АРТУР ШОПЕНГАУЭР

THE WORLD AS WILL AND IDEA (VOL. 3 OF 3)

Артур Шопенгауэр

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Arthur Schopenhauer
The World as Will and Idea (Vol. 3 of 3)

Supplements To The Second Book

Chapter XXI. Retrospect and More General View

If the *intellect* were not of a subordinate nature, as the two preceding chapters show, then everything which takes place without it, *i. e.*, without intervention of the idea, such as reproduction, the development and maintenance of the organism, the healing of wounds, the restoration or vicarious supplementing of mutilated parts, the salutary crisis in diseases, the works of the mechanical skill of animals, and the performances of instinct would not be done so infinitely better and more perfectly than what takes place with the assistance of intellect, all conscious and intentional achievements of men, which compared with the former are mere bungling. In general *nature* signifies that which operates, acts, performs without the assistance of the intellect.

Now, that this is really identical with what we find in ourselves as *will* is the general theme of this second book, and also of the essay, "*Ueber den Willen in der Natur*." The possibility of this fundamental knowledge depends upon the fact that *in us* the will is directly lighted by the intellect, which here appears as self-consciousness; otherwise we could just as little arrive at a fuller knowledge of it *within us* as without us, and must for ever stop at inscrutable forces of nature. We have to abstract from the assistance of the *intellect* if we wish to comprehend the nature of the will in itself, and thereby, as far as is possible, penetrate to the inner being of nature.

On this account, it may be remarked in passing, my direct antipode among philosophers is Anaxagoras; for he assumed arbitrarily as that which is first and original, from which everything proceeds, a νους, an intelligence, a subject of ideas, and he is regarded as the first who promulgated such a view. According to him the world existed earlier in the mere idea than in itself; while according to me it is the unconscious *will* which constitutes the reality of things, and its development must have advanced very far before it finally attains, in the animal consciousness, to the idea and intelligence; so that, according to me, thought appears as the very last. However, according to the testimony of Aristotle (*Metaph.*, i. 4), Anaxagoras himself did not know how to begin much with his νους, but merely set it up, and then left it standing like a painted saint at the entrance, without making use of it in his development of nature, except in

cases of need, when he did not know how else to help himself. All physico-theology is a carrying out of the error opposed to the truth expressed at the beginning of this chapter – the error that the most perfect form of the origin of things is that which is brought about by means of an *intellect*. Therefore it draws a bolt against all deep exploration of nature.

From the time of Socrates down to our own time, we find that the chief subject of the ceaseless disputations of the philosophers has been that *ens rationis*, called *soul*. We see the most of them assert its immortality, that is to say, its metaphysical nature; yet others, supported by facts which incontrovertibly prove the entire dependence of the intellect upon the bodily organism, unweariedly maintain the contrary. That soul is by all and before everything taken as *absolutely simple*; for precisely from this its metaphysical nature, its immateriality and immortality were proved, although these by no means necessarily follow from it. For although we can only conceive the destruction of a formed body through breaking up of it into its parts, it does not follow from this that the destruction of a simple existence, of which besides we have no conception, may not be possible in some other way, perhaps by gradually vanishing. I, on the contrary, start by doing away with the presupposed simplicity of our subjectively conscious nature, or the *ego*, inasmuch as I show that the manifestations from which it was deduced have two very different sources, and that in any case the intellect is physically conditioned, the function of a material organ,

therefore dependent upon it, and without it is just as impossible as the grasp without the hand; that accordingly it belongs to the mere phenomenon, and thus shares the fate of this, – that the *will*, on the contrary, is bound to no special organ, but is everywhere present, is everywhere that which moves and forms, and therefore is that which conditions the whole organism; that, in fact, it constitutes the metaphysical substratum of the whole phenomenon, consequently is not, like the intellect, a *Posterius* of it, but its *Prius*; and the phenomenon depends upon it, not it upon the phenomenon. But the body is reduced indeed to a mere idea, for it is only the manner in which the *will* exhibits itself in the perception of the intellect or brain. The *will*, again, which in all other systems, different as they are in other respects, appears as one of the last results, is with me the very first. The *intellect*, as mere function of the brain, is involved in the destruction of the body, but the *will* is by no means so. From this heterogeneity of the two, together with the subordinate nature of the intellect, it becomes conceivable that man, in the depths of his self-consciousness, feels himself to be eternal and indestructible, but yet can have no memory, either *a parte ante* or *a parte post*, beyond the duration of his life. I do not wish to anticipate here the exposition of the true indestructibility of our nature, which has its place in the fourth book, but have only sought to indicate the place where it links itself on.

But now that, in an expression which is certainly one-sided, yet from our standpoint true, the body is called a mere idea

depends upon the fact than an existence in space, as something extended, and in time, as something that changes, and more closely determined in both through the causal-nexus, is only possible in the *idea*, for all those determinations rest upon its forms, thus in a brain, in which accordingly such an existence appears as something objective, *i. e.*, foreign; therefore even our own body can have this kind of existence only in a brain. For the knowledge which I have of my body as extended, space-occupying, and movable, is only *indirect*: it is a picture in my brain which is brought about by means of the senses and understanding. The body is given to me *directly* only in muscular action and in pain and pleasure, both of which primarily and directly belong to the *will*. But the combination of these two different kinds of knowledge of my own body afterwards affords the further insight that all other things which also have the objective existence described, which is primarily only in my brain, are not therefore entirely non-existent apart from it, but must also ultimately *in themselves* be that which makes itself known in self-consciousness as *will*.

Chapter XXII.[1] Objective View of the Intellect

There are two fundamentally different ways of regarding the intellect, which depend upon the difference of the point of view, and, much as they are opposed to each other in consequence of this, must yet be brought into agreement. One is the *subjective*, which, starting from *within* and taking the *consciousness* as the given, shows us by what mechanism the world exhibits itself in it, and how, out of the materials which the senses and the understanding provide, it constructs itself in it. We must look upon Locke as the originator of this method of consideration; Kant brought it to incomparably higher perfection; and our first book also, together with its supplements, are devoted to it.

The method of considering the intellect which is opposed to this is the *objective*, which starts from *without*, takes as its object not our own consciousness, but the beings given in outward experience, conscious of themselves and of the world, and now investigates the relation of their intellect to their other qualities, how it has become possible, how it has become necessary, and what it accomplishes for them. The standpoint of this method of consideration is the empirical. It takes the world and the animal existences present in it as absolutely given, in that it starts

[1] This chapter is connected with the last half of § 27 of the first volume.

from them. It is accordingly primarily zoological, anatomical, physiological, and only becomes philosophical by connection with that first method of consideration, and from the higher point of view thereby attained. The only foundations of this which as yet have been given we owe to zootomists and physiologists, for the most part French. Here Cabanis is specially to be named, whose excellent work, "*Des rapports du physique au moral*," is initiatory of this method of consideration on the path of physiology. The famous Bichat was his contemporary, but his theme was a much more comprehensive one. Even Gall may be named here, although his chief aim was missed. Ignorance and prejudice have raised against this method of consideration the accusation of materialism, because, adhering simply to experience, it does not know the immaterial substance, soul. The most recent advances in the physiology of the nervous system, through Sir Charles Bell, Magendie, Marshall Hall, and others, have also enriched and corrected the material of this method of consideration. A philosophy which, like the Kantian, entirely ignores this point of view for the intellect is one-sided, and consequently inadequate. It leaves an impassable gulf between our philosophical and our physiological knowledge, with which we can never find satisfaction.

Although what I have said in the two preceding chapters concerning the life and the activity of the brain belongs to this method of consideration, and in the same way all the discussions to be found under the heading, "*Pflanzenphysiologie*," in the

essay, "*Ueber den Willen in der Natur*," and also a portion of those under the heading "*Vergleichende Anatomie*," are devoted to it, the following exposition of its results in general will be by no means superfluous.

We become most vividly conscious of the glaring contrast between the two methods of considering the intellect opposed to each other above if we carry the matter to the extreme and realise that what the one, as reflective thought and vivid perception, directly assumes and makes its material is for the other nothing more than the physiological function of an internal organ, the brain; nay, that we are justified in asserting that the whole objective world, so boundless in space, so infinite in time, so unsearchable in its perfection, is really only a certain movement or affection of the pulpy matter in the skull. We then ask in astonishment: what is this brain whose function produces such a phenomenon of all phenomena? What is the matter which can be refined and potentiated to such a pulp that the stimulation of a few of its particles becomes the conditional supporter of the existence of an objective world? The fear of such questions led to the hypothesis of the simple substance of an immaterial soul, which merely dwelt in the brain. We say boldly: this pulp also, like every vegetable or animal part, is an organic structure, like all its poorer relations in the inferior accommodation of the heads of our irrational brethren, down to the lowest, which scarcely apprehends at all; yet that organic pulp is the last product of nature, which presupposes all the rest. But in itself, and outside

the idea, the brain also, like everything else, is *will*. *For existing for another is being perceived; being in itself is willing*: upon this it depends that on the purely objective path we never attain to the inner nature of things; but if we attempt to find their inner nature from without and empirically, this inner always becomes an outer again in our hands, – the pith of the tree, as well as its bark; the heart of the animal, as well as its hide; the white and the yolk of an egg, as well as its shell. On the other hand, upon the subjective path the inner is accessible to us at every moment; for we find it as the *will* primarily in ourselves, and must, by the clue of the analogy with our own nature, be able to solve that of others, in that we attain to the insight that a being in itself independent of being known, *i. e.*, of exhibiting itself in an intellect, is only conceivable as willing.

If now, in the *objective* comprehension of the intellect, we go back as far as we possibly can, we shall find that the necessity or the need of *knowledge in general* arises from the multiplicity and the *separate* existence of beings, thus from individuation. For suppose there only existed *a single* being, such a being would have no need of knowledge: because nothing would exist which was different from it, and whose existence it would therefore have to take up into itself indirectly through knowledge, *i. e.*, image and concept. It would *itself* already be all in all, and therefore there would remain nothing for it to know, *i. e.*, nothing foreign that could be apprehended as object. In the case of a multiplicity of beings, on the other hand, every individual finds

itself in a condition of isolation from all the rest, and hence arises the necessity of knowledge. The nervous system, by means of which the animal individual primarily becomes conscious of itself, is bounded by a skin; yet in the brain that has attained to intellect it passes beyond this limit by means of its form of knowledge, causality, and thus there arises for it perception as a consciousness of *other* things, as an image of beings in space and time, which change in accordance with causality. In this sense it would be more correct to say, "Only the different is known by the different," than as Empedocles said, "Only the like is known by the like," which was a very indefinite and ambiguous proposition; although points of view may certainly also be conceived from which it is true; as, for instance, we may observe in passing that of Helvetius when he says so beautifully and happily: "*Il n'y a que l'esprit qui sente l'esprit: c'est une corde qui ne frémit qu'à l'unison*," which corresponds with Xenophon's "σοφον ειναι δει τον επιγνωσομενον τον σοφον" (*sapientem esse opportet eum, qui sapientem agniturus sit*), and is a great sorrow. But now, again, from the other side we know that multiplicity of similars only becomes possible through time and space; thus through the forms of our knowledge. Space first arises in that the knowing subject sees externally; it is the manner in which the subject comprehends something as different from itself. But we also saw knowledge in general conditioned by multiplicity and difference. Thus knowledge and multiplicity, or individuation, stand and fall together, for they reciprocally condition each other. Hence it

must be inferred that, beyond the phenomenon in the true being of all things, to which time and space, and consequently also multiplicity, must be foreign, there can also be no knowledge. Buddhism defines this as *Pratschna Paramita*, *i. e.*, that which is beyond all knowledge (J. J. Schmidt, "On the Maha-Jana and Pratschna Paramita"). A "knowledge of things in themselves," in the strictest sense of the word, would accordingly be already impossible from the fact that where the thing in itself begins knowledge ceases, and all knowledge is essentially concerned only with phenomena. For it springs from a limitation, by which it is made necessary, in order to extend the limits.

For the objective consideration the brain is the efflorescence of the organism; therefore only where the latter has attained its highest perfection and complexity does the brain appear in its greatest development. But in the preceding chapter we have recognised the organism as the objectification of the will; therefore the brain also, as a part of it, must belong to this objectification. Further, from the fact that the organism is only the visibility of the will, thus in itself is the will, I have deduced that every affection of the organism at once and directly affects the will, *i. e.*, is felt as agreeable or painful. Yet, with the heightening of sensibility, in the higher development of the nervous system, the possibility arises that in the nobler, *i. e.*, the *objective*, organs of sense (sight and hearing) the exquisitely delicate affections proper to them are perceived without in themselves and directly affecting the will, that is, without being

either painful or agreeable, and that therefore they appear in consciousness as indifferent, merely perceived, sensations. But in the brain this heightening of sensibility reaches such a high degree that upon received impressions of sense a reaction even takes place, which does not proceed directly from the will, but is primarily a spontaneity of the function of understanding, which makes the transition from the directly perceived sensation of the senses to its *cause*; and since the brain then at once produces the form of space, there thus arises the perception of an *external object*. We may therefore regard the point at which the understanding makes the transition from the mere sensation upon the retina, which is still a mere affection of the body and therefore of the will, to the *cause* of that sensation, which it projects by means of its form of space, as something external and different from its own body, as the boundary between the world as will and the world as idea, or as the birthplace of the latter. In man, however, the spontaneity of the activity of the brain, which in the last instance is certainly conferred by the will, goes further than mere *perception* and immediate comprehension of causal relations. It extends to the construction of abstract conceptions out of these perceptions, and to operating with these conceptions, *i. e.*, to *thinking*, as that in which his *reason* consists. *Thoughts* are therefore furthest removed from the affections of the body, which, since the body is the objectification of the will, may, through increased intensity, pass at once into pain, even in the organs of sense. Accordingly idea and thought may also

be regarded as the efflorescence of the will, because they spring from the highest perfection and development of the organism; but the organism, in itself and apart from the idea, is the *will*. Of course, in my explanation, the existence of the body presupposes the world of idea; inasmuch as it also, as body or real object, is only in this world; and, on the other hand, the idea itself just as much presupposes the body, for it arises only through the function of an organ of the body. That which lies at the foundation of the whole phenomenon, that in it which alone has being in itself and is original, is exclusively the *will*; for it is the will which through this very process assumes the form of the *idea*, *i. e.*, enters the secondary existence of an objective world, or the sphere of the knowable. Philosophers before Kant, with few exceptions, approached the explanation of the origin of our knowledge from the wrong side. They set out from a so-called soul, an existence whose inner nature and peculiar function consisted in thinking, and indeed quite specially in abstract thinking, with mere conceptions, which belonged to it the more completely the further they lay from all perception. (I beg to refer here to the note at the end of § 6 of my prize essay on the foundation of morals.) This soul has in some inconceivable manner entered the body, and there it is only disturbed in its pure thinking, first by impressions of the senses and perceptions, still more by the desires which these excite, and finally by the emotions, nay, passions, to which these desires develop; while the characteristic and original element of this soul is mere

abstract thinking, and given up to this it has only universals, inborn conceptions, and *æternæ veritates* for its objects, and leaves everything perceptible lying far below it. Hence, also, arises the contempt with which even now "sensibility" and the "sensuous" are referred to by professors of philosophy, nay, are even made the chief source of immorality, while it is just the senses which are the genuine and innocent source of all our knowledge, from which all thinking must first borrow its material, for in combination with the *a priori* functions of the intellect they produce the *perception*. One might really suppose that in speaking of sensibility these gentlemen always think only of the pretended sixth sense of the French. Thus, as we have said, in the process of knowledge, its ultimate product was made that which is first and original in it, and accordingly the matter was taken hold of by the wrong end. According to my exposition, the intellect springs from the organism, and thereby from the will, and hence could not be without the latter. Thus, without the will it would also find no material to occupy it; for everything that is knowable is just the objectification of the will.

But not only the perception of the external world, or the consciousness of other things, is conditioned by the brain and its functions, but also self-consciousness. The will in itself is without consciousness, and remains so in the greater part of its phenomena. The secondary world of idea must be added, in order that it may become conscious of itself, just as light only becomes visible through the bodies which reflect it, and without them

loses itself in darkness without producing any effect. Because the will, with the aim of comprehending its relations to the external world, produces a brain in the animal individual, the consciousness of its own self arises in it, by means of the subject of knowledge, which comprehends things as existing and the *ego* as willing. The sensibility, which reaches its highest degree in the brain, but is yet dispersed through its different parts, must first of all collect all the rays of its activity, concentrate them, as it were, in a focus, which, however, does not lie without, as in the case of the concave mirror, but within, as in the convex mirror. With this point now it first describes the line of time, upon which, therefore, all that it presents to itself as idea must exhibit itself, and which is the first and most essential form of all knowledge, or the form of inner sense. This focus of the whole activity of the brain is what Kant called the synthetic unity of apperception (*cf.* vol. ii. p. 475). Only by means of this does the will become conscious of itself, because this focus of the activity of the brain, or that which knows, apprehends itself as identical with its own basis, from which it springs, that which wills; and thus the *ego* arises. Yet this focus of the brain activity remains primarily a mere subject of knowledge, and as such capable of being the cold and impartial spectator, the mere guide and counsellor of the will, and also of comprehending the external world in a purely objective manner, without reference to the will and its weal or woe. But whenever it turns within, it recognises the will as the basis of its own phenomenon, and therefore combines with it in

the consciousness of an *ego*. That focus of the activity of the brain (or the subject of knowledge) is indeed, as an indivisible point, simple, but yet is not on this account a substance (soul), but a mere condition or state. That of which it is itself a condition or state can only be known by it indirectly, as it were through reflection. But the ceasing of this state must not be regarded as the annihilation of that of which it is a state. This *knowing* and conscious *ego* is related to the will, which is the basis of its phenomenal appearance, as the picture in the focus of a concave mirror is related to the mirror itself, and has, like that picture, only a conditioned, nay, really a merely apparent, reality. Far from being the absolutely first (as, for example, Fichte teaches), it is at bottom tertiary, for it presupposes the organism, and the organism presupposes the will. I admit that all that is said here is really only an image and a figure, and in part also hypothetical; but we stand at a point to which thought can scarcely reach, not to speak of proof. I therefore request the reader to compare with this what I have adduced at length on this subject in chapter 20.

Now, although the true being of everything that exists consists in its will, and knowledge together with consciousness are only added at the higher grades of the phenomenon as something secondary, yet we find that the difference which the presence and the different degree of consciousness places between one being and another is exceedingly great and of important results. The subjective existence of the plant we must think of as a weak analogue, a mere shadow of comfort and discomfort; and

even in this exceedingly weak degree the plant knows only of itself, not of anything outside of it. On the other hand, even the lowest animal standing next to it is forced by increased and more definitely specified wants to extend the sphere of its existence beyond the limits of its own body. This takes place through knowledge. It has a dim apprehension of its immediate surroundings, out of which the motives for its action with a view to its own maintenance arise. Thus accordingly the *medium of motives* appears, and this is – the world existing objectively in time and space, *the world as idea*, however weak, obscure, and dimly dawning this first and lowest example of it may be. But it imprints itself ever more and more distinctly, ever wider and deeper, in proportion as in the ascending scale of animal organisations the brain is ever more perfectly produced. This progress in the development of the brain, thus of the intellect, and of the clearness of the idea, at each of these ever higher grades is, however, brought about by the constantly increasing and more complicated *wants* of this phenomenon of the will. This must always first afford the occasion for it, for without necessity nature (*i. e.*, the will which objectifies itself in it) produces nothing, least of all the hardest of its productions – a more perfect brain: in consequence of its *lex parsimoniæ*: *natura nihil agit frustra et nihil facit supervacaneum*. It has provided every animal with the organs which are necessary for its sustenance and the weapons necessary for its conflict, as I have shown at length in my work, "*Ueber den Willen in der Natur*,"

under the heading, "*Vergleichende Anatomie*." According to this measure, therefore, it imparts to each the most important of those organs concerned with what is without, the brain, with its function the intellect. The more complicated, through higher development, its organisation became, the more multifarious and specially determined did its wants also become, and consequently the more difficult and the more dependent upon opportunity was the provision of what would satisfy them. Thus there was needed here a wider range of sight, a more accurate comprehension, a more correct distinction of things in the external world, in all their circumstances and relations. Accordingly we see the faculty of forming ideas, and its organs, brain, nerves, and special senses, appear ever more perfect the higher we advance in the scale of animals; and in proportion as the cerebral system develops, the external world appears ever more distinct, many-sided, and complete in consciousness. The comprehension of it now demands ever more attention, and ultimately in such a degree that sometimes its relation to the will must momentarily be lost sight of in order that it may take place more purely and correctly. Quite definitely this first appears in the case of man. With him alone does a *pure separation of knowing and willing* take place. This is an important point, which I merely touch on here in order to indicate its position, and be able to take it up again later. But, like all the rest, nature takes this last step also in extending and perfecting the brain, and thereby in increasing the powers of knowledge, only in consequence of

the increased needs, thus in the service of the *will*. What this aims at and attains in man is indeed essentially the same, and not more than what is also its goal in the brutes – nourishment and propagation. But the requisites for the attainment of this goal became so much increased in number, and of so much higher quality and greater definiteness through the organisation of man, that a very much more considerable heightening of the intellect than the previous steps demanded was necessary, or at least was the easiest means of reaching the end. But since now the intellect, in accordance with its nature, is a tool of the most various utility, and is equally applicable to the most different kinds of ends, nature, true to her spirit of parsimony, could now meet through it alone all the demands of the wants which had now become so manifold. Therefore she sent forth man without clothing, without natural means of protection or weapons of attack, nay, with relatively little muscular power, combined with great frailty and little endurance of adverse influences and wants, in reliance upon that one great tool, in addition to which she had only to retain the hands from the next grade below him, the ape. But through the predominating intellect which here appears not only is the comprehension of motives, their multiplicity, and in general the horizon of the aims infinitely increased, but also the distinctness with which the will is conscious *of itself* is enhanced in the highest degree in consequence of the clearness of the whole consciousness which has been brought about, which is supported by the capacity for abstract knowledge, and now

attains to complete reflectiveness. But thereby, and also through the vehemence of the will, which is necessarily presupposed as the supporter of such a heightened intellect, an intensifying of all the *emotions* appears, and indeed the possibility of the *passions*, which, properly speaking, are unknown to the brute. For the vehemence of the will keeps pace with the advance of intelligence, because this advance really always springs from the increased needs and pressing demands of the will: besides this, however, the two reciprocally support each other. Thus the vehemence of the character corresponds to the greater energy of the beating of the heart and the circulation of the blood, which physically heighten the activity of the brain. On the other hand, the clearness of the intelligence intensifies the emotions, which are called forth by the outward circumstances, by means of the more vivid apprehension of the latter. Hence, for example, young calves quietly allow themselves to be packed in a cart and carried off; but young lions, if they are only separated from their mother, remain permanently restless, and roar unceasingly from morning to night; children in such a position would cry and vex themselves almost to death. The vivaciousness and impetuosity of the ape is in exact proportion to its greatly developed intellect. It depends just on this reciprocal relationship that man is, in general, capable of far greater sorrows than the brute, but also of greater joy in satisfied and pleasing emotions. In the same way his higher intelligence makes him more sensible to *ennui* than the brute; but it also becomes, if he is individually very

complete, an inexhaustible source of entertainment. Thus, as a whole, the manifestation of the will in man is related to that in the brute of the higher species, as a note that has been struck to its fifth pitched two or three octaves lower. But between the different kinds of brutes also the differences of intellect, and thereby of consciousness, are great and endlessly graduated. The mere analogy of consciousness which we must yet attribute to plants will be related to the still far deader subjective nature of an unorganised body, very much as the consciousness of the lowest species of animals is related to the *quasi* consciousness of plants. We may present to our imagination the innumerable gradations in the degree of consciousness under the figure of the different velocity of points which are unequally distant from the centre of a revolving sphere. But the most correct, and indeed, as our third book teaches, the natural figure of that gradation is afforded us by the scale in its whole compass from the lowest audible note to the highest. It is, however, the grade of consciousness which determines the grade of existence of a being. For every immediate existence is subjective: the objective existence is in the consciousness of another, thus only for this other, consequently quite indirect. Through the grade of consciousness beings are as different as through the will they are alike, for the will is what is common to them all.

