

Fontenelle's Many Worlds

by
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Plato stored his best thoughts in his mind--his fairest possession, he called it--revealing them only by word of mouth to his few students. Writing them down, he noted in his Seventh Letter (341c-e), would simply help most readers get them wrong. He also has Socrates say in the *Republic* (494a) that philosophy is not for the multitude. This view prevailed until challenged by Hobbes (1588-1679) and Descartes (1596-1650), whose victory for popular enlightenment climaxed in the celebrated *aude sapere* of Kant (1724-1804). To review that victory I will retrace its first steps, in particular the single path leading from Descartes to Bernard le Bovier de Fontenelle (1657-1757), author of many popularising tracts of wide diffusion, notably *Entretiens sur la Pluralité des Mondes*. First published in 1686, this book went into some 28 editions in its author's lifetime, a remarkable record for a time of limited literacy. As one of the first best-sellers--itself a trait of popularized knowledge--it introduced science and philosophy into the fashionable *salons* and beyond.

In essence the book records Fontenelle's imaginary conversations with a lady disciple whom he wants to bring into "le parti de la philosophie".¹ He hopes that his book will give everybody "une idée générale de la philosophie" (p. 62)--exactly the textbook language of today.

Of about 100 pages, *Entretiens* consists of a preface, an introductory letter to a philosopher-friend, and a report of the author's five evening conversations with his pupil. A sixth conversation was added one year after original publication, the first of many revisions. All were made to keep philosophy abreast of new scientific discoveries, especially in physics and astronomy, rather than for editorial or commercial reasons. The revisions thus

represent philosophy in its new role of handmaiden to the sciences, a role imposing almost a loose-leaf character upon philosophical texts.

Why do all the conversations take place after dusk? Like Penelope, you undo in the night what you do, or are forced to do, during the daytime. The freedom of the night also favors the exchange of confidences. The peace, silence and beauty of the night also provides a pleasure and a charm that we will see later is central to the new philosophy to which Everyman is invited.

Why six conversations? The year before Fontenelle put out *Entretiens* he wrote a treatise on the number nine, so he saw meaning in numbers. Now, six was a favorite number of Descartes--six being the number of the parts of his *Discours de le Méthode* and six the number of *Méditations*. The alert reader might suspect that Descartes was challenging the six-day divine creation. Of course, if questioned, Descartes would deny flatly any such blasphemous intention, and in the same spirit Fontenelle proclaims that "je respecte jusqu'aux délicatesses excessives que l'on a sur le fait de la religion..." (56) But this seems like protesting excessively, especially in a work substituting Copernicus for the traditional geocentrism sanctioned by Holy Writ and the philosophers. So the choice of six is probably a quiet insidious challenge to the scriptural six.

The 17th century was no time for outspoken challenges to authority. It introduced new ideas only with the old caution governing written works. For the entrenched enemy was usually active in employing powerful weapons against writers and printers: severe censorship; the Bastille; book burnings; and official condemnations including the Index. No wonder books concealed more than they revealed, and no wonder anonymous publication was common, as for example for the book under review itself until a dozen years after original publication. Very common also, in France at any rate, was the clandestine circulation of manuscripts. And far fewer books were published than conceived, one being the work on the universe that Descartes wrote but did not publish, among other reasons, because he remembered the fate of Galileo;²

and Galileo (1564-1642) himself, also out of discretion, avoided publication of arguments in support of Copernicus.³

Also written cautiously, *Entretiens* lodged its messages more in implications than in declarations; and its silences reveal much also.⁴ Often Fontenelle takes the reader only up to the threshold, leaving him to take the leap: "Le vrai et le faux sont mêlés ici, mais ils y sont toujours aisés à distinguer". (55) He also confides to his pupil that "on peut assez bien soutenir une opinion chimérique pour embarrasser une personne d'esprit". (94) He likes to deliver light shocks.

The theme of the book--are the planets inhabited?--is itself shocking. At times Fontenelle denies, at times he affirms that life exists on the planets beyond the earth. He is elaborately tolerant where tolerance is rare:

Qui voudra le croire, le croie; pour moi, je ne m'y
puis pas résoudre. (105)

This ostentatious irresolution suffices to raise doubts over the traditional centrality of man on an earth presumably made for him.

