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CYRANO DE BERGERAC AS A NOVELIST

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by A.C.M. Lavers

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Abstract

The subject of this thesis is Savinien de Cyrano Bergerac's novel L'Autre Monde, under which title are reunited his Histoire des Estats et Empires de la Lune and his Histoire des Estats et Empires du Soleil. This is the first full-length study of this novel, of its inspiration and themes -whether religious or philosophical - , of its sources and possible influence on later works.

The style of the novel is also studied, as well as the aesthetics it reveals. An examination of its structure shows the emergence of a pattern which will supply a frame for the fantastic voyages and the philosophical tales of the following century.

Although Cyrano has been the object of many commentaries, none of these have been devoted to L'Autre Monde alone, and the existence of a persistent prejudice makes the need of an unbiassed study all the more felt. The conditions of secrecy obtaining in Cyrano's time because of the danger attached to heterodox opinions makes the determination of Cyrano's beliefs particularly difficult; but there are indices which point to the correct interpretation of the utterances of the various characters of his novels.

The name Cyrano refers in this study now to the author, now to the character (who is called Dyrcona in the second part only); care has been taken to avoid ambiguity.

Notice

L'Autre Monde refers to both parts of Cyrano's novel.

The Moon refers to the first part: Histoire des Etats et Empires de la Lune.

The Sun refers to the second part: Histoire des Etats et Empires du Soleil.

A page-number without any other indication refers to Lachèvre's edition of L'Autre Monde: Les Oeuvres Libertines de Cyrano de Bergerac; the Moon and the Sun having a hundred pages each, it is easy to see at a glance to which reference is made. When Lachèvre's Introduction is quoted, the title Oeuvres Libertines is repeated.

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Introduction

The reputation of Savinien de Cyrano Bergerac certainly is among the most paradoxical: his name is known everywhere because of Edmond Rostand's play, which seriously altered the character of the hero, yet Cyrano's work is still affected by various prejudices and far from being as popular as it deserves to be. This situation existed even before Rostand's play made it apparently final, for Paul Lacroix (writing as le bibliophile Jacob) already remarked in 1858: "Tout le monde, en effet, connaît le nom de Cyrano; personne, ou presque personne, ne lit ses ouvrages..."¹

This is almost entirely due to Cyrano's novel L'Autre Monde, the object of the present study; for it seemed, to some people's minds, to support the legend of his madness². This legend started quite early and may have been spread both deliberately by Cyrano's friends as a prudent measure, and by his enemies as a slander; it offered to the succeeding generations a pretext for ignoring Cyrano's work or avoiding of acknowledgment / their debt to him. Perrens who, after the others

1) In the Notice Historique of his edition of the Histoire Comique des Etats et Empires de la Lune et du Soleil, Paris, 1858, p. XIV.

2) Tallemant wrote casually: "Un fou nommé Cyrano..." (See Historiettes, 1840 edition, X, p. 190). See also Menagiana, 3d edition, 1715, II, p. 22. In the review of Cyrano's novel, in the Bibliothèque Universelle des Romans (October 1776, II, p. 186) there is a balanced opinion on his merits but a mention of the legend: "L'on prétend qu'il était fou lorsqu'il est mort."

calls Cyrano a "fou agité" supposes that his contemporaries appreciated his unusual frankness: "...il était d'une franchise dont personne encore n'avait donné l'exemple. Il ne déguise pas sa pensée comme son maître (Gassendi); il ne la met pas, comme Naudé, sur le compte de quelque ancien, et il ne l'engloutit pas sous les flots débordants d'une érudition indigeste."¹ This certainly is true of the manuscript of L'Autre Monde, but the consequence is that having refused the three ways of avoiding censorship and persecution which Perrens indicates, and which Gassendi, Naudé and La Mothe le Vayer had followed, Cyrano was left only with that of not seeing his work published in his lifetime, and condemned it to an inevitable mutilation. Considering the subsequent development of the seventeenth century and the progress of piety and bigotry, it seems very unlikely that L'Autre Monde would have stood a better chance of appearing intact during Cyrano's lifetime, even if he had lived longer. But having died in 1655 at the age of thirty-six (after a rather mysterious accident about which a controversy has been raging between believers and free-thinkers since the re-discovery of Cyrano in the nineteenth century) Cyrano, by his own wish, had as the executor of his will his friend Le Bret,

1) F.T. Perrens, Les Libertins en France au dix-septième siècle, Paris, s.d., pp. 243-44.

who had for some years been a man of the Church. Faced with a difficult dilemma, Le Bret published and prefaced the impious work, but bowdlerizing it so much and so awkwardly that it became well-nigh incomprehensible¹. All the audacities were not removed, however; some remained, for those who could see them, but they consisted mainly of ideas derived from Italian philosophers of the Renaissance which were no longer very much in favour owing to the success of the "new philosophy". These ideas, very often unidentified and confused with mere fantasy because of their imaginative clothing, have been the cause and the rationalization of a generally cursory and patronizing account of Cyrano's philosophy. "Passionné pour la philosophie, Perrens says, il en parle sans cesse, et comme, assurément, aucun philosophe n'en a parlé Il ne sacrifiait pas Descartes à Gassendi; il amalgamait leurs doctrines aux siennes qui sont un chaos fumeux..."² This becomes even more unfair when the target is no longer L'Autre Monde but the Lettre Contre les Sorciers which one might have thought above such a treatment because of its evident qualities of thought and style: "Cyrano, Delaporte writes, (among his contemporaries who believed in sorcerers) fait bande à part.... Mais ce n'est

1) See for instance the Bibliothèque Universelle des Romans, ed. cit., p. 186; David Russen, of Hythe, in Iter Lunare (London, 1703) p. 79: "His Discourse.... scarce intelligible"; C. Flammarion in Les Mondes Imaginaires et les Mondes Réels (Paris, 1865) p. 376: "Les mutilations opérées sur le ms. ne permettent pas de reconstruire l'idée de l'auteur."
 2) in op. cit., pp. 243-44.

point un avocat bien sérieux des causes qu'il plaide; il était habitué à donner plus de coups d'épée que de bonnes raisons."¹

...so lasting is the stigma of having been a good fencer as well as a good writer! Edgar Poe, whose hero Roderick Usher reads Campanella and is obsessed by a belief in the sentience of things, nevertheless writes, speaking of Utopias: "that of Bergerac is utterly meaningless."² J.O. Bailey, in his Pilgrims through Space and Time, writes that "Cyrano apparently neither understood the science of his day nor bothered to rely upon it" and this is how Cyrano's lucid exposition of Copernicanism appears in his book: "There he argues droll quasi-science with the governor, such as the earth turns with the impact of sun-beams."³ The name of Histoire Comique, borne by both parts of the novel in their first edition, is probably due to Le Bret who sought thus to reduce its seriousness and potential danger, as had been the case for the Histoire Comique de Francion⁴; but even without the Preface in which he further insists on Cyrano's alleged Pyrrhonism and alleged desire to write L'Autre Monde for pure entertainment, such a title seemed to most people to describe the contents adequately.

1) P.V. Delaporte, Aspects du merveilleux dans la littérature française sous le règne de Louis XIV, Paris, 1891, p. 50.

2) The Complete Tales and Poems of Edgar Allan Poe, The Modern Library, New York, 1948, pp. 40-41 (after the tale "The Unparalleled Adventure of one Hans Pfaal").

3) New York, 1947, pp. 18-20.

4) This title was very frequent in the seventeenth century; see Barbier, Dictionnaire des Ouvrages Anonymes (3d edition, 1879) for instance. Théophile's La Première Journée was also called Fragment d'une Histoire Comique (Lachèvre, Oeuvres libertines, p. xxvii).

Nothing came to alter this impression in the following century. Cyrano is not mentioned in Bayle's Dictionnaire, nor in the Encyclopédie. Lenglet-Dufresnoy calls L'Autre Monde a work "plein d'imagination et de singularités"¹, but neither Voltaire nor Swift acknowledge any debt to it. Voltaire approves Molière for having taken two scenes from Cyrano's "ridicule comédie"², and in the article Anneau de Saturne of his Dictionnaire Philosophique he uses Cyrano's name as an insult against Maupertuis. Even nowadays, M. Pintard keeps the tradition alive and describes the proud and melancholy Cyrano as "un étrange fou".³

In spite of a good judgment in the Bibliothèque Universelle des Romans⁴, one must wait for the rediscovery of Cyrano in the nineteenth century. "Il y a quelques années, Victor Fournel wrote in 1862, grand bruit se fit tout à coup autour du nom de Cyrano de Bergerac."⁵ This was due to Charles Nodier who, in his Bibliographie des Fous⁶, then again in 1838, tried to repair Cyrano's badly damaged reputation, keeping however the usual label: "fou de génie".

1) De l'Usage des Romans, 1734.

2) Oeuvres, ed. Beuchot, XVIII, p. 592.

3) Le Libertinage érudit dans la première moitié du XVII^e siècle Paris, 1943. See pp. 329-330.

4) Cyrano's work proves "que cet original savoit beaucoup de physique pour son temps; qu'il étoit particulièrement très au fait des systèmes de Descartes et de Gassendi..." ed. cit. p. 186

5) La littérature indépendante et les écrivains oubliés, Paris, 1862, p. 53.

6) N° 23 of the Bulletin du Bibliophile, 1835.

N° 8, year 1838, reprinted in 1841 as Bonaventure des Périers et Cyrano de Bergerac (Techener).

Gautier followed in Les Grotesques (1844), and his obtrusive prose, bolstered by a boundless imagination, opened the way to Edmond Rostand, especially on the question of the famous nose, now dwarfed by its reputation¹. The historical mistakes in Rostand's play are less important than they have appeared to some people², and even, as will be seen, Rostand who read L'Autre Monde carefully, occasionally achieved a truer understanding than other commentators; the great drawback of the play, however, is that Cyrano's personality is now permanently twisted in the public's mind because that of his dramatic namesake encourages only too well the established mistakes, beside adding a sentimentality altogether unfounded in fact. A sentimental play about "le grand Will" does not impair Shakespeare's fame; but that of a minor writer, especially when it is already shaky, is in great danger of being completely killed by a drama like Cyrano de Bergerac.

Cyrano's lack of luck, however, was to be proved further by another paradoxical situation: for whereas Le Bret had piously published a bowdlerized text, Lachèvre edited the latter with scrupulous fidelity but accompanied it with commentaries which could well earn him the title of modern Father Garasse.

1) Testimonies coming from writers who lived nearer to Cyrano's time do not mention the size of his nose but the sword wounds which had altered its shape. See Menagiana, the Bibliothèque Universelle des Romans (loc. cit.). Jules Sandeau (article "Cyrano" in Dictionnaire de la Conversation et de la Lecture, 1873) does the same thing.

2) See Bibliography. There are numerous books and articles on the comparison of the real Cyrano with Rostand's hero.

The reader who wants to know the exact text of L'Autre Monde must also accept incorrect interpretations, political allusions and even, for all the editor's erudition when the civil status of Cyrano is concerned, allegations which no real evidence establishes¹. Strangely enough, whereas he edited all the laudatory poems of Cyrano's friends, Lachèvre did not have the various prefaces to Cyrano's books reprinted at the same time; this is probably because of their sympathetic treatment of his novel². He has also tried to minimise a success testified by Tallemant (about La Mort à Agrippine), Garnier's Avertissement to the thirteenth tome of his Voyages imaginaires in which L'Autre Monde is reprinted³, and by the numerous reprintings and translations of Cyrano's works⁴.

Let it not be thought, however, that Cyrano's novel has never been the object of sympathetic studies. The bibliography of the commentaries on his work is in fact quite large, although the value of these commentaries varies greatly.

1) Here is an example of each; others will be pointed out in the course of the study:

- p. 14, note 2: Juppont alluded to the medieval anthropocentrism which Lachèvre affects to confuse with the grossest sort of Epicureanism.
- p. 36, note 2, about modern political orators.
- p. 34, note 1: it is already absurd thus to reduce the significance of the Daemon, but on p. 102 Lachèvre's hypothesis has become a fact: "Rappelons que...."

