preceding the present time, to be divided into three lesser intervals of 25 years each, which have also some peculiar features of their own.

From 1775 to 1800, many branches of science still continued in the comparatively inert state which characterised a great part of the eighteenth century. There were, however, two or three notable exceptions. One was the continued successful solution of the outstanding difficulties of the theory of gravity applied to the moon and planets, a task in which the continental mathematicians had no rivals or even coadjutors on this side of the channel; another was the foundation of sidereal astronomy; and the last was the commencement of a system of chemical philosophy based on new and important experiments, and including the laws of heat in combination with matter, which at that period very naturally ranged themselves within the province of the chemist. I do not, of course, mean to affirm that other branches of science were not cultivated with success within the exact period of which we speak. Electricity, for instance, first statical, afterwards that of the pile, had a share in the discoveries and speculations of the time. But these were rather the extension of what had been previously thought of, or the first dawn of future important results, whose development fills a large space in the succeeding story.....

The first quarter of the present century attained a higher and more universal celebrity. Scarcely a branch of physical science but received important and even capital additions. Physical astronomy indeed no longer filled so large a space in the page of discovery, simply because the exhaustive labors of the geometers of the former period had brought it to a stage of perfection nearly co-ordinate with the means of observation, and because, by the publication of the *Mécanique Céleste*, Laplace had rendered available and precise the masses of scattered research accumulated by the labors of a century since the close of Newton's career of discovery. It was in some sense a new book of "Principia,"—not, indeed, the work of one, but of many; nor of a few years, but of two generations at least. Still there it was, a great monument of successful toil, which, like its prototype, was for many years to be studied, even by minds of the highest order, rather than to be enlarged.

But the other branches of natural philosophy were now to make a stride, such as perhaps no preceding time had witnessed. The science of optics was speedily expanded almost two-fold, both in its facts and in its doctrines. Galvanic electricity disclosed a series of phenomena not less brilliant and unexpected in themselves, than important from the new light thus thrown on the still dawning science of chemistry, and from the power of the tool which they placed in the hands of philosophers. Before the first quarter of the present century closed, the important and long-suspected connection between electricity and magnetism was revealed, and its immediate consequences had been traced out with almost unparalleled ingenuity and expedition. The basis of the science of radiant heat, slightly anticipated by the philosophers of the eighteenth and even the seventeenth centuries, was finally laid in a distinct form, assigning to the agent, *heat*, an independent position dissociated from grosser matter, such as *light* had long enjoyed Astronomy, though enriched on the very first night of the new century by the discovery of a small planet, the herald of so many more of the same class, made perhaps less signal progress; but chemistry, besides the aid it received from the invention of the pile, had a triumph peculiarly its own in the addition of the comprehensive doctrine of definite-proportions, destined to throw at some later time a