But what we have now considered between the plant and the animal, and then between the different species of animals, occurs also between man and man. Here also that which is secondary,

the intellect, by means of the clearness of consciousness and distinctness of knowledge which depends upon it, constitutes a fundamental and immeasurably great difference in the whole manner of the existence, and thereby in the grade of it. The higher the consciousness has risen, the more distinct and connected are the thoughts, the clearer the perceptions the more intense the sensations. Through it everything gains more depth: emotion, sadness, joy, and sorrow. Commonplace blockheads are not even capable of real joy: they live on in dull insensibility. While to one man his consciousness only presents his own existence, together with the motives which must be apprehended for the purpose of sustaining and enlivening it, in a bare comprehension of the external world, it is to another a *camera obscura* in which the macrocosm exhibits itself:

> "He feels that he holds a little world
> Brooding in his brain,
> That it begins to work and to live,
> That he fain would give it forth."

The difference of the whole manner of existence which the extremes of the gradation of intellectual capacity establish between man and man is so great that that between a king and a day labourer seems small in comparison. And here also, as in the case of the species of animals, a connection between the vehemence of the will and the height of the intellect can be shown. Genius is conditioned by a passionate temperament,

and a phlegmatic genius is inconceivable: it seems as if an exceptionally vehement, thus a violently longing, will must be present if nature is to give an abnormally heightened intellect, as corresponding to it; while the merely physical account of this points to the greater energy with which the arteries of the head move the brain and increase its turgescence. Certainly, however, the quantity, quality, and form of the brain itself is the other and incomparably more rare condition of genius. On the other hand, phlegmatic persons are as a rule of very moderate mental power; and thus the northern, cold-blooded, and phlegmatic nations are in general noticeably inferior in mind to the southern vivacious and passionate peoples; although, as Bacon[2] has most pertinently remarked, if once a man of a northern nation is highly gifted by nature, he can then reach a grade which no southern ever attains to. It is accordingly as perverse as it is common to take the great minds of different nations as the standard for comparing their mental powers: for that is just attempting to prove the rule by the exceptions. It is rather the great majority of each nation that one has to consider: for one swallow does not make a summer. We have further to remark here that that very passionateness which is a condition of genius, bound up with its vivid apprehension of things, produces in practical life, where the will comes into play, and especially in the case of sudden occurrences, so great an excitement of the emotions that it disturbs and confuses the intellect; while the phlegmatic man in

[2] *De Augm. Scient.*, L. vi. c. 3.

such a case still retains the full use of his mental faculties, though they are much more limited, and then accomplishes much more with them than the greatest genius can achieve. Accordingly a passionate temperament is favourable to the original quality of the intellect, but a phlegmatic temperament to its use. Therefore genius proper is only for theoretical achievements, for which it can choose and await its time, which will just be the time at which the will is entirely at rest, and no waves disturb the clear mirror of the comprehension of the world. On the other hand, genius is ill adapted and unserviceable for practical life, and is therefore for the most part unfortunate. Goethe's "Tasso" is written from this point of view. As now genius proper depends upon the *absolute* strength of the intellect, which must be purchased by a correspondingly excessive vehemence of disposition, so, on the other hand, the great pre-eminence in practical life that makes generals and statesmen depends upon the *relative* strength of the intellect, thus upon the highest degree of it that can be attained without too great excitability of the emotions, and too great vehemence of character, and that therefore can hold its own even in the storm. Great firmness of will and constancy of mind, together with a capable and fine understanding, are here sufficient; and whatever goes beyond this acts detrimentally, for too great a development of the intelligence directly impedes firmness of character and resolution of will. Hence this kind of eminence is not so abnormal, and is a hundred times less rare than the former kind; and accordingly we see great generals

and great ministers appear in every age, whenever the merely external conditions are favourable to their efficiency. Great poets and philosophers, on the other hand, leave centuries waiting for them; and yet humanity may be contented even with this rare appearance of them, for their works remain, and do not exist only for the present, like the achievements of those other men. It is also quite in keeping with the law of the parsimony of nature referred to above that it bestows great eminence of mind in general upon very few, and genius only as the rarest of all exceptions, while it equips the great mass of the human race with no more mental power than is required for the maintenance of the individual and the species. For the great, and through their very satisfaction, constantly increasing needs of the human race make it necessary that the great majority of men should pass their lives in occupations of a coarsely physical and entirely mechanical description. And what would be the use to them of an active mind, a glowing imagination, a subtle understanding, and a profoundly penetrating intellect? These would only make them useless and unhappy. Therefore nature has thus gone about the most costly of all her productions in the least extravagant manner. In order not to judge unfairly one ought also to settle definitely one's expectations of the mental achievements of men generally from this point of view, and to regard, for example, even learned men, since as a rule they have become so only by the force of outward circumstances, primarily as men whom nature really intended to be tillers of the soil; indeed even professors

of philosophy ought to be estimated according to this standard, and then their achievements will be found to come up to all fair expectations. It is worth noticing that in the south, where the necessities of life press less severely upon the human race, and more leisure is allowed, the mental faculties even of the multitude also become more active and finer. It is physiologically noteworthy that the preponderance of the mass of the brain over that of the spinal cord and the nerves, which, according to Sömmerring's acute discovery, affords the true and closest measure of the degree of intelligence both of species of brutes and of individual men, at the same time increases the direct power of moving, the agility of the limbs; because, through the great inequality of the relation, the dependence of all motor nerves upon the brain becomes more decided; and besides this the cerebellum, which is the primary controller of movements, shares the qualitative perfection of the cerebrum; thus through both all voluntary movements gain greater facility, rapidity, and manageableness, and by the concentration of the starting-point of all activity that arises which Lichtenberg praises in Garrick: "that he appeared to be present in all the muscles of his body." Hence clumsiness in the movement of the body indicates clumsiness in the movement of the thoughts, and will be regarded as a sign of stupidity both in individuals and nations, as much as sleepiness of the countenance and vacancy of the glance. Another symptom of the physiological state of the case referred to is the fact that many persons are obliged at once to stand still whenever their

conversation with any one who is walking with them begins to gain some connection; because their brain, as soon as it has to link together a few thoughts, has no longer as much power over as is required to keep the limbs in motion by means of the motory nerves, so closely is everything measured with them.

It results from this whole objective consideration of the intellect and its origin, that it is designed for the comprehension of those ends upon the attainment of which depends the individual life and its propagation, but by no means for deciphering the inner nature of things and of the world, which exists independently of the knower. What to the plant is the susceptibility to light, in consequence of which it guides its growth in the direction of it, that is, in kind, the knowledge of the brute, nay, even of man, although in degree it is increased in proportion as the needs of each of these beings demand. With them all apprehension remains a mere consciousness of their relations to other things, and is by no means intended to present again in the consciousness of the knower the peculiar, absolutely real nature of these things. Rather, as springing from the will, the intellect is also only designed for its service, thus for the apprehension of motives; it is adapted for this, and is therefore of a thoroughly practical tendency. This also holds good if we conceive the significance of life as ethical; for in this regard too we find man knowing only for the benefit of his conduct. Such a faculty of knowledge, existing exclusively for practical ends, will from its nature always comprehend only the relations of things to

each other, but not the inner nature of them, as it is in itself. But to regard the complex of these relations as the absolute nature of the world as it is in itself, and the manner in which it necessarily exhibits itself in accordance with the laws predisposed in the brain as the eternal laws of the existence of all things, and then to construct ontology, cosmology, and theology in accordance with this view – this was really the old fundamental error, of which Kant's teaching has made an end. Here, then, our objective, and therefore for the most part physiological consideration of the intellect meets *his* transcendental consideration of it; nay, appears in a certain sense even as an *a priori* insight into it; for, from a point of view which we have taken up outside of it, our objective view enables us to know in its origin, and therefore as *necessary*, what that transcendental consideration, starting from facts of consciousness, presents only as a matter of fact. For it follows from our objective consideration of the intellect, that the world as idea, as it exists stretched out in space and time, and moves on regularly according to the strict law of causality, is primarily only a physiological phenomenon, a function of the brain, which brings it about, certainly upon the occasion of certain external stimuli, but yet in conformity with its own laws. Accordingly it is beforehand a matter of course, that what goes on in this function itself, and therefore through it and for it, must by no means be regarded as the nature of *things in themselves*, which exist independently of it and are entirely different from it, but primarily exhibits only the mode or manner

of this function itself, which can always receive only a very subordinate modification through that which exists completely independently of it, and sets it in motion as a stimulus. As, then, Locke claimed for the organs of sense all that comes into our apprehension by means of the sensation, in order to deny that it belongs to things in themselves, so Kant, with the same intention, and pursuing the same path further, has proved all that makes *perception* proper possible, thus space, time, and causality, to be functions of the brain; although he has refrained from using this physiological expression, to which, however, our present method of investigation, coming from the opposite side, the side of the real, necessarily leads us. Kant arrived upon his analytical path at the result that what we know are mere *phenomena*. What this mysterious expression really means becomes clear from our objective and genetic investigation of the intellect. The phenomena are the motives for the aims of individual will as they exhibit themselves in the intellect which the will has produced for this purpose (which itself appears as a phenomenon objectively, as the brain), and which, when comprehended, as far as one can follow their concatenation, afford us in their connection the world which extends itself objectively in time and space, and which I call the world as idea. Moreover, from our point of view, the objectionable element vanishes which in the Kantian doctrine arises from the fact that, because the intellect knows merely phenomena instead of things as they are in themselves, nay, in consequence of this is led astray into paralogisms and

unfounded hypostases by means of "sophistications, not of men but of the reason itself, from which even the wisest does not free himself, and if, perhaps indeed after much trouble, he avoids error, can yet never get quit of the illusion which unceasingly torments and mocks him" – because of all this, I say, the appearance arises that our intellect is intentionally designed to lead us into errors. For the objective view of the intellect given here, which contains a genesis of it, makes it conceivable that, being exclusively intended for practical ends, it is merely the *medium of motives*, and therefore fulfils its end by an accurate presentation of these, and that if we undertake to discover the nature of things in themselves, from the manifold phenomena which here exhibit themselves objectively to us, and their laws, we do this at our own peril and on our own responsibility. We have recognised that the original inner force of nature, without knowledge and working in the dark, which, if it has worked its way up to self-consciousness, reveals itself to this as *will*, attains to this grade only by the production of an animal brain and of knowledge, as its function, whereupon the phenomenon of the world of perception arises in this brain. But to explain this mere brain phenomenon, with the conformity to law which is invariably connected with its functions, as the objective inner nature of the world and the things in it, which is independent of the brain, existing before and after it, is clearly a spring which nothing warrants us in making. From this *mundus phœnomenon*, however, from this perception which arises under such a variety

of conditions, all our conceptions are drawn. They have all their content from it, or even only in relation to it. Therefore, as Kant says, they are only for immanent, not for transcendental, use; that is to say, these conceptions of ours, this first material of thought, and consequently still more the judgments which result from their combination, are unfitted for the task of thinking the nature of things in themselves, and the true connection of the world and existence; indeed, to undertake this is analogous to expressing the stereometrical content of a body in square inches. For our intellect, originally only intended to present to an individual will its paltry aims, comprehends accordingly mere *relations* of things, and does not penetrate to their inner being, to their real nature. It is therefore a merely superficial force, clings to the surface of things, and apprehends mere *species transitivas*, not the true being of things. From this it arises that we cannot understand and comprehend any single thing, even the simplest and smallest, through and through, but something remains entirely inexplicable to us in each of them. Just because the intellect is a product of nature, and is therefore only intended for its ends, the Christian mystics have very aptly called it "the light of nature," and driven it back within its limits; for nature is the object to which alone it is the subject. The thought from which the Critique of Pure Reason has sprung really lies already at the foundation of this expression. That we cannot comprehend the world on the direct path, *i. e.*, through the uncritical, direct application of the intellect and its data, but when we reflect upon it become ever more

deeply involved in insoluble mysteries, points to the fact that the intellect, thus knowledge itself, is secondary, a mere product, brought about by the development of the inner being of the world, which consequently till then preceded it, and it at last appeared as a breaking through to the light out of the obscure depths of the unconscious striving the nature of which exhibits itself as *will* to the self-consciousness which now at once arises. That which preceded knowledge as its condition, whereby it first became possible, thus its own basis, cannot be directly comprehended by it; as the eye cannot see itself. It is rather the relations of one existence to another, exhibiting themselves upon the surface of things, which alone are its affair, and are so only by means of the apparatus of the intellect, its forms, space, time, and causality. Just because the world has made itself without the assistance of knowledge, its whole being does not enter into knowledge, but knowledge presupposes the existence of the world; on which account the origin of the world does not lie within its sphere. It is accordingly limited to the relations between the things which lie before it, and is thus sufficient for the individual will, for the service of which alone it appeared. For the intellect is, as has been shown, conditioned by nature, lies in it, belongs to it, and cannot therefore place itself over against it as something quite foreign to it, in order thus to take up into itself its whole nature, absolutely, objectively, and thoroughly. It can, if fortune favours it, understand all that is in nature, but not nature itself, at least not directly.

However discouraging to metaphysics this essential limitation of the intellect may be, which arises from its nature and origin, it has yet another side which is very consoling. It deprives the direct utterances of nature of their unconditional validity, in the assertion of which *naturalism* proper consists. If, therefore, nature presents to us every living thing as appearing out of nothing, and, after an ephemeral existence, returning again for ever to nothing, and if it seems to take pleasure in the unceasing production of new beings, in order that it may be able unceasingly to destroy, and, on the other hand, is unable to bring anything permanent to light; if accordingly we are forced to recognise *matter* as that which alone is permanent, which never came into being and never passes away, but brings forth all things from its womb, whence its name appears to be derived from *mater rerum*, and along with it, as the father of things, *form*, which, just as fleeting as matter is permanent, changes really every moment, and can only maintain itself so long as it clings as a parasite to matter (now to one part of it, now to another), but when once it entirely loses hold, disappears, as is shown by the palæotheria and the ichthyosaurians, we must indeed recognise this as the direct and genuine utterance of nature, but on account of the origin of the intellect explained above, and the nature of it which results from this origin, we cannot ascribe to this utterance an *unconditional truth*, but rather only an entirely *conditional* truth, which Kant has appropriately indicated as such by calling it the *phenomenon* in opposition to the *thing in itself*.

If, in spite of this essential limitation of the intellect, it is possible, by a circuitous route, to arrive at a certain understanding of the world and the nature of things, by means of reflection widely pursued, and the skilful combination of objective knowledge directed towards without, with the data of self-consciousness, this will yet be only a very limited, entirely indirect, and relative understanding, a parabolical translation into the forms of knowledge, thus a *quadam prodire tenus*, which must always leave many problems still unsolved. On the other hand, the fundamental error of the old *dogmatism* in all its forms, which was destroyed by Kant, was this, that it started absolutely from *knowledge*, i.e., *the world as idea*, in order to deduce and construct from its laws being in general, whereby it accepted that world of idea, together with its laws, as absolutely existing and absolutely real; while its whole existence is throughout relative, and a mere result or phenomenon of the true being which lies at its foundation, – or, in other words, that it constructed an ontology when it had only materials for a dianoiology. Kant discovered the subjectively conditioned and therefore entirely immanent nature of knowledge, *i. e.*, its unsuitableness for transcendental use, from the constitution of knowledge itself; and therefore he very appropriately called his doctrine the *Critique of Reason*. He accomplished this partly by showing the important and thoroughly *a priori* part of all knowledge, which, as throughout subjective, spoils all objectivity, and partly by professedly proving that if they were followed out

to the end the principles of knowledge, taken as purely objective, led to contradictions. He had, however, hastily assumed that, apart from *objective* knowledge, *i. e.*, apart from the world as *idea*, there is nothing given us except conscience, out of which he constructed the little that still remained of metaphysics, his moral theology, to which, however, he attributed absolutely only a practical validity, and no theoretical validity at all. He had overlooked that although certainly objective knowledge, or the world as idea, affords nothing but phenomena, together with their phenomenal connection and regressus, yet our own nature necessarily also belongs to the world of things in themselves, for it must have its root in it. But here, even if the root itself cannot be brought to light, it must be possible to gather some data for the explanation of the connection of the world of phenomena with the inner nature of things. Thus here lies the path upon which I have gone beyond Kant and the limits which he drew, yet always restricting myself to the ground of reflection, and consequently of honesty, and therefore without the vain pretension of intellectual intuition or absolute thought which characterises the period of pseudo-philosophy between Kant and me. In his proof of the insufficiency of rational knowledge to fathom the nature of the world Kant started from knowledge as a *fact*, which our consciousness affords us, thus in this sense he proceeded *a posteriori*. But in this chapter, and also in my work, "*Ueber den Willen in der Natur*," I have sought to show what knowledge is in its *nature and origin*, something

secondary, designed for individual ends; whence it follows that it *must be* insufficient to fathom the nature of the world. Thus so far I have reached the same goal *a priori*. But one never knows anything wholly and completely until one has gone right round it for that purpose, and has got back to it from the opposite side from which one started. Therefore also, in the case of the important fundamental knowledge here considered, one must not merely go from the intellect to the knowledge of the world, as Kant has done, but also from the world, taken as given, to the intellect, as I have undertaken here. Then this physiological consideration, in the wider sense, becomes the supplement of that ideological, as the French say, or, more accurately, transcendental consideration.

In the above, in order not to break the thread of the exposition, I have postponed the explanation of one point which I touched upon. It was this, that in proportion as, in the ascending series of animals, the intellect appears ever more developed and complete, *knowledge* always separates itself more distinctly from *will*, and thereby becomes purer. What is essential upon this point will be found in my work, "*Ueber den Willen in der Natur*," under the heading, "*Pflanzenphysiologie*" (p. 68-72 of the second, and 74-77 of the third edition), to which I refer, in order to avoid repetition, and merely add here a few remarks. Since the plant possesses neither irritability nor sensibility, but the will objectifies itself in it only as plastic or reproductive power, it has neither muscle nor nerve. In the lowest grades

of the animal kingdom, in zoophites, especially in polyps, we cannot as yet distinctly recognise the separation of these two constituent parts, but still we assume their existence, though in a state of fusion; because we perceive movements which follow, not, as in the case of plants, upon mere stimuli, but upon motives, *i. e.*, in consequence of a certain apprehension. Now in proportion as, in the ascending series of animals, the nervous and muscular systems *separate* ever more distinctly from each other, till in the vertebrate animals, and most completely in man, the former divides into an organic and a cerebral nervous system, and of these the latter again develops into the excessively complicated apparatus of the cerebrum and cerebellum, spinal marrow, cerebral and spinal nerves, sensory and motor nerve fascicles, of which only the cerebrum, together with the sensory nerves depending upon it, and the posterior spinal nerve fascicles are intended for the *apprehension of the motive* from the external world, while all the other parts are intended for the *transmission* of the motive to the muscles in which the will manifests itself directly; in the same proportion does the *motive* separate ever more distinctly in *consciousness* from the *act of will* which it calls forth, thus the *idea* from the *will*; and thereby the *objectivity* of consciousness constantly increases, for the ideas exhibit themselves ever more distinctly and purely in it. These two *separations* are, however, really only one and the same, which we have here considered from two sides, the objective and the subjective, or first in the consciousness of

other things and then in self-consciousness. Upon the degree of this separation ultimately depends the difference and the gradation of intellectual capacity, both between different kinds of animals and between individual human beings; thus it gives the standard for the intellectual completeness of these beings. For the clearness of the consciousness of the external world, the objectivity of the perception, depends upon it. In the passage referred to above I have shown that the brute only perceives things so far as they are *motives* for its will, and that even the most intelligent of the brutes scarcely overstep these limits, because their intellect is too closely joined to the will from which it has sprung. On the other hand, even the stupidest man comprehends things in some degree *objectively*; for he recognises not merely what they are with reference to him, but also something of what they are with reference to themselves and to other things. Yet in the case of very few does this reach such a degree that they are in a position to examine and judge of anything purely *objectively*; but "that must I do, that must I say, that must I believe," is the goal to which on every occasion their thought hastens in a direct line, and at which their understanding at once finds welcome rest. For thinking is as unendurable to the weak head as the lifting of a burden to the weak arm; therefore both hasten to set it down. The objectivity of knowledge, and primarily of perceptive knowledge, has innumerable grades, which depend upon the energy of the intellect and its separation from the will, and the highest of which is *genius*, in which the comprehension of the

external world becomes so pure and objective that to it even more reveals itself directly in the individual thing than the individual thing itself, namely, the nature of its whole *species*, *i. e.*, its Platonic Idea; which is brought about by the fact that in this case the will entirely vanishes from consciousness. Here is the point at which the present investigation, starting from physiological grounds, connects itself with the subject of our third book, the metaphysics of the beautiful, where æsthetic comprehension proper, which, in a high degree, is peculiar to genius alone, is fully considered as the condition of pure, *i. e.*, perfectly will-less, and on that account completely objective knowledge. According to what has been said, the rise of intelligence, from the obscurest animal consciousness up to that of man, is a progressive *loosening of the intellect from the will*, which appears complete, although only as an exception, in the *genius*. Therefore genius may be defined as the highest grade of the *objectivity* of knowledge. The condition of this, which so seldom occurs, is a decidedly larger measure of intelligence than is required for the service of the will, which constitutes its basis; it is accordingly this free surplus which first really properly comes to know the world, *i. e.*, comprehends it perfectly *objectively*, and now paints pictures, composes poems, and thinks in accordance with this comprehension.