2) See what he says about them, Oeuvres libertines, I, p. XCVII.

3) Voyages imaginaires, 39 tomes, Amsterdam, 1787-89.

4) Not to mention Sommaille's pirated edition, 1661, see Oeuvres libertines p. XCVIII.

The article by Jacques Denis, Sceptiques ou libertins de la première moitié du dix-septième siècle¹ has often been praised, but that of E. Hoenncher, Fahrten nach Mond und Sonne² unjustly neglected, for alone until recent years Hoenncher attempted to find Cyrano's sources among the Renaissance philosophies. The first full length study of Cyrano's life and works was that of Brun³. Concerned with establishing Cyrano's exact identity and with discussing the problems raised by all his works, Brun could lend L'Autre Monde but an incomplete attention. Besides, he was often disturbed by the boldly anatomical metaphors the novel contains, however justified by the rest of Cyrano's philosophy⁴. His study is further invalidated by three wrong assumptions: that Cyrano was fundamentally a Christian and worried by the divergences between his teaching and that of the Church, that everything has been said about the novel when its sources have been found, and that the principal merit of such a work is in the right anticipation of the further development of science. The studies which followed, chiefly those of Löwenstein⁵, Dübi⁶ (far less important than its author had made us

1) In Mémoires de l'Académie de Caen, 1884.

2) Fahrten nach Mond und Sonne, Studien insbesondere zur französischen Literaturgeschichte des XVII. Jahrhunderts, Opfeln und Leipzig, 1887.

3) Savinien de Cyrano Bergerac, sa vie et ses oeuvres, Paris, 1893.

4) See pp. 270-71, ibid. for instance.

5) Naturphilosophische Ideen bei Cyrano de Bergerac, in Archiv für Geschichte der Philosophie, 1903.

6) Cyrano de Bergerac, Sein Leben und seine Werke. Bern, 1906.

anticipate), Jordan¹, Mansuy², Toldo³, are interesting but often fragmentary and marred by mistakes similar to Brun's. The "re-reading" of Cyrano's works which Luciano Erba advocates⁴ has been done in recent years by Messrs. Canseliet⁵, Harvey⁶, Mounin⁷ and Spink⁸ who studied various significant aspects of Cyrano's work. Messrs. A. Adam and Busson have impartially assessed the value of that work and further attracted the attention of students of the seventeenth century to it.⁹ A thorough study of L'Autre Monde in content and in form has however never been made, and its significance was still sufficiently vague for misunderstandings to arise about it as in the case of Marjorie Nicolson's Voyages to the Moon, which appeared in 1948¹⁰, in which Cyrano's novel is called "the most

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- 1) S. de C. B.'s L'Autre Monde.... nach der Pariser und der Münchener Handschrift sowie nach dem Drucke von 1659 zum ersten Male kritisch herausgegeben von L. Jordan, Dresden, 1910.
 - 2) "L'aviation à Varsovie et à Reims au XVII^e siècle et C. de B." in Le monde slave et les classiques français aux XVI-XVII^e siècles, Paris, 1912.
 - 3) "Les voyages merveilleux de C. de B. et de Swift et leurs rapports avec l'oeuvre de Rabelais" in Revue des Etudes Rabelaisiennes, T. IV and V, 1906-1907.
 - 4) "Per una rilettura di C. de B.", in Aevum, luglio-agosto 1956.
 - 5) C. de B., philosophe hermétique", in Les Cahiers d'Hermès, N° I, Editions du Vieux-Colombier, 1947.
 - 6) "C. de B. and the question of human liberties", in Symposium, Syracuse University, May 1950.
 - 7) "C. de B. et Pascal" in Le Préclassicisme Français, Paris, 1952.
 - 8) "Form and Structure: C. de B.'s atomistic conception of metamorphosis", in Literature and Science, Oxford, 1956.
 - 9) A. Adam, Histoire de la Littérature Française au XVII^e siècle T. II, see Index.
H. Busson, La Pensée Religieuse Française de Charron à Pascal Paris, 1933, see Index.
 - 10) New York, 1948.

brilliant of all seventeenth century parodies of cosmic voyages". "Only one who had followed the 'new philosophy' closely could have had as much fun in satirizing and parodying it as did Cyrano", the author adds,¹ adopting Le Bret's interpretation of Cyrano's character. It seems that some amount of devotion to Cyrano's cause is necessary to recognize a merit so strangely overlooked. David Russen of Hythe² insisted on telling the reader about his delight in reading the Moon, and protested against the epithet "comical" applied to its title: "it is throughout carried on with that strength of Argument, force of Reason, solidity of Judgment in the Demonstration of things probable, that it may not be unbecoming the Gravity of Cato, the Seriousness of Seneca, or the Strictness of the most rigid Peripatetick, or Cartesian; and instead of comical, may deserve the Epithete of the most Rational History of the Government of the Moon." Russen was a naïve schoolmaster, but through over-admiring the Moon he reached a just apprehension of its poetic qualities and of the purport of some important passages (that on the "cironalité universelle" for instance). The anonymous writer of the preface to the Sun (supposed to be Rohault since Lacroix

1) op. cit. p. 159

2) Iter Lunare, or a Voyage to the Moon, London, 1703. See on this the last chapter of this study. The passage quoted is on p. 4

suggested it) was less timorous than Le Bret and did not disavow the seriousness of the book. He indicated, on the contrary, that it was fundamental when he discussed the entertaining aspect of the Sun: "Si tu ne peux pas souffrir qu'il ne traite pas sérieusement des choses qui semblent sérieuses d'elles-mêmes.....je puis encore to dire qu'il a peut-être cru qu'un roman seroit une façon nouvelle de traiter les grandes choses qui pourroit toucher le goût des esprits du siècle..." This indicates how L'Autre Monde could show the way to Fontenelle, whose Entretiens sur la Pluralité des Mondes was a similar, but brilliantly successful, attempt, and what part Cyrano played in the fashion of the astronomie mondaine.

Fifty-eight pages out of a hundred in the Moon are devoted to discussions of pure philosophy or astronomy; in the Sun, the proportion is reversed, but that of the didactic pages is still high. The nature of these discussions, as well as their dialectical worth, will be examined later; their prominence is a first index of the importance they had for Cyrano. More will be said also later about M. Canseliet's attempt to explain L'Autre Monde as an occultist allegory; the attempt shows at any rate that there is a consistency to be found in Cyrano's novel, even if the artistic form hardly allows a

didactic exposition. In fact, the reconstruction of his system is indispensable if one wishes to understand some otherwise incomprehensible passages; to call Cyrano a madman is only to evade the difficulty. This is what really belongs to Cyrano, and it shows the vanity of studies which are solely devoted to finding a source for every element of his novel. Many commentators of L'Autre Monde, chiefly those of the end of the nineteenth century, have thought they could dispense with that effort; but they were dealing neither with the real Cyrano nor with the real L'Autre Monde.

This study does not purport to show Cyrano as the fully-fledged philosopher he never pretended to be, for he had a keen respect for philosophical genius; but it is an attempt to prove that his novel was the link between Rabelais and the eighteenth century, which made the philosophical novel conceivable. One of the best judgments on L'Autre Monde is probably that of Thibaudet, who wrote that there are three kinds of adventure: the active, the romanesque, and "le roman de l'aventure intellectuelle, le motif de l'aventure lié de façon ironique et symbolique à un certain romanesque de l'intelligence libre"¹, and named as examples Swift, and Cyrano.

1) "Le Roman de l'Aventure", N.R.F., XIII, 1919, pp. 608-609.

I - The literary sources of L'Autre Monde

Discovering sources is of interest mainly because of the light cast on the genesis of a work of art and on the transformation of ideas and devices at the hands of an author; there will therefore in this chapter be no attempt systematically to trace the origin of every element of L'Autre Monde. This will be done as the need arises in the course of the study, while several aspects of special interest will be developed in an Appendix ¹. The literary sources alone will be reviewed here, the philosophical sources being best examined in the exposition of Cyrano's ideas on matter. Both are not indeed always separate, for Cyrano's philosophical interests were those of the "libertins érudits" whom he frequented, and whose literary tastes were in such harmony that Father Garasse could describe an imaginary and typical "bibliothèque du libertin"², most items of which have influenced Cyrano's thinking. Thus his book is above all the book of a libertin, which reflects the favourite ideas and readings of a definite group; but the fact that its sources are numerous and varied has a particular significance, as will be seen on examining Cyrano's theory of knowledge.

1) See Appendix N°1

2) See La Doctrine Curieuse des beaux esprits de ce temps, ou prétendus tels. Contenant plusieurs maximes pernicieuses à la Religion, à l'Etat et aux bonnes Mœurs. Combattue et renversée. Paris, 1623 . Livre VIII, section 10 .

The desire to express "libertine" ideas, already responsible for the famous lines spoken by Séjanus in Cyrano's tragedy La Mort d'Agrippine¹, was certainly what impelled him to write L'Autre Monde; there remains to be seen what particular works could give him the idea of using for his purpose the form of a fantastic voyage.

The date of composition, essential for the determination of the sources, is difficult to find in the case of a post-humous work which during the author's lifetime circulated only in manuscript. The dates of 1648 for the Moon and the years following 1650 for the Sun, given by internal and external evidence, must be as near the truth as is necessary for our purpose².

1) See La Mort d'Agrippine, II 4 and V 6 especially.

2) L'Autre Monde contains allusions to several events which can help to date it (see on pp. 10 and 183 allusions to MM. de Montmagnie and de Montbazou, and to the recent death of Descartes). It seems that Cyrano re-wrote parts of the Moon during his last illness, when he already had written the Sun which he mentions in the new conclusion.

The tradition of a 1650 edition "sans privilège" of the Moon (mentioned for instance in M. Nicolson, Voyages to the Moon, New York, 1948, p. 267, and in R.C. Williams, Bibliography of the Seventeenth Century Novel in France, New York, 1931, pp. 33, 176, 301) certainly originated in Lacroix's edition of Cyrano's works (Paris 1858). Lacroix's chief argument is a passage of Michel de Marolles in his Mémoires (Amsterdam 1755 T. III p. 259): "Un jeune homme de Paris appelé Cyrano, qui n'avait que trop de coeur et d'esprit, parce qu'il le portoit parfois dans l'excès, me donna son livre du Voyage de la Lune, qui est une pièce ingénieuse, et sa tragédie d'Agrippine". This is discussed by P.A. Brun, S. de Cyrano Bergerac, sa vie et ses oeuvres, Paris 1893, pp. 250ff. and F. Lachèvre in Mélanges (1920, Vol. VII of Le Libertinage au XVIIIè siècle) p; 205: "Paul Lacroix et Cyrano de Bergerac - L'édition originale du Voyage dans la Lune (1657)".

Now 1648 was an important year from our point of view, since it saw the appearance, in the bookshops or the salons, of several works bearing a particular relevance to the subject of interplanetary voyages. Not only had Bishop Godwin's Man in the Moone appeared in translation,¹ but Borel's book Discours Nouveau prouvant la pluralité des Mondes, que les Astres sont des terres habitées, et la terre une Estoile, qu'elle est hors du centre du monde dans le troisiemesme Ciel, et se tourne devant le Soleil qui est fixe, et autres choses tres-curieuses² began to circulate in manuscript in scientific and literary circles, and was commented on favourably by a number of authoritative persons, according to his own testimony. This work had probably but little effect on Cyrano who lived in the circles in question and had no doubt heard all that Borel said at first hand, but the Discours Nouveau contains allusions to the lively interest for astronomical questions in France at that time.³ As for Godwin's book, Lachèvre speaks as if it were a known fact of Cyrano's disappointment in seeing in a bookseller's window L'Homme dans la Lune, the subject of which is so

1) L'Homme dans la Lune, ou le Voyage chimérique fait au Monde de la Lune, nouvellement découvert par Dominique Gonzales, Aventurier Espagnol, autrement dit le Courrier Volant. Mis en nostre Langue, par I.B.D. (Jean Baudouin) Paris 1648

2) 1657 Paris; the text quoted here is that of the 1659 Genève edition.

