The Creation of Order in Humanity

Or, Principles of Political Organization

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Contents

DEFINITIONS

1. I call Order every seriated or symmetrical arrangement. Order necessarily presupposes division, distinction, difference. Nothing undivided, indistinct, undifferentiated, can be understood as ordered: these notions are mutually exclusive.[1]

2. The ideas of *intelligence* and *final cause* are foreign to the idea of order. In fact, order can appear to us as an unforeseen result of properties inherent in the various parts of a whole: intelligence cannot, in this case, be designated as a principle of order. — Besides, a secret tendency or aim can exist in disorder: purpose can also not be taken as an essential character of order.

Accordingly, the consideration of the universe, from the point of view grasped by Bossuet, Fénelon, and Cicero, is not an argument for the existence of God, any more than social disorder, as it is demonstrated to us by history, disproves Providence.

3. Order is the ultimate condition of all persistence, all development, and all perfection.

4. Order, in its various manifestations, being series, symmetry, and relation, is subject to conditions in which it can be broken down, which are like its immediate principle, form, reason, meter. These conditions are what we call *laws*. — Thus, taking the circle as an ordered whole, the fixed equality of the generative radius will be the law. In the arithmetic series 3, 5, 7, 9, 11……., the law or reason is 2.

5. The expression of a law, or its description, is a *formula*.

6. Every true law is absolute and without exception: only the ignorance or inanity of the grammarians, moralists, jurists and other philosophers has dreamed up the proverb: *No rule without exception*. The mania for imposing rules on nature, instead of studying its own laws, has confirmed that ignorant aphorism. — In the mathematical and natural sciences, it is accepted that every law which does not embrace the totality of the facts is a false law, an invalid law: it is the same for all the other sciences.

7. Order is not something *real,* but only something *formal;* it is the idea inscribed in substance, the thought expressed in each collection, series, organism, genus and species, like word in writing.

8. Order is all that man can know of the universe. Considering creation according to the three categories of substance, cause, and relation, we find that beings, perceptible to us only by the relations that we sustain with them, remain impenetrable to us in their substance; that causes, elusive in their principle and origin, let us glimpse only the sequence of their effects. The relations of things, order and disorder, beauty and ugliness, good and evil, are all that we can observe, all that is the subject of its science.

[1] According to the eclectics, order is *the unity in multiplicity*. That definition is fair: however, it seems to me that on could critique it, in that it conveys the thing, but does not define it. What is it that produces the unity in multiplicity? The series, symmetry.

Thus, of the three faces of the universe, only one is intelligible to us: the two others are, for us, the object of a blind, fateful faith. Ontology, as a science of substances and causes, is impossible.[2]

9. We know beings only by their relations: however, as it is necessary, for the needs of science, to distinguish in each of its aspects this great whole that we call the UNIVERSE, we have given special names to things known and unknown, to the visible and invisible, to those that we know and that we believe.

Thus we call *substance* the material, whatever it may be, of every series, of every organization; the principle of all inertia or resistance. In a clock, for example, the substance is the iron, the copper, in short the various materials of which the clock is composed.[3]

10. By *cause* we mean the primitive force that determines a change of state, a production of order or disorder, in short a movement. — The philosophers, by an abuse of language, considering the different terms of a mobile sequence as causing one another, have thought they could, with the aid of these alleged secondary causes, raise themselves to knowledge of the first. But it is easy to see how much they fool themselves, taking relations for causes. The cause which makes the hands of a clock move, according to their way of seeing, is a wheel which turns; the cause which makes the wheel turn is a chain rolling on a pivot; the cause which makes the chain unwind is a weight which pulls it; the cause which makes the weight fall is attraction; the cause of the attraction… is unknown. Now, all these causes are the terms of a mechanical sequence produced in the domain of force, as a polyhedron of wax or ivory is a geometric order produced in the domain of substance. Just as the material does not change with the shapes that we give it and the uses to which we put it; just so the force does not vary, it is not classified, depending on the series of which it may be the *substratum,* the subject. The error is therefore not to name the substance and the cause[4] ; but only to aspire to know them and to claim to explain them.

11. *Property, quality, mode* and *phenomenon* are so many correlative expressions of substance and cause, and serve to designate in what way both are discernible, the order or disorder that they show.

12. According to these notions, order, or that which is purely *formal* in nature, being the only thing accessible to reason, the only subject of the science, becomes for that reason the only reality for reason. There is an order, of natural system of celestial bodies, demonstrated by Newton;

A system of plants, identified by Jussieu;

A system of zoology, of which Cuvier is the principal inventor;

A system of chemistry, which Lavoisier has more or less completely formulated;

A system of numeration, recognized from the earliest times;

Some systems of molecular composition, organic reproduction, of cosmogony, grammar, art and literature, still little known, but which all tend to clear themselves from the veils which cover them and to be formed in an absolute manner.

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[2] The animals are beneath the condition of man; they do not perceive the relations between things; they know nothing. What occurs within them, and what we take for intelligence, is only an instinct perfected by habit, a sort of dream provoked by the surrounding milieu, which implies neither thought nor science. As with sleepwalkers, thought in animals does not know itself; it is organic and spontaneous, but not conscious or reflective.

[3] Essence relates to the disposition and the purpose, rather than the material, and is expressed by the ensemble of the parts, not by the constituent elements of the thing. The substance of a clock can be the same as that of a rotating spit: but the essence of the first consists in a combination whose purpose is to mark the divisions of time; the essence of the second is simply to create a movement of continuous rotation, without periodicity.

[4] See below, chap. iii, § 7.

In the same way, there exists a natural system of social economy, glimpsed or sensed by the legislators, who must strive to adapt their laws to it: a system that humanity fulfills each day and that I propose to recognize.

13. Order is produced, in unorganized beings or those deprived of reason, by virtue of unconscious, blind, unerring forces, and according to laws unknown to them; — in reasoning beings, by virtue of forces that are felt and that are, for that reason, prone to deviate, and according to laws that these beings are called upon to know.

In other words, the brute beings obey their laws without any understanding of them: Humanity is only organized by rational knowledge, and, if I can put it this way, by the elaboration that it makes of its own laws.

Now, that understanding of our laws is not obtained by us in an instantaneous manner and by an automatic perception, but through a long effort of contemplation, research and method. Hence, three great eras in the formation of human knowledge, Religion, Philosophy and Science.

14. I call Religion the instinctive, symbolic and summary expression by which a new society manifests its opinion on the universal order.

In other words, Religion is the ensemble of relations that men, in the cradle of civilization, imagine exists between themselves, the Universe and God, the supreme Organizer.

From a less general point of view, Religion is in all things the intuition of a truth.

The principle of every religion is sentiment; its essential character is spontaneity; its proofs, apparitions and prodigies; its method is faith. Analytic demonstration and rational certainty are the opposite of the religious spirit.

It follows from this that Religion is by nature immobile, daydreaming, intolerant, inimical to research and study, that it has a horror of science and the novelties of progress. For, in the eyes of religion, to doubt or to philosophize is to dispose oneself willingly to soon no longer believe; to reason is to pretend to discover the secrets of God; to speculate is to abolish within oneself the sentiments of admiration and love, of innocence and obedience that are proper to the believer; it is to charge the primitive revelation with insufficiency, to weaken the aspirations of the soul towards the infinite, to liberate oneself from Providence and substitute the humble prayer of Philemon with the revolt of Prometheus.

15. I mean by PHILOSOPHY that aspiration to know, that movement of the mind towards the science that follows religious spontaneity and presents itself as the antithesis of faith: an aspiration and a movement that are still neither science nor method, but the investigation of both. Hence the name philosophy, love or desire for science: hence also the primitive synonymy of the words philosopher and skeptic, which is to say seeker.

The principle of Philosophy is the idea of causality; its special character, superstition; its process, sophistry: I will explain its mechanism and its mystery.[5].

16. Religion and philosophy have this in common, that they embrace the universe in their contemplations and their researches, which removes from them all specialty and by the same token all scientific reality; that in their flights of fancy or their reveries they proceed *à priori*, ceaselessly descending, by a certain rhetorical artifice, from causes to effects, or ascending again from effects to causes, and se fondant constantly, the one of the hypothetical and imprecise idea of

[5] Philosophy, thus understood, is what M. Auguste Comte calls metaphysics. (Editor's note (*).) (*) The Editor's notes that are found in of the course of the work were added by Proudhon himself in a new edition published in 1849.

God, his attributes, and his designs; the other on ontological generalities, deprived of consistency and fruitfulness.

But religion and philosophy differ, in that the first, a product of spontaneity, the work sometimes of an instant, is by its nature immutable and receives modification only through the influence of external causes: while the other, product of curiosity and reflection, varies according to the objects, changes at the mercy of experience, and always extending the circle of its idea, rectifying its procedures and methods, ends by disappearing into science.

17. I call Science the clear, complete, certain and reasoned comprehension, of order.

The proper character of Science is, as opposed to religion and philosophy, to be special, and, according to that specialty, to have a method of invention and demonstration that excludes doubt and leaves nothing to hypothesis.

Relative to religion and philosophy, Science is the interpretation of the symbols of the first, the solution of the problems posed by the second.

