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Devoted to the Science of Religion, the Religion of Science, and the Extension of the Religious Parliament Idea

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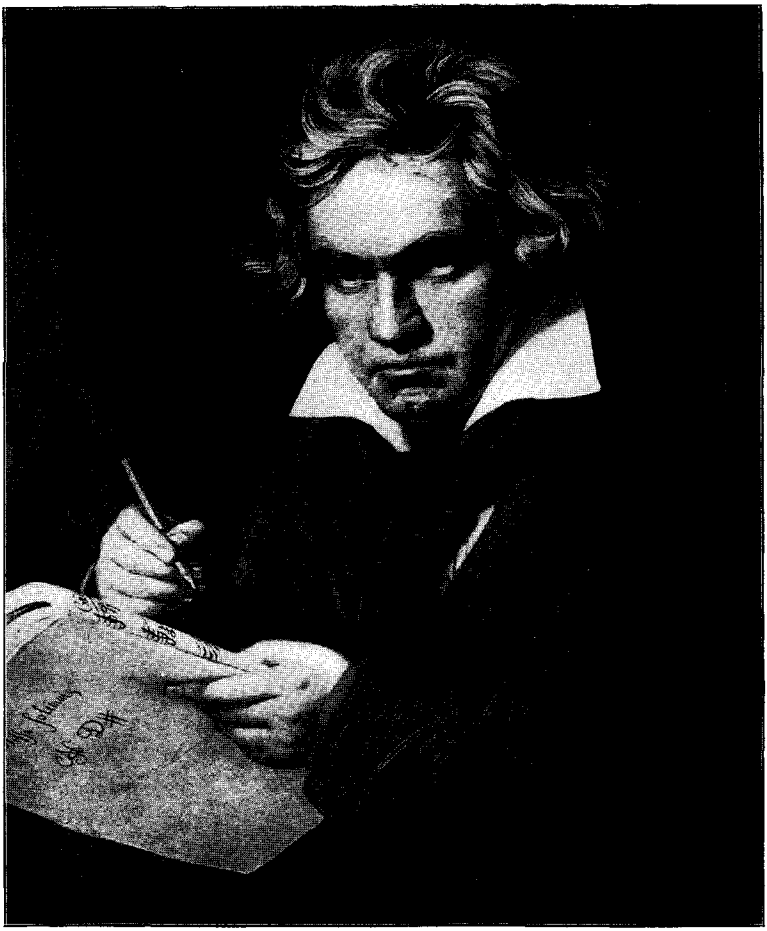

LUDWIG VAN BEETHOVEN

(1770—1827)

AFTER THE ORIGINAL OF STIELER, IN THE POSSESSION OF ROSALIE, COUNTESS VON SAUERMA, *neé* SPOHR. COURTESY OF DR. ROBERT GOLDBECK

FRONTISPIECE TO THE DECEMBER, '98, OPEN COURT

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VOL. XII. (NO. 12.) DECEMBER, 1898. NO. 511

FONTENELLE.

(1657–1757.)

BY PROFESSOR L. LÉVY-BRUHL.

BETWEEN Bayle and Fontenelle there is the difference of day and night, and this difference is already noticeable in their fortunes and modes of life. Attentive only to his work, and heedless of everything else, Bayle in Rotterdam endured with fortitude both poverty and the insulting attacks of his enemies. Fontenelle, a provincial wit craving for literary success in Paris, fairly "elbowed his way" into the world, and rose to a dominant position in the academies. Bayle knew almost everything that could be learned from ancient books, and on this vast subject he exerted his indefatigable and subtle powers of dialectic. Fontenelle looked with disdain upon erudition, which he deemed rubbish; but on the other hand, he was a mathematician. He had a taste for the exact sciences; he had reflected upon them, and had a clear presentiment of what they were very soon to become. So that the work of the one completes in some sort the work of the other.

Fontenelle is a Cartesian, but an independent one, who does not regard himself bound to adhere to all the doctrines of Descartes. Thus we shall see that he rejects the doctrine of the automatism of animals, and also that he deems the Cartesian system of metaphysics untenable. But he follows Descartes implicitly in his conception of method and science, which above all require clearness, as well as in the part which he assigns to mathematics. "What is true is simple and clear; and when the way to the truth is intricate and confused, we may say the way leads to the truth, but that it is nevertheless not the true way." The right method requires that we begin with principles and see the consequences spring immediately from them. Fontenelle therefore looks upon

mathematics as "the universal instrument." This instrument cannot be made too far-reaching or too serviceable. Mechanics, optics, acoustics, in short all sciences which discover particular relations between sensible quantities, are advanced farther and more surely according as the art of discovering relations in general grows more perfect.