3) See also B.S. Ridgely: "Dalibray, Le Pailleur, and the "New Astronomy" in French XVIIth Century poetry", in Journal of the History of Ideas, Vol. XVII, N°1, Jan. 1956.

similar to that of his own book, and of his consoling himself in reflecting that the latter was too bold for immediate publication in any case ¹. He seems to assume that Cyrano could not possibly have been aware of the existence of The Man in the Moone before its translation; this is unlikely because of the fame of the book, and because several of Cyrano's friends could speak English: Saint-Amant, Tristan whose Page Disgracié was remembered by Cyrano when he wrote the Moon,² for instance. It is certain that Cyrano had read the book (probably in translation) since he borrowed the chief character, Gonsales; he took from it many features of his Selenites, and it also seems very likely that it gave him the spark of inspiration to write L'Autre Monde. Charles Sorel, reviewing Cyrano's work in his Bibliothèque Française ³, evoked in connection with it not only L'Homme dans la Lune but also "(le) Songe de Kepler, grand Astrologue, qui a décrit toutes les apparences de la Lune" and "(le) livre d'un Philosophe moderne appelé le Monde dans la Lune". He meant the 1656 translation into French of Bishop Wilkins' Discovery of a new World (1638)

1) See Oeuvres libertines, I, pp. LXII

2) *ibid.* pp. 35-36

3) Edition de la Compagnie des Libraires du Palais, 1674, pp. 103 and 171; quoted in Brun, *op. cit.*, Appendice N° 7, p. 367

and of his Discourse tending to prove that 'tis probable our Earth is one of the Planets; Cyrano was dead in 1656, but he probably knew of Wilkins' books before he started to write his own. Since Sorel mentions it, Kepler's Somnium may well have been known by Cyrano, although no French translation seems ever to have been made ¹. It presents even better than Godwin's book the usual pattern of travel and discovery of a totally different universe, while resorting for the first time to science in order to explain its peculiarities. Only one feature of the Moon might suggest that Cyrano knew the somnium: the Selenite habit of building houses which can, thanks to a central screw, be lowered at will into the ground to escape from the cold climate; this may come from the caverns into which Kepler's Lunarian monsters sought refuge against the fierce heat of the sun, together with a reminiscence of Cardano and Galileo's interest in the screw ².

A book commonly attributed to Sorel himself, the Histoire Comique de Francion, must also be counted among the direct sources of L'Autre Monde; in it the character Hortensius, planning his future novels, declares: "Vous savez que quelques

1) Johanni Keppleri mathematici olim imperatorii Somnium, seu Opus posthumus de astronomia lunari, Divulgatum a M. Ludovico Kepplero filio, medicinae candidato. Francofurti 1634. The only translation is a German one: Traum oder nachgelassenes Werk über die Astronomie des Mondes: übersetzt und kommentiert von Ludwig Günther. Leipzig 1898.

2) See for instance De Subtilitate, 1550, Nuremberg, and Les mécaniques sur la vis de Galilée, Paris 1634, translated by Mersenne.

sages ont tenu qu'il y avoit plusieurs mondes; les uns en mettent dedans les planètes, les autres dans les étoiles fixes, et moi, je crois qu'il y en a dans la lune (...) Or ce qui parle des choses qui se sont faites ici est trop vulgaire; je veux décrire des choses qui soient arrivées dans la Lune; je dépeindray les villes qui y sont et les moeurs de leurs habitants..."¹.

The laughter provoked by Hortensius' plans is echoed by the mockeries of Cyrano's friends at the beginning of the Moon, but this is not a conclusive proof of plagiarism since Borel in his Preface complained of the same reaction to his own ideas; but the idea of writing, not a treatise like Borel, but a novel, may well have come to Cyrano through a reading of Francion, all the more since he often borrowed details from various works of Sorel's.

Another famous voyage to the moon was that of Astolfo, in Ariosto's Orlando Furioso. Astolfo described only the Aristotelian smooth and shiny globe, but the evocation of the earthly Paradise, the use of a fiery chariot for the ascent, and the presence of a majestic character who welcomes the traveller are also found in L'Autre Monde.

Finally, if Cyrano had any possibility of knowing at first hand the contemporary English literature, he may have derived some inspiration from Ben Jonson's News from the New World Discovered in the moon (1622-23); it is perhaps not a mere

1) Histoire Comique de Francion, 1626, Livre XI, p. 804

coincidence that Jonson wrote a tragedy called Sejanus, and Cyrano La Mort d'Agrippine on the same subject.

Apart from the fictions, planned or actually written, which may have suggested to Cyrano the idea of recounting trips to the moon and the sun, there existed a double literary tradition which may have encouraged him in writing a work like L'Autre Monde. On the one hand, there were fantastic tales, with or without a moral embodied in them. Such were Rabelais' works, especially the books four and five, and Lucian's Icaromenippus and his Vera Historia; Rabelais was called by Father Garasse "l'enchiridion du libertinage"¹, and was² branded with the epithet "Lucianiste" by Scaliger: Cyrano could not have been ignorant of their works. Pietro Toldo, in two articles on "Les voyages merveilleux de Cyrano de Bergerac et de Swift et leurs rapports avec l'oeuvre de Rabelais"³, is like Brun of the opinion that the direct sources of L'Autre Monde are Sorel and Rabelais' works. As far as Rabelais is concerned, once the impious jests are discounted (for they were widespread among the libertins), he seems to have had, on the contrary, but very little influence on Cyrano. Their ideal, it will be seen, is often the same one; but, without being totally devoid of jollity, Cyrano's mind

1) op. cit. Livre VIII, section IO

2) quoted by A. Adam, Histoire de la Littérature Française au XVII^e siècle, T. V, p. 221

3) Revue des Etudes Rabelaisiennes, T. IV (1906) and T. V (1907)

was rather that of a radical and of a précieux, lacking in affinities with Rabelais'. Lucian's books, on the other hand, as well as the continuation added by Perrot d'Ablancourt to his translation of the Vera Historia¹, were certainly known and remembered by our author when he imagined his fantastic countries. Lucian described a trip to the moon, then a longer and deliberate voyage to the Heavens, countries where the trees are women, and others where the inhabitants live on the smoke of roasted frogs and have no excreta; d'Ablancourt imagined a Republic of Animals, a curious "île des Pyrandriens", the inhabitants of which recall both the "daemons" and the Salamander of Cyrano's Sun.

Cyrano may also have known Joseph Hall's anonymous book Mundus Alter et Idem², the title and one of the devices of which (the systematic reversal of all the customs of the earth) bear a suggestive resemblance to those of L'Autre Monde. Finally, various works both ancient and modern such as the Supplément du Catholicon, ou Nouvelles des Régions de la Lune, published in 1594 or 1595 with the Satyre Ménippée, the sixth Vision in quevedo's Sueños y Discursos, Cicero's

1) L'Histoire Véritable, traduite par Nicolas Perrot, Sieur d'Ablancourt, 1654.

Both the Histoire Véritable and its continuation were reprinted in Garnier's collection Voyages imaginaires, songes, visions et romans cabalistiques. Tome treizième. A Amsterdam et Paris. 1787.

2) Mundus alter et idem, sive Terra Australis ante hac semper incognita longis itineribus peregrini Academici nuperrime lustrata Auth. Mercurio Britannico (Edited by Gulielmus Knight). Hannoviae, 1607.

Somnium Scipionis, may be counted among the less direct sources of Cyrano's novels ¹.

On the other hand, besides these fantastic works, there were others, more serious, often written by eminent men, purporting to satirize and reform morals, politics and society; to those, the name of Utopias is now reserved, although there has been for a long time a vagueness in the notion, for some Utopias are situated within the frame of a fantastic voyage and others are not ². Conversely, many fantastic voyages involving the description of a strange society have been called by some critics Utopias, which they are not. Although L'Autre Monde, as will be seen, is hardly what can be called a Utopia, its author knew many of the more representative examples of the genre and certainly took ideas from them. Apart from Plato's Republic and Plutarch's Lycurgus (the latter to be found among the books owned by Cyrano's father), the genre was really born with the publication of Thomas More's Utopia in 1516. Neither this book nor Francis Bacon's Nova Atlantis (1629) can be said to have had much influence on Cyrano, but this certainly is the case with Campanella's Civitas Solis, written in 1602 but published only in 1623.

¹) Many of these sources are listed in Victor Fournel's La littérature indépendante et les écrivains oubliés, Paris, Didier, 1862; P. Brun, *op. cit.*, p. 281; M. Nicolson, *op. cit.*, p. 14. The last two authors mention such works as the Platonic myths, Plutarch's De Facie in Orbe Lunare, De incredibilibus quae ultra Thulem insulam sunt, by Antonius Diogenes (of which an analysis is left), which, although interesting for a prospective author of fantastic voyages, are not direct sources of L'Autre Monde. ²) See last chapter.

Campanella himself appears as a character in L'Autre Monde, but the ideas borrowed by Cyrano from the City of the Sun, although relatively numerous as will be seen, are not so important as to justify his choice of Campanella for his Mentor in his imaginary travels in the sun. The central idea of Campanella's Utopia, that of communism (as in the Republic), is totally absent in L'Autre Monde except the clause concerning the women: "...tout homme a pouvoir sur toute femme, et une femme tout de mesme pourroit appeler un homme en Justice qui l'auroit refusée...", but the context shows that what interests Cyrano primarily in this practice is its moral, and not its social, aspect: "Ce n'est pas qu'en ce pais l'impudicité soit un crime; au contraire..."¹ as is further shown by the conversation of the hero with a young Selenite about the respect due to Nature.² The episode of the woman from the Kingdom of Truth³ calls for the same remark: Cyrano is not touched by the social consequences of such a legislation, but merely by the picturesque situation which springs from it.

For most features of L'Autre Monde: the fantastic setting, the introduction of science into fiction, the social and moral criticism, a possible source (or several) can then be

1) p. 57

2) pp. 65-66

3) pp. 193 ff.

found. And yet, the originality of the novel has always been keenly felt. Brun, despite many misunderstandings about L'Autre Monde, could thus write with justification after reviewing the sources of the novel: "De ces rapprochements divers m'ont semblé se dégager les trois conséquences suivantes: 1° Bergerac n'aurait guère emprunté que des détails fantaisistes et ingénieux à presque tous ses prédécesseurs dans le domaine du rêve et de l'imagination, alors que ses successeurs l'ont plutôt suivi dans la voie de ses théories philosophiques, voire même scientifiques, quelle que fût d'ailleurs, ainsi que je vais le dire, leur relative infériorité...."¹ (the other two concern the allegedly prominent rôle played by Sorel and Rabelais' works as sources of L'Autre Monde). A close study of L'Autre Monde in content and in form will help to understand where this originality lies and what makes Cyrano the brilliant forerunner of the conte philosophique.

1) op. cit., pp. 291-292.

2 - Cyrano's Epistemology

Cyrano's theory of knowledge is at first sight dogmatic and optimistic: not only does he think that there is a Truth in all matters, but also that this Truth can be known to a satisfactory extent.

The man on one of the sun-spots (which were in Cyrano's time believed to be little planets) explains that "dans les sciences il y avoit un Vray, hors lequel on estoit toujours éloigné du facile..."¹ This is why all the discrepancies which appear between the systems of different philosophers must be attributed to insufficient explanations; for in the Sun, of which they are the most distinguished citizens, all enigmas must necessarily be solved by a contact with pure Truth. Campanella, for this reason, looks forward to meeting Descartes, and will enlighten the hero only later, "lors que nous aurons eu le loisir de satisfaire pleinement l'ardeur que nous avons mutuellement de nous entretenir".² How significant that Cyrano should have stopped writing his novel at that very moment, even if he intended to resume it afterwards! The conciliation of both philosophies would not have been easy, to say the least.