In some parts of its vast domain, Science still only starts to emerge; in others, it is developed; in nearly all, it is given to us to complete it. But, as we can acquire it, Science is sufficient for the exercise of our reason, for the accomplishment of our earthly mission, for the immortal hopes of our souls.

Everywhere Science has not planted its first milestones, there is religion or philosophy, that is to say ignorance or deception[6].

18. I will call METAPHYSICS the universal and supreme theory of order, a theory of which the methods proper to the various sciences are so many specific applications. Thus, geometry and arithmetic are two annexes of metaphysics, which gives certainty to each and embraces them in its generality.

The object of metaphysics is: 1) to give methods to the branches of study that lack them, and consequently create science there where religion and philosophy call for it;

2) To show the absolute criterion of truth;

3) To furnish conclusions regarding the common aim of the sciences, on the mystery of this world, and the subsequent destiny of the human race[7].

19. I mean by PROGRESS the ascending march of the mind towards Science, through the three consecutive eras of Religion, Philosophy, and Metaphysics or method.

Accordingly, Progress does not mean the accumulation of discoveries that time brings about in each specialization, but the constitution and determination of the sciences themselves.

The observation of Progress, in many cases, is indispensable to the discovery of Order: that is why we will preface our elements of metaphysics with a summary review of religion and philosophy; why, later, the social science will only proceed with the aid of comparative legislation and of history[8].

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[6] Among the ancients, the sculptor wrote on his works the word *faciebat*, was working, to indicate that he never regarded them as finished: thus the friend of truth, always on guard against sophistry and illusion, can call themselves a philosopher; a savant [*scholar, scientist*], never. But modern vanity has made the name of philosopher ambitious and that of savant modest: the savants of today only respect themselves to the extent that they believe themselves to be philosophers; the more pure the science, they call it philosophy.

[7] Metaphysics is what Auguste Comte calls *positive philosophy*. (Editor's note.)

[8] When, in the course of this work, I make use of the words *priests, philosophers, men of power*, etc., I do not designate by these names classes of citizens and I make no categories of persons. I mean by those words abstract figures, which I consider only from the point of view of their condition, of the prejudices that are proper to them,

of the character and habits that their condition gives to a man: I do not describe realities, nor conduct the trial of individuals.

Thus, although the religious spirit is contrary to science, to charity and to progress, I know that there are priests who are very learned, very tolerant and singularly progressive: I even dare say that the clergy, if only for the defense of its doctrines, is of all the associations [*corporations*] the most curious about science, and that the majority of our priests begin to no longer be priests.

Similarly, in spite of the ontology and the sophistry, which they are charged with teaching, there is no lack of philosophers laughing at philosophy, and learned in more than words: I even maintain that today every philosopher who is an honest man is not a philosopher at all.

Would I say that the agents of power, despite their official character as conservative and bourgeois are, through the spirit and tendency of their functions, very close to democracy and equality? I confess, for my part, I am one of those who, rightly or wrongly, has not been able to rid myself, with regard to the bourgeoisie, of certain aversions or suspicions: I readily recognize that many of things move in an entirely reformist direction, and that in many cases the bourgeoisie can call themselves more progressive than socialism.

Finally, to complete this apology, is it suited to scientists of detestable manners and odious character? But what is the need of recalling the bad, when there is so much good to say? No, I have no apologies for these men since I only make war on biases. These men are good, benevolent, excellent; they never wish me wrong: I fear not their biases and suits.

Finally, in order to complete this apologia, would it be necessary to admit that there are savants with detestable habits and an odious character? What need is there to recall the evil, when there is so much good to say? No, I have nothing to apologize for in the eyes of men, since I only make war on prejudices. The men are good, benevolent, excellent; they would never wish me evil: I only fear their prejudices and their costumes [customs?].

In these times of ill-defined powers, inadequate institutions, ambiguous laws and false sciences, it has been necessary for me to make this declaration.

COROLLARIES TO THE DEFINITIONS

20. We can neither penetrate substances nor to grasp causes; what we perceive of nature is always, at bottom, law or relation, nothing more. All our knowledge is ultimately from perceptions of order or disorder, good or evil; all our ideas from the representations of intelligible things, therefore, from the elements of calculation and method. Our very sensations, are nothing but a more or less clear view of relations external, internal, or sympathetic. To see and to feel are one and the same thing: we have a striking proof of it in dreams. So that, the self not really possessing, in some way which it approaches the objects by the senses, not penetrating and assimilating anything, happiness for us, pleasure, the highest felicity are reduced to a vision. Man acts in vain: his life is completely intellectual; the organism and what happens to it are nothing but the means which makes this vision possible.

In our present condition, the feeble energy of these faculties enables us to compensate only partially by understanding the feelings; but who knows if, in another system of existence, pleasure and pain would not be for us purely intelligible things, the perception of which, having no need of any organic excitation, would no longer depend on anything but an act of the will?

But let us put aside *psychology*.

21. Let us conceive a moment when the Universe is nothing but a homogeneous, identical, undifferentiated whole, a chaos, in short: creation will appear to us under the idea of separation, distinction, circumscription, difference; Order will be the series, i.e. the figure, the laws and the relations, according to which each created being will be separated from the undivided whole. Whatever Nature dividing and Nature divided may be, the efficient cause and the material, the agent and the patient, we can neither deny nor affirm anything of either. The spirit involuntarily presupposes them and thrusts itself at them: this spark of intelligence reveals to us a substantial reality and a causal reality, and we will see later how, without ever knowing them, we can acquire the certainty of these two realities. But our science remains no less limited to the observation of order, of relations and laws: consequently, any argument on the eternity of the matter or its extraction from nothing, on the efficacy of the first cause to produce this extraction and the manner of the act of creation, on the identity or the non-identity of the creative force and thing created, the cause and the phenomenon, the ego and the non-ego, must be banished from science and abandoned along with religion and philosophy.

For our intelligence, in a word, to create is to produce order: in this sense, one can say that the creation was not limited to the six days of Moses and that the work of the seventh day, the greatest of the works of the eternal Poet, that of order in society, is still being achieved.

The production of order: such is the object of *metaphysics*.

22. Set before things and placed in relation to the universal Order or the World, initially Man is astonished and worships; little by little, his curiosity awakens, and he starts to scrutinize the great whole whose face had initially enthralled him, taking reflection and thought from him.

Soon, the feeling of his personal activity makes him distinguish the force from the substance and the phenomenon from the cause, and from having once worshiped Nature, Man comes to

think that the world he admires is only an effect, that it is not the intelligent cause that his heart and thought seek; at this point in time, his soul leaps beyond the visible and plunges into the depths of the infinite.

The idea of God in man is the object of an untiring work, ceaselessly rectified, ceaselessly resumed. Man treats this supreme Being like all the other beings subject to his study: he wants to understand its substance and its action, i.e. what is most impenetrable about the creatures themselves. Hence this multitude of monsters and idols that the human brain has decorated with the names of divinities and that the torch of science must make disappear forever.

To determine, by means of universal method, on the basis of the data of all the sciences and according to the successive reforms that the idea of God has undergone in passing from religion into philosophy, what reason can affirm of the sovereign Being that the conscience believes in and distinguishes from the world, but that nothing makes it see: this is what a *theodicy* must be, what it can be.

23. Religion, Philosophy, Science; faith, sophism and method: such are the three moments of knowledge, the three epochs of the education of mankind.

Consult history: every society begins with a religious era; question the philosophers, the scientists, those who think and reason: all will tell you that they were, at a certain period, and for a longer or shorter time, religious. One sees nations immobilized in their primitive beliefs: for these, there is no progress. — Every day we encounter men who are obstinate in their faith, though otherwise extremely enlightened: for them, there is no political science, no moral ideas, no understanding of man. Sentiments, contemplations, terrors, and dreams: this is their portion.

Others, after having taken a few steps, halt at the first glimmers of philosophy; or, frightened by the vastness of the task, despair at going forward and rely on doubt: such is the category of the visionaries, the mystics, the sophists, the liars and the cowards.

§VII. — Solution of the problem of certainty.

326. Before seeking the elements of political science, it is appropriate, as much to remove any prejudicial objection on the part of skepticism as to show the power of our method, to resolve a question that the greatest effort of philosophy has been to declare unreachable, I mean the criterion of certainty.

The problem of certainty, otherwise known as the logical problem or the problem of the absolute legitimacy of knowledge, divides in two: 1) the problem of the origin of ideas; 2) the problem of certainty, or of the conformity of knowledge with reality. We see, in fact, that all the difficulties raised against the absolute certainty of our judgments rest on our ignorance of the origin of our ideas; so that, that origin being known, the problem of certainty is resolved.

Such will be the course of the discussion we are about to begin.

327. According to Plato, ideas come from God, in whom they exist substantially; they are preformed in the souls before their departure from Elysium and their union with bodies: the sensations only arouses the recollection of them in the mind. So we do not acquire our ideas, according to Plato; we remember them. The pure idea (the ideal) of each object is in God; bodies only concretely reproduce it in a more or less perfect manner, with our soul, according to the communication that it has received, recognizes and assesses. The ideas, in short, are the eternal exemplars of things, the types or samples of which our soul has received the imprint, and according to which all the beings have been created.

