

ARTICLE VI.

SCIENCE AND PRAYER.

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I.

THE Scriptures affirm, that, in answer to prayer, a part of Palestine was once visited with long drought and afterward with copious rains and harvests, an entire family healed, a raging fire quenched, God's purpose to destroy a stiff-necked people changed, the sun and moon apparently stopped in mid-heaven for an entire day, a thunder-storm made to burst right in wheat harvest, a leprous hand cured, a dead child revived, a good king's life lengthened, and, for an assuring token, a dial's shadow actually turned backward.

The Bible unmistakably teaches that God both can and does interfere in our behalf, that his interference often is a direct result of our asking, that all reasonable prayers offered in a right spirit are certain of favorable answer. The requests may be as varied as the healthful and intelligent longings of human hearts.

Some scientists smile at what they style the childish credulity of the Christian's creed. Our investigations, say they, have disclosed a universal reign of unchangeable law, not only in the production of material but even of mental phenomena. We have found that within the walls of every particle of matter there is lodged a force; that these forces are of sixty-four or more different kinds, and their differences in nature and effect make all the differences in the substances about us; that they bear to each other certain

unalterably fixed relations, and exert over each other unalterably fixed influences. These relations we have been able by our experiments to reduce to mathematical formulae. We have found that these forces never manifest themselves unless certain conditions are fulfilled, and that, when they are, the forces invariably appear and act always in precisely the same way. It is also claimed, that, as far back as we can peer into the past, this same order has prevailed; that this rock-ribbed, wave-washed, verdure-clad, densely populated earth of ours has come up out of chaotic fire-mist by the operations of none other than these very forces which at the first were hidden within it; that the earth has developed from its unorganized primordial state into its present complexity with as regular gradations of growth as those through which the oak passes in pushing up from out the walls of the acorn its sinewy stem with outreaching boughs and waving pennons; that the earth itself is an organism as truly as the tree, has like complemental parts, has had a germinal beginning, has been, and still is, incarnating under pre-established laws of evolution, point by point, age after age, a certain set ideal under the guidance of a central germ-power, divinely commissioned it may be, but commissioned even as to the details of its finest microscopic work, untold millions of years ago.

How idle, then, it is, they claim, for weak, blind children of a day to presume to break in on this grand order of the universe! Go out into nature, they tell us, and you will find that not a single one of her laws is ever abrogated, that from their control not the least thing is for an instant released. Gravity holds in its grasp not only the ponderous

with a trip-hammer on the face of an anvil, hurl it into the chemical embrace of an affinitive element, do what you will with it, it will reappear identically the same atom informed by precisely the same mysterious force. This speck of matter defies all powers of earth or sky to batter in its walls and drive out its occupant. Every force, the world over, says that only those who find its secret and meet the conditions can command its services. Do you want bread? Here is the seed, the soil, the air, the shower, and the sunbeam. Matter and force are at your bidding, but their laws are inexorable. Rays of light will travel ninety-five millions of miles to serve you; the atmosphere will gather its clouds from the ocean and float them across a continent to pour their treasures at your feet; the mountains will furnish you millstones, and the running brooks will turn them. The forests that grew a hundred thousand years ago you may find packed away in beds of anthracite, waiting to heat your ovens so soon as your dough is ready for the baking. Not a force in nature but will serve the veriest outcast if he will comply with the conditions; not one, even the humblest, will condescend to move so much as a hair's-breadth even for the Czar of all the Russias, unless he does. The prayerless sinner and the praying saint meet here on a common level. All those stories about producing thunder-storms by prayer, healing the sick, turning back shadows, stopping the sun in the heavens, raising the dead, are thoroughly unscientific and absurd, and the height of absurdity is reached when it is claimed that the all-wise Creator can be induced to change

make a change at this late day, when everything is so intimately interlinked and interdependent that an interference in one part may demand a reconstruction throughout the whole in order to avoid widespread confusion and ruin? Can God spare any special thought now for such infinitesimal interests so long as the concerns of this vast swinging universe are upon him? He has laid down broad general plans. We cannot reasonably expect him to listen to our baby prattle about the petty details of our vanishing lives. If we thrust our hands into the fire, live in a malarious district, are capsized in mid-ocean, we must suffer the natural consequences, and look about us, as best we can, for a more congenial environment.

