it to other needs. This is the way that man has progressed in his conquest of nature, and has adapted the forces of nature to his own use. In general, the way in which this progress has been made is as follows: For long years, generally centuries, man has gradually learned by observation and experience more and more of some force of nature. This constitutes what we have called our common knowledge of the force; then some man appeared, wiser or more fortunate than the others, who by measurement and reasoning discovered the law which this force obeys. When the law was discovered man became the master, because then he was in a position to make this force of nature serve him.

Had we the time and space we might take up the study of many more tools. For example, pumps, windmills, water wheels, the hydraulic jack, the hydraulic ram, etc. After finishing tools, the next step would be to study the climate and the soil. This would lead to a study of the general physical properties of solids, liquids and gases, also to a study of heat, light and electricity. Under heat we would study the nature of heat and its relation to climate and soil, also systems of heating and heat engines, such as the steam engine and the gas engine. Under light we would study the nature of light; its effect on plant growth, also color, mirrors, lenses, the opera glass, telescope, stereoscope, camera, etc. Under electricity we would study lightning and lightning rods, also batteries, dynamos, motors, electric bells, electric lights, electric-plating, the telegraph, the telephone and the wireless telegraph.

For those of you who wish to continue this study it would be well to get a good text-book on physics, and the author of this chapter will be glad to recommend such a text-book to those who write to him.