

anything inconsistent with the knowledge of a personal and intelligent Creator and Ruler of the universe in the scientific idea of molecules or atoms to which I have alluded. We shall find the very contrary.

Sir John Herschel says, "we have the strongest evidence that these 'atoms' may all be arranged in a very limited number of groups or classes, all the individuals of each of which are, to all intents and purposes, *exactly alike* in all their properties. Now, when we see a great number of things precisely alike, we do not believe this similarity to have originated except from a common principle independent of them; and that we recognize this likeness, chiefly by the identity of their deportment under similar circumstances, strengthens rather than weakens the conclusion. A line of spinning-jennies [in a cotton mill], or a regiment of soldiers, dressed exactly alike, and going through precisely the same evolutions, gives us no idea of independent existence; we must see them act out of concert before we can believe them to have independent wills and properties, not impressed on them from without. And this conclusion, which would be strong even were there only two individuals precisely alike in all respects and for ever, acquires irresistible force when their number is multiplied beyond the power of imagination to conceive. If we mistake not, then, the discoveries alluded to effectually destroy the idea of an *eternal self-existent matter*; by giving to each of its atoms the essential characters at once of a *manufactured article* and a *subordinate agent*."\*

This was written about forty years ago, and the same idea and the same striking expression, "manufactured articles," were repeated again in another work by

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\* Preliminary Discourse on the Study of Natural Philosophy. Chap. 3.