We see from this account how easy it would be, with a bit of good will, to maintain that Plato merely expressed, with a religious symbol, the objective and cosmic origin of ideas, plus, the capacity that we have for intellectually correct the forms that stray from their type; in other words, to calculate a series according to **its** *reason.* But it is probable that Plato did not conceive of things with that scientific precision.

328. Aristotle, or more accurately the school that has taken him for head, made all ideas depend on sensation, with the famous aphorism: There is nothing in the understanding that has not been previously in the senses.

It has been objected, against this system, that sensation was at most the occasion, means, or vehicle of the idea, but not the cause: let us add that as we explain nothing by making the origin of ideas trace back to God, author of all things; just so, we know nothing more of it by relating it to the senses, that is to the suggestion of nature, that same origin.

329. We gradually distinguish different sorts of ideas, which leads us to multiply, in equal proportion, the sources of ideas.

Among the ideas, some of the representations of perceptible, distinct, particular objects; these ideas were, consequently, named *particular,* and attributed to sensation: the others seem instead to express general points of view, and were for that reason called *general.* But what was the source of the general ideas?

A first hypothesis, suggested by analogy, offered itself, and was immediately adopted. Since the particular ideas had a particular objective reality, the general ideas must similarly have a

general objective reality; and we suppose that *goodness, beauty, strength, life, size, color, weight,* etc., designate real things, as well as such a man, animal, or plant. According to that [hypothesis], all the ideas were still issues of sense. But what were these general realities represented by the ideas of the same name? that is what we could not say.

330. In that predicament, some maintained that the general ideas were pure words, without reality, created by the ability to compare and abstract. Thus the ideas most important to the understanding, those without which reasoning is impossible, were due to the faculty, innate or accidental, divine or physiological, of imposing names, in a word, of speaking. It was to take the effect for the cause: we only speak what we think; we only name what we can see; we only create words for representations; so that the question always returns: What represents the general ideas?

Those who realized all the ideas were named *realists;* those who reduced the general ideas to mere names were called *nominals*.

331. There was a transitional opinion, of which the author was Abelard, and that, under the name of *conceptualism,* affirmed that the general or universal ideas were neither realities nor words, but conceptions of the mind. The mind, it was said, perceived similarities and differences between individuals, which are in themselves neither genera nor species; and by its faculty for generalizing, it spontaneously produces some general ideas, of which language becomes the means of expression. At base, the difference between nominalism and conceptualism is rather slight: in the one, the general ideas are names given to nothings, although suggested by the comparison of objects; in the other, they are the products of intellectual activity, true creations of the understanding. In addition, the opinion of Abelard explained the fact by the fact itself; it amounted to saying: the mind has general ideas, because it has the power to create or receive general idea.

332. I abbreviate as much as possible the history of these quarrels, which cost the life of Petrus Ramus, who has become famous in tales for children. Descartes and Malebranche came out for the innateness of ideas, without much explanation either of the mode of that innateness, which is what Plato had attempted; nor of what they understood as ideas. Locke, and Condillac his disciple, returned to the pure and simple system of sensation, as the origin of all ideas: the latter is celebrated for his system of transformed sensations.

Things were thus, and the system of Locke passed without contradiction, when Hume, an Englishman and skeptic, realized that if all ideas came from sensation, they could contain nothing more than is in sensation. Now, observed Hume, sensation give us the idea of succession, but we cannot draw from it the idea of cause: so that idea is a chimera, a vain prejudice, without reality. That reflection of Hume led straight to atheism, or at least to a skepticism without remedy: it gave rise to the meditations of Reid, and made him take up once again the problem of the origin legitimacy of ideas.

The argument of Hume, formulated in a syllogism, amounts to saying: All ideas come from sensations; now, the idea of cause does not correspond to any perceptible reality, so the idea of cause is only an idea of succession.

But, without disputing the external or internal origin of ideas, one fact remained certain, namely, the existence in our mind of the very clear and distinct idea of cause; and that is so true that the arguments of Hume aimed to correct that idea. In the face of that fact, no syllogism holds: it is either necessary to seek how the idea of cause can be given by sensation, or, if that

could not be done, to declare that the system of sensation was false, since there was an idea for which it could not account.

That simple observation was sufficient to destroy the skepticism of Hume, and one should have stopped there: but one wanted to go further and refine the conceptualist system, and was led to a skepticism a hundred times more profound.

333. First one distinguishes between *general ideas* properly speaking, those that arise in us from abstraction or generalization, and rest on some perceptible fact;

And the so-called *conceptions* without objective reality, that one maintains are formed neither by induction, nor by deduction.

The first were products of reflection; the second, products of spontaneous activity. It was in this that consisted nearly all the difference between the new system and that of Abelard; and we can say that on that pinpoint the giants of modern metaphysics have piled up mountains.

The ideas of space and time, they say to themselves, of substance, cause, and of all those that derive from them, quantity, quality, relation, mode, etc., are not representations of realities, but modifications or determinations of the self, of the forms of the understanding that are proper to them, as extend and impenetrability are to matter, and that manifest themselves in the consciousness *on the occasion* of external phenomena, or sensations. Just as at the sight of a crime, of a good deed, of a charming or hideous object, the soul spontaneously feels horror, enthusiasm or love, without our being able to attribute these *sentiments* to the sensation; just so, in the presence of phenomena, the reasons spontaneously, inevitably conceives, apart from the sensation, the ideas of time and space, of substance and of cause. Chronologically, these ideas are posterior to the perception of the phenomena; logically, the precede them, they strike them with their character, so that not only do we not know things in themselves, but we do not even perceive the phenomena under the general laws that could assure us of their proper being, we perceive them under the specific laws of our understanding.

334. This system, which has for it at least the advantage of being rather well followed, has been, since the works of Reid and Kant and the explanation that Mr. Cousin made of it, accepted in France almost without discussion; it reigns in the philosophy of the universities: but it is far from being blameless.

First it explains nothing. The concepts, it is said, are the forms of the understanding that are revealed to consciousness *on the occasion* of sensation. But what prevents us from saying as much about intuitions, or individual ideas? That is what Plato did: every representation, in his opinion, was a recollection of the soul, aroused in the consciousness *on the occasion* of sensation. Since, that excitation of the idea in the soul has been explained by comparing it to an impression made by a type on a soft substance, adequate to that type; and as we did not find the objective type of these idea-concepts, we have decided on the subjectivity of their origin. That is the whole secret of the Kantian criticism: that which has no substantial existence, like space and time, or perceptible objectivity, like substance and cause, can only be a conception of the mind. We sense all that is false about that argument: the conclusion is separated from the major premise by an abyss, and the syllogism of Kant does not even have the merit of being linked in all its parts. Kant, by reasoning in this way, violated the precepts that he had himself posed: he induced from certain *qualities* of the idea (like necessity, non-reality) a certain *modality* in the subject; he made a permutation of categories, or, as we would say, he changed his point of view.

335. That difficulty is still nothing.

Since all the ideas depend on the innate concepts or forms of the understanding and the plastic power exerted by it on the perceptions of sensibility, it follows that for us truth is entirely human and not at all absolute. Kant remained in agreement; and, despite the niceties of Mr. Cousin, who has converted no one, Mr. Jouffroy has had the good faith to admit that this was true.

Indeed, according to this system, while our ideas are subject to certain subjective laws of subordination, generation and dependence, nothing assures us that they are the faithful translation of external realities: so that we can only maintain that the world is as we think we see it, and the objects conform to our representations. So we must accept this terrible consequence: but, as **fiche** of consolation, we have said that it was all at once of nature and the intelligence to constantly seek the demonstration of its legitimacy, and to never be able to obtain it.

A tendency without object, the idea of the true in itself beside the impossibility of an absolute certainty! There was something contradictory there, which should have stopped on the slope of skepticism a mind as penetrating as Jouffroy. It was the inconsistency of Hume reappearing in another for. And the rigor of reasoning of the transcendental skepticism would not stop the flight of the minds: the most eminent philosophers knuckled down with an incredible ardor to seek the solution of that problem, the agreement of perception with reality, of the subjective with the objective, of the noumena with the phenomena: some absorbing the subject into the object, and idealizing the world, which in this way was the dream of the mind; the others, exteriorizing, materializing, **panthéisant** the self, or rather identifying the self and the non-self, the subjective and the objective, in a higher unity, an unconditioned absolute, from which they derive both, and making of the world, of man, of thought, of God himself (the cosmic self), a sort of evolution of that absolute.

Such were, in substance, the hypotheses of Fichte, Schelling, Hegel, and a crowd of others: hypotheses obviously born from the need to escape the impasse where the critique of Kant had cast minds; but fundamentally powerless hypotheses, since that granted that whole critique: the subjectivity of the concepts following reason, as the shadow follows the body, in all its speculations, and stamping them fatally with its character. For with the subjectivity of the concepts, the conformity of knowledge with external reality, whatever effort was made, remained forever indemonstrable, the very idea of the absolute is nonsense. To identify the self and the non-self, as Fichte, Schelling, and Hegel have done in various forms, or to resolve the actual diversity in an **anté-génésiaque** and hypothetical identity, is to abandon the question: for it is not a question her of what the world and ideas could be in the unobservable era of absolute identity, before creation; it is a question of the conformity of the laws of the world with the laws of the thought of man, subsequent to the absolute identity, after the creation.

