perfect mobility in the silk thread. But the effect of these causes being exactly known by the observation made in the absence of the copper, and being thus allowed for and subducted, a *residual* phenomenon appeared, in the fact that a retarding influence was exerted by the copper itself; and this fact, once ascertained, speedily led to the knowledge of an entirely new and unexpected class of relations. To add one more instance. If it be true (as M. Fourrier considers it demonstrated to be) that the celestial regions have a temperature independent of the sun, not greatly inferior to that at which quicksilver congeals, and much superior to some degrees of cold which have been artificially produced, two causes suggest themselves: one is that assigned by the author above mentioned—the radiation of the stars; another may be proposed in the ether or elastic medium mentioned in the last section, which the phenomena of light and the resistance of comets give us reason to believe fills all space, and which, in analogy to all the elastic media known, may be supposed to possess a temperature and a specific heat of its own, which it is capable of communicating to bodies surrounded by it. Now, if we consider that the heat radiated by the sun follows the same proportion as its light, and regard it as reasonable to admit with respect to stellar heat what holds good of solar; the effect of stellar radiation in maintaining a temperature in space should be as much inferior to that of the radiation of the sun as the light of a moonless midnight is to that of an equatorial noon; that is to say, almost inconceivably smaller. Allowing, then, the full effect for this cause, there would still remain a great residuum due to the presence of the ether.

(161.) Many of the new elements of chemistry have been detected in the investigation of *residual phenomena*. Thus Arfwedson discovered lithia by perceiving an *excess of weight* in the sulphate produced from a small portion of what he considered as magnesia present in a mineral he had analyzed. It is on this principle, too, that the *small concentrated residues of great operations*