The other condition for the possibility of

1)p. 129

2)p. 199

knowledge is that there should be some correspondence between man and the universe. This is assumed as a matter of course by Cyrano who always includes the microcosm in his explanations on the structure and properties of the macrocosm: both are made with the same stuff, both experience the effects of the law which Cyrano calls "sympathy", as is shown by the tale of the "Arbres amants", both are satisfactorily explained in their manifestations by the atomistic postulate, both, in brief, are children of Nature. This assimilation (which goes to even greater lengths, as the chapter on the Scale of Being will show) is expressed allegorically in the Sun by the dance of the little men who form a human-sized being. The latter being called "ce parfait microcosm", and the Cartesian word "vortice" repeated twice, indicate that it is also a symbol of the formation of the macrocosm.¹ This explains the free use of analogy as a method of knowledge in L'Autre Monde; much more than experiment, it is for Cyrano the key of the world.

The idea that the whole visible universe is the unfolding of one central truth has its equivalent on a smaller scale in Cyrano's belief that every phenomenon is the display of its inner nature; everything contains a core of energy which fascinates him in spite of his

1)p. 141

scepticism for the dreams of the alchemists. He speaks of the "energy" of the fruit from the Tree of Life,¹ of the "virtue" in that of the Tree of Knowledge², and to describe perfect whiteness he uses the phrase "l'âme de la neige"³.

It follows that there must have been, in the Golden Age which preceded man's estrangement from Nature, only one language as a link between the mind of man and the realities of the macrocosm, a language to be used not only among men but between men, animals and plants⁴. The words of such a language, in Cyrano's terms, "stated the essence of everything". Now that the Golden Age has ended, through, he says, debauch and drugs, this "langue matrice" is lost, at least to the mind of man for there is still in him a vague apprehension of it, as is shown by his response to music: "...dans la Musique ce Vray ne se rencontre jamais que l'âme aussi-tost soulevée ne s'y porte aveuglement. Nous ne le voyons pas, mais nous sentons que Nature le voit; et sans pouvoir comprendre en quelle sorte nous en sommes absorbez, il ne laisse pas de nous ravir, et si nous ne sçaurions remarquer où il est; ..(...)

1) p. 29 2) p. 29 3) p. 30

4) pp. 129-130 .Biblical remembrances are evident: Cyrano alludes to the language spoken by Adam to the beasts before the Fall, and certainly remembers the confusion of the languages after the attempt to build the tower of Babel, and perhaps the gift of speaking all languages bestowed on all the Apostles .

quand je parle (the man on the sun-spot says to Cyrano)
 vostre âme rencontre, dans chacun de mes mots, ce Vray
 qu'elle cherche à tâtons; et quoy que sa raison ne l'entende
 pas, elle a chez soy Nature qui ne scauroit manquer de
 l'entendre."¹ The musical language of the Selenites, which
 can be sung or played on instruments, is thus a proof of
 their superiority over men; as for the Philosophers in the
 sun, they do not even need language, showing instead the
 thoughts in their heads by transference or, like Campanella,
 using telepathy.

1) p. 129. On page 35 the Daemon said that he had known on
 the earth "une certaine caballe de jeunes gens que le
 vulgaire a connus sous le nom de Chevaliers de la Roze-
 Croix, à qui j'ay enseigné quantité de souplesses et de
 secrets naturels qui, sans doute, les auront faict passer
 chez le peuple pour de grands magiciens." Now in the
Instruction à la France sur la verité de l'histoire des
Freres de la Roze-Croix (A Paris, 1623) Naudé quoted a
 placard recently put in the streets of Paris by the mys-
 terious Brethren, which ended thus: "Nous monstrons et en-
 seignons sans livres ny marques à parler toutes sortes de
 langues des pays où nous voulons estre, pour tirer les
 hommes nos semblables d'erreur de mort", and Naudé said (p. 36)
 that they were believed to have found "un nouvel idiome
 pour exprimer la nature de toutes choses". This may have
 fired the interest of Cyrano and others in the problem of
 language. E. D. Seeber ("Ideal languages in the French and
 English Imaginary Voyage" P.M.L.A., 60, 1945) quotes a letter
 of 20th November, 1629, from Descartes to Mersenne, in which
 there is mention of an invented language based on "la vraie
 Philosophie; car il est impossible autrement de dénombrer
 toutes les pensées des hommes, et de les mettre par ordre..."
 Gabriel de Foigny's Australians (in La Terre Australe
connue, 1676) have actually composed such a language:
 "L'avantage de cette façon de parler est qu'on devient
 philosophe en apprenant les premiers mots qu'on prononce,
 et qu'on ne peut nommer aucune chose en ce pays qu'on
 n'explique sa nature en même temps." (quoted by Seeber).

Since the loss of that primary language, through which Nature would have been known immediately, knowledge must be acquired through the remaining endowments of man. In Cyrano's opinions on this point, the same nostalgic longing for immediacy can be felt: all knowledge is intuitive according to him, and the emphasis on the necessity and reliability of sense data is very great¹. To the allegedly Christian Cyrano who maintains that death will liberate the soul from earthly bonds and give it access to perfect knowledge, the young Selenite replies: "Pourquoy les Sourds n'entendent-ilz point? Est-ce à cause qu'ilz ne sont pas encore privez par le trépas de tous les sens?.... Cependant ilz veulent que cette Ame qui ne peut agir qu'imparfaitement à cause de la perte d'un de ses outils dans le cours de la vie, puisse alors travailler avec perfection quand, après nostre mort, elle les aura tous perdus."² Thus, to perceive and to know are one and the same thing, and the "secondary qualities" which the "new philosophy" tended to consider as subjective realities to be neglected and not at all belonging to the thing itself, are for Cyrano trustworthy indications about reality, or rather, they are reality itself. "Moy, par exemple, je conçois par mes sens..."³ the Daemon says, and so does man, within his limited sphere. One can

1) Thus in the City of the Sun the ideal knowledge is not obtained through "science" but through "sapience", the intuition of reality (La Città del Sole, in Bruno e Campanella, Opere, La letteratura italiana, Vol. 33, 1956, p. 1082.)

2) pp. 93-94

3) p. 37

easily understand how the self-evident character of sensorial impressions led to this belief; it is the same feeling with intellectual ideas which led Descartes to choose clearness and distinctness as the criteria of truth. The certainty obtained through the senses in L'Autre Monde must not however be confused with the Cartesian intellectual intuition, whose value is precisely to allow man to neglect the deceptive sensorial impressions. In *Cyrano*, on the contrary, there is no idea of a distinction between noumena and phenomena, and his atomistic account of sensorial activity (borrowed from Gassendi) supplies a philosophical justification for his belief in a direct contact between man and the universe.

This view explains why superhuman (although not supernatural) beings like the "daemons" can reach a higher degree of knowledge: they have more senses, and therefore a wider contact with reality¹. *Cyrano* cites three examples: the Daemon can know immediately "la cause de la sympathie de l'aiman avec le pôle, celle du reflux de la mer, ce que l'animal devient après la mort."² The former two had already been quoted, together with the attraction of straw by amber and that of rivers by the sea, as effects of

1) For argument's sake the Daemon also supposes that cabbages have more senses than men, "plus ingénieusement travaillées, plus fortes et plus nombreuses..." (p. 69). See on this the chapter of the Scale of Being. The idea of different senses was already in Montaigne, ed° P. Villey, Vol. 2, p. 350
 2) p. 37

"sympathy"¹; the first and the last will be seen to be intimately connected with Cyrano's theories on the eternity of matter, its unity and its cyclical transformations. This is why he is careful to write "animal" and not "man", although both are in his system submitted to the same fate, widely different from that which is taught by the Christian religion. In the printed version, after writing that such high conceptions are impossible for man, Cyrano added "except by faith"², obviously because of the allusion to man's fate after death. Throughout the book may be encountered instances of the same fideism, which certainly has never been stretched so far; such lip-service is doubtless explained by Cyrano's legitimate desire for safety, but the question of his real religious attitude cannot be solved on such evidence only and will be the object of a special investigation.

Are man's senses then perfectly sufficient? No; satisfying in principle, they are in fact inadequate in number and in scope, and enable man to apprehend but a small portion of reality. What escapes the net cast by the five senses cannot be passed off as spiritual since, the Daemon says, there is nothing in Nature that is not material: "Il y a trop peu de rapport, dit-il, entre vos sens et l'explication de ces mystères: Vous vous imaginés,

1)p. 23

2)p. 38

vous autres, que ce que vous ne sçauriez comprendre est spirituel, ou qu'il n'est point; la conséquence en est très faulce, mais c'est un tesmoignage qu'il y a dans l'Univers un million peut-estre de choses qui, pour estre connuës, demanderoient en vous un million d'organes tous differens."¹

Man is then bound to make mistakes by trying to imagine, from the indications given by the senses he has, what can only be known by senses he has not². The imagination is supplied only by the senses, and if one bears in mind the wide and complex part it plays in Cyrano's system, human knowledge appears irremediably corrupt. Cyrano must therefore introduce superhuman beings to show what this theoretically possible knowledge could be like, and attribute lamely the imperfections of man to his bad living; hence the recurrent allusions to a Golden Age and to a Fall.

Did Cyrano keep consistently this theory of knowledge throughout his book? It has often been noticed that the last pages of the Sun seem to point to his conversion to orthodox Cartesian ideas on the relations of the senses and the mind, or soul, as is shown in the allegory of the Lake of Sleep and of the rivers of the five senses³. There is also an exhortation to free one's soul from the shackles of the senses, thereby attaining the enviable condition of

1) p. 37; see also p. 38: "Non plus qu'un aveugle-né..."

2) His interpretations are therefore arbitrary: "C'est une chose étrange, the Daemon says, ce que vous croyez et ne croyez pas..." (p. 97 and footnote) - 3) p. 185 and ff.

Philosopher¹. It is very likely that Descartes' system, which impressed Cyrano very deeply, is responsible for this palinode. The impression one gets from a reading of such passages of the Sun, however, is less that of a total recantation than that of a painful embarrassment in front of self-excluding and equally attractive philosophies, which Cyrano, like some of his contemporaries, did not despair of ever seeing reconciled. Trying to define his position in the epistemological controversy of his century brings us to an important consideration about L'Autre Monde.

It is generally assumed that Cyrano was a faithful disciple of Gassendi who experienced a late conversion to Descartes' ideas. This is certainly the impression one may derive from a superficial reading of L'Autre Monde: the Epicurean interpretation of the phenomena, the sensualism, are those of Gassendi. The Daemon, like Cyrano, has frequented the circle of the Dupuy brothers and met Gassendi and La Mothe le Vayer²; the Cartesian passages have already been indicated: they come at the end and do not seem at first sight well connected with the rest.

Nevertheless, after a better acquaintance with Cyrano's thought, important divergences appear, and alter this judgment fundamentally. For Epicureanism is the most dogmatic part

1)p. 185

2)p. 35

of Gassendi's philosophy; he and his erudite friends were Pyrrhonians at heart. On the contrary, the tone in L'Autre Monde is consistently dogmatic; there is no more than a passing salute to experiment; the only mention of the great voyages, which interested so much the members of the "académie putéane", is a sceptical one: "Enfin j'appris que la gueuserie est un grand Livre qui nous enseigne les moeurs des peuples, à meilleur marché que tous ces grands voyages de Colomb et de Magellan."¹ Cyrano belongs to the idealistic trend of his century at least as much as to the materialistic in which he is usually circumscribed, and in spite of their inequality as thinkers his fundamental assumptions are the same as Descartes': he expects to find the truth through intuition or revelation; he believes in the unity of science, and for this reason has the same interest in the occult. Descartes wanted to know whether there was a key to Lull's Ars Brevis; it has even been possible to suppose that he was a Rosicrucian²; he was a friend of Gerzan, the alchemist, to whom Cyrano dedicated an encomiastic Letter³. Now Gassendi, on the contrary, had published in 1629 an Epistolica exercitatio against Fludd, and in 1634 had written against Herbert of Cherbury who

1) p. II4

2) See G. Cohen, Ecrivains français en Hollande dans la première moitié du XVII^e siècle, Paris, 1920 (reviewed in E. Gilson, Etudes sur le rôle de la pensée médiévale dans la formation du système cartésien, Paris, 1930).