336. Here is the point that the discussion has reached.

Ideas are divided into three varieties:

a) Particular ideas, intuitions, representations or images, given immediately by the senses;

b) General, or universal ideas, formed by abstraction and generalization, according to the data of the senses;

c) Conceptions, or pure ideas, which do not seem to be formed by induction or deduction, in other words, which are not abstracted no generalized according to the relations of the sensations.

Now, admitting for a moment that classification of ideas considered in relation to their origin, we would agree, I think, that the greatest obscurity reigns over the formation of general ideas and concepts, and on that so-called faculty of the mind, either of *generalizing* and *abstracting,* or of spontaneously *conceiving* of ideas. So I propose to show here that concepts and universals

are nothing but empirical intuitions, and reciprocally that every intuition implies a universal and concept, and that without making any use of reasoning, whether inductive or deductive. It would follow, not that ideas are transformed sensations (a proposition unintelligible for me), but the faithful reproduction, on a living and sensible mirror, which is the mind, of nature itself.

But, it will be said, whatever the mode of formation of ideas, is it possible to prove that its value is not subjective, and every proposition issued for this purpose does not necessarily imply contradiction?

Instead of responding to that difficulty, I ask permission to reason according to the hypothesis of the original objectivity of ideas: we will soon see that the distinction of the self and the non-self, of the noumena and phenomena, of the subjective and objective, with regard to the origin of ideas, is as insignificant as it would be, for general physics, to substitute universal expansion for universal attraction.

337. a) Intuition explains itself, or rather is not explained at all. I look at a horse, I smell an odor, I taste a fruit, I feel a cloth: each of these acts gives me, by a special organ, a sensation immediately follows from consciousness, that is to say *intuition*. How does the sensation produce in the self an illumination accompanied by an image? How does consciousness awaken in the heart of life, and reflect the external world? That is what we do not know. We only say: The self communicates with objects through the senses; the vehicle (the objective and the reflector) is known; observer escapes us. From that side, our science stops as before an abyss.

Let us observe, however, the character of the intuition. Properly speaking, the intuition consists less in the exclusive aperception of an object than in the differentiation, clearly drawn and accurately described, of that object from the surrounding environment. In the intuition, the object is detached from the non-self by sensation, as by the tracing of a black line a figure is detached from a white background. So that we can define intuition: a form that our soul, by sensation, detaches from the infinite, that contains all the possible forms.

To this point philosophy has not found the least difficulty in the exposition of the phenomenon: it has appeared natural, easy to understand, that an object produced on the soul, the mind or the intelligence, as it may be called, a sort of image of which the soul had consciousness, since it reproduced it in language. We have not raised the question of knowing if the intuition was a form of understanding determined on the occasion of the sensation, or, as Plato said, a recollection; we have simply believed, the intuition coming after the sensation, it was a representation of the object.

338. Here is where the difficulty begins.

b) Let the soul have, for example, the idea of a horse, nothing better, it is said, since the horse exists in nature: but how can the soul have the idea of the genus to which the horse belongs, and which includes, with the horse, the ass, the zebra, the quagga? The genus of which the horse is part is not an abject formed from four animals, it is not a particular being, it is nothing. And yet it is something, said Bossuet.

That reflection applies to all genera, species, collections, in a word, to all the universals: it has served as motive or pretext to distinguish, besides the intuitions, a second species of ideas, the *general ideas*. We have accounted for the formation of these ideas in the following manner.

When we simultaneously consider several determined objects having among them points of resemblance, if we intellectually separate these points of resemblance from other qualities, properties and modifications of the objects, there results a special intuition, formed of identical elements extracted from the diversity of objects, and brought closer then by the imagination: that

particular act of the understanding is named *abstraction* or *generalization*. Thus the general idea, as to *matter,* has the same origin as intuition: as for *production,* it differs essentially from it. Moreover, the genera and species do not exist in nature; they are nothing real, they are creations of the understanding.

339. This manner of explaining the formation of general ideas supposes that the mind only receives from nature particular, individual **unes** images; consequently, that every idea of genus and species has its formal cause in reason. Indeed, they say, the universe only contains particular or individualized beings; this horse, that orange, this ray of light, are things that **se laissent** see, touch or feel; while a collection, a genus, escapes all the senses and only exists for the mind.

Poor philosopher! Will you never understand that in the objects that affect your sensibility you only perceive some series? That the one, the particular, the individual, appeared to you things, not by the fact of a rough materialization, but by the relation that groups and totalizes the serial unities, in the form of organisms and aggregates? Do you finally see that, as an animal, a plant, or a crystal are series by the same title as the zoological and botanical genera and species, in the same way these genera and these species are individualities by the same title as that animal, this plant, that crystal; and that the whole difference the one and the others are in the essence of their integrative unities, in the point of view and the reason that associates them, in the interval that separates them? What do you say of simple ideas and general ideas? So draw closer by thought that of which your hand cannot seize the link; gather in one case these being so distant for you in space; group them as **en un polypier**, and you will find that unity, that objective individuality, that your mind, more rapid than your eye, has long glimpsed, and that you name a general idea. For the unity is only perceptible by you in the series: it is not given to you to discover it elsewhere. The series is simultaneous unity and multiplicity, particular and general: true poles of all perception, which cannot exist without one another.

Thus the idea of genus, species, and collection, that we attribute so ingenuously to the creative activity of reason, are precisely all that is give to us to know in this world; while the one, the particular, the concrete, of which we make the proper object of a passive intuition, is nothing but the apperception of the serial relation, an apperception that the synthetic nature of our understanding alone makes possible.

So as soon as the mind thinks of creating, by abstraction or generalization, the genus and species, it sees them in reality with a view so simple, so immediate, that it feels it sees the objects by intuition. The adhesion or separation of the parts, their organization, their fixity or their mobility, their succession in space and time, are only particular modes of the series, which, striking us from too close or too far, disguise its unity from us. There is more: if, in our intellectual representations, something could be called creation, it would certainly be the particular, the one, of which we nowhere grasp the substantial reality. But the apperception of the unity will be sufficiently explained by that of the series, of which the relation **s'objective à nous** in the whole, and can be defined as the *repetition of the same*.

340. To generalize to abstract, it is thus, as in the intuition, to perceive the series, but a series of which the unities are separated by greater or lesser intervals, or are found engaged in other series. And since we only grasp the forms of objects, every intuition necessarily implies, from the side of the object, differentiation and division; but, as the essence of the self is unity, simplicity, indivisibility, the mind has the ability to perceive in the series the relation, that is to say what is formal, immaterial, and purely intelligible in the series, the unity and the totality.

Consequently, it is not true to say: The genera and species does not exist in nature; these are some view of our mind: nature only contains particular and individual objects. For, by following this reasoning, the beings considered individuals would not have any more title to existence than the genera and the series that they form among them: the organic molecules that make up that orange and that horse are separated from one another like the stars [planets] that circulate around the sun: all the difference, one more time, is in the length of the intervals. Is it the fault of nature if we only know how to classify the perceptions that it sends us by the spacing of the parts?

Thus every so-called generalized or abstract idea, is resolved in the more or less immediate apperception of a series: so that the general idea and intuition are perfectly identical things, with regard to *production,* since it is always a group or series. But as, in nature, the most diverse series of nature, reason and point of view are involved in one another, we have thought we see a division and a rearrangement there where, in order to arrive at the series, the intuition had to traverse some **milieux pleins** or to cross some spaces.

Consider this ball, the matter of which is unintelligible as well as impenetrable to you: what do you see? Shape, color, weight, elasticity, in short, everything that the **abstracteurs** have called *secondary qualities*. Now all these things are, properly speaking, serial expressions (logical series, anticipations of experience, 241). The roundness is that geometrical series, called sphere, that circumscribes and limits the other series, the ensemble of which makes up a bowl. The color indicates a certain arrangement of molecules; the smell and taste reveal to your soul, by special organs, other serial aspects of these same molecules. The weight and elasticity relate to the force of cohesion of the parts and gravitation of the mass, a force unintelligible and ungraspable in itself, like matter, but subject to some laws of proportion and of series, some of which are manifested by sound, and that calculation is able to determine; and the others are produced in the course of the stars and the acceleration of the **chute des graves**.

Let us pass to the third species of ideas, to concepts.

341. *c) Concepts* are perceptions, no longer of the serial totality, but of the laws, of the forms and elements of the series. They are a class of *logical series* (241), intended to designate in discourse, no longer the *material*, but the **formal** of the series. I have already spoken of the formation of the **premier** and of the most important of these concepts, *unity*. Unity, I have said, is given to us originally in the repetition of the same, or, if you prefer, in the identity of the seriated parts: the intuition of it becomes possible for us, like that of objects themselves, under the condition of a self endowed with the ability to synthetically unite the diversity of the apperception. Now, that faculty, Kant himself recognized, is all the understanding. It can only be found in a simple substance, that is to say not seriated, forming no group or totalized multiplicity. That condition admitted, the origin of concepts is explained with the same ease as that of the intuitions, by objective representations.

