

ture as himself. Whoever will think of it will see that the advance essentially consisted in this, that man placed himself in favorable relations to forces which always existed. Although it is our habit to dwell more on the changes which man has effected in the outer world, and less on the changes which the outer world has effected in him, yet these last are the important changes, and not the first. Man, in his savage state, was, by his active nature, in relation with only a few forms of mechanical force and a few forms of heat. At present, man's active relations with motion are immeasurably greater than then. His relations with heat, through steam, the smelting furnace, the rolling mill, and innumerable other processes and industries, are enormously extended. His active nature has entered into relations with light—for instance, through photography, and with the chemical forces in thousands of processes in which he avails himself of the agency of these, as in dyeing, many mining processes, and pharmacy. Man is also establishing relations between his active nature and magnetism, as, for instance, in the compass, the various uses of the magnet, and the thermo-multiplier. But still we know that with all these relations established this copartnership is only in its infancy. There are probably forces with which we have as yet formed no relationship. Who dreamed of electricity, magnetism, chemical affinity, or of light