Chapter XXIII.[3] On The Objectification Of The Will In Unconscious Nature

That the will which we find within us does not proceed, as philosophy has hitherto assumed, first from knowledge, and indeed is a mere modification of it, thus something secondary, derived, and, like knowledge itself, conditioned by the brain; but that it is the *prius* of knowledge, the kernel of our nature, and that original force itself which forms and sustains the animal body, in that it carries out both its unconscious and its conscious functions; – this is the first step in the fundamental knowledge of my metaphysics. Paradoxical as it even now seems to many that the will in itself is without knowledge, yet the scholastics in some way already recognised and confessed it; for Jul. Cæs. Vaninus (that well-known sacrifice to fanaticism and priestly fury), who was thoroughly versed in their philosophy, says in his "*Amphitheatro*," p. 181: "*Voluntas potentia cœca est, ex scholasticorum opinione*." That, further, it is that same will which in the plant forms the bud in order to develop the leaf and the flower out of it; nay, that the regular form of the crystal is only the trace which its momentary effort has left behind, and that in general, as the true and only αυτοματον, in the proper sense of the word, it lies at the foundation of all the forces of unorganised

[3] This chapter is connected with § 23 of the first volume.

nature, plays, acts, in all their multifarious phenomena, imparts power to their laws, and even in the crudest mass manifests itself as gravity; – this insight is the second step in that fundamental knowledge, and is brought about by further reflection. But it would be the grossest misunderstanding to suppose that this is a mere question of a word to denote an unknown quantity. It is rather the most real of all real knowledge which is here expressed in language. For it is the tracing back of that which is quite inaccessible to our immediate knowledge, and therefore in its essence foreign and unknown to us, which we denote by the words *force of nature*, to that which is known to us most accurately and intimately, but which is yet only accessible to us in our own being and directly, and must therefore be carried over from this to other phenomena. It is the insight that what is inward and original in all the changes and movements of bodies, however various they may be, is in its nature identical; that yet we have only one opportunity of getting to know it more closely and directly, and that is in the movements of our own body. In consequence of this knowledge we must call it *will*. It is the insight that that which acts and strives in nature, and exhibits itself in ever more perfect phenomena, when it has worked itself up so far that the light of knowledge falls directly upon it, *i. e.*, when it has attained to the state of self-consciousness – exists as that *will*, which is what is most intimately known to us, and therefore cannot be further explained by anything else, but rather affords the explanation of all other things. It is accordingly the

thing in itself so far as this can ever be reached by knowledge. Consequently it is that which must express itself in some way in everything in the world, for it is the inner nature of the world and the kernel of all phenomena.

As my essay, "*Ueber den Willen in der Natur*," specially refers to the subject of this chapter, and also adduces the evidence of unprejudiced empiricists in favour of this important point of my doctrine, I have only to add now to what is said there a few supplementary remarks, which are therefore strung together in a somewhat fragmentary manner.

First, then, with reference to plant life, I draw attention to the remarkable first two chapters of Aristotle's work upon plants. What is most interesting in them, as is so often the case with Aristotle, are the opinions of earlier profound philosophers quoted by him. We see there that Anaxagoras and Empedocles quite rightly taught that plants have the motion of their growth by virtue of their indwelling *desires* (επιθυμια); nay, that they also attributed to them pleasure and pain, therefore sensation. But Plato only ascribed to them desires, and that on account of their strong appetite for nutrition (*cf.* Plato in the "*Timœus*," p. 403, Bip.) Aristotle, on the other hand, true to his customary method, glides on the surface of things, confines himself to single characteristics and conceptions fixed by current expressions, and asserts that without sensation there can be no desires, and that plants have not sensation. He is, however, in considerable embarrassment, as his confused language shows, till here also,

"where fails the comprehension, a word steps promptly in as deputy," namely, το θρεπτικον, the faculty of nourishing. Plants have this, and thus a part of the so-called soul, according to his favourite division into *anima vegetativa*, *sensitiva*, and *intellectiva*. This, however, is just a scholastic *Quidditas*, and signifies *plantæ nutriuntur quia habent facultatem nutritivam*. It is therefore a bad substitute for the more profound research of his predecessors, whom he is criticising. We also see, in the second chapter, that Empedocles even recognised the sexuality of plants; which Aristotle then also finds fault with, and conceals his want of special knowledge behind general propositions, such as this, that plants could not have both sexes combined, for if so they would be more complete than animals. By quite an analogous procedure he displaces the correct astronomical system of the world of the Pythagoreans, and by his absurd fundamental principles, which he specially explains in the books *de Cœlo*, introduces the system of Ptolemy, whereby mankind was again deprived of an already discovered truth of the greatest importance for almost two thousand years.

I cannot refrain from giving here the saying of an excellent biologist of our own time who fully agrees with my teaching. It is G. R. Treviranus, who, in his work, "*Ueber die Erscheinungen und Gesetze des organischen Lebens*," 1832, Bd. 2, Abth. 1, § 49, has said what follows: "A form of life is, however, conceivable in which the effect of the external upon the internal produces merely feelings of desire or dislike. Such is the life of plants. In

the higher forms of animal life the external is felt as something objective." Treviranus speaks here from pure unprejudiced comprehension of nature, and is as little conscious of the metaphysical importance of his words as of the *contradictio in adjecto* which lies in the conception of something "felt as objective," a conception which indeed he works out at great length. He does not know that all feeling is essentially subjective, and all that is objective is, on the other hand, perception, and therefore a product of the understanding. Yet this does not detract at all from the truth and importance of what he says.

In fact, in the life of plants the truth that will can exist without knowledge is apparent – one might say palpably recognisable. For here we see a decided effort, determined by wants, modified in various ways, and adapting itself to the difference of the circumstances, yet clearly without knowledge. And just because the plant is without knowledge it bears its organs of generation ostentatiously in view, in perfect innocence; it knows nothing about it. As soon, on the other hand, as in the series of existences knowledge appears the organs of generation are transferred to a hidden part. Man, however, with whom this is again less the case, conceals them intentionally: he is ashamed of them.

Primarily, then, the vital force is identical with the will, but so also are all other forces of nature; though this is less apparent. If, therefore, we find the recognition of a desire, *i. e.*, of a will, as the basis of *plant life*, expressed at all times, with more or less distinctness of conception, on the other hand, the reference

of the forces of *unorganised* nature to the same foundation is rarer in proportion as their remoteness from our own nature is greater. In fact, the boundary between the organised and the unorganised is the most sharply drawn in the whole of nature, and perhaps the only one that admits of no transgressions; so that *natura non facit saltus* seems to suffer an exception here. Although certain crystallisations display an external form resembling the vegetable, yet even between the smallest lichen, the lowest fungus, and everything unorganised there remains a fundamental and essential difference. In the *unorganised* body that which is essential and permanent, thus that upon which its identity and integrity rests, is the material, the *matter*; what is unessential and changing is, on the other hand, the *form*. With the *organised* body the case is exactly reversed; for its life, *i. e.*, its existence as an organised being, simply consists in the constant change of the *material*, while the *form* remains permanent. Its being and its identity thus lies in the *form* alone. Therefore the continuance of the *unorganised* body depends upon *repose* and exclusion from external influences: thus alone does it retain its existence; and if this condition is perfect, such a body lasts for ever. The continuance of the *organised* body, on the contrary, just depends upon continual *movement* and the constant reception of external influences. As soon as these are wanting and the movement in it stops it is dead, and thereby ceases to be organic, although the trace of the organism that has been still remains for a while. Therefore the talk, which is so

much affected in our own day, of the life of what is unorganised, indeed of the globe itself, and that it, and also the planetary system, is an organism, is entirely inadmissible. The predicate life belongs only to what is organised. Every organism, however, is throughout organised, is so in all its parts; and nowhere are these, even in their smallest particles, composed by aggregation of what is unorganised. Thus if the earth were an organism, all mountains and rocks, and the whole interior of their mass, would necessarily be organised, and accordingly really nothing unorganised would exist; and therefore the whole conception of it would be wanting.

On the other hand, that the manifestation of a *will* is as little bound up with life and organisation as with knowledge, and that therefore the unorganised has also a will, the manifestations of which are all its fundamental qualities, which cannot be further explained, – this is an essential point in my doctrine; although the trace of such a thought is far seldomer found in writers who have preceded me than that of the will in plants, where, however, it is still unconscious.

In the forming of the crystal we see, as it were, a tendency towards an attempt at life, to which, however, it does not attain, because the fluidity of which, like a living thing, it is composed at the moment of that movement is not enclosed in a *skin*, as is always the case with the latter, and consequently it has neither vessels in which that movement could go on, nor does anything separate it from the external world. Therefore, rigidity

at once seizes that momentary movement, of which only the trace remains as the crystal.

The thought that the will, which constitutes the basis of our own nature, is also the same will which shows itself even in the lowest unorganised phenomena, on account of which the conformity to law of both phenomena shows a perfect analogy, lies at the foundation of Goethe's "*Wahlverwandtschaften*," as the title indeed indicates, although he himself was unconscious of this.

Mechanics and astronomy specially show us how this will conducts itself so far as it appears at the lowest grade of its manifestation merely as gravity, rigidity, and inertia. Hydraulics shows us the same thing where rigidity is wanting and the fluid material is now unrestrainedly surrendered to its predominating passion, gravity. In this sense hydraulics may be conceived as a characteristic sketch of water, for it presents to us the manifestations of will to which water is moved by gravity; these always correspond exactly to the external influences, for in the case of all non-individual existences there is no particular character in addition to the general one; thus they can easily be referred to fixed characteristics, which are called laws, and which are learned by experience of water. These laws accurately inform us how water will conduct itself under all different circumstances, on account of its gravity, the unconditioned mobility of its parts, and its want of elasticity. Hydrostatics teaches how it is brought to rest through gravity; hydrodynamics,

how it is set in motion; and the latter has also to take account of hindrances which adhesion opposes to the will of water: the two together constitute hydraulics. In the same way Chemistry teaches us how the will conducts itself when the inner qualities of materials obtain free play by being brought into a fluid state, and there appears that wonderful attraction and repulsion, separating and combining, leaving go of one to seize upon another, from which every precipitation originates, and the whole of which is denoted by "elective affinity" (an expression which is entirely borrowed from the conscious will). But Anatomy and Physiology allow us to see how the will conducts itself in order to bring about the phenomenon of life and sustain it for a while. Finally, the poet shows us how the will conducts itself under the influence of motives and reflection. He exhibits it therefore for the most part in the most perfect of its manifestations, in rational beings, whose character is individual, and whose conduct and suffering he brings before us in the Drama, the Epic, the Romance, &c. The more correctly, the more strictly according to the laws of nature his characters are there presented, the greater is his fame; hence Shakespeare stands at the top. The point of view which is here taken up corresponds at bottom to the spirit in which Goethe followed and loved the natural sciences, although he was not conscious of the matter in the abstract. Nay more, this not only appears from his writings, but is also known to me from his personal utterances.

If we consider the will, where no one denies it, in conscious

beings, we find everywhere, as its fundamental effort, the *self-preservation* of every being: *omnis natura vult esse conservatrix sui*. But all manifestations of this fundamental effort may constantly be traced back to a seeking or pursuit and a shunning or fleeing from, according to the occasion. Now this also may be shown even at the lowest grades of nature, that is, of the objectification of the will, where the bodies still act only as bodies in general, thus are the subject-matter of mechanics, and are considered only with reference to the manifestations of impenetrability, cohesion, rigidity, elasticity, and gravity. Here also the *seeking* shows itself as gravitation, and the *shunning* as the receiving of motion; and the *movableness* of bodies by pressure or impact, which constitutes the basis of mechanics, is at bottom a manifestation of the effort after *self-preservation*, which dwells in them also. For, since as bodies they are impenetrable, this is the sole means of preserving their cohesion, thus their continuance at any time. The body which is impelled or exposed to pressure would be crushed to pieces by the impelling or pressing body if it did not withdraw itself from its power by flight, in order to preserve its cohesion; and when flight is impossible for it this actually happens. Indeed, one may regard *elastic* bodies as the more *courageous*, which seek to repel the enemy, or at least to prevent him from pursuing further. Thus in the one secret which (besides gravity) is left by mechanics otherwise so clear, in the communicability of motion, we see a manifestation of the fundamental effort of the will in all its

phenomena, the effort after self-preservation, which shows itself even at the lowest grades as that which is essential.

In unorganised nature the will objectifies itself primarily in the universal forces, and only by means of these in the phenomena of the particular things which are called forth by causes. In § 26 of the first volume I have fully explained the relation between cause, force of nature, and will as thing in itself. One sees from that explanation that metaphysics never interrupts the course of physics, but only takes up the thread where physics leaves it, at the original forces in which all causal explanation has its limits. Only here does the metaphysical explanation from the will as the thing in itself begin. In the case of every physical phenomenon, of every *change* of material things, its cause is primarily to be looked for; and this cause is just such a particular *change* which has appeared immediately before it. Then, however, the original force of nature is to be sought by virtue of which this cause was capable of acting. And first of all the *will* is to be recognised as the inner nature of this force in opposition to its manifestation. Yet the will shows itself just as directly in the fall of a stone as in the action of the man; the difference is only that its particular manifestation is in the one case called forth by a motive, in the other by a mechanically acting cause, for example, the taking away of what supported the stone; yet in both cases with equal necessity; and that in the one case it depends upon an individual character, in the other upon an universal force of nature. This identity of what is fundamentally essential is even made palpable

to the senses. If, for instance, we carefully observe a body which has lost its equilibrium, and on account of its special form rolls back and forward for a long time till it finds its centre of gravity again, a certain appearance of life forces itself upon us, and we directly feel that something analogous to the foundation of life is also active here. This is certainly the universal force of nature, which, however, in itself identical with the *will*, becomes here, as it were, the soul of a very brief *quasi* life. Thus what is identical in the two extremes of the manifestation of the will makes itself faintly known here even to direct perception, in that this raises a feeling in us that here also something entirely original, such as we only know in the acts of our own will, directly succeeded in manifesting itself.

We may attain to an intuitive knowledge of the existence and activity of the will in unorganised nature in quite a different and a sublime manner if we study the problem of the three heavenly bodies, and thus learn more accurately and specially the course of the moon round the earth. By the different combinations which the constant change of the position of these three heavenly bodies towards each other introduces, the course of the moon is now accelerated; now retarded, now it approaches the earth, and again recedes from it; and this again takes place differently in the perihelion of the earth from in its aphelion, all of which together introduces such irregularity into the moon's course that it really obtains a capricious appearance; for, indeed, Kepler's third law is no longer constantly valid, but in equal times it describes

unequal areas. The consideration of this course is a small and separate chapter of celestial mechanics, which is distinguished in a sublime manner from terrestrial mechanics by the absence of all impact and pressure, thus of the *vis a tergo* which appears to us so intelligible, and indeed of the actually completed case, for besides *vis inertiæ* it knows no other moving and directing force, except only gravitation, that longing for union which proceeds from the very inner nature of bodies. If now we construct for ourselves in imagination the working of this given case in detail, we recognise distinctly and directly in the moving force here that which is given to us in self-consciousness as will. For the alterations in the course of the earth and the moon, according as one of them is by its position more or less exposed to the influence of the sun, are evidently analogous to the influence of newly appearing motives upon our wills, and to the modifications of our action which result.

The following is an illustrative example of another kind. Liebig (*Chemie in Anwendung auf Agrikultur*, p. 501), says: "If we bring moist copper into air which contains carbonic acid, the affinity of the metal for the oxygen of the air will be increased by the contact with this acid to such a degree that the two will combine with each other; its surface will be coated with green carbonic oxide of copper. But now two bodies which have the capacity of combining, the moment they meet assume opposite electrical conditions. Therefore if we touch the copper with iron, by producing a special electrical state, the capacity of the copper

to enter into combination with the oxygen is destroyed; even under the above conditions it remains bright." The fact is well known and of technical use. I quote it in order to say that here the will of the copper, laid claim to and occupied by the electrical opposition to iron, leaves unused the opportunity which presents itself for its chemical affinity for oxygen and carbonic acid. Accordingly it conducts itself exactly as the will in a man who omits an action which he would otherwise feel himself moved to in order to perform another to which a stronger motive urges him.

I have shown in the first volume that the forces of nature lie outside the chain of causes and effects, because they constitute their accompanying condition, their metaphysical foundation, and therefore prove themselves to be eternal and omnipresent, *i. e.*, independent of time and space. Even in the uncontested truth that what is essential to a *cause* as such consists in this, that it will produce the same effect at any future time as it does now, it is already involved that something lies in the cause which is independent of the course of time, *i. e.*, is outside of all time; this is the force of nature which manifests itself in it. One can even convince oneself to a certain extent empirically and as a matter of fact of the *ideality* of this form of our perception by fixing one's eyes upon the powerlessness of time as opposed to natural forces. If, for example, a rotatory motion is imparted to a planet by some external cause, if no new cause enters to stop it, this motion will endure for ever. This could not be so if time

were something in itself and had an objective, real existence; for then it would necessarily also produce some effect. Thus we see here, on the one hand, the *forces of nature*, which manifest themselves in that rotation, and, if it is once begun, carry it on for ever without becoming weary or dying out, prove themselves to be eternal or timeless, and consequently absolutely real and existing in themselves; and, on the other hand, *time* as something which consists only in the manner in which we apprehend that phenomenon, since it exerts no power and no influence upon the phenomenon itself; for *what does not act is not.*

We have a natural inclination whenever it is possible to explain every natural phenomenon *mechanically*; doubtless because mechanics calls in the assistance of the fewest original, and hence inexplicable, forces, and, on the other hand, contains much that can be known *a priori*, and therefore depends upon the forms of our own intellect, which as such carries with it the highest degree of comprehensibility and clearness. However, in the "Metaphysical First Principles of Natural Science" Kant has referred mechanical activity itself to a dynamical activity. On the other hand, the application of mechanical explanatory hypotheses, beyond what is demonstrably mechanical, to which, for example, Acoustics also belongs, is entirely unjustified, and I will never believe that even the simplest chemical combination or the difference of the three states of aggregation will ever admit of mechanical explanation, much less the properties of light, of heat, and electricity. These will always admit only of a

dynamical explanation, *i. e.*, one which explains the phenomenon from original forces which are entirely different from those of impact, pressure, weight, &c., and are therefore of a higher kind, *i. e.*, are more distinct objectifications of that will which obtains visible form in all things. I am of opinion that light is neither an emanation nor a vibration; both views are akin to that which explains transparency from pores and the evident falseness of which is proved by the fact that light is subject to no mechanical laws. In order to obtain direct conviction of this one only requires to watch the effects of a storm of wind, which bends, upsets, and scatters everything, but during which a ray of light shooting down from a break in the clouds is entirely undisturbed and steadier than a rock, so that with great directness it imparts to us the knowledge that it belongs to another order of things than the mechanical: it stands there unmoved like a ghost. Those constructions of light from molecules and atoms which have originated with the French are indeed a revolting absurdity. An article by Ampère, who is otherwise so acute, upon light and heat, which is to be found in the April number of the "*Annales de chimie et physique*," of 1835, may be considered as a flagrant expression of this, and indeed of the whole of atomism in general. There the solid, the fluid, and the elastic consist of the same atoms, and all differences arise solely from their aggregation; nay, it is said that space indeed is infinitely divisible, but not matter; because, if the division has been carried as far as the atoms, the further division must fall in the spaces between

the atoms! Light and heat, then, are here vibrations of the atoms; and sound, on the other hand, is a vibration of the molecules composed of the atoms. In truth, however, these atoms are a fixed idea of the French savants, and therefore they just speak of them as if they had seen them. Otherwise one would necessarily marvel that such a matter-of-fact nation as the French can hold so firmly to a completely transcendent hypothesis, which is quite beyond the possibility of experience, and confidently build upon it up to the sky. This is just a consequence of the backward state of the metaphysics they shun so much, which is poorly represented by M. Cousin, who, with all good will, is shallow and very scantily endowed with judgment. At bottom they are still Lockeians, owing to the earlier influence of Condillac. Therefore for them the thing in itself is really matter, from the fundamental properties of which, such as impenetrability, form, hardness, and the other primary qualities, everything in the world must be ultimately explicable. They will not let themselves be talked out of this, and their tacit assumption is that matter can only be moved by mechanical forces. In Germany Kant's teaching has prevented the continuance of the absurdities of the atomistic and purely mechanical physics for any length of time; although at the present moment these views prevail here also, which is a consequence of the shallowness, crudeness, and folly introduced by Hegel. However, it cannot be denied that not only the evidently porous nature of natural bodies, but also two special doctrines of modern physics, apparently render assistance

to the atomic nuisance. These are, Hauz's Crystallography, which traces every crystal back to its kernel form, which is an ultimate form, though only *relatively* indivisible; and Berzelius's doctrine of chemical atoms, which are yet mere expressions for combining proportions, thus only arithmetical quantities, and at bottom nothing more than counters. On the other hand, Kant's thesis in the second antinomy in defence of atoms, which is certainly only set up for dialectical purposes, is a mere sophism, as I have proved in my criticism of his philosophy, and our understanding itself by no means leads us necessarily to the assumption of atoms. For just as little as I am obliged to think that the slow but constant and uniform *motion* of a body before my eyes is composed of innumerable motions which are absolutely quick, but broken and interrupted by just as many absolutely short moments of rest, but, on the contrary, know very well that the stone that has been thrown flies more slowly than the projected bullet, yet never pauses for an instant on the way, so little am I obliged to think of the mass of a body as consisting of atoms and the spaces between them, *i. e.*, of absolute density and absolute vacuity; but I comprehend those two phenomena without difficulty as constant *continua*, one of which uniformly fills time and the other space. But just as the one motion may yet be quicker than another, *i. e.*, in an equal time can pass through more space, so also one body may have a greater specific gravity than another, *i. e.*, in equal space may contain more matter: in both cases the difference depends upon the intensity of the acting

force; for Kant (following Priestley) has quite correctly reduced matter to forces. But even if the analogy here set up should not be admitted as valid, and it should be insisted upon that the difference of specific gravity can only have its ground in porosity, even this assumption would always lead, not to atoms, but only to a perfectly dense matter, unequally distributed among different bodies; a matter which would certainly be no longer *compressible*, when no pores ran through it, but yet, like the space which it fills, would always remain infinitely *divisible*. For the fact that it would have no pores by no means involves that no possible force could do away with the continuity of its spatial parts. For to say that everywhere this is only possible by extending the already existing intervals is a purely arbitrary assertion.