3) See Descartes, Oeuvres, ed° Ch. Adam and A. Tannery, I, p. 570, and Lachèvre, Oeuvres libertines, II, p. 218.

taught that there was, in all men, an internal sense which is recalled by that universal and spontaneous adherence to truth in which Cyrano believes. His conception of the active principle in matter, on the other hand, recalls those of Henri More, and his idea of the senses is a cross between Gassendi's sensualism and Descartes' intuition.

All this must be borne in mind if one wants to realise the most singular feature of L'Autre Monde: a passionate desire to reconcile the most divergent philosophies (often resulting in a liberal acceptance of apparent nonsense), based on the conviction that knowledge is one, and that there is some truth in every belief.

Thus the Daemon, who so often recalls Gassendi, cannot be confused with him since he chose the Rose-Croix for his disciples. On the other hand, if Naudé had written an Apology of Campanella, Descartes despised the latter¹; both are nonetheless made to welcome each other with joy in

1) Descartes wrote to Huygens in March 1638, about the very book which Cyrano attributes to the Daemon in his novel: "Pour la Doctrine, il y a quinze ans que j'ay vû ce livre de Sensu rerum du mesme Auteur.....mais j'avois trouvé dès-lors si peu de solidité en ses écrits, que je n'en avois rien du tout gardé en ma mémoire; et maintenant je ne scaurois dire autre chose, sinon que ceux qui s'égarerent en affectant de suivre des chemins extraordinaires, me semblent bien moins excusables que ceux qui ne faillent qu'en compagnie, et en suivant les traces de beaucoup d'autres." (Oeuvres, ed. cit., T. II, p. 48) And again to Mersenne, in a letter of November 11th, 1638: "Ce que j'ay vû autres fois de Campanelle ne me permet pas de rien esperer de bon de son livre, et je vous remercie de l'offre que vous me faites de me l'envoyer; mais je ne désire nullement le voir." (ibid., T. II, p. 436)

L'Autre Monde. True, there are apparently irreducible oppositions in their systems, but, Cyrano says, "Mon Philosophe me répondit que Monsieur des Cartes nous rendroit raison de cela luy-mesme, et qu'estant né aussi obligeant que Philosophe, il seroit asseurément ravi de trouver en ce Monde un Homme mortel pour l'éclaircir de cent doutes que la surprise de la mort l'avoit contraint de laisser à la Terre qu'il venoit de quitter; qu'il ne croyoit pas qu'il eût grande difficulté à y répondre suivant ses principes que je n'avois examinez qu'autant que la foiblesse de mon esprit me le pouvoit permettre..."¹ As for Campanella, he despised atomism and called Lucretius stultissimus for having believed the universe created by chance and having put neither a principle nor a soul in his atoms². It is significant that Cyrano did not also, with unabated optimism, forcibly reconcile Descartes and Gassendi in his novel! However, a passage like this one: "Pour moy, je pense que ce Lac évapore un air qui a la propriété d'épurer entièrement l'esprit de l'embarras des sens; car il ne se présente rien à votre pensée qui ne semble vous perfectionner et vous instruire:

1) p. 184. On this question see the review by E. Gilson of Léon Blanchet's Les antécédents historiques du "Je pense donc je suis" (Paris 1920) in op. cit. The same hope of hearing Descartes solve after death the difficulties in his system is shared by Mersenne and the hero in Gabriel Daniel's Voyage du Monde de Descartes (Paris 1691), a work probably inspired by that of Cyrano who is mentioned in it (See last chapter).

2) in Atheismus triumphatus (Paris 1636) cap. III, pp. 24 and 34-35 (cited in H. Busson: La pensée religieuse française de Charron à Pascal, Paris 1933, pp. 418-419.)

c'est ce qui fait que j'ay le plus grand respect du monde pour ces Philosophes qu'on nomme resveurs, dont nos ignorans se moquent" may well refer to Descartes and his enemies¹.

Not only ideas, but also the authors and the characters of many books can be found in L'Autre Monde, which appears like a vast enterprise of synthesis. The accusation of plagiarism (suggested so readily and persistently by Lachèvre for instance) is not only superficial but fundamentally misleading since it ignores Cyrano's desire to write a book in which la République des Lettres would meet as on a forum, to examine and conciliate all ideas. It is, besides, unlikely: a man who wants to pass off ~~the~~ others' ideas as his own does not choose Campanella and Descartes as characters, does not name Gassendi and La Mothe le Vayer, does not call Gonsales the man he finds in the moon, or indicate that his flying machine can still be seen in Poland². One may notice furthermore that the Daemon unifies several traditions in the story he gives of his many reincarnations (one of them being a character from Tristan's Page Disgracié). In the manuscript of L'Autre Monde one could also find a reference to Francion, which did not however appear in print; but Le Bret may have suppressed it himself, since Sorel had disavowed his bold novel since 1633.

1) p. 187

2) See chapter four (The means of flight).

The comparison of opinions was of course the favourite occupation of the humanists; but their reaction to their multiplicity was the same as Montaigne's. On the contrary Cyrano, when he collects various beliefs, appears neither as the Pyrrhonian that Le Bret pretended he was in the 1657 Preface to the Estats et Empires de la Lune (probably to safeguard himself and the book against accusations of libertinage), nor the perfidious destroyer M. Pintard sees in La Mothe le Vayer¹. The revelations of the man on the sun-spot, and the reflexions they inspire in the hero about a possible concordance of the events as they are taught in the Bible and as they appear in ancient history² recall more, by their serious tone, the contemporary beginnings of the history of religions than the Dictionnaire Philosophique. Cyrano makes an original use of the dialogue, a flourishing genre during the previous hundred years, but purporting more often to emphasize the divergences than to smooth them out.

The theories which will be expounded in the next chapter are, on the whole, much more the fruit of reflection than of experiment. They offer a significant commentary to

1) Le libertinage érudit dans la première moitié du dix-septième siècle (Paris 1943), T.I, pp; 531 ff.

2) p. 128 . See also p. 23, about the myth of Prometheus.

Cyrano's theory of knowledge since because of it he condemns himself to a persistently false position: declaring, as he does, that the world is intelligible, but not to human reason, and writing, as it were, his book of revelation, he must necessarily resort, after Pomponazzi and Vanini, to naturalistic so-called explanations.

It is chiefly this aspect of L'Autre Monde (also caused by a strong feeling that no creature can hope to grasp Nature's fecundity in its entirety) which has unfortunately repelled many a commentator of Cyrano de Bergerac.

such as 3 - Cyrano's ideas on matter

In the Moon Cyrano says about the "daemons": "Je luy demandé s'ilz estoient des corps comme nous: il me respondit qu'ouÿ (...), qu'au reste, il n'y avoit rien en la Nature qui ne fut matériel..."¹ Even if Cyrano sometimes appears to leave this materialistic standpoint, it is always unwillingly and never formally. His ideas on matter, its origin, structure and behaviour, are then particularly important. But it is impossible to achieve a clear conception of them if one does not realise their treble origin. No more than anybody's, is Cyrano's metaphysics entirely his own; but whereas more gifted philosophers could genuinely create something new in organizing existing elements, one can see him repeatedly try to unite heterogeneous ideas into a coherent whole which would equally agree with his reason, his affective needs and the existing facts. He does not always succeed and, in many parts of his book, three very recognizable trends can be followed.

That it should be so is understandable if one remembers the philosophical and scientific background of his time. Cyrano had been (directly or indirectly) Gassendi's pupil; he could hardly, owing to his passionate interest in

1) p. 37

such speculations and his friendship with Rohault, ignore Descartes' ideas, which more often than not conflicted with Gassendi's. Besides, both Descartes and Gassendi were Christians which Cyrano was not; he therefore had to diverge from them in order to follow his "libertine" convictions. This must have been difficult in many ways, for Democritean and Epicurean atomism seemed self-evident to him and this must have tended to persuade him that Gassendi's philosophy, partly founded on them, corresponded to reality. On the other hand, his admiration for Descartes' principles, "simples et si naturels"¹ was as great as that of most of his contemporaries, and it forbade him to discard Descartes' system altogether. Fortunately, another powerful influence seemed to solve most of his difficulties, namely, that of the Renaissance Italian philosophers: Pomponazzi, Cardano, Telesio, Bruno, often through their disciples: Cremonini, Campanella, Vanini.² Their more or less open atheism, deism or pantheism, usually veiled by a transparent fideism, suited Cyrano who was equally repelled by Descartes and Gassendi's belief in the Christian God and by the absence of any equivalent of God in Democritus and Epicurus.

Can the relative influence on Cyrano of these three philosophical sources be assessed? That of Gassendi and

1) pp. 183-184 - 2) The library of the libertin according to Father Garasse (ed. cit.) contains three shelves: "Le premier (rang) contient le Pomponace, le Paracelse et Machiavel... Le deuxième contient Hiérosme Cardan, Charron et Lucilio Vanino..."

that of the Italian philosophers would rank about equal; or rather, Gassendi's teaching is, as it were, embedded in theirs, like a clearer, more modern and more scientific core which usefully makes more precise some delicate points. The influence of Descartes on Cyrano's general philosophy, unlike that which he certainly had on his epistemology, is on the whole small. Nevertheless, many critics of Cyrano have repeated that the Moon is Gassendist and the Sun Cartesian, to the extent, Lachèvre says, for instance, of seeming written by different authors!¹ Generally speaking, the third source of influence has gone unrecognized, and this omission is so serious as to make the whole novel incomprehensible. Thus Perrens could write in Les libertins about Cyrano: "Il ne sacrifiait pas Descartes à Gassendi; il amalgamait leurs doctrines aux siennes qui sont un chaos fumeux..." and challenged future commentators: "Accorde qui pourra les ingrédients si divers dont est composé ce salmigondis..."² The genuine difference between the Moon and the Sun consists in a much less restrained exposition of Cyrano's beliefs in the latter, and in a leaning towards strongly heterodox ideas of a God instead of the complacency towards atheism which can be felt in many parts of the Moon.

1) Oeuvres libertines, ed. cit. p. 2

2) Les libertins en France au XVII^e siècle, Paris, s.d. , pp. 244 and 248.

It must not be believed that the order of exposition of these influences also refers to their order of occurrence in time; they probably coexisted, the Cartesian influence perhaps coming last, after Cyrano had met Rohault. Whether Cyrano, had he lived longer, would ever have become an orthodox follower of Descartes seems at least very doubtful. His other ideas meant too much to him to be abandoned and there is in his book not a hint of a synthesis. Descartes' system seemed to him like a foreign body which he could not integrate into his own doctrine, but far from giving him doubts about the latter he thought, as has been seen, that death alone had prevented Descartes from operating this synthesis himself, possibly by clarifying his works which are "si pleins et si subtils, qu'il faut une attention pour les entendre qui demande l'âme d'un vray et consommé Philosophe."¹

It is preferable to indicate which particular points Cyrano has taken from these various systems as the question arises during the exposition of his own for he often has modified them or appended them to his own interpretations; but this preliminary was necessary to understand many apparently irreducible oppositions.

1) p. 184

1° - Cyrano's belief in the unity of matter

Modern science seeks simply to record phenomena; but Cyrano still confidently believes that it is possible to explain them by a philosophical view of the universe. Nevertheless, the way in which he attempts to fulfil his desire, however arbitrary and unsuccessful from our point of view, shows a distinct influence of the increasingly rationalistic outlook which characterizes his time.