Such, in brief, is the attitude assumed at the present day by a majority of scientists on this one of the most vital and perplexing of questions. This their creed is, as I think can be clearly shown, a most mischievous mixture of truth and error. The spirit of cold speculative scepticism pervading it is making rapid inroads upon all classes in society. How many even of those who have been gathered into the fold of the church have fallen under the blighting spell of this genius of modern materialistic thought! How many prayers are simply the outbreathings of a reverential fear, or are a mere dead formalism, or the results of sheer habit! How many are little else than agonized longings accompanied with no joyous expectation! How few, very few, are offered with the same confident assurance of results as inspires the farmer when he sows his fields, or the telegraphic operator when with his key he closes the electric circuit and sends his messages over the long leagues of ocean cable!

My purpose at present is to show:—

1st. That phenomena and the producing forces with their laws or modes of working brought to light by scientific investigations in the fields of physics and of metaphysics, harmonize perfectly with the Scripture view of prayer,

and abound in suggestions of how God can interfere in nature without destroying any force or abrogating a single law.

2d. That, as a fact, he has thus actually interfered again and again.

3d. That it is not only not presumptuous, but most natural and reasonable, for us to expect that he will interfere for *us*, insignificant though we may seem to be.

4th. That he will interfere because we ask him, doing for us what otherwise he would not have done.

5th. And, lastly, that he will not in a single instance withhold any real blessing which is asked for in the right spirit, and the bestowal of which lies within the compass of his power.

1st. *How* can God answer prayer without destroying any force or abrogating any law? In my own experience, real light on this point first came from the perusal of Dr. Bushnell's "Nature and the Supernatural." His mode of treatment has long since past out of memory, but a thought-germ was lodged in my mind which has since grown into a deep-rooted conviction. As, however, I have followed out these lines of thought, it has been a constant source of surprise that so many of the scientists, while they have with tireless patience and keenest insight unravelled much of the infinite intricacy that attends the interplay of nature's forces, unearthing so many secrets and becoming masters in so many fields of inquiry, have seemingly lost sight of that most interesting and important of all facts, that everywhere ample provision has been made for the efficient interference of direct will power. They of course cannot have failed to discover it, for there is hardly a waking moment in the lives of any of us when we are not conscious that we actually exer-

is a fact patent to all. And so I surmise it is not the fact, but the deep significance of the fact, that has so strangely escaped the notice of so many of our savants of science.

Over my body in many particulars my will exercises direct control. I, for instance, order my hand lifted. The mandate instantly flashes from the brain down the motor nerves to the very muscles in waiting, and their fibres at once begin to shorten. I exercise this direct will power right against the force of gravity, temporarily overpowering but not destroying it, for it still continues to pull the hand down with the same might as before. This overbalancing of one force by another is taking place everywhere throughout nature. For illustration, take a tumbler of water. If it were not for the cohesive attraction between the particles of the glass being stronger than the gravity, the sides would crumble into dust, and sink with the water to the lowest attainable level. Gravity has not been destroyed, but simply mastered by a stronger antagonist. Remove a part of the heat from the water, and it will become a crystallised solid, showing that until now the heat force has been holding the crystalline in check. Lower still further the temperature, and the sides of the tumbler will burst in pieces, the crystalline force overcoming the cohesive. Raise the temperature, and the water will change to steam, and a repulsion between the particles will appear, the heat driving them asunder, despite all that cohesion can do.

Over the world outside the body, the control of our wills, though mostly indirect, is equally potent, and yet nature is not thrown into confusion, not a single force destroyed, not a law abrogated. Our volitions are simply supernatural, not contranatural. Our wills act indirectly by complying with the conditions that unfetter nature's forces. The scientists have established beyond question the fact that there is not a single one of these forces that is not wholly inoperative unless certain conditions are fulfilled, and just as soon

as they are, the force begins to work its wonders. Scientists have even gone further, discovering in very many instances precisely what those conditions are, and thus placed it within our reach to utilize those forces in the arts of life.

Back of our will power, acting as its guide, there now exists, thanks to these explorers, a well-informed intelligence, and we have become masters of nature by simply understanding and complying with her laws. For instance, we want homes for ourselves and our little ones, and so we cast about and find abundance of crude material,—sand and clay, metal and slate, rock and standing trees and running water. Our wills decree that these shall be transformed into cemented walls of brick and stone, framed timbers, tessellated floors, frescoed ceilings, plate-glass windows, roofs and mantels, furnaces and swinging doors, and step by step, under the quickening power of the mind, the wondrous change is wrought. We even make our wills felt in the domains of vegetable and animal life, improving old varieties and developing new ones among fruits and flowers and domesticated animals, enriching and seeding our soils, and multiplying our flocks and herds to meet our ever-growing wants.