The assumption of atoms rests upon the two phenomena which have been touched upon, the difference of the specific gravity of bodies and that of their compressibility, for both are conveniently explained by the assumption of atoms. But then both must also always be present in like measure, which is by no means the case. For, for example, water has a far lower specific gravity than all metals properly so called. It must thus have fewer atoms and greater interstices between them, and consequently be very compressible: but it is almost entirely incompressible.

The defence of atoms might be conducted in this way. One may start from porosity and say something of this sort: All bodies have pores, and therefore so also have all parts of a body: now if this were carried out to infinity, there would ultimately

be nothing left of a body but pores. The refutation would be that what remained over would certainly have to be assumed as without pores, and so far as absolutely dense, yet not on that account as consisting of absolutely indivisible particles, atoms; accordingly it would certainly be absolutely incompressible, but not absolutely indivisible. It would therefore be necessary that it should be asserted that the division of a body is only possible by penetrating into its pores; which, however, is entirely unproved. If, however, this is assumed, then we certainly have atoms, *i. e.*, absolutely indivisible bodies, thus bodies of such strong cohesion of their spatial parts that no possible power can separate them: but then one may just as well assume such bodies to be large as small, and an atom might be as big as an ox, if it only would resist all possible attacks upon it.

Imagine two bodies of very different kinds, entirely freed from all pores by compression, as by means of hammering, or by pulverisation; – would their specific gravity then be the same? This would be the criterion of dynamics.

Chapter XXIV. On Matter

Matter has already been spoken of in the fourth chapter of the supplements to the first book, when we were considering the part of our knowledge of which we are conscious *a priori*. But it could only be considered there from a one-sided point of view, because we were then concerned merely with its relation to the forms of our intellect, and not to the thing in itself, and therefore we investigated it only from the subjective side, *i. e.*, so far as it is an idea, and not from the objective side, *i. e.*, with regard to what it may be in itself. In the first respect, our conclusion was that it is objective *activity* in general, yet conceived without fuller determination; therefore it takes the place of causality in the table of our *a priori* knowledge which is given there. For what is material is that which *acts* (the actual) in general, and regarded apart from the specific nature of its action. Hence also matter, merely as such, is not an object of *perception*, but only of *thought*, and thus is really an abstraction. It only comes into perception in connection with form and quality, as a body, *i. e.*, as a fully determined kind of activity. It is only by abstracting from this fuller determination that we think of matter as such, *i. e.*, separated from form and quality; consequently under matter we think of *acting* absolutely and in general, thus of *activity* in the abstract. The more fully determined acting we then conceive as the *accident* of matter; but only by means of this does

matter become perceptible, *i. e.*, present itself as a body and an object of experience. Pure matter, on the other hand, which, as I have shown in the Criticism of the Kantian Philosophy, alone constitutes the true and admissible content of the conception of *substance*, is causality itself, thought objectively, consequently as in space, and therefore filling it. Accordingly the whole being of matter consists in *acting*. Only thus does it occupy space and last in time. It is through and through pure causality. Therefore wherever there is action there is matter, and the material is the active in general. But causality itself is the form of our understanding; for it is known to us *a priori*, as well as time and space. Thus matter also, *so far* and up to this point, belongs to the formal part of our knowledge, and is consequently that form of the understanding, *causality* itself, bound up with space and time, hence objectified, *i. e.*, conceived as that which fills space. (The fuller explanation of this doctrine will be found in the second edition of the essay on the principle of sufficient reason, p. 77; third edition, p. 82.) So far, however, matter is properly not the *object* but the *condition* of experience; like the pure understanding itself, whose function it so far is. Therefore of pure matter there is also only a *conception*, no *perception*. It enters into all external experience as a necessary constituent part of it; yet it cannot be given in any experience, but is only *thought*, and thought indeed as that which is absolutely inert, inactive, formless, and without qualities, and which is yet the supporter of all forms, qualities, and effects. Accordingly, of all

fleeting phenomena, thus of all manifestations of natural forces and all living beings, matter is the *permanent substratum* which is necessarily produced by the forms of our intellect in which the world as *idea* exhibits itself. As such, and as having sprung from the forms of the intellect, it is entirely *indifferent* to those phenomena themselves, *i. e.*, it is just as ready to be the supporter of this force of nature as of that, whenever, under the guidance of causality, the necessary conditions appear; while it itself, just because its existence is really only *formal*, *i. e.*, is founded in the *intellect* must be thought as that which under all that change is absolutely permanent, thus with regard to time is without beginning and without end. This is why we cannot give up the thought that anything may be made out of anything, for example, gold out of lead; for this would only require that we should find out and bring about the intermediate states which matter, in itself indifferent, would have to pass through upon that path. For *a priori* we can never see why the same matter which is now the supporter of the quality lead could not some time become the supporter of the quality gold. Matter, as that which is only *thought a priori*, is distinguished from the *a priori intuitions* or *perceptions* proper by the fact that we can also think it entirely away; space and time, on the contrary, never. But this only shows that we can present to ourselves space and time in imagination without matter. For the matter which has once been placed in them, and accordingly thought as *existing*, we can never again absolutely think away, *i. e.*, imagine it as vanished and annihilated, but

are always forced to think of it merely as transferred to another space. So far, then, matter is as inseparably connected with our faculty of knowledge as space and time themselves. Yet even the difference that it must first be voluntarily thought as existing indicates that it does not belong so entirely and in every regard to the *formal* part of our knowledge as space and time, but also contains an element which is only given *a posteriori*. It is, in fact, the point of connection of the empirical part of our knowledge with the pure and *a priori* part, consequently the peculiar foundation-stone of the world of experience.

Only where all *a priori* assertions cease, therefore in the *entirely empirical* part of our knowledge of bodies, in their form, quality, and definite manner of acting, does that *will* reveal itself which we have already recognised and established as the true inner nature of things. But these forms and qualities always appear only as the properties and manifestations of that very *matter* the existence and nature of which depends upon the subjective forms of our intellect, *i. e.*, they only become visible in it, and therefore by means of it. For that which always exhibits itself to us is only *matter* acting in some specially determined manner. Out of the inner properties of such matter, properties which cannot be further explained, proceeds every definite kind of effect of given bodies; and yet the matter itself is never perceived, but only these effects, and the definite properties which lie at their foundation, after separating which, matter, as that which then remains over, is necessarily added in thought by

us; for, according to the exposition given above, it is objectified *causality itself*. Accordingly matter is that whereby the *will*, which constitutes the inner nature of things, becomes capable of being apprehended, perceptible, *visible*. In this sense, then, matter is simply the *visibility* of the will, or the bond between the world as will and the world as idea. It belongs to the latter inasmuch as it is the product of the functions of the intellect, to the former inasmuch as that which manifests itself in all material existences, *i. e.*, phenomena is the will. Therefore every object is, as thing in itself, will, and as phenomenon, matter. If we could strip any given matter of all the properties that come to it *a priori*, *i. e.*, of all the forms of our perception and apprehension, we would have left the thing in itself, that which, by means of those forms, appears as the purely empirical in matter, but which would then itself no longer appear as something extended and active; *i. e.*, we would no longer have matter before us, but the will. This very thing in itself, or the will, in that it becomes a phenomenon, *i. e.*, enters the forms of our intellect, appears as matter, *i. e.*, as the invisible but necessarily assumed supporter of the properties which are only visible through it. In this sense, then, matter is the visibility of the *will*. Consequently Plotinus and Giordano Bruno were right, not only in their sense but also in ours, when they made the paradoxical assertion already referred to in chapter 4: Matter itself is not extended, consequently it is incorporeal. For space, which is our form of perception, imparts extension to matter, and corporeal existence consists in acting,

which depends upon causality, and consequently upon the form of our understanding. On the other hand, every definite property, thus everything empirical in matter, even gravity, depends upon that which only becomes visible by means of matter, the thing in itself, the will. Gravity is yet the lowest of all grades of the objectification of the will; therefore it appears in all matter without exception, thus is inseparable from matter in general. Yet, just because it is a manifestation of the will, it belongs to knowledge *a posteriori*, not to knowledge *a priori*. Therefore we can always picture to ourselves matter without weight, but not without extension, repulsive force, and stability, for then it would be without impenetrability, and consequently would not occupy space, *i. e.*, it would be without *the power of acting*; but the nature of matter as such just consists in *acting*, *i. e.*, in causality in general; and causality depends upon the *a priori* form of our understanding, and therefore cannot be thought away.

Matter is accordingly the *will* itself, but no longer in itself, but so far as it is *perceived*, *i. e.*, assumes the form of the objective idea. Thus what objectively is matter is subjectively will. Exactly corresponding to this, as was proved above, our body is just the visibility, objectivity of our will, and so also every body is the objectivity of the will at some one of its grades. Whenever the will exhibits itself to objective knowledge it enters into the forms of perception of the intellect, time, space, and causality. But on account of this it exists at once as a *material* object. We can present to our minds form without matter, but not the reverse;

because matter deprived of form would be the will itself, and the will only becomes objective by entering the forms of perception of our intellect, and therefore only by means of the assumption of form. Space is the form of perception of matter because the latter is the substance (Stoff) of mere form, but matter can *appear* only in form.

Since the will becomes objective, *i. e.*, passes over into the idea, matter is the universal substratum of this objectification, or rather it is this objectification itself taken abstractly, *i. e.*, regarded apart from all form. Matter is accordingly the *visibility* of the will in general, while the character of its definite manifestations has its expression in form and quality. Hence what in the manifestation, *i. e.*, for the idea, is *matter* is in itself *will*. Therefore, under the conditions of experience and perception, everything holds good of it that holds good of the will in itself, and it repeats all the relations and properties of the will in temporal images. Accordingly it is the substance of the world of perception, as the will is the inner nature of all things. The forms are innumerable, the matter is one; just as the will is one in all its objectifications. As the will never objectifies itself as general, *i. e.*, as absolute will, but always as particular, *i. e.*, under special determinations and a given character, so matter never appears as such, but always in connection with some particular form and quality. In the manifestation or objectification of the will matter represents its totality, it itself, which in all is one, as matter is one in all bodies. As the will is the inmost kernel of

all phenomenal beings, so matter is the substance which remains after all the accidents have been taken away. As the will is that which is absolutely indestructible in all existence, so matter is that which is imperishable in time and permanent through all changes. That matter for itself, thus separated from form, cannot be perceived or presented in imagination depends upon the fact that in itself, and as the pure substantiality of bodies, it is really the *will* itself. But the will cannot be apprehended objectively, or perceived in itself, but only under all the conditions of the *idea*, and therefore only as *phenomenon*. Under these conditions, however, it exhibits itself at once as body, *i. e.*, as matter clothed in form and quality. But form is conditioned by space, and quality or power of acting by causality; thus both depend upon the functions of the intellect. Matter without them would just be the thing in itself, *i. e.*, the will itself. Therefore, as has been said, Plotinus and Giordano Bruno could only be brought by a completely objective path to the assertion that matter in and for itself is without extension, consequently without spatial properties, consequently incorporeal.

Because, then, matter is the visibility of the will, and every force in itself is will, no force can appear without a material substratum, and conversely no body can be without forces dwelling in it which constitute its quality. Therefore a body is the union of matter and form which is called substance (Stoff). Force and substance are inseparable because at bottom they are one; for, as Kant has shown, matter itself is given us only as the

union of two forces, the force of expansion and that of attraction. Thus there is no opposition between force and substance, rather they are precisely one.

Led by the course of our consideration to this standpoint, and having attained to this metaphysical view of matter, we will confess without reluctance that the temporal *origin* of forms, shapes, or species cannot reasonably be sought elsewhere than in matter. Some time or other they must have come forth from it, just because it is the mere *visibility of the will* which constitutes the inner nature of all phenomena. In that the will manifests itself, *i. e.*, presents itself *objectively* to the intellect, matter, as its visibility, assumes *form* by means of the functions of the intellect. Hence the Schoolmen said: "*Materia appetit formam*." That such was the origin of all forms of life cannot be doubted: we cannot even conceive it otherwise. Whether, however, now, since the paths to the perpetuation of the forms stand open, and are secured and sustained by nature with boundless care and jealousy, *generatio œquivoca* still takes place, can only be decided by experience; especially since the saying, *Natura nihil facit frustra*, might, with reference to the paths of regular propagation, be used as a valid argument against it. Yet in spite of the most recent objections to it, I hold that at very low grades *generatio œquivoca* is very probable, and primarily indeed in the case of entozoa and epizoa, particularly such as appear in consequence of special cachexia of the animal organism. For the conditions of their life only appear exceptionally; consequently

their species cannot propagate itself in the regular manner, and therefore has always to arise anew whenever opportunity offers. Therefore as soon as the conditions of life of epizoa have appeared in consequence of certain chronic diseases, or cachexia, and in accordance with them, *pediculus capitis* or *pubis* or *corporis* appears entirely of itself, and without any egg; and this notwithstanding the complex structure of these insects, for the putrefaction of a living animal body affords material for higher productions than that of hay in water, which only produces infusoria. Or is it thought more likely that the eggs of the epizoa are constantly floating about in the air in expectation? (Fearful to think of!) Let us rather remember the disease of phthiriasis, which occurs even now. An analogous case takes place when through special circumstances the conditions of life appear of a species which up till then was foreign to that *place*. Thus August St. Hilaire saw in Brazil, after the burning of a primitive forest, as soon as ever the ashes had cooled, a number of plants grow up out of them, the species of which was not to be found far and wide; and quite recently Admiral Petit-Thouars informed the *Académie des sciences* that upon the growing coral islands in Polynesia a soil gradually deposits itself which is now dry, now lies in water, and which vegetation soon takes possession of, bringing forth trees which are absolutely peculiar to these islands (*Comptes rendus*, 17th Jan. 1859, p. 147). Whenever putrefaction takes place mould, fungi, and in liquids infusoria appear. The assumption now in favour that

spores and eggs of the innumerable species of all those kinds of animal life are everywhere floating in the air, and wait through long years for a favourable opportunity, is more paradoxical than that of *generatio æquivoca*. Putrefaction is the decomposition of an organised body, first into its *more immediate* chemical constituents. Since now these are more or less the same in all living beings, the omnipresent will to live can possess itself of them, in order, in accordance with the circumstances, to produce new existences from them; and these forming themselves according to design, *i. e.*, objectifying the volition of the will at the time, solidify out of the chemical elements as the chicken out of the fluidity of the egg. When, however, this does not take place, the putrefying matter is resolved into its *ultimate* constituent parts, which are the chemical elements, and now passes over again into the great course of nature. The war which has been waged for the last ten or fifteen years against *generatio æquivoca*, with its premature shouts of victory, was the prelude to the denial of the vital force, and related to it. Let no one, however, be deceived by dogmatic assertions and brazen assurances that the questions are decided, settled, and generally recognised. On the contrary, the whole mechanical and atomistic view of nature is approaching its bankruptcy, and its defenders have to learn that something more is concealed behind nature than action and reaction. The reality of *generatio æquivoca* and the folly of the extraordinary assumption that in the atmosphere, everywhere and always, billions of seeds of all possible kinds of fungi, and

eggs of all possible kinds of infusoria, are floating about, till now one and then another by chance finds its suitable medium, has quite recently (1859) been thoroughly and victoriously shown by Pouchet before the French Academy, to the great vexation of the other members.

Our wonder at the origin of forms in matter is at bottom like that of the savage who looks for the first time in a mirror and marvels at his own image which he sees there. For our own inner nature is the will, whose mere *visibility* is matter. Yet matter never appears otherwise than with the *visible*, *i. e.*, under the outer shell of form and quality, and therefore is never directly apprehended, but always merely added in thought as that which is identical in all things, under all differences of quality and form. On this account it is more a metaphysical than a physical principle of explanation of things, and to make all existences arise from it is really to explain them from something which is very mysterious; which all know it to be except those who confound attacking with comprehending. In truth, the ultimate and exhaustive explanation of things is by no means to be sought in matter, although certainly the temporal origin both of unorganised forms and of organised beings is to be sought in it. Yet it seems that the origination of organised forms, the production of the species themselves, is almost as difficult for nature to accomplish as it is for us to comprehend. This is indicated by the entirely extravagant provision which nature always makes for maintaining the species which once

exist. Yet on the present surface of this planet the will to live has gone through the scale of its objectification three times, quite independently of each other, in a different modulation, and also with great difference of perfection and fulness. The old world, America, and Australia have, it is well known, each their peculiar independent fauna, entirely different from that of the other two. Upon each of these great continents the species are throughout different, but yet, because all three belong to the same planet, they have a thorough analogy with each other running parallel through them; therefore the *genera* are for the most part the same. In Australia this analogy can only be very imperfectly followed because its fauna is very poor in mammalia, and contains neither beasts of prey nor apes. On the other hand, between the old world and America it is obvious, and in the following manner. In mammals America always produces the inferior analogue, but in birds and reptiles the better. Thus it has the advantage in the condor, the macaw, the humming-bird, and the largest batrachia and ophidia; but, for example, instead of the elephant it has only the tapir, instead of the lion the puma, instead of the tiger the jaguar, instead of the camel the lama, and instead of apes proper only monkeys. Even from this last defect it may be concluded that in America nature was not able to rise to man; for even from the nearest grade below man, the chimpanzee and the orang-outang or pongo, the step to man was still an excessively great one. Correspondingly we find that the three races of men which, both upon physiological and linguistic

grounds, are undoubtedly equally original, the Caucasian, the Mongolian, and the Ethiopian, are only at home in the old world; while America, on the other hand, is peopled by a mixed or climatically modified Mongolian race, which must have come over from Asia. On the surface of the earth which immediately preceded the present surface apes were reached here and there, but not men.

From this standpoint of our consideration, which shows us matter as the direct visibility of the will which manifests itself in all things, nay, indeed, for the merely physical investigation which follows the guidance of time and causality, lets it pass as the origin of things, we are easily led to the question whether even in philosophy we could not just as well start from the objective as from the subjective side, and accordingly set up as the fundamental truth the proposition: "There is in general nothing but matter and its indwelling forces." But, with regard to these "indwelling forces" here so easily used, we must remember that their assumption leads every explanation back to a completely incomprehensible miracle, and then leaves it beside it, or rather leaves it to begin from it. For every definite, inexplicable force of nature which lies at the foundation of the most different kinds of effects of an unorganised body, not less than the vital force which manifests itself in every organised body, is such an incomprehensible miracle, as I have fully explained in chap. 17, and have also shown that physics can never be set upon the throne of metaphysics, just because it leaves quite

untouched the assumption referred to and also many others; whereby from the beginning it renounces all claim to give an ultimate explanation of things. I must further remind the reader here of the proof of the insufficiency of materialism, which is given towards the end of the first chapter, because, as was said there, it is the philosophy of the subject which forgets itself in its calculation. But all these truths rest upon the fact that everything *objective*, everything external, since it is always only something apprehended, something known, remains also always indirect and secondary, therefore absolutely never can become the ultimate ground of explanation of things or the starting-point of philosophy. Philosophy necessarily requires what is absolutely immediate for its starting-point. But clearly only that which is given in *self-consciousness* fulfils this condition, that which is within, the *subjective*. And hence it is so eminent a merit of Descartes that he first made philosophy start from self-consciousness. Since then, upon this path, the genuine philosophers, especially Locke, Berkeley, and Kant, have gone even further, each in his own manner, and in consequence of their investigations I was led to recognise and make use, not of one, but of two completely different data of immediate knowledge in self-consciousness, the idea and the will, by the combined application of which one can go further in philosophy, in the same proportion as in the case of an algebraical problem one can accomplish more if two known quantities are given than if only one is given.

