

orderly results of law, or else we shall have to turn them over to final causes¹ and the philosopher.

There is, in truth, not one chance in countless millions of millions that the many unique properties of carbon, hydrogen, and oxygen, and especially of their stable compounds water and carbonic acid, which chiefly make up the atmosphere of a new planet, should simultaneously occur in the three elements otherwise than through the operation of a natural law which somehow connects them together. There is no greater probability that these unique properties should be without due cause uniquely favorable to the organic mechanism. These are no mere accidents; an explanation is to seek. It must be admitted, however, that no explanation is at hand.

For the coincidence of properties itself a rational explanation based upon known laws of nature is perhaps conceivable. Attention has already been called to the interconnection of such properties as latent heat of vaporization, thermal conductivity, molecular volume, the value of the van der Waals constant a ,

¹ Bacon compared final causes to vestal virgins. "Like them," he says, "they are dedicated to God, and are barren." — "The Advancement of Learning," Book II, p. 142.