On net balance Fontenelle leans toward the view that the planets beyond the earth are indeed inhabited though he carefully denies that the inhabitants are *fils d'Adam* (56). He calls them simply creatures that are not human though throughout the book he grants them recognizably human traits: they pray, take oaths, are foolish, have laws and customs, and so on. They may even be superior to man, according to Fontenelle, in having possibly a sixth sense; thus again is challenged the old view of man's privileged place in God's election. That view will not enjoy authority among the new philosophers that Fontenelle was encouraging.

Fontenelle picked a Marquise for his pupil. If he had to pick a woman, she would almost have to be titled because few other women at the time enjoyed the leisure

or money for private instruction. Nor was it entirely unusual to pick a woman since a few were beginning to open their *salons* to study and serious conversation; contemporary Molière (1622-1673) entitled one of his plays *Les Femmes Savantes*. But yet men were more numerous than women among *les gens du monde* that Fontenelle was writing for, so his choice of a lady pupil requires attention.

In the course of the book a woman becomes a philosopher. Toward its end she cries exultantly: "j'ai dans la tête tout le système de l'univers! Je suis savante!" (143) A 17th-century reader would certainly be shocked to come upon a woman philosopher. Her new dignity would be all the more remarkable because, as we see later, the Fontenelle view is that all past philosophers, excepting Descartes and other moderns (64), were comprehensively mistaken; she, in contrast, marches straight and true to a secure knowledge of the universe. She is the revolution that Fontenelle brings about with his pen.

It is a great leap in the dignity of women to enter the ranks of those who know, but perhaps the point is not to be stressed because in the course of the book a man instructs a woman, not vice versa. But their relative positions are only transition between a past disowned and a future rich in happy novelties, one being the birth of women philosophers. Fontenelle goes even further to elevate women: the Marquise notes that "un certain philosophe" (128) gave thanks for being man, not beast, and Greek, not barbarian. But Thales, according to Diogenes Laertius, was also grateful for being man, not woman. Fontenelle has the Marquise pass over the last distinction; is the first woman philosopher challenging the first philosopher?

The Marquise is almost like Athena emerging from the head of Fontenelle:

Ne croyez-vous pas que si la sagesse elle-même voulait se présenter aux hommes avec succès, elle ne ferait point mal de paraître sous une figure qui approchât un peu de celle de la Marquise? (58)

Not really wise, however, she is rather on the road toward wisdom. Fontenelle holds that "Pour moi, je la tiens savante, à cause de l'extrême facilité qu'elle aurait à le devenir". (58) She is thus potential wisdom only and thus also a true heraldess of the dawn of the new age of popularised philosophy.

The Marquise, though she scales the heights, is not remarkably intelligent. True, she "a le discernement vif et prompt" (77), but so have others. The new fact--if fact it is--is that ordinary intelligence is no bar to joining the ranks of philosophers. That is the chief message of the book. All you need to know is how to read a novel; the celebrated *Princesse de Clèves* is Fontenelle's example. If you understand it at one reading, Fontenelle asserts, nothing will escape you at a second reading of *Entretiens* (55). Here is Fontenelle's challenge to Plato's view (Seventh Letter, 241) that even the brightest and best need a supreme effort to grasp the truth. Fontenelle demurs in the person of his Marquise.

Timaeus (51) held that mind is a divine attribute possessed only by a very few. Fontenelle would admit the near universality of mediocre intelligence but would hold that for several reasons it is no bar to the philosophic life. The chief one is the new discovery of a method of arriving at the truth. The error of past thought is identified in Galileo's claim that with few exceptions (not specified) past thinkers have followed "modi erronei di ricerca".⁵ The future needs a new cast of characters armed with new tools.

Descartes really conceived the Marquise before Fontenelle:

ceux qui ne marchent que fort lentement peuvent avancer beaucoup davantage, s'ils suivent toujours le droit chemin, que ne font ceux qui courent et qui s'en éloignent. (*Discours*, 2)

Fontenelle adds that

les vrais philosophes sont comme les éléphants, qui, en marchant, ne posent jamais le second pied à terre, que le premier n'y soit bien affermi. (156)

It is all in knowing the proper way to walk, not run.