The processes by which our wills enforce their decrees may be a little tedious, but the ends are reached, the course of nature is seriously broken in upon, results attained which otherwise nature never would have attempted, yet no disorder has anywhere ensued. What marvellous effects have been produced by this intelligent will power of man, cunningly directing to its own uses the ever-waiting elemental and vital forces! How many rivers have been bridged, beds of rivers shifted or tunnelled, mountains discrowned or their rocky centres pierced to open highways for the world's commerce! The very lightnings have been tamed into flying Mercurys to carry the thought-messages of this busy-brained master, the oceans whitened with his sail, the con-

tinents covered with his networks of railways and canals, barren wastes changed into vineyards and palm-groves and orange-orchards, the unshapely quarries of granite and of marble transformed into palaces and statue-crowned temples to body forth his ripest culture and most holy thought.

The influence of the human will has had even a wider circuit assigned it. Many of us have known instances of weak wills being overawed by stronger ones, and the domination being so absolute as for the time being to actually blot out every distinctive trace of personality and suspend individual responsibility. Not one of us but has felt, time and again, the indirect power of another's will reaching us through channels of argument, persuasive kindling of the fancy, eloquent appeal, shrewd suggestion, or show of appreciative sympathy. There are a thousand avenues to the heart, a thousand ways to arouse the conscience, inflame passion, fill the chambers of the soul with dread alarms, and these are discovered and utilized by positive and aggressive souls athirst for wealth, power, or prestige. Society has its born leaders. Individuality and responsible free choice are with the vast majority still retained, but it is through these multiform influences of personal character that the life of the world's subtile social organism is, under pre-established spiritual laws, regulated and maintained.

Thus we see that to the touch of the human will all nature is plastic, that every facility has seemingly been provided for its efficient interference. Think you that, in a world where so many doors have been so invitingly left open for the will of the creature to enter and occupy, the will of the Creator has been studiously excluded? Can science, which has so conclusively proved the one, consistently deny the other? Is it not rather forced to assert that, so far as God's will has greater innate power and is guided by a profounder knowledge, it has proportionately greater facilities for effecting its purposes and, at the same time, leaving every force and law

both in the material and mental kingdoms equally undisturbed?

Before the birth of science a radical misconception of the true nature of miracles was entertained, and seems still very generally to prevail, and this has doubtless largely provoked the attacks made on the truthfulness of the Bible record. Cannot the miracle-workings spoken of have been wrought by acts of divine will precisely analogous to those of the human? What necessity is there for thinking that any force or law has been, or need be, destroyed? The axe that was made to float on the water by God's command through his prophet was not necessarily made lighter than the water any more than my hand when I raise it is made lighter than the air. The nature of the materials remained the same, and gravity was still in full force, but God's will was under the axe as mine is under the hand. Precisely how it got there I cannot explain, neither can I how mine got under the hand. The one is no more mysterious than the other, no more of a deviation from nature's laws, but both volitions are, as far as I can discover, essentially the same.

There perhaps is no Bible narrative whose truth has been more violently and generally assailed than that of the sun's being stayed upon Gibeon and the moon in the valley of Aijalon. It has been pronounced scientifically impossible. Some authors have attempted to explain it by claiming that it is only a quotation from the Book of Jasher, a mere poetical extravaganza embellished by that warmth of imagery characteristic of Oriental writings. But such a defence is not called for. The Christian believer may confidently chal-

It would not have changed the earth's position in the heavens or its relations with its satellite, its sister planets, or its central sun. If the scientist can by his own will power put out his hand and check the spinning of a top, what reason has he for thinking that God's will cannot check the whirl of a world? Has he any evidence that his will is more closely linked with matter than God's? The same eminent authority also pointed out that, if he had chosen, God could have lengthened the day by simply condensing the atmosphere and thus changing its power of refraction. Whether he actually adopted either of these methods or used a better we with our yet extremely meagre knowledge of nature have of course no means of determining, but we can see even now how such an end was within the ready reach of a will as masterful and as wise as we are warranted in believing God's to be.