In accordance with what has been said, the ineradicable

falseness of materialism primarily consists in the fact that it starts from a *petitio principii*, which when more closely considered turns out indeed to be a πρωτον φευδος. It starts from the assumption that matter is something absolutely and unconditionally given, something existing independently of the knowledge of the subject, thus really a thing in itself. It attributes to matter (and consequently also to its presuppositions time and space) an *absolute* existence, *i. e.*, an existence independent of the perceiving subject; this is its fundamental error. Then, if it will go honestly to work, it must leave the qualities inherent in the given materials, *i. e.*, in the substances, together with the natural forces which manifest themselves in these, and finally also the vital force, unexplained, as unfathomable *qualitates occultæ*, and start from them; as physics and physiology actually do, because they make no claim to be the ultimate explanation of things. But just to avoid this, materialism – at least as it has hitherto appeared – has not proceeded honestly. It denies all those original forces, for it pretends and seems to reduce them all, and ultimately also the vital force, to the mere mechanical activity of matter, thus to manifestations of impenetrability, form, cohesion, impulsive power, inertia, gravity, &c., qualities which certainly have least that is inexplicable in themselves, just because they partly depend upon what is known *a priori*, consequently on the forms of our own intellect, which are the principle of all comprehensibility. But the intellect as the condition of all objects, and consequently of the whole phenomenal world,

is entirely ignored by materialism. Its plan is now to refer everything qualitative to something merely quantitative, for it attributes the former to mere *form* in opposition to *matter* proper. To matter it leaves, of the properly *empirical* qualities, only gravity, because it already appears as something quantitative, the only measure of the quantity of the matter. This path necessarily leads it to the fiction of atoms, which now become the material out of which it thinks to construct the mysterious manifestations of all original forces. But here it has really no longer to do with empirically *given* matter, but with a matter which is not to be found *in rerum natura*, but is rather a mere abstraction of that real matter, a matter which would absolutely have no other than those mechanical qualities which, with the exception of gravity, can be pretty well construed *a priori*, just because they depend upon the forms of space, time, and causality, and consequently upon our intellect; to this poor material, then, it finds itself reduced for the construction of its castle in the air.

In this way it inevitably becomes *atomism*; as happened to it already in its childhood in the hands of Leucippus and Democritus, and happens to it again now that it has come to a second childhood through age; with the French because they have never known the Kantian philosophy, and with the Germans because they have forgotten it. And indeed it carries it further in this its second childhood than in its first. Not merely *solid* bodies are supposed to consist of atoms, but liquids, water, air, gas, nay, even light, which is supposed to be the undulations

of a completely hypothetical and altogether unproved ether, consisting of atoms, the difference of the rapidity of these undulations causing colours. This is an hypothesis which, like the earlier Newtonian seven-colour theory, starts from an analogy with music, entirely arbitrarily assumed, and then violently carried out. One must really be credulous to an unheard-of degree to let oneself be persuaded that the innumerable different ether vibrations proceeding from the infinite multiplicity of coloured surfaces in this varied world could constantly, and each in its own time, run through and everywhere cross each other without ever disturbing each other, but should rather produce through such tumult and confusion the profoundly peaceful aspect of illumined nature and art. *Credat Judæus Apella!* Certainly the nature of light is to us a secret; but it is better to confess this than to bar the way of future knowledge by bad theories. That light is something quite different from a mere mechanical movement, undulation, or vibration and tremor, indeed that it is material, is shown by its chemical effects, a beautiful series of which was recently laid before the *Académie des sciences* by Chevreul, who let sunlight act upon different coloured materials. The most beautiful thing in these experiments is, that a white roll of paper which has been exposed to the sunlight exhibits the same effects, nay, does so even after six months, if during this time it has been secured in a firmly closed metal tube. Has, then, the tremulation paused for six months, and does it now fall into time again? (*Comptes rendus* of

20th December 1858.) This whole hypothesis of vibrating ether atoms is not only a chimera, but equals in awkward crudeness the worst of Democritus, and yet is shameless enough, at the present day, to profess to be an established fact, and has thus brought it about that it is orthodoxly repeated by a thousand stupid scribblers of all kinds, who are devoid of all knowledge of such things, and is believed in as a gospel. But the doctrine of atoms in general goes still further: it is soon a case of *Spartam, quam nactus es, orna*! Different perpetual motions are then ascribed to all the atoms, revolving, vibrating, &c., according to the office of each; in the same way every atom has its atmosphere of ether, or something else, and whatever other similar fancies there may be. The fancies of Schelling's philosophy of nature and its disciples were for the most part ingenious, lofty, or at least witty; but these, on the contrary, are clumsy, insipid, paltry, and awkward, the production of minds which, in the first place, are unable to think any other reality than a fabulous, qualityless matter, which is also an absolute object, *i. e.*, an object without a subject; and secondly can think of no other activity than motion and impact: these two alone are comprehensible to them, and that everything runs back to these is their *a priori* assumption; for these are their *thing in itself*. To attain this end the vital force is reduced to chemical forces (which are insidiously and unjustifiably called molecular forces), and all processes of unorganised nature to mechanism, *i. e.*, to action and reaction. And thus at last the whole world and everything in it becomes merely a piece of mechanical

ingenuity, like the toys worked by levers, wheels, and sand, which represent a mine or the work on a farm. The source of the evil is, that through the amount of hand-work which experimenting requires the head-work of thinking has been allowed to get out of practice. The crucible and the voltaic pile are supposed to assume its functions; hence also the profound abhorrence of all philosophy.

But the matter might be put in this way. One might say that materialism, as it has hitherto appeared, has only failed because it did not adequately *know* the matter out of which it thought to construct the world, and therefore was dealing, not with matter itself, but with a propertyless substitute for it. If, on the contrary, instead of this, it had taken the actual and *empirically* given matter (*i. e.*, material substance, or rather substances), endowed as it is with all physical, chemical, electrical properties, and also with the power of spontaneously producing life out of itself, thus the true *mater rerum*, from the obscurity of whose womb all phenomena and forms come forth, to fall back into it some time again; from this, *i. e.*, from matter fully comprehended and exhaustively known, a world might have been constructed of which materialism would not need to be ashamed. Quite true: only the trick would then consist in this, that the *Quæsita* had been placed in the *Data*, for professedly what was taken as given, and made the starting-point of the deduction, was mere matter, but really it included all the mysterious forces of nature which cling to it, or more correctly, by means of it become visible to us,

much the same as if under the name of the dish we understand what lies upon it. For in fact, for our knowledge, matter is really merely the *vehicle* of the qualities and natural forces, which appear as its accidents, and just because I have traced these back to the will I call matter the mere *visibility of the will*. Stripped of all these qualities, matter remains behind as that which is without qualities, the *caput mortuum* of nature, out of which nothing can honestly be made. If, on the contrary, in the manner referred to, one leaves it all these properties, one is guilty of a concealed *petitio principii*, for one has assumed the *Quæsita* beforehand as *Data*. But what is accomplished with *this* will no longer be a proper *materialism*, but merely *naturalism*, *i. e.*, an absolute system of *physics*, which, as was shown in chap. 17 already referred to, can never assume and fill the place of metaphysics, just because it only begins after so many assumptions, thus never undertakes to explain things from the foundation. Mere naturalism is therefore essentially based simply upon *qualitates occultæ*, which one can never get beyond except, as I have done, by calling in the aid of the *subjective* source of knowledge, which then certainly leads to the long and toilsome round-about path of metaphysics, for it presupposes the complete analysis of self-consciousness and of the intellect and will given in it. However, the starting from what is *objective*, at the foundation of which lies *external perception*, so distinct and comprehensible, is a path so natural and which presents itself of its own accord to man, that *naturalism*, and consequently, because this cannot satisfy as it is

not exhaustive, *materialism*, are systems to which the speculative reason must necessarily have come, nay, must have come first of all. Therefore at the very beginning of the history of philosophy we meet naturalism, in the systems of the Ionic philosophers, and then materialism in the teaching of Leucippus and Democritus, and also later we see them ever appear anew from time to time.

Chapter XXV. Transcendent Considerations Concerning The Will As Thing In Itself

Even the merely empirical consideration of nature recognises a constant transition from the simplest and most necessary manifestation of a universal force of nature up to the life and consciousness of man himself, through gentle gradations, and with only relative, and for the most part fluctuating, limits. Reflection, following this view, and penetrating somewhat more deeply into it, will soon be led to the conviction that in all these phenomena, the inner nature, that which manifests itself, that which appears, is one and the same, which comes forth ever more distinctly; and accordingly that what exhibits itself in a million forms of infinite diversity, and so carries on the most varied and the strangest play without beginning or end, this is one being which is so closely disguised behind all these masks that it does not even recognise itself, and therefore often treats itself roughly. Thus the great doctrine of the ἑν και παν early appeared both in the east and in the west, and, in spite of all contradiction, has asserted itself, or at least constantly revived. We, however, have now entered even deeper into the secret, since by what has already been said we have been led to the insight that when in any phenomenon a *knowing consciousness* is added to

that inner being which lies at the foundation of all phenomena, a consciousness which when directed inwardly becomes *self-consciousness*, then that inner being presents itself to this self-consciousness as that which is so familiar and so mysterious, and is denoted by the word *will*. Accordingly we have called that universal fundamental nature of all phenomena *the will*, after that manifestation in which it unveils itself to us most fully; and by this word nothing is further from our intention than to denote an unknown *x*; but, on the contrary, we denote that which at least on one side is infinitely better known and more intimate than anything else.

Let us now call to mind a truth, the fullest and most thorough proof of which will be found in my prize essay on the freedom of the will – the truth that on account of the absolutely universal validity of the law of causality, the conduct or the action of all existences in this world is always strictly *necessitated* by the causes which in each case call it forth. And in this respect it makes no difference whether such an action has been occasioned by causes in the strictest sense of the word, or by stimuli, or finally by motives, for these differences refer only to the grade of the susceptibility of the different kinds of existences. On this point we must entertain no illusion: the law of causality knows no exception; but everything, from the movement of a mote in a sunbeam to the most deeply considered action of man, is subject to it with equal strictness. Therefore, in the whole course of the world, neither could a mote in a sunbeam describe any other

line in its flight than it has described, nor a man act any other way than he has acted; and no truth is more certain than this, that all that happens, be it small or great, happens with absolute *necessity*. Consequently, at every given moment of time, the whole condition of all things is firmly and accurately determined by the condition which has just preceded it, and so is it with the stream of time back to infinity and on to infinity. Thus the course of the world is like that of a clock after it has been put together and wound up; thus from this incontestable point of view it is a mere machine, the aim of which we cannot see. Even if, quite without justification, nay, at bottom, in spite of all conceivability and its conformity to law, one should assume a first beginning, nothing would thereby be essentially changed. For the arbitrarily assumed first condition of things would at its origin have irrevocably determined and fixed, both as a whole and down to the smallest detail, the state immediately following it; this state, again, would have determined the one succeeding it, and so on *per secula seculorum*, for the chain of causality, with its absolute strictness – this brazen bond of necessity and fate – introduces every phenomenon irrevocably and unalterably, just as it is. The difference merely amounts to this, that in the case of the one assumption we would have before us a piece of clockwork which had once been wound up, but in the case of the other a perpetual motion; the necessity of the course, on the other hand, would remain the same. In the prize essay already referred to I have irrefutably proved that the action of man can make

no exception here, for I showed how it constantly proceeds with strict necessity from two factors – his character and the motives which come to him. The character is inborn and unalterable; the motives are introduced with necessity under the guidance of causality by the strictly determined course of the world.

Accordingly then, from one point of view, which we certainly cannot abandon, because it is established by the objective laws of the world, which are *a priori* valid, the world, with all that is in it, appears as an aimless, and therefore incomprehensible, play of an eternal necessity, an inscrutable and inexorable Αναγκη. Now, what is objectionable, nay, revolting, in this inevitable and irrefutable view of the world cannot be thoroughly done away with by any assumption except this, that as in one aspect every being in the world is a phenomenon, and necessarily determined by the laws of the phenomenon, in another aspect it is in itself *will*, and indeed absolutely *free will*, for necessity only arises through the forms which belong entirely to the phenomenon, through the principle of sufficient reason in its different modes. Such a will, then, must be self-dependent, for, as free, *i. e.*, as a thing in itself, and therefore not subject to the principle of sufficient reason, it cannot depend upon another in its being and nature any more than in its conduct and action. By this assumption alone will as much *freedom* be supposed as is needed to counterbalance the inevitable strict *necessity* which governs the course of the world. Accordingly one has really only the choice either of seeing that the world is a mere machine which

runs on of necessity, or of recognising a free will as its inner being whose manifestation is not directly the action but primarily the *existence and nature* of things. This freedom is therefore transcendental, and consists with empirical necessity, in the same way as the transcendental ideality of phenomena consists with their empirical reality. That only under this assumption the action of a man, in spite of the necessity with which it proceeds from his character and the motives, is yet *his own* I have shown in my prize essay on the freedom of the will; with this, however, self-dependency is attributed to his nature. The same relation holds good of all things in the world. The strictest *necessity*, carried out honestly with rigid consistency, and the most perfect *freedom*, rising to omnipotence, had to appear at once and together in philosophy; but, without doing violence to truth, this could only take place by placing the whole *necessity* in the *acting and doing* (*Operari*), and the whole *freedom* in the *being and nature* (*Esse*). Thereby a riddle is solved which is as old as the world, simply because it has hitherto always been held upside down and the freedom persistently sought in the *Operari*, the necessity in the *Esse*. I, on the contrary, say: Every being without exception *acts* with strict necessity, but it *exists* and is what it is by virtue of its *freedom*. Thus with me freedom and necessity are to be met with neither more nor less than in any earlier system; although now one and now the other must be conspicuous according as one takes offence that *will* is attributed to processes of nature which hitherto were explained from necessity, or that the same

strict necessity is recognised in motivation as in mechanical causality. The two have merely changed places: freedom has been transferred to the *Esse*, and necessity limited to the *Operari*.

In short, *Determinism* stands firm. For fifteen hundred years men have wearied themselves in vain to shake it, influenced by certain crotchets, which are well known, but dare scarcely yet be called by their name. Yet in accordance with it the world becomes a mere puppet-show, drawn by wires (motives), without it being even possible to understand for whose amusement. If the piece has a plan, then fate is the director; if it has none, then blind necessity. There is no other deliverance from this absurdity than the knowledge that the *being and nature* of all things is the manifestation of a really *free will*, which knows itself in them; for their *doing and acting* cannot be delivered from necessity. To save freedom from fate and chance, it had to be transferred from the action to the existence.

As now necessity only affects the phenomenon, not the thing in itself, *i. e.*, the true nature of the world, so also does *multiplicity*. This is sufficiently explained in § 25 of the first volume. I have only to add here one remark in confirmation and illustration of this truth.

Every one knows only *one* being quite immediately – his own will in self-consciousness. Everything else he knows only indirectly, and then judges it by analogy with this; a process which he carries further in proportion to the grade of his reflective powers. Even this ultimately springs from

the fact that there really is *only one being*; the illusion of multiplicity (*Maja*), which proceeds from the forms of external, objective comprehension, could not penetrate to inner, simple consciousness; therefore this always finds before it only one being.

If we consider the perfection of the works of nature, which can never be sufficiently admired, and which even in the lowest and smallest organisms, for example, in the fertilising parts of plants or in the internal construction of insects, is carried out with as infinite care and unwearied labour as if each work of nature had been its only one, upon which it was therefore able to expend all its art and power; if we yet find this repeated an infinite number of times in each one of innumerable individuals of every kind, and not less carefully worked out in that one whose dwelling-place is the most lonely, neglected spot, to which, till then, no eye had penetrated; if we now follow the combination of the parts of every organism as far as we can, and yet never come upon one part which is quite simple, and therefore ultimate, not to speak of one which is inorganic; if, finally, we lose ourselves in calculating the design of all those parts of the organism for the maintenance of the whole by virtue of which every living thing is complete in and for itself; if we consider at the same time that each of these masterpieces, itself of short duration, has already been produced anew an innumerable number of times, and yet every example of a species, every insect, every flower, every leaf, still appears just as carefully perfected as was the first

of its kind; thus that nature by no means wearies and begins to bungle, but, with equally patient master-hand, perfects the last like the first: then we become conscious, first of all, that all human art is completely different, not merely in degree, but in kind, from the works of nature; and, next, that the working force, the *natura naturans*, in each of its innumerable works, in the least as in the greatest, in the last as in the first, *is immediately present whole and undivided*, from which it follows that, as such and in itself, it knows nothing of space and time. If we further reflect that the production of these hyperboles of all works of art costs nature absolutely nothing, so that, with inconceivable prodigality, she creates millions of organisms which never attain to maturity, and without sparing exposes every living thing to a thousand accidents, yet, on the other hand, if favoured by chance or directed by human purpose, readily affords millions of examples of a species of which hitherto there was only one, so that millions cost her no more than one; this also leads us to see that the multiplicity of things has its root in the nature of the knowledge of the subject, but is foreign to the thing in itself, *i. e.*, to the inner primary force which shows itself in things; that consequently space and time, upon which the possibility of all multiplicity depends, are mere forms of our perception; nay, that even that whole inconceivable ingenuity of structure associated with the reckless prodigality of the works upon which it has been expended ultimately springs simply from the way in which things are apprehended by us; for when the simple and

indivisible original effort of the will exhibits itself as object in our cerebral knowledge, it must appear as an ingenious combination of separate parts, as means and ends of each other, accomplished with wonderful completeness.

The *unity of that will*, here referred to, which lies beyond the phenomenon, and in which we have recognised the inner nature of the phenomenal world, is a metaphysical unity, and consequently transcends the knowledge of it, *i. e.*, does not depend upon the functions of our intellect, and therefore can not really be comprehended by it. Hence it arises that it opens to the consideration an abyss so profound that it admits of no thoroughly clear and systematically connected insight, but grants us only isolated glances, which enable us to recognise this unity in this and that relation of things, now in the subjective, now in the objective sphere, whereby, however, new problems are again raised, all of which I will not engage to solve, but rather appeal here to the words *est quadam prodire tenus*, more concerned to set up nothing false or arbitrarily invented than to give a thorough account of all; – at the risk of giving here only a fragmentary exposition.

If we call up to our minds and distinctly go through in thought the exceedingly acute theory of the origin of the planetary system, first put forth by Kant and later by Laplace, a theory of which it is scarcely possible to doubt the correctness, we see the lowest, crudest, and blindest forces of nature bound to the most rigid conformity to law, by means of their conflict

for one and the same given matter, and the accidental results brought about by this produce the framework of the world, thus of the designedly prepared future dwelling-place of innumerable living beings, as a system of order and harmony, at which we are the more astonished the more distinctly and accurately we come to understand it. For example, if we see that every planet, with its present velocity, can only maintain itself exactly where it actually has its place, because if it were brought nearer to the sun it would necessarily fall into it, or if placed further from it would necessarily fly away from it; how, conversely, if we take the place as given, it can only remain there with its present velocity and no other, because if it went faster it would necessarily fly away from the sun, and if it went slower it would necessarily fall into it; that thus only one definite place is suitable to each definite velocity of a planet; and if we now see this solved by the fact that the same physical, necessary, and blindly acting cause which appointed it its place, at the same time and just by doing so, imparted to it exactly the only velocity suitable for this place, in consequence of the law of nature that a revolving body increases its velocity in proportion as its revolution becomes smaller; and, moreover, if finally we understand how endless permanence is assured to the whole system, by the fact that all the mutual disturbances of the course of the planets which unavoidably enter, must adjust themselves in time; how then it is just the irrationality of the periods of revolution of Jupiter and Saturn to each other that prevents their

respective perturbations from repeating themselves at one place, whereby they would become dangerous, and brings it about that, appearing seldom and always at a different place, they must sublate themselves again, like dissonances in music which are again resolved into harmony. By means of such considerations we recognise a design and perfection, such as could only have been brought about by the freest absolute will directed by the most penetrating understanding and the most acute calculation. And yet, under the guidance of that cosmogony of Laplace, so well thought out and so accurately calculated, we cannot prevent ourselves from seeing that perfectly blind forces of nature, acting according to unalterable natural laws, through their conflict and aimless play among themselves, could produce nothing else but this very framework of the world, which is equal to the work of an extraordinarily enhanced power of combination. Instead now, after the manner of Anaxagoras, of dragging in the aid of an *intelligence* known to us only from animal nature, and adapted only to its aims, an intelligence which, coming from without, cunningly made use of the existing forces of nature and their laws in order to carry out its ends, which are foreign to these, – we recognise in these lowest forces of nature themselves that same, one will, which indeed first manifests itself in them, and already in this manifestation striving after its goal, through its original laws themselves works towards its final end, to which therefore all that happens according to blind laws of nature must minister and correspond. And this indeed cannot be otherwise,

because everything material is nothing but just the phenomenal appearance, the visibility, the objectivity of the will to live which is one. Thus even the lowest forces of nature themselves are animated by that same will, which afterwards, in the individual beings provided with intelligence, marvels at its own work, as the somnambulist wonders in the morning at what he has done in his sleep; or, more accurately, which is astonished at its own form which it beholds in the mirror. This unity which is here proved of the accidental with the intentional, of the necessary with the free, on account of which the blindest chances, which, however, rest upon universal laws of nature, are as it were the keys upon which the world-spirit plays its melodies so full of significance, – this unity, I say, is, as has already been remarked, an abyss in the investigation into which even philosophy can throw no full light, but only a glimmer.