Descartes praises those "qui découvrent peu à peu la vérité dans les sciences". (*Discours*, 58) Fontenelle also speaks for "petits raisonnements doux". (148) That the truth will come in small packets makes for easy absorption by ordinary minds. That the truth will take the form of simple and clear ideas also puts them in the reach of simple minds.

Exceptional intelligence is no sure help because the finest minds of the past have allegedly failed. Descartes grants that philosophy "a été cultivée par les plus excellents esprits qui aient vécu depuis plusieurs siècles". (*Discours*, 7) And yet:

on ne saurait rien imaginer de si étrange et si peu croyable, qu'il n'ait été dit par quelqu'un des philosophes.... (*Discours*, 14)

Fontenelle also refers to "les mauvais raisonnements que font les philosophes". (104) A remarkable depreciation of philosophy seems to accompany an attempt to direct many to it.

The error-prone philosophers are in particular ancient ones. Fontenelle even ridicules "cent autres rêveries que je m'étonne qui n'aient perdu de réputation toute l'antiquité". (64) Pythagoras, Plato and Aristotle are specifically cited (63) as representing an antiquity rich in "rèveries". Particular ridicule is cast on the views of "les anciens sur les corps célestes". (141) Hostility toward the philosophic tradition is more freely expressed than toward the biblical tradition, but I cannot tell from *Entretiens* alone which is stronger in Fontenelle.

Does radical contempt for the past temper radical optimism for the future? Not at all, for now we know where the truth is: "chercher la vérité dans les sciences" is the program laid down in the subtitle of Descartes' *Discours*. So for the first time the search for truth that is philosophy will go from success to success, but it will emerge from the collective efforts of ordinary minds and not depend on the haphazard appearance of gifted minds that in rare moments enjoy sudden illumination.

Moreover, the great discoveries are yet to come. In medicine, for example, "tout ce qu'on y sait n'est presque rien à comparaison de ce qui reste à y savoir". (*Discours*, 55) It is not much different in other fields except that in some, physics and astronomy for example, great advances have already come quickly. The horizon is wide open in all fields--a prospect exciting to both tutor and pupil, who also share the sense of exhilaration felt in liberation from longstanding error. The Enlightenment started with an emotional lift.

In reference to past thought Fontenelle claims that "Toute la philosophie...n'est fondée que sur deux choses, sur ce qu'on a l'esprit curieux et les yeux mauvais..." (62) But new telescopes are now correcting the second, for they permit you to see the heavens, not just talk about them. Very considerable therefore is the contribution to philosophy of strong lenses now available to all.

Yet Fontenelle also believes that even good eyes will not take you the full distance since you can see only from where you stand, that is, your perspective is inescapably tied to the accident of location. Earth-bound creatures, for example, are limited in the range of their vision; and worse still is their alleged ignorance on this point: "Nous voulons juger de tout, et nous sommes toujours dans un mauvais point de vue". (80-1) Fontenelle holds in fact that only inhabitants on the sun, were there any, could see things whole and entire--in its planetary system at any rate.

In the search for truth the essential difference is of perspective, not of intellect. Intellectual differences always come second; they certainly come behind differences in visual acuity. Fontenelle tells his pupil that he is guiding her "aussi loin que vont vos yeux" (143), not as far as he can stretch her mind. It is almost as if eyes replaced mind instead of aiding it.

Handicapped by his restricted perspective, the earthling will not grasp easily, if at all, non-local truth. For him all truth is only partial or probable. The intellectual effort to win precision is thereby eased up. But on this point Fontenelle departs from his master who regarded "presque pour faux tout ce qui n'était que vraisemblable". (*Discours*, 8) Unfortunately, in *Entretiens* Fontenelle does not explore this difference with Descartes, perhaps not to overburden the intelligence of his student. In any case in stressing the probable character of truth he was no doubt happy to strip away à la Descartes the aura of certitude surrounding old philosophical and religious notions.