The miracles of replenishing the widow's cruse of oil, turning the water to wine, feeding the five thousand with the five loaves and few fishes, though they involve something more than simply the overmastering of one force by another, as in the incident just cited, and are at first more difficult of apprehension and belief, and lie more exposed to the adverse criticisms of scientists, yet, after a careful scrutiny, will be found, after all, remarkably analogous in many respects to achievements of the human will, and no more contranatural, or improbable, or wrapped in a profounder mystery. There is no necessity for thinking that in these or kindred acts any new matter or force was brought into existence. The oil and the wine, the miraculously provided cakes and fishes, differed in no respect in their elemental atoms, or in the combinations of these atoms, from products which nature, assisted and guided by man, had for centuries before been manufacturing. There was no call for any new matter, as it was already at hand in vast abundance. Christians need not claim this. Indeed, neither need they

claim that, when, as it is recorded, in the beginning God created the heavens and the earth, he brought forth something out of nothing, as too many unthinkingly believe. Scientists may well pronounce such a notion absurd. An achievement like that would transcend even divine power, for it involves a contradiction, an impossibility. Something cannot come out of nothing. It is nowhere revealed that there ever was a time when matter did not exist. The beginning spoken of in Genesis need have reference only to the present order of things, the present processes of evolution through which the burning and non-burning balls of matter have been made to people space. Although this history may reach back over what to us are inconceivable periods, yet there unquestionably was a time when not a single sun or satellite anywhere existed, when matter must have been in some other radically different form. Further than this we need not go. If it was not originally a part of God, and is not now to be considered as an *emanation* from him, it must in our thought take rank as an equally self-existent and eternal entity. The fact is, the more prolonged and profound our study into its nature, the more impenetrable appears the mystery that shrouds it, for at first we can little realize that the substance we see and taste and handle is revealed to us simply by the effect produced upon our sense-nerves by forces that lie hidden behind it, so that we, when further advanced in our reflections, are led to query whether, after all, it is not the presence of *force* that is revealed to our consciousness rather than that of *matter* as the medium of force, and

this accomplished the same ends in other ways, for how else can we explain the presence of the oil which the prophet found in the widow's cruse, or the wine already drunk at the wedding feast, or the bread and fish in the baskets of Christ's disciples before he miraculously multiplied them? But the human will had been compelled to resort to tedious and, for the most part, indirect methods to accomplish what the divine will wrought without delay, and apparently by direct impressment. I say "apparently," for it is quite possible that the methods employed were still indirect, though not accompanied with any noticeable delay. We ourselves are continually shortening the processes we employ in carrying out our purposes. By a more perfect knowledge of nature's laws we become more complete masters of her forces. What giant strides have we already made in this direction, especially during this nineteenth century! It is difficult for us to realize the nature and extent of our recent victories over matter. With what blank amazement would Washington and his companions be filled were they now, without knowing what had taken place, to return to the country they fought to save! For since Washington closed his eyes to earth, there have come the steamship, the locomotive, the telegraph, the telephone, the phonograph, and thousands of shortening processes. In his day, yes and forty years later, to cross the American continent was a task of many weary months. Now we make the trip in less than a week. The news of Waterloo was three days reaching England, but the tidings of the last bombardment of Alexandria, though half-way round the globe, took only as many minutes. The thunder of the first gun had hardly died away along the banks of the Nile before the air was throbbing with its echo on the banks of the Thames. We also have of late, through our telephones, succeeded in holding easy converse with each other, though separated by leagues of distance, even in actually distinguishing the peculiar intonations of

each other's voices. At what time these discoveries of new forces and how to unfetter them shall reach their limit, who would be bold enough to predict? and yet not until science has won its final triumph over nature should devotees of science be unwilling to concede that it is clearly possible that Bible miracles were the work of nature's forces simply guided by a will thoroughly conversant with nature's laws, which were within the reach of the directive power of the will of a man if illumined by the insight of a God. But even if these miracles were performed by direct will power, still we can point to constantly recurring instances in which precisely analogous effects are produced both in the vegetable and animal kingdoms, as well as in the higher realm of the human will. Scientific treatises call our attention not only to an inorganic, but also to an organic, chemistry, and assure us that the vital forces, working through complex animal and vegetable organisms, effect combinations of elements which outside of their laboratories or the laboratories of man are never produced, and are marked by extreme instability, readily decomposing under the influence of heat or fermentation, so soon as their influence is withdrawn. Those mysterious forces lodged inside the walls of seeds prove themselves the masters of other forces equally mysterious lodged inside the walls of atoms. Carbon, hydrogen, oxygen, and nitrogen never would have congregated into such chemical groups, or arranged themselves along such lines of symmetry, or climbed to such dizzy heights, directly against the steady pull of gravity, were they not working under compulsion; and so soon as they escape from the thrall of their task-masters, their old individuality comes back to them, their old modes of combining, their old circles of association return, and the unstable organic compounds are torn down into the more stable, original, inorganic ones. Here we witness one great class of nature's forces—the atomic—lorded over for a time by another and superior

class. As we are daily witnesses of these facts, we never think of questioning them.