This is exactly the spirit of the Cartesian method, and therefore it is not surprising that Fontenelle should also have allied himself to that representation of the universe upheld by the disciples of Descartes. We do not demean the universe, he says, when we maintain that it is on a large scale what a watch is in miniature. On the contrary, it is beautiful to contemplate that the order of nature, marvellous as it is, rests on such simple principles. Everything in it takes place according to the laws of mechanics and geometry; and as to matters in physics which cannot be brought to such a degree of clearness,—for instance the fermentation of liquids, the diseases of animals, etc.,—it is not that geometry does not predominate in them, but that it then becomes obscure and almost impenetrable on account of the too great complexity of the figures.

All his life Fontenelle adhered to that corpuscular philosophy, which admits clear ideas of *figures* and *motions* only. If we reject this philosophy, we shall fall into thoughts which may be ever so specious, noble, or brilliant, but which will not fail to be wanting in clearness. This was an evident allusion to the system of Newton. The Newtonian system is essentially based upon "attraction," which is "a very obscure and questionable principle"; whereas the Cartesian system is based on purely mechanical principles, which are acknowledged by everybody. While giving full credit to the mathematical genius of Newton, Fontenelle maintains against him, to the last, the Cartesian hypothesis of vortices.

And indeed he had been indebted to this hypothesis for his great success in his youth. His *Entretiens sur la Pluralité des Mondes* had made the meaning of this hypothesis accessible to men and even women of fashion: it was a work of elegant popularisation, in which Fontenelle's faults had been no less useful to him than his excellences.

On the other hand, Fontenelle takes no notice of Descartes's metaphysics, which he is poorly acquainted with and will not give himself the pains to understand. Not that he prefers metaphysics of a different stripe: it is metaphysics itself which seems to him little worthy of notice. He already speaks of it as many sci-

entific men did afterwards: with indifference mingled with politeness and scorn; as if metaphysicians were a species of ingenious and inoffensive artists, who took delight in constructing more or less plausible systems, but could not claim to be earnest seekers of truth. Fontenelle compares metaphysicians to historians, which with him is equivalent to placing them as far as possible from the mathematician or physicist, that is, the real man of science. "Tacitus and Descartes," he says, "I take to be two great inventors of systems of very different kinds, both equally bold, of equally lofty and fruitful genius, and equally liable in their separate domains to error." Soon after this, we find Voltaire calling the philosophy of Descartes a "romance," and reproaching him with his excess of imagination. Besides, Fontenelle himself says, as Voltaire does afterwards, that Descartes proved, by his own example, the uselessness of metaphysical researches. "Should the systems of Descartes and of Leibniz both sink under hostile objections, it would be necessary for philosophers—and a very painful necessity for them—to cease worrying about the union of the soul with the body. Descartes and Leibniz both would be a justification in their seeking the secret no longer."

But there remains one metaphysical problem in which Fontenelle does not cease to take an interest; it is that of the existence of God, which he reconsiders on several occasions. And here again he is less a follower of Descartes than a precursor of Voltaire. He rejects metaphysical proofs as too subtle. He proposes a different mode of demonstration, which he thinks is new, and which is taken from the origin of animal species; in general, we may say, he endeavors to prove the existence of God by the consideration of nature. "True physics," he says, "will rise so high as to become a sort of theology." Is this a bit of diplomatic speech merely, a display of false colors to shield his wares, or one of those popular opinions "which must be treated tenderly and with regard"? It is difficult to decide. Nothing proves Fontenelle to have been insincere on this point. As he accepts literally the comparison of the universe to a watch, it is but natural that the comparison of God to a supreme watch-maker should satisfy him. "This great work," he says, "which grows in wonderfulness as it becomes better known, gives us an exceedingly lofty idea of Him who *wrought* it." A perfectly clear representation of the world here leads Fontenelle to a representation likewise perfectly clear but rather puerile and superficial, of the relation between God and the world. It is, so to speak, the ransom of clearness, in a subject

which does not admit of it. But the successors of Fontenelle, in the eighteenth century, take no notice of this drawback, and most of them prefer Fontenelle's conception of Divinity to the incomparably deeper and finer one which they might have found in Descartes or Spinoza.