But I now turn to a *subjective* consideration belonging to this place, to which, however, I am able to give still less distinctness than to the objective consideration which has just been set forth; for I shall only be able to express it by images and similes. Why is our consciousness brighter and more distinct the further it extends towards without, so that its greatest clearness lies in sense perception, which already half belongs to things outside us, – and, on the other hand, grows dimmer as we go in, and leads, if followed to its inmost recesses, to a darkness in which all knowledge ceases? Because, I say, consciousness presupposes *individuality*; but this belongs to the mere phenomenon, for it is

conditioned by the forms of the phenomenon, space and time, as multiplicity of the similar. Our inner nature, on the other hand, has its root in that which is no longer phenomenon, but thing in itself, to which, therefore, the forms of the phenomenon do not extend; and thus the chief conditions of individuality are wanting, and with these the distinctness of consciousness falls off. In this root of existence the difference of beings ceases, like that of the radii of a sphere in the centre; and as in the sphere the surface is produced by the radii ending and breaking off, so consciousness is only possible where the true inner being runs out into the phenomenon, through whose forms the separate individuality becomes possible upon which consciousness depends, which is just on that account confined to phenomena. Therefore all that is distinct and thoroughly comprehensible in our consciousness always lies without upon this surface of the sphere. Whenever, on the contrary, we withdraw entirely from this, consciousness forsakes us, – in sleep, in death, to a certain extent also in magnetic or magic influences; for these all lead through the centre. But just because distinct consciousness, being confined to the surface of the sphere, is not directed towards the centre, it recognises other individuals certainly as of the same kind, but not as identical, which yet in themselves they are. Immortality of the individual might be compared to a point of the surface flying off at a tangent. But immortality, by virtue of the eternal nature of the inner being of the whole phenomenon, may be compared to the return of that point, on the radius, to the centre, of which

the whole surface is just the extension. The will as the thing in itself is whole and undivided in every being, as the centre is an integral part of every radius; while the peripherical end of this radius is in the most rapid revolution, with the surface, which represents time and its content, the other end, at the centre, which represents eternity, remains in the profoundest peace, because the centre is the point of which the rising half is not different from the sinking. Therefore in the Bhagavad-gita it is said: "*Haud distributum animantibus, et quasi distributum tamen insidens, animantiumque sustentaculum id cognoscendum, edax et rursus genitale*" (Lect. 13, 16 vers. Schlegel). Certainly we fall here into mystical and figurative language, but it is the only language in which anything can be said on this entirely transcendent theme. So this simile also may pass. The human race may be imagined as an *animal compositum*, a form of life of which many polypi, especially those which swim, such as *Veretillum*, *Funiculina*, and others, afford examples. As in these the head isolates each individual animal, and the lower part, with the common stomach, combines them all in the unity of one life process, so the brain with its consciousness isolates the human individual, while the unconscious part, the vegetative life with its ganglion system, into which in sleep the brain-consciousness disappears, like a lotus which nightly sinks in the flood, is a common life of all, by means of which in exceptional cases they can even communicate, as, for example, occurs when dreams communicate themselves directly, the thoughts of the mesmeriser pass into the somnambulist,

and finally also in the magnetic or generally magical influence proceeding from intentional willing. Such an influence, if it occurs, is *toto genere* different from every other on account of the *influxus physicus* which takes place, for it is really an *actio in distans* which the will, certainly proceeding from the individual, yet performs in its metaphysical quality as the omnipresent substratum of the whole of nature. One might also say that as in the *generatio æquivoca* there sometimes and as an exception appears a weak residue of the original *creative power* of the will, which in the existing forms of nature has already done its work and is extinguished, so there may be, exceptionally, acting in these magical influences, as it were, a surplus of its original *omnipotence*, which completes its work and spends itself in the construction and maintenance of the organisms. I have spoken fully of this magical property of the will in "The Will in Nature," and I gladly omit here discussions which have to appeal to uncertain facts, which yet cannot be altogether ignored or denied.

Chapter XXVI.[4] On Teleology

The universal teleology or design of organised nature relative to the continuance of every existing being, together with the adaptation of organised to unorganised nature, cannot without violence enter into the connection of any philosophical system except that one which makes a *will* the basis of the existence of every natural being; a will which accordingly expresses its nature and tendency not merely in the actions, but already in the *form* of the phenomenal organism. In the preceding chapter I have merely indicated the account which our system of thought gives of this subject, since I have already expounded it in the passage of the first volume referred to below, and with special clearness and fulness in "The Will in Nature," under the rubric "Comparative Anatomy."

The astounding amazement which is wont to take possession of us when we consider the endless design displayed in the construction of organised beings ultimately rests upon the certainly natural but yet false assumption that that *adaptation* of the parts to each other, to the whole of the organism and to its aims in the external world, as we comprehend it and judge of it by means of *knowledge*, thus upon the path of the *idea*, has also come into being upon the same path; thus that as it exists *for* the intellect, it was also brought about *by* the

[4] This chapter and the following one are connected with § 28 of the first volume.

intellect. We certainly can only bring about something regular and conforming to law, such, for example, as every crystal is, under the guidance of the law and the rule; and in the same way, we can only bring about something designed under the guidance of the conception of the end; but we are by no means justified in imputing this limitation of ours to nature, which is itself prior to all intellect, and whose action is entirely different in kind from ours, as was said in the preceding chapter. It accomplishes that which appears so designed and planned without reflection and without conception of an end, because without idea, which is of quite secondary origin. Let us first consider what is merely according to rule, not yet adapted to ends. The six equal radii of a snowflake, separating at equal angles, are measured beforehand by no knowledge; but it is the simple tendency of the original will, which so exhibits itself to knowledge when knowledge appears. As now here the will brings about the regular figure without mathematics, so also without physiology does it bring about the form which is organised and furnished with organs evidently adapted to special ends. The regular form in space only exists for the perception, the perceptive form of which is space; so the design of the organism only exists for the knowing reason, the reflection of which is bound to the conceptions of end and means. If direct insight into the working of nature was possible for us, we would necessarily recognise that the wonder excited by teleology referred to above is analogous to that which that savage referred to by Kant in his explanation of the ludicrous

felt when he saw the froth irresistibly foaming out of a bottle of beer which had just been opened, and expressed his wonder not that it should come out, but that any one had ever been able to get it in; for we also assume that the teleology of natural productions has been put in the same as it comes out for us. Therefore our astonishment at design may likewise be compared to that which the first productions of the art of printing excited in those who considered them under the supposition that they were works of the pen, and therefore had to resort to the assumption of the assistance of a devil in order to explain them. For, let it be said again, it is our intellect which by means of its own forms, space, time, and causality, apprehends as object the act of will, in itself metaphysical and indivisible, which exhibits itself in the phenomenon of an animal, – it is our intellect which first produces the multiplicity and diversity of the parts, and is then struck with amazement at their perfect agreement and conspiring together, which proceeds from the original unity; whereby then, in a certain sense, it marvels at its own work.

If we give ourselves up to the contemplation of the indescribably and infinitely ingenious construction of any animal, even if it were only the commonest insect, lose ourselves in admiration of it, and it now occurs to us that nature recklessly exposes even this exceedingly ingenious and highly complicated organism daily and by thousands to destruction by accident, animal rapacity, and human wantonness, this wild prodigality fills us with amazement; but our amazement is based upon an

ambiguity of the conceptions, for we have in our minds the human work of art which is accomplished by the help of the intellect and by overcoming a foreign and resisting material, and therefore certainly costs much trouble. Nature's works, on the contrary, however ingenious they may be, cost her absolutely no trouble; for here the will to work is already the work itself, since, as has already been said, the organism is merely the visibility of the will which is here present, brought about in the brain.

In consequence of the nature of organised beings which has been set forth, teleology, as the assumption of the adaptation of every part to its end, is a perfectly safe guide in considering the whole of organised nature; on the other hand, in a metaphysical regard, for the explanation of nature beyond the possibility of experience, it must only be regarded as valid in a secondary and subsidiary manner for the confirmation of principles of explanation which are otherwise established: for here it belongs to the problems which have to be given account of. Accordingly, if in some animal a part is found of which we do not see any use, we must never venture the conjecture that nature has produced it aimlessly, perhaps trifling, or out of mere caprice. Certainly it is possible to conceive something of this kind under the Anaxagorean assumption that the disposition of nature has been brought about by means of an ordering understanding, which, as such, obeys a foreign will; but not under the assumption that the true inner being (*i. e.*, outside of our idea) of every organism is simply and solely *its own will*; for then the existence of every part

is conditioned by the circumstance that in some way it serves the will which here lies at its foundation, expresses and realises some tendency of it, and consequently in some way contributes to the maintenance of this organism. For apart from *the will which manifests itself in it*, and the conditions of the external world under which this has voluntarily undertaken to live, for the conflict with which its whole form and disposition is already adapted, nothing can have influenced it and determined its form and parts, thus no arbitrary power, no caprice. On this account everything in it must be designed; and therefore final causes (*causæ finales*) are the clue to the understanding of organised nature, as efficient causes (*causæ efficientes*) are the clue to the understanding of unorganised nature. It depends upon this, that if in anatomy or zoology, we cannot find the end or aim of an existing part, our understanding receives a shock similar to that which it receives in physics from an effect whose cause remains concealed; and as we assume the latter as necessary, so also we assume the former, and therefore go on searching for it, however long we may already have done so in vain. This is, for example, the case with the spleen, as to the use of which men never cease inventing hypotheses, till some day one shall have proved itself correct. So is it also with the large spiral-formed teeth of the babyroussa, the horn-shaped excrescences of certain caterpillars, and more of the like. Negative cases are also judged by us according to the same rule; for example, that in a class which, as a whole, is so uniform as that of lizards, so important a

part as the bladder is present in many species, while it is wanting in others; similarly that dolphins and certain cetacea related to them are entirely without olfactory nerves, while the rest of the cetacea and even fishes have them: there must be a reason which determines this.

Individual real exceptions to this universal law of design in organised nature have indeed been discovered, and with great surprise; but in these cases that *exceptio firmat regulam* applies, since they can be accounted for upon other grounds. Such, for example, is the fact that the tadpoles of the pipa toad have tails and gills, although, unlike all other tadpoles, they do not swim, but await their metamorphosis on the back of the mother; that the male kangaroo has the marsupial bones which in the female carry the pouch; that male mammals have breasts; that the *Mus typhlus*, a rat, has eyes, although very small ones, without any opening for them in the outer skin, which thus covers them, clothed with hair; and that the moles of the Apennines, and also two fishes —*Murena cœcilia* and *Gastrobrauchus cœcus*– are in the same case; of like kind is the *Proteus anguinus*. These rare and surprising exceptions to the rule of nature, which is otherwise so rigid, these contradictions with itself into which it falls, we must explain from the inner connection which the different kinds of phenomena have with each other, by virtue of the unity of that which manifests itself in them, and in consequence of which nature must hint at some thing in one, simply because another of the same type actually has it. Accordingly the male

animal has a rudimentary form of an organ which is actually present in the female. As now here the difference of the *sex* cannot abolish the type of the *species*, so also the type of a whole order – for example, of the batrachia – asserts itself even where in one particular species (pipa) one of its determinations is superfluous. Still less can nature allow a determination (eyes) which belongs to the type of a whole division (Vertebrata) to vanish entirely without a trace, even if it is wanting in some particular species (*Mus typhlus*) as superfluous; but here also it must at least indicate in a rudimentary manner what it carries out in all the others.

Even from this point of view it is to some extent possible to see upon what depends that *homology* in the skeleton primarily of mammals, and in a wider sense of all vertebrates, which has been so fully explained, especially by Richard Owen in his "*Ostéologie comparée*," and on account of which, for example, all mammals have seven cervical vertebræ, every bone of the human hand and arm finds its analogue in the fin of the whale, the skull of the bird in the egg has exactly as many bones as that of the human fœtus, &c. All this points to a principle which is independent of teleology, but which is yet the foundation upon which teleology builds, or the already given material for its works, and just that which Geoffroy St. Hilaire has explained as the "anatomical element." It is the *unité de plan*, the fundamental type of the higher animal world, as it were the arbitrarily chosen key upon which nature here plays.

Aristotle has already correctly defined the difference between the efficient cause (*causa efficiens*) and the final cause (*causa finalis*) in these words: "Δυο τροποι της αιτιας, το οὑ ἑνεκα και το εξ αναγκης, και δει λεγοντας τυγχανειν μαλιστα μεν αμφοιν." (*Duo sunt causæ modi: alter cujus gratia, et alter e necessitate; ac potissimum utrumque eruere oportet.*) *De part. anim.*, i. 1. The efficient cause is that *whereby* something is, the final cause that *on account of which* it is; the phenomenon to be explained has, in time, the former *behind* it, and the latter *before* it. Only in the case of the voluntary actions of animal beings do the two directly unite, for here the final cause, the end, appears as the motive; a motive, however, is always the true and proper *cause* of the action, is wholly and solely its *efficient* cause, the change preceding it which calls it forth, by virtue of which it necessarily appears, and without which it could not happen; as I have shown in my prize essay upon freedom. For whatever of a physiological nature one might wish to insert between the act of will and the corporeal movement, the *will* always remains here confessedly that which moves, and what moves *it* is the *motive* coming from without, thus the *causa finalis*; which consequently appears here as *causa efficiens*. Besides, we know from what has gone before that the bodily movement is one with the act of will, for it is merely its phenomenal appearance in cerebral perception. This union of the *causa finalis* with the efficient cause in the one phenomenon *intimately* known to us, which accordingly remains throughout our typical phenomenon, is certainly to be firmly

retained; for it leads precisely to the conclusion that at least in organised nature, the knowledge of which has throughout final causes for its clue, a *will* is the forming power. In fact, we cannot otherwise distinctly think a final cause except as an end in view, *i. e.*, a motive. Indeed, if we carefully consider the final causes in nature in order to express their transcendent nature, we must not shrink from a contradiction, and boldly say: the final cause is a motive which acts upon a being, by which it is not known. For certainly the termite nests are the motive which has produced the toothless muzzle of the ant-bear, and also its long extensile, glutinous tongue: the hard egg-shell which holds the chicken imprisoned is certainly the motive for the horny point with which its beak is provided in order to break through that shell, after which it throws it off as of no further use. And in the same way the laws of the reflection and refraction of light are the motive for the wonderfully ingenious and complex optical instrument, the human eye, which has the transparency of its cornea, the different density of its three humours, the form of its lens, the blackness of its choroid, the sensitiveness of its retina, the contracting power of its pupil, and its muscular system, accurately calculated according to those laws. But those motives acted before they were apprehended; it is not otherwise, however contradictory it may sound. For here is the transition of the physical into the metaphysical. But the latter we have already recognised in the *will*; therefore we must see that the will which extends an elephant's trunk towards an object is the same will which has also

called it forth and formed it, anticipating objects.

It is in conformity with this that in the investigation of *organised* nature we are entirely referred to *final causes*, everywhere seek for these and explain everything from them. The *efficient causes*, on the contrary, here assume only a quite subordinate position as the mere tools of the final causes, and, just as in the case of the voluntary movement of the limbs, which is confessedly effected by external motives, they are rather assumed than pointed out. In explaining the physiological *functions* we certainly look about for the efficient causes, though for the most part in vain; but in explaining the origin of the parts we again look for them no more, but are satisfied with the final causes alone. At the most we have here some such general principle as that the larger the part is to be the stronger must be the artery that conducts blood to it; but of the actually efficient causes which bring about, for example, the eye, the ear, the brain, we know absolutely nothing. Indeed, even in explaining the mere functions the final cause is far more important and more to the point than the efficient; therefore, if the former alone is known we are instructed and satisfied with regard to the principal matter, while, on the other hand, the efficient cause alone helps us little. For example, if we really knew the *efficient cause* of the circulation of the blood, as we do not, but still seek it, this would help us little unless we knew the final cause, that the blood must go into the lungs for the purpose of oxidation, and again flow back for the purpose of nourishing;

but by the knowledge of this, even without the knowledge of the efficient cause, we have gained much light. Moreover, I am of opinion, as was said above, that the circulation of the blood has no properly efficient cause, but that the will is here as immediately active as in muscular movement where motives determine it by means of nerve conduction, so that here also the movement is called forth directly by the final cause; thus by the need of oxidation in the lungs, which here to a certain extent acts as a motive upon the blood, yet so that the mediation of knowledge is in this case wanting, because everything takes place in the interior of the organism. The so-called metamorphosis of plants, a thought lightly thrown out by Kaspar Wolf, which, under this hyperbolic title, Goethe pompously and with solemn delivery expounds as his own production, belongs to the class of explanations of organic nature from the efficient cause; although ultimately he only says that nature does not in the case of every production begin from the beginning and create out of nothing, but as it were, writing on in the same style, adds on to what already exists, makes use of the earlier forms, developed, and raised to higher power, to carry its work further: just as it has done in the ascending series of animals entirely in accordance with the law: *Natura non facit saltus, et quod commodissimum in omnibus suis operationibus sequitur* (*Arist. de incessu animalium, c. 2 et 8*). Indeed, to explain the blossom by pointing out in all its parts the form of the leaf seems to me almost the same as explaining the structure of a house by showing that all its parts,

storeys, balconies, and garrets, are only composed of bricks and mere repetitions of the original unity of the brick. And not much better, though much more problematical, seems to me the explanation of the skull from vertebræ, although even here also it is a matter of course that the covering or case of the brain will not be absolutely different and entirely disparate from that of the spinal cord, of which it is the continuation and terminal knob, but will rather be a carrying out of the same kind of thing. This whole method of consideration belongs to the Homology of Richard Owen referred to above. On the other hand, it seems to me that the following explanation of the nature of the flower from its *final cause*, suggested by an Italian whose name has escaped me, is a far more satisfactory account to give. The end of the *corolla* is – (1.) Protection of the pistil and the *stamina*; (2.) by means of it the purified saps are prepared, which are concentrated in the *pollen* and *germs*; (3.) from the glands of its base the essential oil distils which, for the most part as a fragrant vapour, surrounding the anthers and pistil, protects them to a certain extent from the influence of the damp air. It is also one of the advantages of final causes that every *efficient* cause always ultimately rests upon something that cannot be fathomed, a force of nature, *i. e.*, a *qualitas occulta*, and, therefore, it can only give a *relative* explanation; while the final cause within its sphere affords a sufficient and perfect explanation. It is true we are only perfectly content when we know both the efficient cause, also called by Aristotle ἡ αιτια εξ αναγκης, and the final cause, ἡ χαριν

του βελτιονος, at once and yet separately, as their concurrence, their wonderful working together, then surprises us, and on account of it the best appears as the absolutely necessary, and the necessary again as if it were merely the best and not necessary; for then arises in us the dim perception that both causes, however different may be their origin, are yet connected in the root, in the nature of the thing in itself. But such a twofold knowledge is seldom attainable; in *organised* nature, because the efficient cause is seldom known to us; in *unorganised* nature, because the final cause remains problematical. However, I will illustrate this by a couple of examples as good as I find within the range of my physiological knowledge, for which physiologists may be able to substitute clearer and more striking ones. The louse of the negro is black. Final cause: its own safety. Efficient cause: because its nourishment is the black *rete Malpighi* of the negro. The multifarious, brilliant, and gay colouring of the plumage of tropical birds is explained, although only very generally, from the strong effect of the light in the tropics, as its efficient cause. As the final cause I would assign that those brilliant feathers are the gorgeous uniform in which the individuals of the innumerable species there, often belonging to the same genus, may recognise each other; so that each male may find his female. The same holds good of butterflies of different zones and latitudes. It has been observed that consumptive women, in the last stage of their illness, readily become pregnant, that the disease stops during pregnancy, but after delivery appears again worse than before,

and now generally results in death: similarly that consumptive men generally beget another child in the last days of their life. The *final cause* here is that nature, always so anxiously concerned for the maintenance of the species, seeks to replace by a new individual the approaching loss of one in the prime of life; the *efficient cause*, on the other hand, is the unusually excited state of the nervous system which occurs in the last period of consumption. From the same final cause is to be explained the analogous phenomenon that (according to Oken, *Die Zeugung*, p. 65) flies poisoned with arsenic still couple, and die in the act of copulation. The final cause of the pubes in both sexes, and of the Mons Veneris in the female, is that even in the case of very thin subjects the Ossa pubis shall not be felt, which might excite antipathy; the efficient cause, on the other hand, is to be sought in the fact that wherever the mucous membrane passes over to the outer skin, hair grows in the vicinity; and, secondly, also that the head and the genitals are to a certain extent opposite poles of each other, and therefore have various relations and analogies between them, among which is that of being covered with hair. The same efficient cause holds good also of the beard of the man; the final cause of it, I suppose, lies in the fact that the pathogonomic signs, thus the rapid alterations of the countenance betraying every movement of the mind, are principally visible in the mouth and its vicinity; therefore, in order to conceal these from the prying eye of the adversary, as something dangerous in bargaining, or in sudden emergencies, nature gave man the

beard (which shows that *homo homini lupus*). The woman, on the other hand, could dispense with this; for with her dissimulation and command of countenance are inborn. As I have said, there must be far more apt examples to be found to show how the completely blind working of nature unites in the result with the apparently intentional, or, as Kant calls it, the mechanism of nature with its technic; which points to the fact that both have their common origin beyond their difference in the will as the thing in itself. Much would be achieved for the elucidation of this point of view, if, for example, we could find the efficient cause which carries the driftwood to the treeless polar lands, or that which has concentrated the dry land of our planet principally in the northern half of it; while it is to be regarded as the final cause of this that the winter of that half, because it occurs in the perihelion which accelerates the course of the earth, is eight days shorter, and hereby is also milder. Yet in considering *unorganised* nature the final cause is always ambiguous, and, especially when the *efficient* cause is found, leaves us in doubt whether it is not a merely subjective view, an aspect conditioned by our point of view. In this respect, however, it may be compared to many works of art; for example, to coarse mosaics, theatre decorations, and to the god Apennine at Pratolino, near Florence, composed of large masses of rock, all of which only produce their effect at a distance, and vanish when we come near, because instead of them the efficient cause of their appearance now becomes visible: but the forms are yet actually existent, and are no mere

imagination. Analogous to this, then, are the final causes in unorganised nature, if the efficient causes appear. Indeed, those who take a wide view of things would perhaps allow it to pass if I added that something similar is the case with omens.

For the rest, if any one desires to misuse the *external* design, which, as has been said, always remains ambiguous for physico-theological demonstrations, which is done even at the present day, though it is to be hoped only by Englishmen, there are in this class enough examples *in contrarium*, thus ateleological instances, to derange his conception. One of the strongest is presented by the unsuitableness of sea-water for drinking, in consequence of which man is never more exposed to the danger of dying of thirst than in the midst of the greatest mass of water on his planet. "Why, then, does the sea need to be salt?" let us ask our Englishman.