Further than that, we see the products of vegetative-vital forces taken possession of by animal-vital, and grouped into still more strange and higher compounds, and the chemic compelled to play a part still more foreign to their first estate. We know that this, too, is a case of compulsion, for the very moment vitality ceases, disintegration begins. These nitrogenous combinations are the very embodiment of instability.

We are daily witnesses of more startling wonders still. They form part of our personal experiences. We find that we can by sheer will power compel even these higher forces of animal vitality, and through them the lower, to do our bidding. The late Dr. Carpenter, the foremost physiologist of his day, called especial attention to this fact, asserting that thus we can greatly add to the acuteness of any of our bodily senses, can actually compel the nourishing blood to flow to any part of the system and infuse new vigor. The experiences of artisans and artists, astronomers and microscopists, experts and specialists in every class of work, deaf-mutes and the blind, abundantly confirm this. There are few of us who have not found by actual experience that by calling up certain thoughts we can turn the cheek pale or crimson it with blushes, flood the eyes with tears or make them merrily twinkle or flash with angry fire, cause the heart to violently throb or intermit its beats, throw the blood to the brain, make the knees quake, the skin perspire, the whole body tremble, with intensity of emotion. The control which persons of cultivated histrionic powers have over the body to make it the vehicle of thought can be appreciated only by those who have witnessed the masters as they have entranced their audiences, and who have themselves been thrilled and spirit-bound under the spell of their enchantments.

If the vegetative forces can thus dominate over the atomic, the animal over the vegetative, and the will of man over all, what valid objection can science urge to the Christian's creed that God's will can by direct impressment effect combinations in the elements which Nature's forces indirectly and uncompelled bring about by slower processes according to the terms of their divine commission? Why may not God's will have as immediate and complete a sovereignty over the earth or the universe, as we over these complicate bodies of ours, which our spirits permeate through and through by their informing presence? And why may not his sovereignty be inconceivably more immediate and complete, and still retain in its relationships its marked analogy to the characteristics of force which science has herself recorded? Why may not the divine will not only make bread, wine, and fish directly out of the surrounding elements, but heal lepers, restore the blind, or even raise the dead, and still do no more violence to nature's systems of law than the human will is doing every day? There are multitudes of well-authenticated instances in which persons have by simple determination checked for considerable periods the inroads of disease and even permanently broken its power. So startling have been the effects of the will and of the imagination over these susceptible bodies, there have arisen schools of theorists which advocate that what have hitherto been pronounced incurable diseases may be made to yield to the modern mind-cure treatment. They have doubtless overrated the will's curative energy, but they certainly have made no mistake, except in the extent to which such cure can be carried. Sudden fright, worryment in financial diffi-

absent loved ones, their rescue from danger or illness, appreciative sympathetic recognition of merit, fruition of long-deferred hopes, the stir of patriotic or religious fervor,—all have their medicinal influence, their exhilarating, uplifting power. Thoughts sudden and startling have often brought sickness or banished it, brought death even in the midst of healthful life, or lengthened life's lease for those apparently passing within the shadow. If impalpable thought is clothed with such recuperative and destructive power, and if between the Creator and his creatures there are open avenues of communication as there evidently must be,—avenues more open and numerous than between man and man,—what valid objection can be urged to the belief that God, with his infinitude of knowledge of the structure of the human frame and the laws regulating its processes, and with his intimate and accurate acquaintance with its ever-varying environment, can by turning the currents of thought by means of timely suggestions, by firing the fancy, rousing the conscience, raising the hope, occasioning and confirming the purpose, and, by the even more mighty magnetism of such positive and such sympathetic personality as his must be, summon health or sickness, life or death, when and where he chooses?

Thus the Christian's creed that God can answer prayer if he so desires, that there are multitudinous ways in which he may indirectly or directly carry out the mandates of his will without destroying any force or abrogating any law, finds in the discoveries of modern science most abundant confirmatory and illustrative facts. It is only in the ill founded theories and misinterpretations of some of the devotees of science that its claims have been denied. Christianity will some day summon science to the bar of the world's judgment as her strongest witness and most helpful ally.

[*To be Continued.*]