Thus the concept of *unity* is nothing but the very intuition of the series, or of the terms of the series: for as, from the side of the object, the series is formed from the relation of the unities; thus, from the side of the subject, the unity becomes visible through the analysis of the group that contains it. So that the various moments of the formation of the concepts are **the other way around** from the logical conditions of the phenomenality of the objects. The soul first distinguishes a series, that is to say a circumscribed group, a determined *totality;* then, in that totality, it recognizes some parts, and acquires the concept of plurality; finally, grasping either the rapport of identity that unites the part, or the part itself, it arrives at the concept of *unity*.

(The concept of *continuity* or *contiguity* is a hypothesis of the mind, suggested by the comparison of larger or smaller, more or less **tightened** series. It is the same with the concepts of *indifference, infinite, same;* there are, to speak properly, some negations of the series, of which the absolute condition is determination, differentiation, division, variety.)

The series being a group of unities and these unities being able to be endlessly repeated, the comparison of several series, from the point of view of the accumulation of their unities, gives the concept of *quantity*. It is still a variety of the serial intuition that makes possible, as I have said, by the synthetic faculty of the understanding.

Moreover, *quantity, totality, plurality, unity,* are logical formulas (241), some conventional terms serving to designate, no longer the series, but the general laws of every series, laws of which the knowledge is in us, like that of the series, absolutely empirical. The observation of the solar system was necessary for Kepler to discover the laws to which he gave his name; and the knowledge of these laws was only, like that of the objects to which they were related, an acquisition de of experience. Just so, the general idea of the serial forms and elements is only an acquisition of the mind, like the apperception of the series itself.

342. The formation of the concepts of the second class of categories is explained with an equal ease. Who says series, or totality pulled from the undifferentiated infinite, necessarily says circumscription and *limit*. Now the limit has been defined, long ago, *negation* of every development or **ulterior** *reality*. But the **circumscription** of the series can be more or less exact, more or less pure in its realization: that is to say that the physical expression of the intelligible relation that links the unities can be more or less faithful: from there the transcendental concept of *quality*.[1] All these concepts are resolved in the last analysis in the faculty that the mind has of saying *yes,* when it has the intuition of a series; *no,* when that intuition suddenly ceases: — *yes,* when the reason of the unities is observed; *no,* when it is not. These are not *forms* of the understanding, they are acts of consciousness. And these acts are named by the mind, according to the *objects* that they bring about.

343. In the serial theory, the concepts mutually engender one another, maintain and suppose one another: that admirable sequence, we would seek it in vain in the criticism of Kant. There the **symmetrized** categories, I would say nearly crystallized in an immobile **cadre**, are independent of one another, without common link, without genesis. Their junction point is the understanding: apart from that, they offer no relation among themselves; they follow one another, but we do not know what they are or where they come from. And, let us note it well, it could not be otherwise in the system of forms innate to reason: for, suppose that the categories are conversions of one another, or various aspects of a primitive intuition; the system immediately crumbles, and all that effort of argumentation to free human knowledge from the sensible intuition, as supreme condition of its possibility, comes to naught.

344. As the category of *quantity* is given by the analysis of the series as multiple and differentiated, and that of *quality* by the more or less defective nature of the physical realization of the series: thus the category of *modality* includes the properties of the series in relation to judgment, the conditions of intelligibility of things. That is what we have sufficiently explain by treating in turn the forms and laws of the series, the source of every sophism and the causes of our errors, some abnormal and **anté-normaux** facts; in other words, what constitutes for us the possible,

[1] We see here why the concept of quality is not applicable to mathematics, which only operates on some exact series and regular figures. The concept of quality begins in the physical, realization of the pure series, of the idea.

the real, the necessary; and their correlatives, the impossible, the non-being, the contingent. The fourth class of categories implies the entire theory of the serial law: like the series itself, it is essentially empirical, and the concepts that compose it are all resolved, like those of quantity and quality, in an act either of affirmation, or of negation of the consciousness, provoked by the analysis of its own representations.

345. The *element,* the *relation,* the *properties, modes* and various *aspects* of the series, have been summarily enumerated by Kant in his table of the categories: but as that philosopher did not grasp the series in itself and in its objectivity, he was led to **subjectize** under the ancient name of concepts, the parts of the intuition. In other words, what Kant described after Aristotle, under the name of *categories,* these are the constituent principles of the series. Now, if the idea of series is an idea **entirely from experience**, we must confess that the ideas of the elements and of the laws of the series are also of experience, by the decisive reason that who is true of all is true of each of the parts, what is true of the system is even more true of the principle.

The role of the understanding in the aperception contributed more to maintain Kant in his error. In fact, let us suppose the self is multiple and **seriated**, and every representation **from the exterior** becomes impossible. Reestablish, on the contrary, identity and indivisibility in the self; give it back its nature amorphous, and with it the ability to grasp the *unity* of the intuition: immediately the consciousness will awaken, thought enters into exercise, images and ideas arrive in a mass, and reason is constituted. But, before the intelligence of the series, and under the preoccupation with the theory of general ideas, what could a psychologist think of that species of intuitions that were neither representative of genera or species, nor representative of individual objects? They must inevitably take them for some *a priori* forms of the understanding, form that it imposes on every perception, as conditions of intelligibility, but which are not inherent in perception.

346. The self is one, identical, indivisible: that is why it remains impenetrable to itself, an only knows itself through its operations, which draw all their denomination from the nature or form of the objects that they excite. This is also the reason that it is capable of sensibility, of apperception and of knowledge: it is by virtue of that essential unity that it converts into ideas that impressions that are transmitted it to the senses, contemplates the series **even** in its elements and its laws, and finally raises itself to the concepts of *substance* and *cause*.

Under the multiform, multicolored veil of the series, beyond the series, we perceive in objects the substance and the cause: the self surmises rather than sees them, and grasps them, but without entering into them deeply. Let us first show the *objectivity* of these concepts; later we will record their *reality*.

Concept of causality. According to Kant, the idea of cause is a category of the reason, a form of the intelligence, determined in it, not by sensation, but on the occasion of sensation. The idea of cause, in short, is a law of thought: we could not demonstrate to ourselves that it is also a law of being.

Dissatisfied with this hypothesis, that it apparently judged too skeptical, eclecticism thought to work wonders in these recent times by substituting a demonstration drawn from what it calls, with a childish vanity, the *psychological method.* With the aid of that method, eclecticism claims to demonstrate the legitimacy of the idea of cause, not only as a law of thought, but as a fact. The idea of cause, it says, is given immediately in consciousness: it is to the consciousness, only competent judge in this matter, that it is necessary to turn in order to have the origin of the idea of cause. — That **turnabout**, as we will see, was not fortunate; it made metaphysics retreat.

The self feels itself free and active; it believes in its spontaneity, in its **causative** force: nothing is more true. All its manifestations also seem to justify the opinion that it has of itself; it deliberately produces ideas, combinations, and movements; each of its acts, finally, indicates an exertion of force. But all of that will not disguise a deeper dependence, a **subalternization** of a particular sort, but no less absolute, in the vast chain of **phenomenalities** and contingencies? The communication of the movement does not necessarily take place in a uniform and continuous manner, as in the shock of several marbles placed one behind the other: we also note some interruptions and recrudescences, syntheses and points of centralization, from which then spring, impromptu, and under certain conditions, some efforts that we call spontaneous, because we have lost the lost the track. Man, along with all organized beings, is one of those centers or reservoirs of movement, that feed the scattered **phenomenalities** in the milieu that surrounds them, and in which an industrious organization converts into specific acts the mechanical or sympathetic impulsions come from outside. What is such a causality, beside that of which our consciousness has received the image? If the man is the cause, he is like the powder that makes the bomb explode, like the steam that makes our machines work, like the stomach of the quadruped that furnishes us dairy produce. Are all these centers of movement causes, you say: I feel it! About time, but how do you see it?

So let us return to the hypothesis of Kant: and after having admitted with him the concept of cause as a law of thought, let us show its origin in the intuition of the series.

347. The senses, said Hume, testify that phenomena follow one another, but not that they are *linked*. In order to glimpse the succession of two facts, nothing is required but memory, the permanent identity of the self: but the idea of succession does not necessarily imply that of causality. — The critics have found nothing to respond to that argument of Hume; they have only blamed, as I have said (332), the conclusion that the other drew from it.

Some **naturels** of New Holland being assembled at the foot of a rock, at the moment when they whistled, a fragment of rock suddenly broke away, and they were all crushed. Since that time, said Dumont d'Urville, the Australians abstain from whistling at the foot of mountains. That is because, in their mind, the fall of the mountain and the whistles are two phenomena that are linked.

So the philosopher and the savage, I mean reflection and spontaneity, agree to conceive of cause as the link of phenomena. But, first, in what case can we say that the phenomena are linked, and how does the mind perceive this link? It is, I dare say, what philosophy has never known.