Most of the following ideas on matter, the elements, vacuum and gravity are expounded in the Moon by the Spaniard Gonsales, the hero's forerunner and companion of captivity. The question whether Cyrano himself believes these heterodox ideas, for which the Spaniard was persecuted on the earth, or simply states them evidently ~~abises~~, as it does throughout the whole book, for Cyrano discusses "libertine" ideas in the dialogue form so dear to the Renaissance philosophers as a guarantee of safety, and he naturally assumes the part of the more orthodox and traditional interlocutor (a constant device of the philosophical novel, the literary heir of the dialogue). Brun¹ holds that Cyrano intends throughout to make the Spaniard look ridiculous, but this only applies to his antiquated means of reaching the moon; his ideas are so consistent

1) op. cit., p. 300

with Cyrano's that it seems right to credit our author with them. He will therefore be called here by his name.

Cyrano believes in the unity of matter, to which he gives the Aristotelian name of "primary matter". He however still mentions the four traditional elements (unlike Cardano who rejected fire¹). But instead of being as in medieval physics different in nature, Cyrano believes them to be different aspects taken by the primary matter, and the cause of this variation in aspect also accounts for their different properties. This primary matter is also called "earth", and the three other elements are defined in relation to it. The order: fire, air, water, earth, expresses the increasing degree of concentration of the primary matter: "Quand , par exemple, vous regardés du feu, ce n'est pas du feu, ce n'est rien que de l'air beaucoup estendu, l'air n'est que de l'eau fort dilatée, l'eau n'est rien que de la terre qui se fond et la terre elle-mesme n'est autre chose que de l'eau beaucoup resserrée, et ainsy à pénétrer sérieusement la matière, vous trouverés qu'elle n'est qu'une, qui comme une excellente commédienne joue icy bas toutes sortes de personnages sous toutes sortes d'habits..."²

1) In De Subtilitate, a book which Cyrano had evidently read, either in Latin or in one of the French translations e.g. that of Le Blanc (Paris 1556 or Paris 1566, the latter being quoted here): Les livres de Hierome Cardanus intitulés de la subtilité et subtiles inventions. On the primary matter see pp. 4a and 4b; on fire not being an element, pp. 26a and 26b.

2) p. 46

The idea of the unity of matter is of course very old.¹Thales thought water was the primary substance (and in Cyrano's time so did Van Helmont, as far as tangible things were concerned²), Anaximenes believed it was air, and Heraclitus, fire. Cyrano probably believes it is earth because of the Christian idea that in this world all is earth and returns to earth for, as will be seen, he makes clear by some examples that his primary matter is practically identified with the visible earth, and is not merely so called by a metaphor.

The difficulty arises, as is always the case with that metaphysical solution, when variety must be explained. Hence his resorting to the four elements, a limited number, for the idea of a great number of simple bodies is somewhat scandalous to him: "autrement, he says, il faudroit admettre autant d'éléments qu'il y a de sortes de corps"³, which he evidently rejects. Boyle, who defined the confused notion of element, was the first to introduce in physics this idea of yesterday, since today's science believes like the pre-Socratics in the unity of matter (as Juppont rightly foresaw in his article⁴).

1) It had become quite popular again because of the contemporary philosophies. Looking back on that time N. Pluche wrote in 1739 in his Histoire du Ciel considéré selon les idées des poètes, des philosophes et de Moïse: "Les atômes de Gassendi et la matière homogène de Descartes ont accredité plus que jamais la folie des transmutations." (p. 261)

2) See A. Wolf: A History of Science, Technology, and Philosophy in the XVIth and XVIIth centuries (London, 1935) pp. 327-328.

3) p. 46

4) "L'oeuvre scientifique de Cyrano de Bergerac" in Mémoires de l'Académie des Sciences de Toulouse, 1906.

These four elements are always existing in a latent state in everything, kept in equilibrium by the interplay of sympathies and antipathies, universal forces which will be presently explained; although essentially qualitative, they are not devoid of a quantitative aspect: a small amount of fire, Cyrano writes, "qui chemine séparé, s'esgarera quelquefois dans un nuage s'il y rencontre d'autres feux en assez grand nombre pour faire teste à la vapeur... (its enemy)... Si quand il se trouve embarrassé dans ces cruditez importunes de la moyenne région il n'est pas assés fort pour se deffendre, il s'abandonne à la discrétion de la nuë..."¹ When the equilibrium is broken, the visible effects occur, for instance in the combustion of the log, an example which Cyrano develops at length: "...ilz diront, eux, quand elle sera embrasée que ce qui estoit bois est devenu feu; mais je leur soustiens que non, moy, et qu'il n'y a point davantage de feu, maintenant qu'elle est toute en flammes, que tantost auparavant qu'on en eust approché l'allumette; mais celui qui estoit caché dans la busche, que le froid et l'humide empeschoient de s'estendre et d'agir, secouru par l'estranger, a rallié ses forces contre le flegme qui l'estouffoit, et s'est emparé du champ qu'occupoit son ennemy..."²

The four elements are like four simple bodies sufficient to

1) p. 51

2) See footnote on next page.

produce by their combination the infinite variety of the world (for the four qualities: hot, cold, dry and moist, which remain in his system, do no longer determine the nature and effects of elements or bodies): "All is in all things",¹ Cyrano says, after Giordano Bruno, and boasts to prove it. Whether he believes his own necessarily inadequate explanations is not clear, in spite of their bombastic presentation²! This is usually not visible, but there are "entremetteurs" in which we can see the universal mixture: mud, between earth and water; vapours, between water and air; "exhalations", between air and fire³. The same is nevertheless true for more complicated bodies, such as this log Cyrano has chosen as an example. Unlike the Peripateticians, however, he does not

2) from previous page - This passage has not been understood by Juppont (art. cit.): "Comment interpréter "le secours de l'étranger"?.....Qu'entend-il par "le champ qu'occupait son ennemi"?.....Autant d'énigmes que la découverte de L'Histoire de L'Étincellepermettrait peut-être d'éclaircir."

Lachèvre rebukes Juppont in note 1) of the same page (p. 50): "Le pauvre Cyrano n'avait rien de sybillin dans son langage", but adroitly escapes the task of translating this language: "Par moments, il laisse toute liberté à sa "fantaisie" sans y attacher d'autre importance.....Les interprétations de ses commentateurs ont souvent dépassé sa pensée."

1) p. 49. Cardano cites Anaxagoras as saying the same thing (op. cit. p. 124)

2) for instance p. 50: "Je ne suppose point à leur mode de maxime (the Aristotelians) que je ne prouve..."

3) In the Aristotelian as in the Cartesian account of meteors the nature of "vapours" is aqueous, and that of "exhalations" is solid, like dust. See E. Gilson's article on Descartes' Météores in op. cit., 1ère partie, chap. 3, p. 102.

think that the elements at any time are changed into one another, **but** that they are mixed without interpenetrating¹.

Also, in spite of their essential unity, they have been existing separately since the Creation².

These ideas on the underlying unity of the elements and on their individual structure explain their various effects:

"et si vous me demandés pourquoy donc le feu brusle et l'eau refroidit, veu que ce n'est qu'une mesme matière, je vous responds que cette matière agit par sympathie, selon la disposition où elle se trouve dans le temps qu'elle agit."³:

either they tend to impose on the body with which they are in contact their own degree of concentration, or they tend to transform it into earth, being themselves earth. Water, for instance, being already closely knit, tightens the bodies it touches to make them more like earth; in an analogous way, fire rids them of their moisture and of their cold, and dilates them, being itself dilated. This explains for Cyrano some "facts" of common observation, such as the dropsical people who change anything they eat into water⁴.

This notion of sympathy⁵ is persistent in Cyrano's explanations. He does not define it anywhere but takes for

1)p. 50

2)id.

3)p. 46

4)p. 47

5)See Cardano, op. cit. especially Chapter I (p. 6a) and p. 138

granted that its existence and properties are well-known and unquestionable; several facts emerge however from the text.

Unlike the "active principle" which makes it fertile and which will be discussed later, sympathy belongs intrinsically to matter, animated or inert, of which it seems to be a property. It consists essentially in a tendency of similar things to draw near each other, and its negative aspect is antipathy, by which things of an opposite nature tend to repel, or to eliminate, each other. Is there any criterion to determine these similarities? Sometimes, it is pure identity: thus Cyrano, who explained mechanically the superposition of bodies of different weight¹ and rejected the explanation by qualities or propensities, is not inconsistent when he says that fire has "an appetite" for going up² - or at least it is more significant than a mere inconsistency: it is a manifestation of sympathy, since the sun is made of fire³. In fact, the same mechanism must be very frequent if "all is in all things"; it is then a question of the proportion of elements which compose a body, and as this proportion is constant and determines the nature of the body, some substances will always be sympathetic to others.

1) This is also in Cardano, op. cit. Chap. I, in the study of the three "mouvements naturels".

2) p. 51 for instance

3) In Elijah's story, Eve followed Adam, who was flying from the moon to the earth, thanks to sympathy, her body having been taken from his. (p. 23)

If the proportion is upset, the body turns into another and becomes sympathetic to other substances. Thus the log, deprived by combustion of its inherent water and of its inherent fire, becomes ashes. Things happened that way at the Creation, making cosmos out of chaos¹.

It seems, however, that sympathy does not always require the presence of one or more common elements in two bodies to make them attract each other. We are not told, for instance, what the moon has in common with ox-marrow, but there is a definite superstition that one attracts the other, and Cyrano uses this as a device to explain his trip to the moon. Perhaps such cases can be explained by the existence of analogies such as those which the Selenite "physionome" detects between the daily state of his patients and the foods and flower-mattresses he prescribes for them².

Two examples of sympathetic attraction Cyrano cites, that of straw by amber and of the lodestone by the pole³, as well as the story of Elijah's ascension on a metallic tray attracted by a magnetic ball⁴, show that he knew of the recent studies on the magnet and frictional electricity⁵;

1) pp. 127 and 130. It is a paraphrase of Lucretius, De Natura Rerum, V, 432-508.

2) p. 70

3) pp. 23 and 37

4) p. 26

5) Especially since Gilbert's De Magnete, magneticisque corporibus, et de magno magnete tellure, London, 1600. He is named in the Preface to Cyrano's Sun (1662).

quite probably, they had given him hopes of seeing his firm belief in sympathy confirmed and scientifically explained. Magnetism was willingly invoked on the subject of mysterious phenomena. It may be noticed, however, that in the magnet similar poles repel and opposite poles attract each other, which is the opposite of what happens in the case of sympathy; but this does not appear to have been noticed by Cyrano who only retained the idea of an attraction. He is probably not aware of the extreme variety of the phenomena which he groups under the heading of sympathy, for he holds that the latter force takes different aspects according to the bodies through which it manifests itself, for instance as magnetism, static electricity, tides and the attraction of rivers by the sea. It is interesting to notice that he does not mention, as an example of the same force, attraction itself, which was often likened to magnetism.

Does he provide any metaphysical origin for sympathy, "ce principe d'amour inconnu"¹? He probably does so in an episode of the Sun, that of the Dodona forest, in which one of the trees tells him, apparently without much justification, the story of Castor and Pollux; soon, however, it appears that it is in fact one of these allegories of which Cyrano is so fond when he wants to impart what matters most in his

1)p. I27

system. The legend of the magic apples borne by the two trees which sprang from the bodies of Orestes and Pylades could be merely a pretext for Cyrano to display his classical erudition, and re-tell the stories of Pygmalion, Narcissus, Hermaphrodite and others; but at the end he explains how the iron and the lodestone were born from the ashes of these trees "the virtue of which they still keep"¹. The two different but equivalent ways in which the feelings experienced by two beings are supposed to be extracted and purified into a material quintessence as by a distillation are firstly death (that of the first couple of lovers) normally followed by a rebirth as another species - in this instance trees - and secondly cremation (of the trees themselves). The products in both cases were respectively the apples, and iron and lodestone. The "virtue" of sympathy is then shown to extend to stones, plants and human beings the selfsame effect of a tendency towards union and identification with the corresponding part. In human beings it is called, according to the sex, love or friendship, but, Cyrano says, always a male sort of friendship. Both feelings are usually confused in their manifestations in L'Autre Monde, and this must be understood in the light of this allegory:

1)p. I74

both are the same human counterpart of the other manifestations of sympathy in all the Kingdoms of Nature. It is equally understandable that such a friendship should be commended and prescribed as the noblest feeling, as it is in many parts of the book; for submitting to it is to be wise and to respect one of the most fundamental laws of Nature.