As in his successors, there is noticeable in Fontenelle also a secret spite against priests, and a tendency to explain positive religions by folly, ignorance, error, a childish taste for the marvellous, and man's natural imbecility, exploited by his wily fellows. "Wholesome philosophy," by spreading light, baffles these clever folks, and dispels superstition. Fontenelle, indeed, does not openly attack the Christian religion. In his *Histoire des Oracles* he assails only the pagan priests. In this work he summarises a ponderous Latin book, written by a Dutchman, who seeks to prove that oracles were never inspired by demons, and that they disappeared, as they had arisen, solely as the result of natural causes.

But what motives had Fontenelle or his readers to feel interested in the disappearance of oracles that had now been silent for more than fifteen centuries? Instead of "oracles" read "miracles," and the work of Fontenelle will at once have meaning, while at the same time becoming singularly aggressive. We understand what he means, when he explains that a belief in "oracles" must be attributed to the taste of men for the supernatural, and to the cravings of their imagination, not yet regulated by reason; or when he says that supernatural phenomena cease to be produced as soon as there are witnesses of a somewhat critical turn of mind. "When oracles began to appear in the world, philosophy, fortunately for them, had not yet appeared." Fontenelle dwells at length upon the impostures and artifices of priests. Everything centred about them, and had any one dared to breathe a word against them he would have been cried down as an atheist and a blasphemer. "The priests in the temples repudiated kinship with the mountebanks in the streets because they were themselves mountebanks of a nobler and more serious stripe,—which makes a great difference in that trade." Notice, I pray, the tone of scorn and hatred in these words; it will often resound again in the eighteenth century. It is true, once more, that here Fontenelle speaks only of pagan priests. But seeing that he observes, in the same work, that in feigning to maintain a thing one insinuates the contrary as cunningly as one can "because of the regard one must needs have for popular opinion," it is hardly possible to misapprehend his intentions.

Fontenelle has not by any means a historical turn of mind. But, in contradistinction to the pure Cartesians, far from neglecting history outright, he occupied himself with it; and, in his reflexions on this subject, two contrary tendencies counterbalance each other, both of which we shall find again in the course of the century. At one time he considers man as being always and everywhere identical in his essence, and when this abstract idea of humanity is uppermost, historical events are to him but of secondary interest, and serve only to confirm what he infers from his general conception. Again, being induced by physics and the nascent researches of physiology to take into account the great complexity of the facts of reality and thus put on his guard against systems, he evinces some curiosity concerning primeval and savage humanity. He foresees the possibility of comparative ethnography, of scientific anthropology, and finally of extending to social matters the method of the natural sciences. These two tendencies do not express themselves clearly enough in his mind to be antagonistic; they rather co-exist. They mingle together as best they can, and express themselves by indications as yet uncertain, but bound to develop in the future.

The first of these tendencies shows itself in a very curious way in Fontenelle's idea of constructing history *a priori*. "A man of great skill," he says, "simply by considering human nature, might guess all past and future history, without ever having heard of a single event. Such a man would say: 'human nature is composed of ignorance, credulity, and vanity, ... here and there a little kindness, etc.' He would call up before his mind the details of a multitude of facts which either have actually happened, or are quite similar to facts that have happened. This method of learning history would assuredly not be a bad one: one would be at the fountain-head of things, and would thence behold, in a diverting way, the consequences which had been foreseen."

That such a construction is impracticable, Fontenelle is very well aware; yet he mentions it more than half seriously, and rather as an ideal than as a jest. He seems to take no account of the various conditions in which the development of the different nations really took place; the surface of the globe is simply conceived, in an abstract way, as so much space inhabited by a homogeneous population called mankind. Wherefore this paradox? Because only in this way can history be brought closer in form to science such as conceived by Descartes, and become what afterwards came to be called sociology. All real sciences imply foresight of

the future, based on the analysis of present reality. And if sociology ever becomes a science, it will enable us in some measure to foresee the future, and so to prepare for it. Fontenelle had a distinct glimpse of that sociology, and he was aware that it depended on a knowledge of the laws which govern the progress of the human mind. He holds that we ought to study the variations by which tastes, customs, and opinions, succeed one another in the minds of men, and above all the law which governs the variations; for in most cases it is not by mere chance that one taste succeeds another; there is generally a necessary, though hidden, link. "One would then conceive a history of the human mind as a succession of thoughts which spring up among the nations one after another, or rather, one from another, the concatenation of which, being duly observed, might give rise to some sort of prophecy."