That in *unorganised* nature the final causes entirely withdraw into the background, so that an explanation from them alone is here no longer valid, but the efficient causes are rather indispensably required, depends upon the fact that the will which objectifies itself here also no longer appears in individuals which constitute a whole for themselves, but in forces of nature and their action, whereby end and means are too far separated for their relation to be clear and for us to recognise a manifestation of will in it. This already occurs in organised nature, in a certain degree, when the design is an external one, *i. e.*, the end lies in *one* individual and the means in *another*. Yet even here it

remains unquestionable so long as the two belong to the same species, indeed it then becomes the more striking. Here we have first to count the reciprocally adapted organisation of the genitals of the two sexes, and then also many circumstances that assist the propagation of the species, for example, in the case of the *Lampyris noctiluca* (the glowworm) the circumstance that only the male, which does not shine, has wings to enable it to seek out the female; the wingless female, on the other hand, since it only comes out in the evening, possesses the phosphorescent light, so that the male may be able to find it. Yet in the case of the *Lampyris Italica* both sexes shine, which is an instance of the natural luxury of the South. But a striking, because quite special, example of the kind of design we are speaking of is afforded by the discovery made by Geoffroy St. Hilaire, in his last years, of the more exact nature of the sucking apparatus of the cetacea. Since all sucking requires the action of respiration, it can only take place in the respirable medium itself, and not under water, where, however, the sucking young of the whale hangs on to the teats of the mother; now to meet this the whole mammary apparatus of the cetacea is so modified that it has become an injecting organ, and placed in the mouth of the young injects the milk into it without it requiring to suck. When, on the contrary, the individual that affords essential help to another belongs to an entirely different species, and even to another kingdom of nature, we will doubt this external design just as in unorganised nature; unless it is evident that the maintenance

of the species depends upon it. But this is the case with many plants whose fructification only takes place by means of insects, which either bear the pollen to the stigma or bend the stamina to the pistil. The common barberry, many kinds of iris, and *Aristolochia Clematitis* cannot fructify themselves at all without the help of insects (*Chr. Cour.* Sprengel, *Entdecktes Geheimniss, &c.*, 1793; Wildenow, *Grundriss der Kräuterkunde*, 353). Very many diœcia, monœcia, and polygamia are in the same position. The reciprocal support which the plant and the insect worlds receive from each other will be found admirably described in Burdach's large Physiology, vol. i. § 263. He very beautifully adds: "This is no mechanical assistance, no make-shift, as if nature had made the plants yesterday, and had committed an error which she tries to correct to-day through the insect; it is rather a deep-lying sympathy between the plant and the animal worlds. It ought to reveal the identity of the two. Both, children of one mother, ought to subsist with each other and through each other." And further on: "But the organised world stands in such a sympathy with the unorganised world also," &c. A proof of this *consensus naturæ* is also afforded by the observation communicated in the second volume of the "Introduction into Entomology" by Kirby and Spence, that the insect eggs that pass the winter attached to the twigs of the trees, which serve as nourishment for their larvæ, are hatched exactly at the time at which the twig buds; thus, for example, the aphis of the birch a month earlier than that of the ash. Similarly, that the insects of

perennial plants pass the winter upon these as eggs; but those of mere annuals, since they cannot do this, in the state of pupæ.

Three great men have entirely rejected teleology, or the explanation from final causes, and many small men have echoed them. These three are, Lucretius, Bacon of Verulam, and Spinoza. But in the case of all three we know clearly enough the source of this aversion, namely, that they regarded it as inseparable from speculative theology, of which, however, they entertained so great a distrust (which Bacon indeed prudently sought to conceal) that they wanted to give it a wide berth. We find Leibnitz also entirely involved in this prejudice, for, with characteristic naïveté, he expresses it as something self-evident in his *Lettre à M. Nicaise* (*Spinozæ op. ed Paulus*, vol. ii. p. 672): "*Les causes finales, ou ce qui est la même chose, la consideration de la sagesse divine dans l'ordre des choses.*" (The devil also *même chose*!) At the same point of view we find, indeed, Englishmen even at the present day. The Bridgewater-Treatise-men – Lord Brougham, &c. – nay, even Richard Owen also, in his "*Ostéologie Comparée*," thinks precisely as Leibnitz, which I have already found fault with in the first volume. To all these teleology is at once also theology, and at every instance of design recognised in nature, instead of thinking and learning to understand nature, they break at once into the childish cry, "Design! design!" then strike up the refrain of their old wives' philosophy, and stop their ears against all rational arguments, such as, however, the great

Hume has already advanced against them.[5]

The ignorance of the Kantian philosophy now, after seventy years, which is really a disgrace to Englishmen of learning, is principally responsible for this whole outcast position of the English; and this ignorance, again, depends, at least in great measure, upon the nefarious influence of the detestable English clergy, with whom stultification of every kind is a thing after their own hearts, so that only they may be able still to hold the English nation, otherwise so intelligent, involved in the most degrading bigotry; therefore, inspired by the basest obscurantism, they oppose with all their might the education of the people, the investigation of nature, nay, the advancement of all human knowledge in general; and both by means of their connections and by means of their scandalous, unwarrantable wealth, which increases the misery of the people, they extend their influence even to university teachers and authors, who accordingly (for example, Th. Brown, "On Cause and Effect") resort to suppressions and perversions of every kind simply in order to avoid opposing even in a distant manner that "cold superstition" (as Pückler very happily designates their religion,

[5] Let me here remark in passing that, judging from the German literature since Kant, one would necessarily believe that Hume's whole wisdom had consisted in his obviously false scepticism with regard to the law of causality, for this alone is everywhere referred to. In order to know Hume one must read his "Natural History of Religion" and his "Dialogues on Natural Religion." There one sees him in his greatness, and these, together with Essay 21 "Of National Characters," are the writings on account of which – I know of nothing that says more for his fame – even to the present day, he is everywhere hated by the English clergy.

or the current arguments in its favour).

But, on the other hand, the three great men of whom we are speaking, since they lived long before the dawn of the Kantian philosophy, are to be pardoned for their distrust of teleology on account of its origin; yet even Voltaire regarded the physico-theological proof as irrefutable. In order, however, to go into this somewhat more fully: first of all, the polemic of Lucretius (iv. 824-858) against teleology is so crude and clumsy that it refutes itself and convinces us of the opposite. But as regards Bacon (*De augm. scient.*, iii. 4), he makes, in the first place, no distinction with reference to the use of final causes between organised and unorganised nature (which is yet just the principal matter), for, in his examples of final causes, he mixes the two up together. Then he banishes final causes from physics to metaphysics; but the latter is for him, as it is still for many at the present day, identical with speculative theology. From this, then, he regards final causes as inseparable, and goes so far in this respect that he blames Aristotle because he has made great use of final causes, yet without connecting them with speculative theology (which I shall have occasion immediately especially to praise). Finally, Spinoza (*Eth.* i. *prop.* 36, *appendix*) makes it abundantly clear that he identifies teleology so entirely with physico-theology, against which he expresses himself with bitterness, that he explains *Natura nihil frustra agere*: *hoc est, quod in usum hominum non sit*: similarly, *Omnia naturalia tanquam ad suum utile media considerant, et credunt aliquem*

alium esse, qui illa media paraverit; and also: *Hinc statuerunt, Deos omnia in usum hominum fecisse et dirigere*. Upon this, then, he bases his assertion: *Naturam finem nullum sibi præfixum habere et omnes causas finales nihil, nisi humana esse figmenta*. His aim merely was to block the path of theism; and he had quite rightly recognised the physico-theological proof as its strongest weapon. But it was reserved for Kant really to refute this proof, and for me to give the correct exposition of its material, whereby I have satisfied the maxim: *Est enim verum index sui et falsi*. But Spinoza did not know how else to help himself but by the desperate stroke of denying teleology itself, thus design in the works of nature – an assertion the monstrosity of which is at once evident to every one who has gained any accurate knowledge of organised nature. This limited point of view of Spinoza, together with his complete ignorance of nature, sufficiently prove his entire incompetence in this matter, and the folly of those who, upon his authority, believe they must judge contemptuously of final causes.

Aristotle, who just here shows his brilliant side, contrasts very advantageously with these modern philosophers. He goes unprejudiced to nature, knows of no physico-theology – such a thing has never entered his mind, – and he has never looked at the world for the purpose of seeing whether it was a bungled piece of work. He is in his heart pure from all this, for he also sets up hypotheses as to the origin of animals and men (*De generat. anim.*, iii. 11) without lighting upon the physico-

theological train of thought. He always says: "ἡ φυσις ποιει (*natura facit*), never ἡ φυσις πεποιηται" (*natura facta est*). But after he has truly and diligently studied nature, he finds that it everywhere proceeds teleologically, and he says: "ματην ὁρωμεν ουδεν ποιουσαν την φυσιν" (*naturam nihil frustra facere cernimus*), *De respir.*, c. 10; and in the books, *De partibus animalium*, which are a comparative anatomy: "Ουδε περιεργον ουδεν, ουτε ματην ἡ φυσις ποιει. – Ἡ φυσις ἑνεκα του ποιει παντα. – Πανταχου δε λεγομεν τοδε τουδε ἑνεκα, ὁπου αν φαινηται τελος τι, προς ὁ ἡ κινησις περαινει; ὡστε ειναι φανερον, ὁτι εστι τι τοιουτον, ὁ δη και καλουμεν φυσιν. Επει το σωμα οργανον; ἑνεκα τινος γαρ ἑκαστον των μοριων, ομοιως τε και το ὁλον." (*Nihil supervacaneum, nihil frustra natura facit. – Natura rei alicujus gratia facit omnia. – Rem autem hanc esse illius gratia asserere ubique solemus, quoties finem intelligimus aliquem, in quem motus terminetur; quocirca ejusmodi aliquid esse constat, quod Naturam vocamus. Est enim corpus instrumentum: nam membrum unumquodque rei alicujus gratia est, tum vero totum ipsum.*) At greater length, p. 633 and 645 of the Berlin quarto edition, and also *De incessu animalium*, c. 2: "Ἡ φυσις ουδεν ποιει ματην, αλλ' αει, εκ των ενδεχομενων τῃ ουσιᾳ, περι ἑκαστον γενος ζωου το αριστον." (*Natura nihil frustra facit, sed semper ex iis, quæ cuique animalium generis essentiæ contingunt, id quod optimum est.*) But he expressly recommends teleology at the end of the books *De generatione animalium*, and blames Democritus for

having denied it, which is just what Bacon, in his prejudice, praises in him. Especially, however, in the "Physica," ii. 8, p. 198, Aristotle speaks *ex professo* of final causes, and establishes them as the true principle of the investigation of nature. In fact, every good and regular mind must, in considering organised nature, hit upon teleology, but unless it is determined by the preconceived opinions, by no means either upon physico-theology or upon the anthropo-teleology condemned by Spinoza. With regard to Aristotle generally, I wish further to draw attention to the fact here, that his teaching, so far as it concerns *unorganised* nature, is very defective and unserviceable, as in the fundamental conceptions of mechanics and physics he accepts the most gross errors, which is the less pardonable, since before him the Pythagoreans and Empedocles had been upon the right path and had taught much better. Empedocles indeed, as we learn from Aristotle's second book, *De cælo* (c. 1, p. 284), had already grasped the conception of a tangential force arising from rotation, and counteracting gravity, which Aristotle again rejects. Quite the reverse, however, is Aristotle's relation to the investigation of *organised* nature. This is his field; here the wealth of his knowledge, the keenness of his observation, nay, sometimes the depth of his insight, astonish us. Thus, to give just one example, he already knew the antagonism in which in the ruminants the horns and the teeth of the upper jaw stand to each other, on account of which, therefore, the latter are wanting where the former are found, and conversely (*De partib. anim.*,

iii. 2). Hence then, also his correct estimation of final causes.

Chapter XXVII. On Instinct And Mechanical Tendency

It is as if nature had wished, in the mechanical tendencies of animals, to give the investigator an illustrative commentary upon her works, according to final causes and the admirable design of her organised productions which is thereby introduced. For these mechanical tendencies show most clearly that creatures can work with the greatest decision and definiteness towards an end which they do not know, nay, of which they have no idea. Such, for instance, is the bird's nest, the spider's web, the ant-lion's pitfall, the ingenious bee-hive, the marvellous termite dwelling, &c., at least for those individual animals that carry them out for the first time; for neither the form of the perfected work nor the use of it can be known to them. Precisely so, however, does *organising* nature work; and therefore in the preceding chapter I gave the paradoxical explanation of the final cause, that it is a motive which acts without being known. And as in working from mechanical tendency that which is active is evidently and confessedly the *will*, so is it also really the will which is active in the working of organising nature.

One might say, the will of animal creatures is set in motion in two different ways: either by motivation or by instinct; thus from without, or from within; by an external occasion, or by an internal tendency; the former is explicable because it lies before

us without, the latter is inexplicable because it is merely internal. But, more closely considered, the contrast between the two is not so sharp, indeed ultimately it runs back into a difference of degree. The motive also only acts under the assumption of an inner tendency, *i. e.*, a definite quality of will which is called its *character*. The motive in each case only gives to this a definite direction – individualises it for the concrete case. So also instinct, although a definite tendency of the will, does not act entirely, like a spring, from within; but it also waits for some external circumstance necessarily demanded for its action, which at least determines the time of its manifestation; such is, for the migrating bird, the season of the year; for the bird that builds its nest, the fact of pregnancy and the presence of the material for the nest; for the bee it is, for the beginning of the structure, the basket or the hollow tree, and for the following work many individually appearing circumstances; for the spider, it is a well-adapted corner; for the caterpillar, the suitable leaf; for egg-laying insects, the for the most part very specially determined and often rare place, where the hatched larvæ will at once find their nourishment, and so on. It follows from this that in works of mechanical tendency it is primarily the instinct of these animals that is active, yet subordinated also to their intellect. The instinct gives the universal, the rule; the intellect the particular, the application, in that it directs the detail of the execution, in which therefore the work of these animals clearly adapts itself to the circumstances of the existing case.

According to all this, the difference between instinct and mere character is to be fixed thus: Instinct is a character which is only set in motion by a *quite specially determined* motive, and on this account the action that proceeds from it is always exactly of the same kind; while the character which is possessed by every species of animal and every individual man is certainly a permanent and unalterable quality of will, which can yet be set in motion by very different motives, and adapts itself to these; and on account of this the action proceeding from it may, according to its material quality, be very different, but yet will always bear the stamp of the same character, and will therefore express and reveal this; so that for the knowledge of this character the material quality of the action in which it appears is essentially a matter of indifference. Accordingly we might explain instinct as a character which is beyond all measure one-sided and strictly determined. It follows from this exposition that being determined by mere motivation presupposes a certain width of the sphere of knowledge, and consequently a more fully developed intellect: therefore it is peculiar to the higher animals, quite pre-eminently, however, to man; while being determined by instinct only demands as much intellect as is necessary to apprehend the one quite specially determined motive, which alone and exclusively becomes the occasion for the manifestation of the instinct. Therefore it is found in the case of an exceedingly limited sphere of knowledge, and consequently, as a rule, and in the highest degree, only in animals of the lower classes, especially insects.

Since, accordingly, the actions of these animals only require an exceedingly simple and small motivation from without, the medium of this, thus the intellect or the brain, is very slightly developed in them, and their outward actions are for the most part under the same guidance as the inner, follow upon mere stimuli, physiological functions, thus the ganglion system. This is, then, in their case excessively developed; their principal nerve-stem runs under the belly in the form of two cords, which at every limb of the body form a ganglion little inferior to the brain in size, and, according to Cuvier, this nerve-stem is an analogue not so much of the spinal cord as of the great sympathetic nerve. According to all this, instinct and action through mere motivation, stand in a certain antagonism, in consequence of which the former has its maximum in insects, and the latter in man, and the actuation of other animals lies between the two in manifold gradations according as in each the cerebral or the ganglion system is preponderatingly developed. Just because the instinctive action and the ingenious contrivances of insects are principally directed from the ganglion system, if we regard them as proceeding from the brain alone, and wish to explain them accordingly, we fall into absurdities, because we then apply a false key. The same circumstance, however, imparts to their action a remarkable likeness to that of somnambulists, which indeed is also explained as arising from the fact that, instead of the brain, the sympathetic nerve has undertaken the conduct of the outward actions also; insects are accordingly, to a certain

extent, natural somnambulists. Things which we cannot get at directly we must make comprehensible to ourselves by means of an analogy. What has just been referred to will accomplish this in a high degree when assisted by the fact that in Kieser's "*Tellurismus*" (vol. ii. p. 250) a case is mentioned "in which the command of the mesmerist to the somnambulist to perform a definite action in a waking state was carried out by him when he awoke, without remembering the command." Thus it was as if he must perform that action without rightly knowing why. Certainly this has the greatest resemblance to what goes on in the case of mechanical instincts in insects. The young spider feels that it must spin its web, although it neither knows nor understands the aim of it. We are also reminded here of the dæmon of Socrates, on account of which he had the feeling that he must leave undone some action expected of him, or lying near him, without knowing why – for his prophetic dream about it was forgotten. We have in our own day quite well-authenticated cases analogous to this; therefore I only briefly call these to mind. One had taken his passage on a ship, but when it was about to sail he positively would not go on board without being conscious of a reason; – the ship went down. Another goes with companions to a powder magazine; when he has arrived in its vicinity he absolutely will not go any further, but turns hastily back, seized with anxiety he knows not why; – the magazine blows up. A third upon the ocean feels moved one night, without any reason, not to undress, but lays himself on the bed in his clothes and boots, and even

with his spectacles on; – in the night the ship goes on fire, and he is among the few who save themselves in the boat. All this depends upon the dull after-effect of forgotten fatidical dreams, and gives us the key to an analogous understanding of instinct and mechanical tendencies.

On the other hand, as has been said, the mechanical tendencies of insects reflect much light upon the working of the unconscious will in the inner functions of the organism and in its construction. For without any difficulty we can see in the ant-hill or the beehive the picture of an organism explained and brought to the light of knowledge. In this sense Burdach says (*Physiologie*, vol. ii. p. 22): "The formation and depositing of the eggs is the part of the queen-bee, and the care for the cultivation of them falls to the workers; thus in the former the ovary, and in the latter the uterus, is individualised." In the insect society, as in the animal organism, the *vita propria* of each part is subordinated to the life of the whole, and the care for the whole precedes that for particular existence; indeed the latter is only conditionally willed, the former unconditionally; therefore the individuals are even sacrificed occasionally for the whole, as we allow a limb to be taken off in order to save the whole body. Thus, for example, if the path is closed by water against the march of the ants, those in front boldly throw themselves in until their corpses are heaped up into a dam for those that follow. When the drones have become useless they are stung to death. Two queens in the hive are surrounded, and must fight with each other till one of

them loses its life. The ant-mother bites its own wings off after it has been impregnated, for they would only be a hindrance to it in the work that is before it of tending the new family it is about to found under the earth (Kirby and Spence, vol. i.) As the liver will do nothing more than secrete gall for the service of the digestion, nay, will only itself exist for this end – and so with every other part – the working bees also will do nothing more than collect honey, secrete wax, and make cells for the brood of the queen; the drones nothing more than impregnate; the queen nothing but deposit eggs; thus all the parts work only for the maintenance of the whole which alone is the unconditional end, just like the parts of the organism. The difference is merely that in the organism the will acts perfectly blindly in its primary condition; in the insect society, on the other hand, the thing goes on already in the light of knowledge, to which, however, a decided co-operation and individual choice is only left in the accidents of detail, where it gives assistance and adopts what has to be carried out to the circumstances. But the insects will the end as a whole without knowing it; just like organised nature working according to final causes; even the choice of the means is not as a whole left to their knowledge, but only the more detailed disposition of them. Just on this account, however, their action is by no means automatic, which becomes most distinctly visible if one opposes obstacles to their action. For example, the caterpillar spins itself in leaves without knowing the end; but if we destroy the web it skilfully repairs it. Bees adapt their hive at the first to

the existing circumstances, and subsequent misfortunes, such as intentional destruction, they meet in the way most suitable to the special case (Kirby and Spence, *Introduc. to Entomol.*; Huber, *Des abeilles*). Such things excite our astonishment, because the apprehension of the circumstances and the adaptation to these is clearly a matter of knowledge; while we believe them capable once for all of the most ingenious preparation for the coming race and the distant future, well knowing that in this they are not guided by knowledge, for a forethought of that kind proceeding from knowledge demands an activity of the brain rising to the level of reason. On the other hand, the intellect even of the lower animals is sufficient for the modifying and arranging of the particular case according to the existing or appearing circumstances; because, guided by instinct, it has only to fill up the gaps which this leaves. Thus we see ants carry off their larvæ whenever the place is too damp, and bring them back again when it becomes dry. They do not know the aim of this, thus are not guided in it by knowledge; but the choice of the time at which the place is no longer suitable for the larvæ, and also of the place to which they now bring them, is left to their knowledge. I wish here also to mention a fact which some one related to me verbally from his own experience, though I have since found that Burdach quotes it from Gleditsch. The latter, in order to test the burying-beetle (*Necrophorus vespillo*), had tied a dead frog lying upon the ground to a string, the upper end of which was fastened to a stick stuck obliquely in the ground. Now

after several burying-beetles had, according to their custom, undermined the frog, it could not, as they expected, sink into the ground; after much perplexed running hither and thither they undermined the stick also. To this assistance rendered to instinct, and that repairing of the works of mechanical tendency, we find in the organism the *healing power* of nature analogous, which not only heals wounds, replacing even bone and nerve substance, but, if through the injury of a vein or nerve branch a connection is interrupted, opens a new connection by means of enlargement of other veins or nerves, nay, perhaps even by producing new branches; which further makes some other part or function take the place of a diseased part or function; in the case of the loss of an eye sharpens the other, or in the case of the loss of one of the senses sharpens all the rest; which even sometimes closes an intestinal wound, in itself fatal, by the adhesion of the mesentery or the peritoneum; in short, seeks to meet every injury and every disturbance in the most ingenious manner. If, on the other hand, the injury is quite incurable, it hastens to expedite death, and indeed the more so the higher is the species of the organism, thus the greater its sensibility. Even this has its analogue in the instinct of insects. The wasps, for instance, who through the whole summer have with great care and labour fed their larvæ on the produce of their plundering, but now, in October, see the last generation of them facing starvation, sting them to death (Kirby and Spence, vol. i. p. 374). Nay, still more curious and special analogies may be found; for example, this: if the female

humble-bee (*Apis terrestris, bombylius*) lays eggs, the working humble-bees are seized with a desire to devour them, which lasts from six to eight hours and is satisfied unless the mother keeps them off and carefully guards the eggs. But after this time the working humble-bees show absolutely no inclination to eat the eggs even when offered to them; on the contrary, they now become the zealous tenders and nourishers of the larvæ now being hatched out. This may without violence be taken as an analogue of children's complaints, especially teething, in which it is just the future nourishers of the organism making an attack upon it which so often costs it its life. The consideration of all these analogies between organised life and the instinct, together with the mechanical tendencies of the lower animals, serves ever more to confirm the conviction that the *will* is the basis of the one as of the other, for it shows here also the subordinate rôle of knowledge in the action of the will, sometimes more, sometimes less, confined, and sometimes wanting altogether.