In his *Discours* (1637) Descartes urges readers to study "le grand livre du monde", supporting the earlier advice (1623) of Galileo:

La filosofia é scritta in questo grandissimo libro,
che continuamente ci sta aperto innanzi a gli occhi
(io dico l'universo)....⁶

Eyes, not mind. In any case reading of books as such is apparently not recommended, and Fontenelle even refuses "le nom de savants" (58)--attached to the Marquise--to those who have spent their entire life reading books. Expressed in books, this contempt for books is probably reserved for old ones. One should not overlook, for example, that *Entretiens* does not except the oldest book, the Bible, the book containing many books.

One class of book--travel literature--escapes contempt. *Entretiens* is itself an account of an imaginary voyage among the planets. By travel books you enter into direct contact with the world awaiting exploration. Travel books

may therefore be a new class of philosophical literature; Fontenelle would probably give higher marks to Herodotus than to Parmenides.

Descartes had pointed out that

sitôt que l'âge me permit de sortir de la sujction de mes précepteurs...j'employai le reste de ma jeunesse à voyager.... (*Discours*, 8)

Nine years he spent doing nothing but "rouler çà et là dans le monde". (*Discours*, 25) Even aimless wandering apparently serves philosophy, newly conceived. In contrast, Socrates never left Athens-Piraeus except briefly and on military service.

Montaigne (1533-1592) had exploited the discovery of the New World to announce that what we call barbarism is simply the customs of other people.⁷

Not similar, but identical, is the opinion of Descartes:

depuis en voyageant ayant reconnu que tous ceux qui ont des sentiments fort contraires aux nôtres ne sont pas pour cela barbares ni sauvages.... (*Discours*, 14)

Fontenelle goes a step further by traveling with the chariot of his imagination into regions far from the earth and hence far from earth-bound prejudices. New perspective, new truths.

A novice philosopher must be, in Descartes' words, an "esprit entièrement libre de tous préjugés."⁸ So he narrates in detail his arduous task of "déracinant de mon esprit toutes les mauvaises opinions que j'y avais reçues...." (*Discours*, 19) The Marquise is more fortunate than Descartes and other educated men for in being excluded from schools at the time she avoided their alleged corruption. Fontenelle almost boasts that his pupil has "nulle teinture de science" (54) and, more broadly, she "n'a jamais ouï parler de ces choses-là". (54) She has apparently read few, if any, books and has known no

teacher before Fontenelle, who instructs her, it is noticed, at home, not in school. The blessed creature enters philosophy almost as a *tabula rasa*, and no different must be "true" philosophy itself.

The heavens declare the glory of God according to the Psalmist (19), but that is not what the Marquise finds during her travels. Despite their "magnificence surprenante" (68) the heavens show the same instability and irregularity encountered on the planet earth. Stars are born and die amidst "une mortalité générale"; (139) the planets move in countless irregular ways; and random events (eclipses, comets, sunspots) are common evidence of a lack of heavenly order. The newly-discovered heavens therefore inspire no veneration nor provide any guidance to humans. Nor are they made to the measure of man: "voilà l'univers si grand que je m'y perds...." (130) in the words of the Marquise. Alienation, not a sense of belonging, emerges here; the only world the Marquise will fit into is the one that she herself will create.

The Marquise returns morally unchanged from her voyages: knowing more without acting better. Not that she is vicious--the book is entirely silent on her moral habits--but rather that in Fontenelle's view there seems to be no moral requirement for elevation to wisdom. That also makes things easy, while also effecting Fontenelle's repudiation of the insistent moralism of older thinkers.

She may even have picked up some indifference to the moral concerns native to the earth:

Pour moi, je commence à voir la terre si effroyablement petite, que je ne crois pas avoir désormais d'empressement pour aucune chose. (131)

Indeed, Fontenelle has not given her the social traits--marriage and family--that would link her to one limited but loved parcel of land. Cosmopolitan literally, she is married only to philosophy. Fontenelle mentions men and women throughout but never citizens.

