

man and a brother. Not even the surprising evolutions of our friend the evolutionist, though sufficient, to quote ye ancient proverb, "to cause a dog to laugh," can coax a smile to the immobile features of the most promising chimpanzee. From these considerations it must be clear that man the laughing animal, deserves our attention, as well as man the speaking or reasoning animal. This distinctive characteristic marks him plainly as a social being, for this light effervescence of our natures would never display itself, were we to bottle down, beneath a stern monastic seclusiveness, all the warm sympathetic instincts of fellowship that dwell in the human breast. The laugh rings out amid the dreary waste of withered hopes to show that something fresh and green still remains, the cheery note of defiance which the soul utters as it ventures forth amid earthly damps and glooms. Thus to weep is not the strongest emblem of earthly woe. That must indeed be a crushing grief that can bow a stout heart to tears, but how intense the depths of that stygian gloom which can close all the springs of joy, and quench forever the cheery sunshine of smiles. An important principle in intellectual philosophy, is traceable from this exponential feature of our natures. In order that man, the social being, may communicate to his fellows indwelling thought, he has been gifted with that rare and marvellous instrument, the human voice divine. In its grand capacities it has been so attuned, as to give expression to the harmonies of the soul when thrilled by emotion. Interwoven with the very woof and warp of our being, it sounds now the dismal note of grief, again ripples on in a chorus of joy. The fountain of mirth ever flows near the fountain of tears. The skilful orator recognizes this principle. By apt allusion or ludicrous incident, he tickles the broad appreciativeness of humor, and then with ease can awake to responsive echoes the key of sorrow or pity.

The keen observer of human nature who with chemical nicety seeks to analyze the various specimens of mankind, with whom he meets in the rugged ways of life, finds in this one of the most unerring of preliminary tests. There is the ringing, wholesome, honest laugh, which belongs unmistakably to one of those joyous hopeful natures who are ever looking upon the bright side of things, and whom no complication of adverse circumstances seems to have power to cast down. Such an one had the wise King in mind, when he said, "A merry heart doeth good like a medicine." There is the low, quiet laugh, betokening a retiring nature, the music of a heart at peace with itself. The laugh again that speaks of vulgar associations, unmannerly

and harsh. The orderly expression of mirth from the lips of the polished and refined. The soulless choking laugh of the thoroughly selfish nature. The smirk of the prude. The affected simper of the shallow-brained coxcomb. The laugh which is but a mask to hide the hidden pain, and finally, the grating laugh of scorn, the sneer of ridicule, who can deny its power. How many a noble aspiration has this keenest lance of the enemy wounded to the death, how many a life has it been effectual in turning from the highway of duty, down to the paths of a base and cowardly existence. All these and a thousand intermediate gradations of human loves and hates, of mortal joys and woes, are expressed through the medium of laughter.

### THE UTILITY OF SCIENCE.

IN the history of the race, there has ever been traceable a gradual advancement in the knowledge of the principles of science. True there have been periods in which this progress has been so slow as to be scarcely perceptible. But these may be considered as only halting places, at which science gathered fresh materials to carry her triumphs farther into the hitherto unexplored regions. One generation has taken up the work where the former left it off, and taking advantage of the labors of their predecessors in collecting and examining facts, they have handed over to their successors in turn, the legacy they received increased by the result of their own labors and observations.

This process has been going on all adown through the ages, until science has arrived at her present state of development. Its course has resembled that of the small rivulet, which, starting out first from a single stream, has by receiving additions from other sources, become enlarged and augmented, until it flows a mighty river broad and deep, and finally loses itself in the ocean. This long and ever progressing series of advancement has accumulated a vast amount of facts for distribution amongst the different generations of men which succeed each other as the world advances. It has cast a flood of light upon almost every object in Nature. It has brushed away with a giant hand, many old superstitions and crude ideas respecting natural phenomena, and taught men the true solutions of those grand problems.

We do not for a moment claim that the entire realm of Cosmos has been explored by scientific men, or that the book of nature has been literally translated into intelligible language. Notwithstanding all that has been done, we are but at the thresh-hold of the knowables

as yet, or, as Newton has expressed it; just "picking up pebbles on the shore of the great ocean of science." Still, great advancement has been made. The world is no longer looked upon as being upheld by resting on the back of some huge tortoise, or supported on the shoulders of Atlas. The sun is no longer supposed to pass round in twenty-four hours an orbit whose diameter exceeds one hundred and eighty millions of miles.

This however, is but one side of the picture. A partial insight into the workings of nature, in the different departments of science, such as astronomy, physics, geology, &c., is not the only benefit we derive from the labors of scientific men. No sooner have principles been discovered than that they have been applied to the invention of works of art. Science has ever been the parent of Art. All along the history of the development of the former, may be traced offshoots of its application in the growth of the latter.

Art, like science, was at the beginning extremely rude. The ideas which the ancients held concerning native and natural phenomena, were not more crude than was the apparatus or machinery with which they carried on their work in the realm of physical labor. The improvements in this latter branch have ever been commensurate with the developments of the former. At first, clumsy agricultural implements, uncouth spears and battle-axes, or ungainly ships were summoned into existence by the exigencies of the times. These, and such like, as nations advanced, gave place to other and more improved means of carrying on individual and national works.

Like science too, art has now arrived at a grand stage of development. There is scarcely a sphere of human activity in which man has not been aided by it. The burdens which he was formerly compelled to bear on his own shoulders are now borne by inferior animals, or inanimate agents. In some respects the whole line of activity has been revolutionized. The printing-press, for instance, has quite changed the whole aspect of the literary world by the dissemination of books and periodicals *ad infinitum* over almost the entire surface of the earth. We need only mention the steam-engine and the telegraph, so often harped upon, to show the utility of that science which was after many years of labor, carried at length so far as to admit of its being applied in this distinguished and useful manner.

All the grand inventions, which so materially aid in carrying on the various affairs of the world, are dependent for their existence upon scientific principles which may be the result of centuries of mental toil and experiment in some quiet laboratories. We often think that