But in yet another respect instincts and the animal organisation reciprocally illustrate each other: through the *anticipation of the future* which appears in both. By means of instincts and mechanical tendencies animals care for the satisfaction of wants which they do not yet feel, nay, not only for their own wants, but even for those of the future brood. Thus they work for an end which is as yet unknown to them. This goes so far, as I have illustrated by the example of the Bombex in "The Will in Nature" (second edit. p. 45, third edit. p. 47), that they pursue

and kill in advance the enemies of their future eggs. In the same way we see the future wants of an animal, its prospective ends, anticipated in its whole corporisation by the organised implements for their attainment and satisfaction; from which, then, proceeds that perfect adaptation of the structure of every animal to its manner of life, that equipment of it with the needful weapons to attack its prey and to ward off its enemies, and that calculation of its whole form with reference to the element and the surroundings in which it has to appear as a pursuer, which I have fully described in my work on the will in nature under the rubric "Comparative Anatomy." All these anticipations, both in the instinct and in the organisation of animals, we might bring under the conception of a knowledge *a priori*, if *knowledge* lay at their foundation at all. But this is, as we have shown, not the case. Their source lies deeper than the sphere of knowledge, in the will as the thing in itself, which as such remains free even from the *forms* of knowledge; therefore with reference to it time has no significance, consequently the future lies as near it as the present.

Chapter XXVIII.[6] Characterisation Of The Will To Live

Our second book closed with the question as to the goal and aim of that will which had shown itself to be the inner nature of all things in the world. The following remarks may serve to supplement the answer to this question given there in general terms, for they lay down the character of the will as a whole.

Such a characterisation is possible because we have recognised as the inner nature of the world something thoroughly real and empirically given. On the other hand, the very name "world-soul," by which many have denoted that inner being, gives instead of this a mere *ens rationis*; for "soul" signifies an individual unity of consciousness which clearly does not belong to that nature, and in general, since the conception "soul" supposes knowing and willing in inseparable connection and yet independent of the animal organism, it is not to be justified, and therefore not to be used. The word should never be applied except in a metaphorical sense, for it is much more insidious than ψυχη or anima, which signify breath.

Much more unsuitable, however, is the way in which so-called pantheists express themselves, whose whole philosophy consists chiefly in this, that they call the inner nature of the

[6] This chapter is connected with § 29 of the first volume.

world, which is unknown to them, "God;" by which indeed they imagine they have achieved much. According to this, then, the world would be a theophany. But let one only look at it: this world of constantly needy creatures, who continue for a time only by devouring one another, fulfil their existence in anxiety and want, and often suffer terrible miseries, till at last they fall into the arms of death; whoever distinctly looks upon this will allow that Aristotle was right in saying: "ἡ φυσις δαιομονια, αλλ' ου θεια εστι" (*Natura dæmonia est, non divina*), *De divinat.*, c. 2, p. 463; nay, he will be obliged to confess that a God who could think of changing Himself into such a world as this must certainly have been tormented by the devil. I know well that the pretended philosophers of this century follow Spinoza in this, and think themselves thereby justified. But Spinoza had special reasons for thus naming his one substance, in order, namely, to preserve at least the word, although not the thing. The stake of Giordano Bruno and of Vanini was still fresh in the memory; they also had been sacrificed to that God for whose honour incomparably more human sacrifices have bled than on the altars of all heathen gods of both hemispheres together. If, then, Spinoza calls the world God, it is exactly the same thing as when Rousseau in the "*Contrat social*," constantly and throughout denotes the people by the word *le souverain*; we might also compare it with this, that once a prince who intended to abolish the nobility in his land, in order to rob no one of his own, hit upon the idea of ennobling all his subjects. Those philosophers of our day have certainly

one other ground for the nomenclature we are speaking of, but it is no more substantial. In their philosophising they all start, not from the world or our consciousness of it, but from God, as something given and known; He is not their *quæsitum*, but their *datum*. If they were boys I would then explain to them that this is a *petitio principii*, but they know this as well as I do. But since Kant has shown that the path of the earlier dogmatism, which proceeded honestly, the path from the world to a God, does not lead there, these gentlemen now imagine they have found a fine way of escape and made it cunningly. Will the reader of a later age pardon me for detaining him with persons of whom he has never heard.

Every glance at the world, to explain which is the task of the philosopher, confirms and proves that *will to live*, far from being an arbitrary hypostasis or an empty word, is the only true expression of its inmost nature. Everything presses and strives towards *existence*, if possible *organised existence*, *i. e.*, *life*, and after that to the highest possible grade of it. In animal nature it then becomes apparent that *will to live* is the keynote of its being, its one unchangeable and unconditioned quality. Let any one consider this universal desire for life, let him see the infinite willingness, facility, and exuberance with which the will to live presses impetuously into existence under a million forms everywhere and at every moment, by means of fructification and of germs, nay, when these are wanting, by means of *generatio æquivoca*, seizing every opportunity, eagerly grasping for itself

every material capable of life: and then again let him cast a glance at its fearful alarm and wild rebellion when in any particular phenomenon it must pass out of existence; especially when this takes place with distinct consciousness. Then it is precisely the same as if in this single phenomenon the whole world would be annihilated for ever, and the whole being of this threatened living thing is at once transformed into the most desperate struggle against death and resistance to it. Look, for example, at the incredible anxiety of a man in danger of his life, the rapid and serious participation in this of every witness of it, and the boundless rejoicing at his deliverance. Look at the rigid terror with which a sentence of death is heard, the profound awe with which we regard the preparations for carrying it out, and the heartrending compassion which seizes us at the execution itself. We would then suppose there was something quite different in question than a few less years of an empty, sad existence, embittered by troubles of every kind, and always uncertain: we would rather be amazed that it was a matter of any consequence whether one attained a few years earlier to the place where after an ephemeral existence he has billions of years to be. In such phenomena, then, it becomes visible that I am right in declaring that *the will to live* is that which cannot be further explained, but lies at the foundation of all explanations, and that this, far from being an empty word, like the absolute, the infinite, the idea, and similar expressions, is the most real thing we know, nay, the kernel of reality itself.

But if now, abstracting for a while from this interpretation drawn from our inner being, we place ourselves as strangers over against nature, in order to comprehend it objectively, we find that from the grade of organised life upwards it has only one intention – that of the *maintenance of the species*. To this end it works, through the immense superfluity of germs, through the urgent vehemence of the sexual instinct, through its willingness to adapt itself to all circumstances and opportunities, even to the production of bastards, and through the instinctive maternal affection, the strength of which is so great that in many kinds of animals it even outweighs self-love, so that the mother sacrifices her life in order to preserve that of the young. The individual, on the contrary, has for nature only an indirect value, only so far as it is the means of maintaining the species. Apart from this its existence is to nature a matter of indifference; indeed nature even leads it to destruction as soon as it has ceased to be useful for this end. Why the individual exists would thus be clear; but why does the species itself exist? That is a question which nature when considered merely objectively cannot answer. For in vain do we seek by contemplating her for an end of this restless striving, this ceaseless pressing into existence, this anxious care for the maintenance of the species. The strength and time of the individuals are consumed in the effort to procure sustenance for themselves and their young, and are only just sufficient, sometimes even not sufficient, for this. Even if here and there a surplus of strength, and therefore of comfort –

in the case of the *one* rational species also of knowledge – remains, this is much too insignificant to pass for the end of that whole process of nature. The whole thing, when regarded thus purely objectively, and indeed as extraneous to us, looks as if nature was only concerned that of all her (Platonic) *Ideas*, *i. e.*, permanent forms, none should be lost. Accordingly, as if she had so thoroughly satisfied herself with the fortunate discovery and combination of these Ideas (for which the three preceding occasions on which she stocked the earth's surface with animals were only the preparation), that now her only fear is lest any one of these beautiful fancies should be lost, *i. e.*, lest any one of these forms should disappear from time and the causal series. For the individuals are fleeting as the water in the brook; the Ideas, on the contrary, are permanent, like its eddies: but the exhaustion of the water would also do away with the eddies. We would have to stop at this unintelligible view if nature were known to us only from without, thus were given us merely *objectively*, and we accepted it as it is comprehended by knowledge, and also as sprung from knowledge, *i. e.*, in the sphere of the idea, and were therefore obliged to confine ourselves to this province in solving it. But the case is otherwise, and a glance at any rate is afforded us into the *interior of nature*; inasmuch as this is nothing else than *our own inner being*, which is precisely where nature, arrived at the highest grade to which its striving could work itself up, is now by the light of knowledge found directly in self-consciousness. Here the will shows itself to us as something

toto genere different from the idea, in which nature appears unfolded in all her (Platonic) Ideas; and it now gives us, at one stroke, the explanation which could never be found upon the objective path of the idea. Thus the subjective here gives the key for the exposition of the objective. In order to recognise, as something original and unconditioned, that exceedingly strong tendency of all animals and men to retain life and carry it on as long as possible – a tendency which was set forth above as characteristic of the subjective, or of the will – it is necessary to make clear to ourselves that this is by no means the result of any objective *knowledge* of the worth of life, but is independent of all knowledge; or, in other words, that those beings exhibit themselves, not as drawn from in front, but as impelled from behind.

If with this intention we first of all review the interminable series of animals, consider the infinite variety of their forms, as they exhibit themselves always differently modified according to their element and manner of life, and also ponder the inimitable ingenuity of their structure and mechanism, which is carried out with equal perfection in every individual; and finally, if we take into consideration the incredible expenditure of strength, dexterity, prudence, and activity which every animal has ceaselessly to make through its whole life; if, approaching the matter more closely, we contemplate the untiring diligence of wretched little ants, the marvellous and ingenious industry of the bees, or observe how a single burying-beetle (*Necrophorus*

vespillo) buries a mole of forty times its own size in two days in order to deposit its eggs in it and insure nourishment for the future brood (*Gleditsch, Physik. Bot. Œkon. Abhandl.*, iii. 220), at the same time calling to mind how the life of most insects is nothing but ceaseless labour to prepare food and an abode for the future brood which will arise from their eggs, and which then, after they have consumed the food and passed through the chrysalis state, enter upon life merely to begin again from the beginning the same labour; then also how, like this, the life of the birds is for the most part taken up with their distant and laborious migrations, then with the building of their nests and the collecting of food for the brood, which itself has to play the same rôle the following year; and so all work constantly for the future, which afterwards makes bankrupt; – then we cannot avoid looking round for the reward of all this skill and trouble, for the end which these animals have before their eyes, which strive so ceaselessly – in short, we are driven to ask: What is the result? what is attained by the animal existence which demands such infinite preparation? And there is nothing to point to but the satisfaction of hunger and the sexual instinct, or in any case a little momentary comfort, as it falls to the lot of each animal individual, now and then in the intervals of its endless need and struggle. If we place the two together, the indescribable ingenuity of the preparations, the enormous abundance of the means, and the insufficiency of what is thereby aimed at and attained, the insight presses itself upon us that life is a business,

the proceeds of which are very far from covering the cost of it. This becomes most evident in some animals of a specially simple manner of life. Take, for example, the mole, that unwearied worker. To dig with all its might with its enormous shovel claws is the occupation of its whole life; constant night surrounds it; its embryo eyes only make it avoid the light. It alone is truly an *animal nocturnum*; not cats, owls, and bats, who see by night. But what, now, does it attain by this life, full of trouble and devoid of pleasure? Food and the begetting of its kind; thus only the means of carrying on and beginning anew the same doleful course in new individuals. In such examples it becomes clear that there is no proportion between the cares and troubles of life and the results or gain of it. The consciousness of the world of perception gives a certain appearance of objective worth of existence to the life of those animals which can see, although in their case this consciousness is entirely subjective and limited to the influence of motives upon them. But the *blind* mole, with its perfect organisation and ceaseless activity, limited to the alternation of insect larvæ and hunger, makes the disproportion of the means to the end apparent. In this respect the consideration of the animal world left to itself in lands uninhabited by men is also specially instructive. A beautiful picture of this, and of the suffering which nature prepares for herself without the interference of man, is given by Humboldt in his "*Ansichten der Natur*" (second edition, p. 30 *et seq.*); nor does he neglect to cast a glance (p. 44) at the analogous suffering of the human race,

always and everywhere at variance with itself. Yet in the simple and easily surveyed life of the brutes the emptiness and vanity of the struggle of the whole phenomenon is more easily grasped. The variety of the organisations, the ingenuity of the means, whereby each is adapted to its element and its prey contrasts here distinctly with the want of any lasting final aim; instead of which there presents itself only momentary comfort, fleeting pleasure conditioned by wants, much and long suffering, constant strife, *bellum omnium*, each one both a hunter and hunted, pressure, want, need, and anxiety, shrieking and howling; and this goes on *in secula seculorum*, or till once again the crust of the planet breaks. Yunghahn relates that he saw in Java a plain far as the eye could reach entirely covered with skeletons, and took it for a battlefield; they were, however, merely the skeletons of large turtles, five feet long and three feet broad, and the same height, which come this way out of the sea in order to lay their eggs, and are then attacked by wild dogs (*Canis rutilans*), who with their united strength lay them on their backs, strip off their lower armour, that is, the small shell of the stomach, and so devour them alive. But often then a tiger pounces upon the dogs. Now all this misery repeats itself thousands and thousands of times, year out, year in. For this, then, these turtles are born. For whose guilt must they suffer this torment? Wherefore the whole scene of horror? To this the only answer is: it is thus that the will to live objectifies itself.[7] Let one consider it well and

[7] In the *Siècle*, 10th April 1859, there appears, very beautifully written, the story of

comprehend it in all its objectifications; and then one will arrive

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a squirrel that was magically drawn by a serpent into its very jaws: “Un voyageur qui vient de parcourir plusieurs provinces de l'ile de Java cite un exemple remarqueable du pouvoir facinateur des serpens. Le voyageur dont il est question commençait à gravir Junjind, un des monts appelés par les Hollandais Pepergebergte. Après avoir pénétré dans une épaisse forêt, il aperçut sur les branches d'un kijatile un écureuil de Java à tête blanche, folâtrant avec la grâce et l'agilité qui distinguent cette charmante espèce de rongeurs. Un nid sphérique, formé de brins flexible et de mousse, placé dans les parties les plus élevées de l'arbre, a l'enfourchure de deux branches, et une cavité dans le tronc, semblaient les points de mire de ses jeux. A peine s'en était-il éloigné qu'il y revenait avec une ardeur extrême. On était dans le mois de Juillet, et probablement l'écureuil avait en haut ses petits, et dans le bas le magasin à fruits. Bientôt il fut comme saisi d'effroi, ces mouvemens devinrent désordonnés, on eut dit qu'il cherchait toujours à mettre un obstacle entre lui et certaines parties de l'arbre: puis il se tapit et resta immobile entre deux branches. Le voyageur eut le sentiment d'un danger pour l'innocente bête, mais il ne pouvait deviner lequel. Il approcha, et un examen attentif lui fit découvrir dans un creux du tronc une couleuvre lieu, dardant ses yeux fixes dans la direction de l'écureuil. Notre voyageur trembla pour le pauvre écureuil. La couleuvre était si attentive à sa proie qu'elle ne semblait nullement remarquer la présence d'un homme. Notre voyageur, qui était armé, aurait donc prevenir en aide à l'infortuné rongeur en tuant le serpent. Mais la science l'emporta sur la pitié, et il voulut voir quelle issue aurait le drame. Le dénoûment fut tragique. L'écureuil ne tarda point à pousser un cri plaintif qui, pour tous ceux qui le connaissent, dénote le voisinage d'un serpent. Il avança un peu, essaya de reculer, revint encore en avant, tâche de retourner en arrière. Mais s'approcha toujours plus du reptile. La couleuvre, roulée en spirale, la tête au dessus des anneaux, et immobile comme un morceau de bois, ne le quittait pas du regard. L'écureuil, de branche en branche, et descendant toujours plus bas, arriva jusqu'à la partie nue du tronc. Alors le pauvre animal ne tenta même plus de fuir le danger. Attiré par une puissance invincible, et comme poussé par le vertige, il se précipita dans la gueule du serpent, qui s'ouvrit tout à coup démesurément pour le recevoir. Autant la couleuvre avait été inerte jusque là autant elle devint active dès qu'elle fut en possession de sa proie. Déroulant ses anneaux et prenant sa course de bas en haut avec une agilité inconcevable, sa reptation la porta en un clin d'œil au sommet de l'arbre, où elle alla sans doute digérer et dormir.”In this example we see what spirit

at an understanding of its nature and of the world; but not if one frames general conceptions and builds card houses out of them. The comprehension of the great drama of the objectification of the will to live, and the characterisation of its nature, certainly demands somewhat more accurate consideration and greater thoroughness than the dismissal of the world by attributing to it the title of God, or, with a silliness which only the German fatherland offers and knows how to enjoy, explaining it as the "Idea in its other being," in which for twenty years the simpletons of my time have found their unutterable delight. Certainly, according to pantheism or Spinozism, of which the systems of our century are mere travesties, all that sort of thing reels itself off actually without end, straight on through all eternity. For then the world is a God, *ens perfectissimum*, *i. e.*, nothing better can be or be conceived. Thus there is no need of deliverance from it; and consequently there is none. But why the whole tragi-comedy exists cannot in the least be seen; for it has no spectators, and the actors themselves undergo infinite trouble, with little and merely negative pleasure.

Let us now add the consideration of the human race. The

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animates nature, for it reveals itself in it, and how very true is the saying of Aristotle quoted above (p. 106). This story is not only important with regard to fascination, but also as an argument for pessimism. That an animal is surprised and attacked by another is bad; still we can console ourselves for that; but that such a poor innocent squirrel sitting beside its nest with its young is compelled, step by step, reluctantly, battling with itself and lamenting, to approach the wide, open jaws of the serpent and consciously throw itself into them is revolting and atrocious. What monstrous kind of nature is this to which we belong!

matter indeed becomes more complicated, and assumes a certain seriousness of aspect; but the fundamental character remains unaltered. Here also life presents itself by no means as a gift for enjoyment, but as a task, a drudgery to be performed; and in accordance with this we see, in great and small, universal need, ceaseless cares, constant pressure, endless strife, compulsory activity, with extreme exertion of all the powers of body and mind. Many millions, united into nations, strive for the common good, each individual on account of his own; but many thousands fall as a sacrifice for it. Now senseless delusions, now intriguing politics, incite them to wars with each other; then the sweat and the blood of the great multitude must flow, to carry out the ideas of individuals, or to expiate their faults. In peace industry and trade are active, inventions work miracles, seas are navigated, delicacies are collected from all ends of the world, the waves engulf thousands. All strive, some planning, others acting; the tumult is indescribable. But the ultimate aim of it all, what is it? To sustain ephemeral and tormented individuals through a short span of time in the most fortunate case with endurable want and comparative freedom from pain, which, however, is at once attended with ennui; then the reproduction of this race and its striving. In this evident disproportion between the trouble and the reward, the will to live appears to us from this point of view, if taken objectively, as a fool, or subjectively, as a delusion, seized by which everything living works with the utmost exertion of its strength for something that is of no value. But when we consider

it more closely, we shall find here also that it is rather a blind pressure, a tendency entirely without ground or motive.

The law of motivation, as was shown in § 29 of the first volume, only extends to the particular actions, not to willing *as a whole and in general*. It depends upon this, that if we conceive of the human race and its action *as a whole and universally*, it does not present itself to us, as when we contemplate the particular actions, as a play of puppets who are pulled after the ordinary manner by threads outside them; but from this point of view, as puppets which are set in motion by internal clockwork. For if, as we have done above, one compares the ceaseless, serious, and laborious striving of men with what they gain by it, nay, even with what they ever can gain, the disproportion we have pointed out becomes apparent, for one recognises that that which is to be gained, taken as the motive-power, is entirely insufficient for the explanation of that movement and that ceaseless striving. What, then, is a short postponement of death, a slight easing of misery or deferment of pain, a momentary stilling of desire, compared with such an abundant and certain victory over them all as death? What could such advantages accomplish taken as actual moving causes of a human race, innumerable because constantly renewed, which unceasingly moves, strives, struggles, grieves, writhes, and performs the whole tragi-comedy of the history of the world, nay, what says more than all, *perseveres* in such a mock-existence as long as each one possibly can? Clearly this is all inexplicable if we seek the moving causes outside the

figures and conceive the human race as striving, in consequence of rational reflection, or something analogous to this (as moving threads), after those good things held out to it, the attainment of which would be a sufficient reward for its ceaseless cares and troubles. The matter being taken thus, every one would rather have long ago said, "*Le jeu ne vaut pas la chandelle*

Конец ознакомительного фрагмента.