Cyrano, like earlier thinkers (Gilbert for instance), attributes then a kind of intelligence to the magnet to explain its properties; being souls, iron and lodestone normally tend towards the poles through which all souls go back to the sun¹. This is what connects to the general philosophy of L'Autre Monde the notion of sympathy which would otherwise appear to be a mere property of matter, unjustified metaphysically. As this is not allowed to happen in Cyrano's qualitative universe, one must understand sympathy as a kind of governing principle of the universe, similar to Empedocles' Love and Hate, as its human aspect of friendship well shows. Cyrano probably got his inspiration from the Renaissance Platonists for his idea of sympathy and of the "active principle".

We have wondered what Cyrano meant by "primary matter"; it seems that he himself assumes that there is such a thing, without being able to imagine it. It is certain, however, that

1)p. 130

there is no difference in nature and behaviour between living and inanimate matter - and even human, that is to say reasoning matter - as is evident from the cycle of the log, for instance (where electricity and "animal fire" are the same thing), and in the words which end the demonstration of the Spaniard: "de cette façon, dans un homme il y a tout ce qu'il faut pour composer un arbre; de cette façon, dans un arbre il y a tout ce qu'il faut pour composer un homme. Enfin de cette façon, toutes choses se rencontrent en toutes choses, mais il nous manque un Prométhée

a. pour faire cet extraict" (ms. Paris)

b. qui nous tire du sein de la Nature, et nous rende sensible, ce que je veux bien appeller matière première ".
(ms. Munich)¹

It has been seen that the aspect which matter assumes has an influence on its behaviour. This leads us to an examination of the physical consequences of this theory, chiefly of Cyrano's conception of gravity, intimately connected with his ideas about vacuum.

Cyrano must have heard in Gassendi's circle of Galileo's ideas on the fall of bodies, since he states that there is no matter more weighty than another². He cannot have deduced

1)p. 52

2)p. 45

it from his belief in the unity of matter, since he offers the latter as an explanation for a fact. Does he, however, really mean that objects made with different substances but having the same volume would fall at the same speed, provided that there is no air-resistance? This does not seem to be the case for, recognizing that different substances fall with varying speeds, he does not resort to the resistance of the air to explain it, but distinguishes between two realities: one which he calls "inclination", directed towards the centre of the earth and equal in all substances (since they are in fact one and the same), and the actual speed with which they fall, which differs with every substance. The cause of this variation is the "quantity" of the bodies, a word replaced in print by "quality". This substitution is not as unfortunate as one might think, since the quality or nature of every substance is determined by the quantity of primary matter concentrated in a larger or smaller space: in other words, nothing but the old Aristotelian idea, accepted universally before Galileo's discoveries!¹ This is deceptive enough to have escaped many a commentator who thought that Cyrano's ideas on the subject were in agreement with those of Galileo; and it seems doubtless that he knew of them, but

1)p. 47

did not understand the real cause, keeping in mind the notion of some equality between bodies, but in fact stating in his novel only that all bodies fall. This is borne out by the fact that having also heard of the famous problem of the pump and remembering its connection with the existence of vacuum, he resorts again to the theory of the mixture of elements to explain it¹ (water rising because it is intimately mixed with the air which one elevates), and this, in spite of the fact that he knows that air is weighty².

One has seen the importance of the structure of bodies in Cyrano's conceptions of matter. Now, how could these contractions and dilatations occur if there exists no vacuum? Thus, with actual mistakes sometimes, but at any rate with remarkable consistency, Cyrano evokes once more the central tenet of his metaphysics and physics.

The existence of vacuum is also inferred from the fact of motion³, for, like his contemporaries who often considered only absolute time and absolute space, he fails to take into account the resistance of materials. He rejects - in the Moon at least - the Cartesian idea of rarefaction. The impossibility for two bodies to occupy the same place at the same time is stated as an unquestionable fact.

1) p. 49

2) p. 48

3) id. ; Cyrano, like Cardano (see op. cit. p. 40b for instance) is scathing for Aristotle. But both attack in fact rather Scholasticism and depend greatly on Paduan Aristotelianism. See on p. 47 another defence of vacuum, for instance.

At the end of the "cycle of the log", it is noticeable that the remaining ashes are sterile¹. To re-enter the cycle of life matter needs then an active principle. Is this principle part of matter? If not, how is it distinct from it? On this point hinges the whole question of Cyrano's religious beliefs. Before examining all its implications it is however necessary to consider a very different theory of matter which can also be found in L'Autre Monde.

2° - Atomism in L'Autre Monde.

The former theory was expounded by Gonsales; this one is expressed by one of the Selenite philosophers, and it is with very little alteration the Epicurean and Lucretian theory of the atomic constitution of the Universe, such as it was taught by Gassendi.

The first important difference concerns the nature of the atoms. In the first case, they were similar parts of matter which is one, however different the various bodies may seem. Now in the Epicurean theory the atoms are different according to the bodies, and Cyrano seems to agree without feeling the discrepancy between his various statements. Some atoms, then, are angular, others square, others spherical and so on. They are "très solides, très incorruptibles et

1) p. 52

très simples"¹. As Cyrano nowhere indicates what they are made of, one can suppose that they are made of the primary matter, and that "très simples" means homogeneous. The difference would not be very momentous so far, but he attributes to these various shapes of the atoms the cause of the various movements of the bodies which they constitute, and these movements are characteristic of them, they are, properly speaking, the nature of the body. The system is then much more complicated than that according to which the elements, formed by various concentrations of the primary matter, formed in their turn all the existing substances. In the same way, all movements were attributed in the first case to the fairly simple and universal force of sympathy, but there are now as many movements as there are bodies: "tous agissent diversement chacun selon sa figure (...); l'une, comme la carrée demande le repos perpétuel, d'autres un mouvement de costé, d'autres un demy-mouvement, comme de trépidation..."²

A substance which is most important in Cyrano's metaphysics is fire. All its characters will be examined in detail but it is important to remember that its essence consists in moving constantly and in penetrating all bodies. For these

1) p. 76

2) id.

reasons, Cyrano supposes that it is constituted by "la ronde (figure), dont l'estre est de se remuer, venant à se joindre à la pyramidale..."¹

As for the space existing between the atoms, Cyrano still holds that it is a vacuum, but in the first theory what mattered was only the fact that it allowed contractions and dilatations as well as movement, and not its shape. Now on the contrary Cyrano explains that the shape of these "pores", which is constant and determined by that of the surrounding atoms, plays an essential part in explaining the effects of the round atoms of fire upon various substances. This is most important since all - sound, heat, smells, light and so on - is material and therefore corpuscular. It explains, according to him, the laws of refraction and the brightness of gems². Gassendi, following with consistency his philosophy, attributed heat to a special kind of atoms coursing through the pores of heated bodies; this was opposed to the theory which explained it by a kind of motion, held for instance by Bacon and Boyle (though Boyle resorted to atoms of fire to explain the increase in weight on the part of a metal when it is calcined³). There was as yet little distinction between

1) p. 76 - 2) pp. 123 and 134 -

3) in Of the mechanical origin of heat and cold (1675). Cyrano agrees with this and it allows him to explain why some substances become hotter than others (p. 47), but he also explains the fact by the shape of atoms (p. 126). He also believes in atoms of cold, as becomes evident in the metaphysical discussions of the Sun.

heat, fire and flame; the notion of fire is even more comprehensive for Cyrano as will be seen in the study of the "active principle", but he always speaks of fire or of its equivalent as of something material, constituted by a special kind of atom. A consequence is that he believes, like Gassendi and Galileo, that light, being corpuscular, travels at a finite speed, whereas Descartes believed it to be infinite.

It was sometimes supposed that there were special atoms in air to carry heat and sound, a medium sometimes called "aether"; Cyrano does not say anything about that, but his imaginary use of ether in his trip to the sun probably indicates that he had heard of discussions on whether ether was imponderable or not.

Except for the two cases which have been mentioned, both theories exist in L'Autre Monde without clashing; Cyrano seems to use one or the other when he finds it convenient, and quite probably does not realise that they do not always agree. The atomistic account of the universe is in no case a mere enclave of another man's theories, as seems to be the case with Descartes', for Cyrano refers to it constantly, and obviously materialism is for him a synonym of atomism. It does not seem by any means unfit to him to explain psychological phenomena, and his interpretation of the senses,

the feelings and the soul stamps his system as chiefly atomistic. He realises himself the value of atomism for a general account of the universe: "Enfin, ces premiers et indivisibles Atomes font un cercle sur qui roulent sans difficulté les difficultez les plus embarrassantes de la Phisicque."¹

Most of Cyrano's explanations of the senses² come from Gassendi's Philosophiae Epicuri Syntagma, or from Descartes. Sight, he says, is the most difficult of all to explain. Whereas in the case of the other senses the objects sent forth atoms, "ces petits riens corporels"³, in the case of sight the eyes are supposed to send forth "dust of fire" which constitute the visual rays and which brings back the material image of the objects, the Epicurean "simulacra". The feelings are often a consequence of sensorial excitement, which is easy to understand since they are due to the movements of special sorts of atoms, not different in nature from those which come from external objects. The communication between both is assured by the presence of pores on the skin and the brains, and the nerves carry these atoms inside the body. The nature of the feeling thus obtained depends both on the shape of the excited inner atoms and on the intensity of the stimulus. After having explained courage

1)p. 78

2)pp. 78 and ff.

3)p. 79

and joy, Cyrano sums up: "Il en arrive ainsy de l'ébullition des autres passions, selon que ces petits corps sont jettés plus ou moins violemment sur nous, selon le mouvement qu'ilz reçoivent par la rencontre d'autres bransles, et selon ce qu'ilz trouvent à remuer chez nous."¹ Hence the various effects of music, for instance.

Cyrano's belief that everything can be explained by atomism supplies on the other hand a foundation for his epistemology and for his opinion concerning fate after death. For since every mental activity is carried out by material agents, there is no reason to deem judgment more trustworthy than memory or imagination (which seem to be the only three mental faculties Cyrano recognizes): thus, the three are represented as equally indispensable rivers in the Sun. For the same reason, all the levels of human activity are morally equal: "Il en va tout ainsy de ce feu qui se meut de soy-mesme, car ayant trouvé les organes propres à l'agitation nécessaire pour raisonner, il a raisonné; quand il en a trouvé de propres à sentir seulement, il a senti; quand il en a trouvé de propres à végéter, il a végété..."² Here, the rationalist postulate is clearly seen: it happens that some men have received more judgment, and

1)p. 80

2)p. 78

some more imagination (because, Cyrano explains allegorically in the Sun, the atoms which will form their soul have been immersed for a longer or shorter time in the three rivers); but the faculties themselves are identical and constitute a common ground between them. Thanks to the atomistic theory, there is no embarrassing question of the union of the soul to the body, as in Descartes' dualism; hence the almost unlimited power which Cyrano attributes to imagination, as will be seen. In fact, everything is now clear about man and Nature except for "ce feu qui se meut de soy-mesme", which will be now studied.

3° - The active principle.¹

In the episode of the log, combustion amounted to breaking, by adding more of an element than would normally be in such a compound body, the subtle equilibrium which constituted that particular body, and thereby releasing the other three elements: when fire is added, the inner fire, water, and air, escape, and there remains what can best evoke the elusive primary matter because of its sterility: ashes. Cyrano explains later how the status quo can be regained by a fortuitous reintegration of the four elements, and this can be done only by giving back to earth, water and air the

1) See about this subject Cardano (op. cit.) especially chapters 2 ("Des elemens...") and 4 ("De la clarté et lumiere").

amount of fire which he had previously demonstrated to exist in them. Fire is then an indispensable ingredient in the physical existence of everything in the universe¹.

