

in industry or commerce, and mankind could get along without knowing or concerning itself with them. Take a case in illustration and one that thrusts itself on the attention of man month after month, and year after year, from birth to death. The seasons answer this point, for, while they mean so much in the joy of life and the appreciation of this beautiful world, they occur with an almost monotonous regularity. Their phenomena, further, are everywhere manifest, and one would think it difficult or impossible for any individual capable of reasoning to escape the desire to know how they are caused, yet it is doubtful if more than one out of every ten of those who are supposed to be educated can adequately explain their causation, and it is doubtful if more than one out of every hundred average individuals comprehend how they occur. Some of those who are questioned on the subject may, probably, answer that in winter the sun goes south and in summer returns north, and that explanation contents them; while others not only cannot explain, but even manifest no concern at their inability to do so, and have no desire to know. They have passed through childhood, youth and adolescence to full maturity, yet they have never found it was from the practical point of view of value to know, and they have never felt the inward impulse to know. The causation of the seasons to such is a scientific fact alone, and as it is of no direct service to them or to commerce or industry so far as they are aware, they are indifferent regarding it.

Quite in contrast with this apathy or indifference is the attitude of the individual endowed with the Scientific Spirit. He has within him the compelling desire to know the causes of things, a desire that is not one whit satisfied with a half explanation or one that superficially appears correct. To this end facts are necessary, but the desire to collect facts, simply in itself alone, is no evidence of the presence of the Scientific Spirit, any more than is the desire to collect postage stamps, curios, and beetles, or to make a record of four hundred appendicectomies or ovariectomies. With the Scientific Spirit causation is everything and facts are of importance only when they help to ascertain causation.

The scientific mind wants to know why and how things happen, the average mind does not, except when there is a pecuniary, industrial or commercial advantage involved in knowing. Convince the average man that there is a material advantage to be gained from knowing the how and why of some phenomenon and he will be eager to obtain all possible information about it. If, for example, it could be shown that sun spots dominated the American wheat crop, every speculator in wheat would have his telescope and bit of smoked glass and he might be so