This was in the days of Fontenelle quite a new idea, and it was destined to be a fruitful one. It gave Fontenelle a wonderfully precise insight into mythology, the depth of which was brought to light by Mr. Andrew Lang in his recent book *Myths, Cults, and Religions*. Fontenelle observed the childish and savage character of Greek myths, and found that they did not differ in this from those which are to be met with in the infancy of all other nations. He concluded that they were a spontaneous production of ignorant and savage imaginations, and that there was no need, in order to explain them, to have recourse to anything else than a simple description of human nature. "We can hardly realise nowadays the state of ignorance and barbarism of the first ages. Let us picture to ourselves the Kaffirs, the Laplanders, the Iroquois, and let us even observe that these people, being already ancient, must have attained to a certain degree of knowledge and cultivation which was wanting in men of the first ages." Consequently, it is preposterous, when we are shocked by the revolting immorality of these fables, to seek for a moral interpretation of them, or, when struck by their childish absurdity, to suppose therein any primitive symbolical construction of certain natural phenomena. We must not transfer to the authors of these fables our own habits of thought; on the contrary, we must go back, if we can, to the intellectual state which gave rise to them, and which humanity everywhere went through as a necessary state of its evolution. Thus can we explain "the wonderful similitude between the fables of the Greeks and those of the Americans." Men of all contries have pictured to themselves the Unknown under the shape of what was known to them. As man becomes civilised, his gods become less brutal and

shocking. "It is not science," Fontenelle concludes, "to fill our heads full of the extravagant beliefs of the Phenicians and Greeks, but it is science to know what led the Phenicians and Greeks to these extravagant beliefs." True; but to establish comparative mythology we must have an exact knowledge of the different series of myths. Too often did the French philosophers of the eighteenth century see what was to be done, and failed to do it, because they hastily tried to interpret before they were in full possession of what was to be interpreted.

Fontenelle was thus quite prepared, by his habitual turn of thought, to intervene in the famous quarrel between the ancients and the moderns, which broke out at the end of the seventeenth century. The comparative merits of Homer, Pindar, Sophocles, Corneille, Racine, Molière, etc., were then generally discussed from a purely literary point of view. Fontenelle deals with the question as a philosopher and sociologist. He inquires whether there has been any progress since ancient times, and how progress is to be understood. He compares, as Pascal did, the succession of men of all times to one man living forever and learning continually. Such a man has been a child, when he was busied only with the more pressing needs of life; and a youth, when his imagination principally was exercised. He has now attained to manhood, when he has more reasoning power. But the comparison here comes to an end, for this symbolical man shall have no old age. Progress shall be unlimited.

Fontenelle makes use of two principles to solve the question of the ancients and moderns, at least as regards the sciences.

In the first place, he lays down the doctrine of *the natural equality of minds*. We have seen that, according to Fontenelle, humanity always remains similar to itself in its essence. Centuries, therefore, cause no natural differences between men. The climate of Greece or Italy and that of France are too similar to cause any obvious differences between the Greek and Latins and the French. And should they give rise to differences, these would be easily cancelled and would not be more to their advantage than to ours. We are then perfectly equal, be we ancients or moderns, Greek or French. But may not nature favor certain centuries by producing in them a greater number of superior men? This is unlikely. There might be at most some imperceptible inequality; but the general order of nature looks quite constant. The oaks and poplar trees in our fields are like to those which stood there in the olden times. It is not otherwise with mankind.

The difference, therefore, proceeds only from the *necessary succession of discoveries*. The ancients could not do more in their time. They did what our best minds would have done in their place, and, were they in ours, it is probable that they would have

BERNARD BOVIER DE FONTENELLE.
1657-1757.

the same views as we have; for there is a necessary order which regulates our progress. Every notion is developed only after a certain range of preceding notions has been developed, and when its turn has come. Fortunately, this law has long been ignored. Men have conceived unreasonable hopes, which encouraged them

to work. Chemistry would not have existed but for alchemy; and should we possess the discoveries made by alchemists if they had not fancied they would succeed in making gold? "Men must have an imaginary goal to inspire them. But now the sciences are in a fair way to succeed, and when we behold the progress they have made during the last century, in spite of prejudices, obstacles, and the small number of scientific men, we might almost be tempted to let our hopes for the future rise too high. We shall see new sciences springing out of nothingness, while ours are still in the cradle." On the subject of the future of science the cold mind of Fontenelle is kindled almost to enthusiasm. He unguardedly says in the *Éloge* of a mathematician, that "with good logic and good medicine men would need nothing more."

Therefore August Comte, who adopted several of these ideas into his system, was not wrong in looking upon Fontenelle as a precursor of modern times. No doubt his mind, though most lucid, was lacking in extent and power. He could produce nothing beyond pamphlets and fragments. But his views are sometimes strangely strong, bold, and deep. It is not to be denied that Fontenelle was among the first who had a distinct notion of scientific progress, and of the intellectual development of mankind being subject to fixed laws.