Some political implications yet peek through a book lacking political discussions. Already noted was the triumphant *je suis savante* of the Marquise. From uneducated pupil to *savante* is really a big leap, at least in her self-esteem, especially where the giants of the past are discredited and discarded. More self-confident, she will also become more self-assertive and perhaps even puffed up with her new sense of superiority. Sooner or later she will insist in being consulted, not dictated to, by authorities of all kinds. And so emerges a political order, as others become like her, men and women both, that is based on private judgment and consent. The public opinion of petulant people will come to rule this new order, and their star-filled education, which promotes indifference to human concerns, will somehow make for good government.

Fontenelle might yet deny these democratic implications. He does distinguish, for example, *esprits fins* from *esprits ordinaires* and also "us" from the "people". But I am not sure that, snobbery apart, such distinctions support a sympathy for government by a few since the education of the Marquise is meant as an example for all. Moreover, where there are social advantages in becoming a philosopher--to gain the respect of others--will not many turn themselves in this direction? Descartes had already pointed out that "la philosophie donne moyen de parler vraisemblablement de toutes choses et se faire admirer des moins savants.... (*Discours*, 5) Few people will indeed deny themselves such a gain.

Fontenelle places himself at the service of such people. He teaches them philosophy to help them get ahead. This is exactly what the ancient Sophists did. The similarity is to be noted because, siding without exception with the moderns against the ancients, Fontenelle seems unaware of his link with one sector of the ancient tradition. Also noted is another depreciation of philosophy in making it serve a function other than the single one set forth in its etymology.

Tutor addresses disciple as "nous autres coperniciens". (74) The Marquise is thus enrolled in the new enterprise of science or "experimental philosophy" as it was called. She will be mixing freely with Copernicus and the other discoverers. For no gap between scientific knowledge and the popular mind will be tolerated. Here certainly is a democratic element in the new point of view.

Fontenelle and others will be busy putting into popular terms the coming flood of scientific discoveries.⁹ A new kind of literature, one uniting entertainment and instruction, will be created: "...j'ai cru pouvoir les instruire et les divertir tout ensemble". (54) But at times he gives up instruction:

je n'ai point du tout prétendu les instruire, mais seulement les divertir en leur présentant, d'une manière un peu plus agréable et plus égayée.... (54)

Perhaps he did not want to scare off readers by admitting a didactic intention. Even those easily scared off are invited to the party. So he promises that he will not write a treatise "trop sèche pour les gens du monde". (53) Consequently he offers digressions and pleasant literary allusions when the going gets rough; there are no *longeurs*; and he exploits the happy circumstance "que les idées de physique y sont riantes d'elles-mêmes...." (55) This fact--if fact it is--helps him charm the Marquise into the swelling ranks of philosophers. By nothing other than making philosophy attractive he breaks with the past.

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Notes

¹Robert Shackleton, *Fontenelle: Entretiens sur la Pluralité des Mondes and Digression sur les Anciens et les Moderns* (Oxford at the Clarendon Press, 1955), 58. This book contains the French text in its final revision (1742).

²*Discours de la Méthode*, contained in *Oeuvres Choiesies*, ed. Louis Dimier (Paris: Librairie Garnier Frères, no year indicated), I, 53.

³Letter to Kepler from Padua, August 4, 1597. Italian translation of Latin original in *Opere di Galilei Galileo a cura di Franz Brunetti* (Unione Tipografico-Editrice Torinese, 1964), I, 856.

⁴"...il a fait... du silence une institution". R. Carré, *La Philosophie de Fontenelle*, (Paris: Librairie Félix Alcan, 1932), 650. Carré also refers to Fontenelle's "maîtrise dans l'art de la suggestion...." 662. Worth reading on Fontenelle's devious mode of writing is pp. 645-684.

⁵*Opere, op. cit.*, I, 855.

⁶*Il Saggiatore, Opere, op. cit.*, I, 631.

⁷*Essais*, (Paris: Librairie Gallimard, 1950), 243.

⁸Letter introducing the *Méditations Métaphysiques*, in *Oeuvres Choiesies, op. cit.*, I, 72-3.

⁹"...il a inventé la vulgarisation scientifique...." Alain Niderst, *Fontenelle à la Recherche de Lui-Même* (Paris, 1972), 586. Also: "...he invented and exploited a whole technique of popularisation." Herbert Butterfield, *The Origins of Modern Science, 1300-1800*, (The Free Press, New York, 1965), 172.