

him a few years ago.\* To appreciate the full force of his argument and illustrations of spinning-jennies and soldiers, you have only to think of those beautiful effects of crystallization which you have seen, and to which Dr. Tyndall so often alludes.

Listen now to what is said by one of the great living authorities on the subject of molecules—one of those who have specially distinguished themselves by investigation concerning them—Prof. Clerk Maxwell, of Cambridge. One passage that I shall give has often been quoted already, but it will bear, and it deserves, frequent repetition. The extracts are from a lecture† of his, wherein he describes the methods of the various investigations. He gives some of his conclusions as follows: "In the heavens we discover by their light, and by their light alone, stars so distant from each other, that no material thing can ever have passed from one to another; and yet this light, which is to us the sole evidence of the existence of these worlds, tells us also [by means of the spectroscope] that each of them is built up of molecules of the same kinds as those which we find on earth." "Each molecule throughout the universe bears impressed on it the stamp of a metric system as distinctly as does the metre of the Archives of Paris, or the double royal cubit of the Temple of Karnac." "No theory of Evolution can be formed to account for the similarity of molecules." "None of the processes of nature, since the time when nature began, has produced the slightest difference in the properties of any molecule." "On the other hand, the exact equality of each molecule to all others of the same kind gives it, as Sir John Herschel has well said, the essential character of a *manufactured article*, and precludes the

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\* Familiar Lectures on Scientific Subjects.

† Read before the British Association at Bradford, September, 1873.