All the series, of which nature offers us the inexhaustible **assemblage**, are **primordially** divided into two great categories: some, which we will call *stable* or *fixed,* because, in order to persist, their unities must be coherent or at least simultaneous: that species of series will later give us the concept of substance; — the others, to which we will give the name of ***fluentes,*** because their unities flow, so to speak, and disappear, like the water of the rivers and the breath of the winds. The unities of that second species of series are called *moments*.

These moments, while they had between them neither cohesion nor simultaneity, are no less governed by a common reason: without that, they would not form series. This is what the transmission of sound, of light, and in general of every movement, makes easily intelligible. In the eclipses of the satellites of Jupiter, the observer placed at a distance of less than half of that at which we are from that planet would not longer see the satellite that we would still perceive; and reciprocally when the **occultation** will cease for him, it will begin for us. In this series of

vibratory movements, the unities (vibrations) are obviously neither coherent nor simultaneous; they are simply linked. But on what condition are they linked? On the condition of the homogeneity of their matter, and of a relation either of equality, or of identity or progression, which makes possible their mutual influence. Thus the vibrations of the air (sound) do not transmit the vibrations of the ether (light), because there is not a homogeneity of matter; thus the fall of an **aerolite** does not draw the earth outside of its orbit, because there is no suitable relation between their masses.

So the series makes us know *à priori* when the phenomena are linked, and when they are not; in other words, what are the conditions of the causality or manifestation of the force. This first point obtained, it remains to know how the force itself, the cause finally, appeared to us in the phenomenon.

Now, the concept of cause being **correlative** in the mind to that of substance, we will lay them both out at the same times.

348. Concept of substance. All the objects that fall under our senses offer us an assemblage of series engaged in one another, and that we can consider as serving reciprocally as pivot and radius, element and relation, subject and attribute. That correlation of series is expressed in the philosophical language by the antithetical terms of *substance* and *modification.* Thus, in the ball of ivory, the chemical or molecular form being taken as principal or substantial series, the fragrance, weight, and elasticity are its attributes. The roles could be changed between these various serial expressions without the object being destroyed, and the accuracy of the reasoning compromised: but custom has decided that in every fixed series one of the elementary series will be specifically and exclusively considered as the *substratum* of the others, as substance.

The same observation applied to the **fluentes** series: in this order of intuitions, the unities, or moments, determine one another, taking by turns, according to the point of view where we are place, the names of **motor** and **mobile**, agent and **patient**, cause and phenomenon.

That is what Kant so very clearly, when he brought in the concepts of substance and attribute, cause and effect (inherence and dependence), in the category of relation: all these terms, in fact, are so many correlative expressions indicating by turns the various aspects of a series.

But the illustrious author of the Analytic had stopped on his road. The series is a whole made up of elements grouped according to a certain reason or law. That reason and the form that it gives rise to are the intelligible part of the series; the serial element, considered in itself and only as an integral part of a series, is an obscure, unintelligible thing. The tone *mi,* separated from the gamut; the red ray, separated from the **beam of light**, signifies nothing for the mind; an animal, a plant, separated from the species, genus and kingdom, are not understood. Just so a handful of grain, a mass of trees, a herd of animals, give a good idea of plurality or collection; but as long as we do not relate them to an arithmetic series, these collections are unintelligible.

It is only when the serial unity can be in its turn taken for series, and consequently be subject to the analysis, that it becomes clear to the mind, to which it furnishes an idea. Up to this point it is a *je ne sais quoi* without shape and without name, incomprehensible, impenetrable. The soul, by virtue of his own essence, which is the unity and the lack of differentiation, the soul *senses* the serial element; but not receiving its imprint, it does not *explain it,* it denies it. It calls it non-self, *matter.*

The same thing takes place in the **fluente** series: a plant germinates, develops, sprouts flowers that reproduce endlessly; — the man acts, moves, thinks, loves and reasons; the impact of bodies, sound, light, the courses of the stars, all that presents us with series of a certain order, now simple,

now complex, the law of which can be calculated and the results foreseen, but in which the moment taken in itself is, like the element in the fixed series, at once sensible and unintelligible.

Now, that serial unity, which now remains and now passes, which allows itself, so to speak, to touch, but not to see, do I need that say that it is precisely what furnishes us, there the concept of substance, here the concept of cause, substance et cause, or as one might say, what remain unintelligible in apperception? And can the origin of these concepts actually be in doubt?…

349. To make this demonstration complete, let us say how the ideas of substance and cause, as analytic as they are first in intuition, become gradually, with experience, absolute and so to speak extra-serial.

On the one hand, the serial element, as long as it is only envisioned as an element, is essentially unintelligible: in fact, the unity, the identity, the indifference is not explained. But this same element is considered in its turn, no long as a part, but as a whole; no longer as component, but as compound: then the series reappeared, a series subordinated to the first, but always composed of unities likely to be broken down in their turn into new series formed of other unities. On the other hand, to the degree that we descend the chain of the series, the forms seem to draw closer and closer to one another and to finally resolve in a single one: that is especially prominent in the classification of the animal and vegetable forms. So the mind demands if there is an end to that infinite **seriation**; if, in each object, there is a primordial series the elements of which the are **indécomposables**: in other words, if it is a first atom of every substantial series and a first moment of every causative series; so finally, in nature, the substance is identical and the cause universal.

In summary, the mind, by scanning the chain of the series, whether fixed or **fluentes**, passes continually from the intelligible to the unintelligible, from the idea to the sensation, and *vice versa*. What gives rise to the idea is called relation, law, group or series; what produces the sensation is simply matter, element or substance, moment or cause. Now, as it is a **term** where the analysis of forms and phenomena is forced to stop, where consequently sensation furnishes nothing more to the mind and is the source of no idea, we have given to that completely obscure, unintelligible, indemonstrable, and negative sensation the abusive names of *idea of substance* and *idea of cause*. And when to that qualification of *idea* we have substituted the more logical one of *concept,* as the concepts of substance and cause respond to nothing **appréciable** to reason, since they are the negation of every later series, — negation of form, not of object, — instead of saying that these concepts were the sensation, not followed by the idea, external realities, we affirm that they are pure ideas, non-empirical forms of the understanding.

Thus, instead of saying with Hume: Sensation is not sufficient to explain the idea of cause, so that idea corresponds to nothing real. We say: The idea or rather the concept of causality is only a sensation, and that is why that concept is unintelligible, inexplicable.

It is here that it is appropriate to take up again the discussion of the antinomies of pure reason, all the mystery of which consists in the necessity for the mind of classifying [sérier] in order to understand, and on which the serial theory will shine a bright light. But the limits of this light do not allow me to delve any deeper into these metaphysical depths: it is enough that we have shown, in the sensible intuition, the origin of the universals and categories.

350. *Concepts of time and space*. Every series is **un conditionné**, that is implied in the very notion of the series. Now, the mind perceiving in nature only series, everything relates necessarily to one or the other of these two objects: the series and its conditions.

The fundamental conditions of the series are: 1) division; 2) the element or the unity; 3) the relation of the unities. The unity and the relation have given to us successively the categorical ideas of quantity, quality, modality, substance and cause: in order to contest the origin that we have assigned to these concepts, it would be necessary to overturn the whole serial theory, and to deny that the ideas of cohesion and movement come from the empirical intuition. In fact, the universal idea of substance is due to the hypothesis that the self, by virtue of its own unity, makes, and cannot not make, from a last element that, **indécomposable** itself, serves the constitution of every fixed and permanent series: the universal idea of cause is fitting to that of a fluid uniting and pulling substances, as the electric fluid, by its passage, moves one hundred persons forming the chain, with a shock by turns received and transmitted.

The concepts of space and time, **correlative** between them like the ideas of substance and cause, are given by the first condition of every series, division.

The series is necessarily composed of unities. Each serial unity is separated and distinguished from the neighboring unity as the thesis and the antithesis, the self and non-self, that is to say absolutely and indefinitely; so that between the two it is possible to insert as many middle terms as you wish, that is to say a whole series. For example, between the red ray and the orange ray, the shade varies continually; between the *mi* and the *fa,* the intermediate tones are countless, although the ear does not grasp the difference; between the solipeds and the ruminants, nature could create a mass of varieties and species; between one number and another number, we can insert arithmetic means infinitely; between a phenomenon and another phenomenon, we conceive the force being transmitted by a chain of moments more and more closely packed; finally between one given point in the void and another point, the distance, as small as it may be, is always capable of division.

Let us now turn the hypothesis around: instead of inserting middle terms between the unities of a series, let us conceive that series itself prolonged infinitely. Thus, outside of the visible rays, the mind conceives of weaker and weaker waves; beyond the perceptible tones, some vibrations always more **rares** outside of the known animal species, new manifestations of life. Likewise, to the largest possible number the mind can always add one unity; instead of a **seriated** communication of force, the mind conceive of it being produced spontaneously and operating without transition; beyond Sirius and all the stars, space still extends.

That property of the series, of drawing together its unities or of prolonging itself indefinitely, is analogous to that of which we spoke just now, of presenting a series always new in each of its elements, as far as one could analyze it. Now, space and time are only particular modes of that power of indefinite differentiation; but the human mind, conditioned by the series of which it is the living image, and subjugated first by the ideas of coherence and succession, the first that it would receive from the sensible intuition, is to objectivize to itself the negative and specific concepts of space and time, and it has made of them these two gigantic figures that occupy such a large place in poetry, theology and philosophy. Space and time are nothing real, any more than the millions of arithmetic means that we can insert between one and two; nor are they forms of the understanding, but simple serial modalities, particular to the **fluente** geometric series, from which man has made two capacities containing all phenomena and all beings.

351. The idea of time, according to the psychologists, is given to us in consciousness by the succession of our thoughts; the idea of space comes to us through sight and touch.

But first, where do our thoughts themselves come from? From external phenomena of which the soul receives the representation, and to which we are linked ourselves, as phenomena, and as

centers of movement. Thus, according to the testimony of reason, time is an objective condition of **phenomenality** before being a subjective form of our understanding.

A comparison will make this more clear. Let us suppose that the Universe is animated and intelligent, is God, finally, as pantheism understands God; then, by following the reasoning of the psychologists, the idea of time would be given to the Universe-God in the succession of its thoughts. But the thoughts of the Universe-God are the phenomena that occur within it; so that, for it, the idea of time would still be an objective intuition. Now, the difference between the Universe-God and us, in relation to the concept of time, is that we see the phenomena, types of our thoughts, external to ourselves, while the Universe-God would see them within itself, by introspection.

As for the idea of space, how have the metaphysicians been able to bring back to only *two species* of apperceptions (sight and touch) an *absolute* for of knowledge? That would hardly have been forgivable in the men of primitive societies, in the philosophers of the golden age. Either space and time condition all our intuitions, or they lose their absolute character and are themselves only particular modes of the absolute condition of all knowledge, of the series.

352. The origin of the idea-concepts, as it is discovered by the analysis of the series, finds a striking testimony in philology. In the most ancient languages, the ideas of substance and cause, of time and space have no terms that express them, or, if they have them, these terms are turned from their original meaning and taken as metaphors. Now, if man, by virtue of his organization, has spontaneously found in the articulations of his voice the signs of the ideas that come to him through the senses, how has that same organization not furnished him with signs for the idea-concepts, preexisting in the understanding and awakening only at the call of sensation? How have the pure ideas be designated by the names of sensible objects, by signs of intuitions? Why, for example, in the primitive idioms, is being synonymous with living, substance a synonym of wood or stone, cause a synonym of father or mother? At that stage, time is life; space is the air included under the cavity of the sky: everywhere a concrete sign for a metaphysical idea, the phenomenon serving as the symbol of a conception. Why is that, once more, if the concepts of the understand and the categories of pure reason are the essential forms of thought? Or was the impossibility to create special signs for special ideas—what I am saying?—for necessary ideas?

353. We say that in this man has followed the general law of languages, in which every intuition is expressed by a **vocable** in relation with the object, while the concepts are depicted by some metaphors and analogies, precisely because they are pure and freed from all empiricism.

That argument, as well as explaining the fact by the fact itself, supposes in addition that man could not directly represent by word abstract and intelligible things; but the fact comes to refute that assertion. What's more, what there is exclusively intelligible in the world, is the relation: not the signs of relation are not only contemporary with the signs of intuition, but [are] also, like them, original and specific to the ideas they represent. Such are the articles, first name, prepositions and conjunctions, that no analysis, whether logical or etymological, could bring back to some concrete signs, turned from their original meanings, into metaphors. Bien plus, the words that seem best able to translate the category of substance, the **substantifs**, all are formed according to the appearances and modifications of the objects, an according to the relations that they maintain among them; as for the verbs, or attributes proper to the category of cause (force, life, action), they are of a more complex construction and have only appeared later in the language. So that, in the languages, all was first a sign of phenomenon and sign of relation, that is to say symbolic expression of the series and its forms. And what would it be if, descending more and

more into etymological analysis, we would show the **substantifs** and **attributifs** formed from amorphous roots, elementary articulations, which could all be considered as relative particles? How to grant then, in the system of Kant, that tardiness of language in creating expressions for the general ideas of substance, cause, space and time, with the spontaneous creation of the signs of relation and series?…

354. This leads us to an observation that is curious, but which will not surprise the reader. The order of spontaneous aperception of concepts is inverse to that of their scientific determination.

We have just seen how the examination of the series, its elements, its laws and its modes, brings successively the concepts of totality, plurality, unity; limitation, negation, reality; necessity, existence, possibility, to the more general concepts of Quantity, Quality, Modality; then to those of Cause and Substance, and from those to the ideas of Time and Space. But, in the first period of its intellectual education, Humanity cannot reach the concepts by that path of analysis: it is carried there in a leap by the vivacity of the intuition, and launches itself with the first bound to the summits of metaphysics, God, the Infinite, Space, Time, Substance, Cause, Series, Thought; finally begins the **autoptique** observation bringing the method in its wake. Arriving at this limit, reason goes back up the slope that it had descended, to only stop at the place from which it had left.

But the primitive apperception of the concepts is so confused and so vague that speech cannot express it: from this the philological contradiction that we have just raised. Man can only stammer his sentiments and sensations: he speaks his ideas. The animal cries, sings, moans, because it is sensible: it does not speak, because it has no ideas, because its intelligence is not its own, because its soul is not, like our own, emancipated from the Divinity.

What first torments children and excites their concern, is space. Is there a vault above our heads, and beyond that vault, another than contains it, then a third that contains that one, etc.? This is how the mind, informed by the serial law, pursues the series even when it no longer encounters an object, like a bird, that, deprived of air, tries to breath the void. The Hebrews depicted the world as a series of concentric sphere: even the name of space, in their language, is synonymous with sheet of metal, because, according to their opinion, the first heaven was of crystal polished like a metallic mirror. All people have placed on the other side of the celestial sphere the destination of the blessed and angels, and the throne of the Divinity.

Another subject of anxiety, no less keen, is Time. The imagination soars first to the origin of things and asks itself: Before the creation, what was there, and what did Go do? The majority of the makers of cosmogonies have responded that he meditated. And God is generally represented as an old man in deep thought: we have called him the Ancient, the Eternal, as later, with the aid of the concepts of Substance and Cause, we have named him the Living, the Strong, the Supreme Being, Creator or Cause of all things. I have recounted in the preceding chapters the history of those last two concepts and their influence of society.

355. If the discussion in which we just entered on the subject of the universals and categories has cast some light in the mind of the reader, the logical problem, or problem of the legitimacy of the knowledge, is resolved. What do we mean by *criterion of certainty?* The absolute condition of science. Now, that condition, we have sufficiently explained it in the first six paragraphs of this chapter: it is the series. The series that is to say: 1) division, multiplicity, number; 2) a differential relation, begetting synthesis, totalization, group.

What is an *idea?* The intuition of a series.

What is *truth?* The demonstration of that series. *The truth,* said Leibnitz, *is in the linking of ideas,* in their series.

What distinguishes dream from waking? It is because, in the dream, the idea are broken, the intuitions formed from fragments of series, and all the laws of thought, laws according to which the self dreaming itself things, at each instant violated.

What is meant by concepts? The representation of the element, of the reason and of the modes of the series. That element, that reason and those modes, considered in their universality, become themselves the general points of view of every series.

"The whole faculty of the understanding," said the philosopher of Königsberg, "consists in reducing the synthesis of the diversity to the unity of apperception;" that is to say in faithfully representing the series, then to take it itself for unity.

The concept of *unity,* adequate to that of infinity, is the proper and specific form of the understanding, as it is the condition of every apperception. Beyond the unity, as beyond infinity, there is nothing.

"But," adds Kant, "the understanding only gives the unity of the *à priori* apperception by means of the categories." That means that, first, we can form series without a *point of view.*

"The concept without intuition does not give knowledge." In order to have the understanding of a series, it is not enough to have a point of view; there must be material, an element. That is still not all: the point of view and the element being given, "the particular laws that concern phenomena determined empirically cannot derive from the categories, although they are subject to them;" that is to say that after the point of view and the material, one last thing is essential to the formation of the series, it is the relation or reason.

Thus, the element (matter or *substratum* of the series), the point of view and the reason being given, the series can be constructed, and all science is possible *à priori.* I say more: the sensation only being intelligible through the series, the hypothesis of an *à posteriori* science, a science that would need something other than its formal conditions, is an absurdity. The role of empirical observation, relative to the formation of the knowledge, is limited, either to provoke some phenomena, as in experimental physics and chemistry, in order to later discover its rational laws; or to verify the conclusions of the theory in the phenomenon. But the observation is not science, any more than memory, any more than sensation.

356. So either it is the self that, by virtue of the unity of its essence and of its synthetic faculty, converts its sensations into ideas, then, on the occasion of the phenomena, determines in it the laws of thought an constructs the metaphysical world; or else it is nature that is reflected in consciousness, and **lui** discovers gradually the intelligible forms of being and its impenetrable principles: — **let** the diversity be in nature and the synthesis in the self, or that both are in the object, and only the faculty of perceive [apercevoir] them [is] in the subject: isn't it, at base, in relation to knowledge, always the same thing? What does this difference of opinion matter to science, or certainty? One thing remains constant: in order for the self to be determined, in order for it to think, in order for it to know itself, there must be sensations, intuitions; the self requires a non-self, the impressions of which respond to its own capacity. Thought is the synthesis of two antithetical forces, the subjective unity and the objective multiplicity; so that we have the right to pose this aphorism: *What the senses reveal is adequate to what the reason thinks,* and reciprocally: *Every series constructed in the understanding is possible in experience.*

The heavens instruct the earth, the poet has said; the earth repeats the lessons of heaven. That is, in a few words, the summary of metaphysics. The law is absolute, the same for the mind, the

same for the material. Ineffable duality, mysterious poles of creation, sympathetic echoes of the divine speech, the Man and the World, like the seraphim of Isaiah, crying to one another: Holy, holy, holy is the Eternal, the God of the spheres, the Creator of the series!

357. How, at that hour, could the fundamental objection of skepticism against the authority of reason find a place?

"Reason cannot be demonstrated by itself, because that would be a begging of the question; nor by a prior principle, because that principle would need to be proven by another, that one by a third, and that this would retreat infinitely." That argument, conceived according to the syllogistic or causal method, falls before the serial method, in which the ideas are demonstrated, no longer by acts of birth and genealogical reports, but by their genera, their species and their series, resulting from their differences and their relations.

And how not to laugh in pity at seeing the eclectic inanities regarding that same question of certainty: "The evidence is not demonstrated; the aperception of the first principles is spontaneous, thoughtless, swift as lightning, impersonal, subjective and objective at once, etc., etc.?" In reading that part of the works of Mr. Cousin, where he naively places himself above Kant, we are tempted to doubt that this professor, despite his admirable talent, has understood nothing of the philosopher of which he has made himself the interpreter.

358. But, in escaping the transcendental skepticism, let us not fall back into absolute idealism, that is to say, to make use of a singular, but energetic expression, into nihilism? The laws of the world and those of reason are the same, that appears to have been demonstrated; but if we perceive in the world only series and laws, what is the world? What is there beyond our thought? Are we assured of the existence of bodies? And are our ideas of substance and cause nothing more than logical signs, conventional figures that cover no reality? From then on, what proves the serial theory? If not that a phantasmagoria obsesses us, apart from which there is for us only nothingness.

That objection, presented with a striking force by the skeptics of all centuries, has always made analysis back down, and we must say, it has remained without solution. The only response that we have made has been to appeal to the unshakeable faith of the human race, founded on the testimony of the senses, a testimony that proves nothing by itself, since, as we have observed, sensation is unintelligible. And yet the fact of consciousness invoked against idealism is already sufficient to disconfirm this system; for, since the human race believes in the existence of the body, it is because there is a reason, instinctive or well-reasoned, for believing it; but what is that reason?

We see that the problem posed by idealism is reduced to legitimating by pure reason a prejudice of sentiment. The sentiment of the existence of bodies, the concept of corporality is given to use by the extent, the solidity, the impenetrability of the material, the phenomena of attraction, repulsion and change. Now, apart from sensation, does metaphysics furnish motives for believing in the reality of bodies?

359. Here the induction, as well as the syllogism, is powerless: how would the mind, starting from noumena and phenomena, arrive at what is neither noumena nor phenomena? How would it demonstrate to itself by ideas something that is not an idea?… — The serial theory seems equally incompetent: its fundamental axiom is that, apart from the laws and their combinations, the mind can know nothing. It is with it, however, that we will refute idealism.

At § iv (231 and following), we have distinguished some *natural* series and some *artificial* series. The first, we have said, are those whose object bears its law within itself; the second are some

transpositions, some **play** of human industry, a sort of complement of the creation, invented for the attractiveness and convenience of our life. An analogous distinction or, to put it better, the same distinction reproduced in a much larger aspect plus large, will give us the proof that we seek.

All the representations with which the human mind concerns itself divide into two great categories: the first, that we will name *ideal* series; the second, *real* series. Now, if I prove that this classification is based on a certain character, wouldn't I have resolved the problem?

360. That character consists in that, in the ideal series, the unities can be transposed, form other series, and convert into one another without their essence being destroyed; while in the real series the unities are **incommutables** and inconvertible. I will explain.

We have said that plants were animals turned around: that comparison expresses very well the difference in animal and vegetable organizations; but it does not suppose the experimental possibility of the fact. Open a living dog, and transfer to the extremities of its four members the organs of respiration, absorption, secretion and generation; you will kill that dog, but you will not create a new organism. Try to make a man with organs transferred from a hundred cadavers, you still couldn't do it. Thus, in an organized subject, the transposition, the inversion of the organic parts is impossible. Just as in the two kingdoms the species are inalterable: we have never seen the horse become an elephant, the whale transform into a crayfish, nor the melon hang from the grapevine. In the animal and vegetable series, the unities or species are thus still inconvertible, but they cannot suffer modifications at all profound without perishing. The oak could not stop at the dimensions of the rose bush, nor the rose bush acquire the majesty of the cedar; we would not make the lion a domestic animal, proper to guard the herds, and feeding on hay.

I know well that the mineral kingdom (the gases, water, air, light) sustains and feeds the vegetable kingdom and becomes, so to speak, vegetable; that the plants are transformed into animal matter in the digestive sacs of herbivores, rodents, **granivores**, insects, etc.; that, in their turn, serve as food for carnivores and man. But it is not series that are converted there: they are, in the scale of beings, series of a higher order that continue by assimilating inert materials, subtracted from series of a lower order. In these organic decompositions and recompositions, the physical atoms do not perish, it is true, but the serial unities are destroyed. There would be conversion of series if, for example, some fragments of clover not crushed and digested produced a living bullock; if a tortoise became an eagle, like the caterpillar that, without perishing, becomes a butterfly.

361. Thus, in the real series, there is a nature, a something that resists, that defends itself, that wants to remain what it is, and breaks rather than submit to any metamorphosis, to the slightest alteration; something more than the weight, the color, the movement, the shape, the series; something finally intractable to the thought of man.

362. On the contrary, in the ideal series, the unities can be transposed, turned around, without ceasing to be themselves and form series. The conversion that we have seen (213) of the system quaternary of Ampère into a ternary system is one example of it. The mathematical operations are all serial conversions. To add, multiply, divide, subtract, in other words, to put together and take apart a number, isn't that to convert genera and species? From an equilateral triangle make a rectangle of equal surface or equal perimeter; the properties of the line, of the parallels, of the angle, always remain the same. If the circle is incommensurable with the edge, that is because the circle has something anti-serial about it, the line that describes it being an image of continuity rather than of series. But we work that conversion in a manner so inexact that we wish to **sériant**

the circumference, that is by drawing on each side of that line a polygon of a great number of sides.

The invention of Guttenberg presents a striking example of serial conversion. The typographic case is only a series of which the mobile unities can serve indistinctly to reproduce all the imaginable books. The same thing would occur if, instead of letters, the case contained all the words of a language with their inflections and endings. So it would be like a vast vocabulary and grammatical system composed of a multitude of series whose unities would constantly serve to form new groups, without losing their relations and without being destroyed.

Our metric system is no less remarkable: there as well we see a linear series becomes by turns a measure of capacity, solidity, weight, and of currency.

The more we observe nature, the more we plumb the laws of intelligence, and the more we convince ourselves of the certainty of that distinction between the real series and the ideal series. Water boils at a certain temperature, beyond which it ceases to absorb the caloric: there is thus between the heat and the water a chemical proportion that cannot be surpassed without the elementary form of the liquid being destroyed. The water cannot become blazing or luminous; above **80o R.** it evaporates; decomposed, it furnishes two gases, one of which is breathable and the other combustible. But the thermometer, the barometer, the gasometer, the calorimeter, all the instruments that we use to measure the intensity of physical forces, can receive very diverse graduations, which will all convert into one another.

The languages, series of articulated signs, present an extraordinary phenomenon: **homologues**, identical in their elements or primitive roots, in that which is purely ideal in them, formed, in short, of the same unities, they are all conversions of one another, they are sisters: but only analogues, unequal, for all that they take from the physiological and social nature of man, they gradually cease to under stand one another, become inconvertible into one another, often even untranslatable.

363. In summary, every series is composed of unities grouped according to a common law: but soon these unities can be separated and serve other series without ceasing for that to be the same, and that property of conversion is peculiar to intelligible things; soon the unities oppose to their conversion an invincible resistance, and leave, after the destruction of the series, only their last elements. In the face of that fact, thought no longer recognizes itself; reason is astonished at seeing the thread of its operations broken; and the intelligent self, creator of series, confesses a non-self that is anti-serial, substantial or causative, unintelligent and unintelligible…

Thus metaphysics joins it authority to that of the intimate sense in order to **attest to us** something outside of our thought; idealism, as much objective as subjective, remains convinced **of chimera**, and the anxieties of skepticism can from now on touch us.

Pierre-Joseph Proudhon
The Creation of Order in Humanity
Or, Principles of Political Organization
1843

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