Matter in the sun is "naturally active"² because it is made of atoms of fire, naturally endowed with movement; on the earth it is naturally inert. Practically, however, matter is never seen in its inert state; it always has some degree of being in it, even if the appearances seem to indicate the contrary. Of the stones, little is said, except that they have in the sun a kingdom of their own; but mud or water, out of which animals can be born, give us an idea of fertilized matter.

Fire, it has been said, was often used to express the ideas of both heat and light; but it soon appears that these are carefully distinguished in Cyrano's mind. In the Moon, the Daemon holds two globes filled with light, and answers to his beholders who marvel at his not being burnt that "ce sont des rayons du Soleil que j'ay purgez de leur chaleur, autrement les qualitez corrosives de son feu auroient blessé vostre veüe en l'esbloüissant; j'en ai fixé la lumière et l'ay renfermée dans ces boules transparentes que je tiens..."³ and elsewhere Cyrano explains that fire does not burn if

1)p. I25; see also p. 76 : "le feu, qui est le constructeur et destructeur des parties et du tout de l'univers..."

2)p. I45

3) p. 82.

it is not attached to some matter¹ (which, as has been explained, determines the degree of heat). Light is then fire when it is unattached to matter. It must be emphasized again that fire, and therefore light and heat, are material like every existing thing; when Cyrano then uses the term "matter" in opposition to fire, one must understand "primary matter", the rôle of which will be explained. There is nevertheless a genuine difficulty at this point in Cyrano's metaphysics, and it will be seen that the question of how matter can result in more than matter is its stumbling block, as it has been that of many would-be materialistic accounts of the universe.

Apart from light, which does not play an important part in Cyrano's ideas, unattached fire can be seen in another phenomenon. Cyrano predicted with confidence that the end of the world will come through universal conflagration, the cause being that fire has used up all existing matter and must wander off in search of a new planetary system to consume²; the same sequence of events can be witnessed on a smaller scale on the earth when fire, escaping from a burnt substance and on its way to the sun, becomes abnormally concentrated in a cloud and results in lightning: "comme il vient en montant, à se desgager peu à peu de la violente

1)p. 126

2)p. 86

compagnie de ses hostes (air and water, also escaping), alors il prend le large, parce qu'il ne rencontre plus rien d'antipathique à son passage, et cette négligence est bien souvent la cause d'une seconde prison; car luy qui chemine séparé, s'esgarera quelquefois dans un nuage s'il y rencontre d'autres feux en assés grand nombre pour faire teste à la vapeur, ilz se joigⁿent, ilz grondent, ilz tonnent, ilz fouldroient...."¹

How does fire appear when it is attached to matter? Cyrano has already answered that it is heat, but it is soon evident that both fire and heat sometimes have different meanings. Juppont², who read Cyrano's work attentively, had well noticed it, but, obsessed with the desire to find in Cyrano's explanations the equivalent of modern scientific concepts, he thought that fire in L'Autre Monde was sometimes used to express the modern notion of energy. In fact, we shall see that the function Cyrano attributes to it is not far from the present idea of energy, even if in nature they are widely different.

When the Spaniard attempted to demonstrate to our hero how "all is in all things" he said that the apparently spontaneous birth of small fishes out of water was a proof that there was fire in water³. In the same way, trying to

1)p. 51; see also p. 50: "elle se consomeroit brusquement comme un éclair". No connection is made by Cyrano between lightning and the force which tends to reunite straw & amber.
 2)in op. cit. - 3)p. 50

show how all the elements could unite again in a tree after being separated by combustion, he shows fire, contained in a drop of water from a cloud, joining the "animal fire" of the oak. It is then evident that fire and heat, beside their usual meaning, are in some way equivalent to what Cyrano calls "germ". The same oak, for instance, will also attract by sympathy water, once its original fertility has been restored, thanks to the "natural heat of its germ". Water can find its fire again in many ways, one of which is the "nourishing heat of manure on which it has been thrown". The instances when fire and heat have this connotation of fertility, life, nourishment, are very numerous in L'Autre Monde¹. Unlike some other notions, this one is taken for granted by Cyrano; it is nevertheless one of the most important in his system since it postulates the identical nature of : visible fire, light, heat of any origin, lightning, nourishment for the preservation of life, and germs for its propagation. Its importance appears greater still when one realises that all these phenomena are the manifestations of the souls of the various beings².

Before discussing this point, it is interesting to

1) p. 32: "heat of the germ" of the apple-tree; p. 168 a long metaphor in the précieux style illustrating germination; p. 169 a suggestion that the same sort of germination can occur directly from human germs.

2) Cyrano's active principle, then, is not the "quintessence" of ancient physics since the nature of the stars and that of the souls is identified with common fire, and like it subject to disintegration. Cyrano abolishes the distinction kept by Cardano (op.cit.) between celestial and earthly fire (p.99)

determine how this animal fire is held by matter. In the example of comets, for instance, the Spaniard shows that fire must be fixed in some way, otherwise it would wander about and either fall back eventually on the earth, or constitute lightning. Now in the case of this particular function, matter is assimilated to moisture - more, one feels, because water was held to be absolutely antipathetic to fire than because of any intimate necessity: "Car qu'ilz choisissent le feu, mesme le plus destaché de la matière, comme les Comettes, il y en a tousjours et beaucoup (d'humidité), puisque si cette humeur onctueuse dont ilz sont engendrés, réduite en soulfre par la chaleur de l'antipéristase qui les allume, ne trouvoit un obstacle à sa violence dans l'humide froideur qui la tempère et la combat, elle se consumeroit brusquement comme un éclair."¹ Such terms as "chaleur naturelle", "flamme radicale" or "chaleur radicale" mean the active principle, as is shown by a long discussion on page 125; the epithet "onctueux" applied to "humeur" as in the passage quoted above, or to "matière" as on page 125, is used in connection with a substance which easily fixes the active principle; "humide radical" designates, as has just been said, matter as opposed to this active principle.² In human beings as well as in other creatures, the "humide

1) p. 50

2) See Cardano, op. cit. p. 129. See also the eighth chapter: "Des plantes des arbres et des herbes": "L'humeur gras et acqueux est qui a soustenu la force de la chaleur celeste tant longtemps qu'il l'a retenue..." (p. 225)

radical" has the same function, namely, to prevent too rapid a loss of "chaleur naturelle". On the other hand, this natural heat is supplied during life by food, and teleologically Cyrano assimilates food to sleep, since both are necessary for the preservation of life. Food is not necessary during his second trip thanks to the proximity of the sun, except during the crossing of the "moyenne région" because of the cold which, like fasting, tends to diminish the amount of radical heat in the body¹. Sleep is not needed either, because its normal function of repairing the spirits which have been consumed by work is made superfluous by the abundant supply of these spirits from the sun's rays². The finalism Cyrano adopts regarding food and sleep was probably caused by the identical effects of both: a sensation of bodily heat and of drowsiness, and a feeling of joy, which he often mentions in this connection. This raises the question of the exact location of the active principle in a human being or in any other.

In the Sun, Cyrano makes it clear that one must see in the active principle what one is agreed to call the soul. Souls of fire were of course well known in metaphors, but he takes the metaphor absolutely. Having identified it

1)p. 125

2)p. 133. In enlightened people such as the Selenites, nourishment is effected almost without any excreta produced; those inassimilable remains are due, according to him, not so much to their unsuitability as to our not knowing how to manage them (see p. 42). He even thinks they are the cause of all illnesses.

with fire, he attributes to it all the properties of fire, chiefly its material nature and its atomic structure. The problem of the location of souls in space immediately occurs. As regards the place of the soul in man, this was a moot question in Cyrano's century and, as often, his opinions show the influence of the various answers which were given; however, they must usually be inferred, for there are no definite statements on the subject. For instance, it is everywhere assumed that the soul is within the limits of the body, and even in the head, since the proximity of the hands to the head explains, according to Cyrano, that they are more skilful than the feet¹; this is certainly due to Descartes' idea of the conarium. Again, in the Sun, the images and the thoughts can be seen when the Philosophers choose to make their heads transparent, and their accumulation is finally the cause of death². However, in other cases, the soul seems to cover a wider and more diffuse area. For instance, an important aspect of the active principle is what Cyrano usually calls "imagination", sometimes explicitly "fire of the imagination". Its presence or absence and its intensity are closely dependent on the essence of every being, and in a way constitute that essence. Thus it is a part of the "hot" temperament, which is found more in man than in animals³, more

1)p. 81

2)p. 191

3)p. 131 for instance.

in the Philosophers than in the ordinary man, and more in the daemons than in the Philosophers themselves. The daemons are, according to one of them, "remuant(s), ambitieux, et digère(nt) beaucoup"¹, and these three terms are fully understood only when one bears in mind the properties of fire, which enters in their constitution more than that of any other being. The term "ambitieux", as the context shows, is closely akin to "remuant": the daemons use extensively their imagination, or will. Those, which are generally distinguished and sometimes opposed, are intimately connected for Cyrano; or rather, will and desire are identified, and are fulfilled by imagination as by a servant. When will or desire are applied with particular violence and, as it were, precision, "the whole mass becomes light"² and able to undergo the most surprising changes of aspect or of position. This happened to Adam, and is shown to happen to the daemons, whose substance is for the greater part "naturally active". Imagination itself is nothing else than the faculty of forming in the mind an image which is material and the perfect reduction to scale of whatever the subject intends to happen: it can be a new form he wants to assume, or a new situation he wants to find himself in, as in the case of

1)p. 36

2)p. 23; see also p. 137: "elle suscite le microcosme..."

accelerated travel. As for the mechanism through which it really happens, its source is in the last analysis sympathy, since it is generated by the similarity between a bigger, visible shape in the macrocosm, and another in the microcosm, smaller but material, and which can be actually visible in the case of the Philosophers. The highest possible state is that in which this inner fire or "enthousiasme", as Cyrano once aptly calls it¹, is allowed full play, and in which mind and a naturally active matter blend into unity. The Sun only is capable of it, but man has gone further and further from it, in a real decadence due to debauch, drugs and inadequate food². Many times in L'Autre Monde one can see a character deeply concentrating before the occurrence of what would be called miracles by the unenlightened (but Elijah himself is intent on circumscribing the sphere of the supernatural and on explaining the trances "que vous appelez extatiques" as another example of that particular case of "natural magic"³). These ideas explain Cyrano's animistic conception of gravity. The phenomenon by which a body, thrown into the air, reduces its speed and then falls back towards the earth (of which for the first time Galileo had given a mathematical interpretation) is explained by analogy with the example of

1)p. 23

2)pp. 23 and 92

3)p. 23

a human being jumping: "Ma volonté (...) ayant suscité tout le microcosme, elle tâche de le transporter jusqu'au but qu'elle s'est proposé; si elle n'y arrive pas toujours, c'est à cause que les principes dans la Nature, qui sont universels, prévalent aux particuliers, et que la puissance de vouloir estant particulière aux choses sensibles, et celle de cheoir au centre estant généralement répandue par toute la matière, mon saut est contraint de céder dès que la masse, après avoir vaincu l'insolence de la volonté qui l'a surprise, se rapproche du point où elle tend."¹ Imagination, when it is a servant of will or desire, is then the means by which an enlightened being can obtain what he wants by facilitating the obedience of matter to its own laws (sympathy, for instance). Voltaire's idea of making Micromégas and the inhabitant of Sirius travel without any machine, thanks to their knowledge of all the forces "attractives et répulsives" probably originated in Cyrano's use of sympathy and imagination and profited by the more recent Newtonian discoveries.

Now the effects of imagination seem to necessitate more than just the brain and the animal spirits, a latent activity and sensitivity in all the parts of the body. Moreover, the man on the sun-spot reveals that a powerful imagination can

1)p. 137

extend to the knowledge of the past and of the future¹. All this strongly recalls the dissatisfaction of several seventeenth century thinkers with a purely mechanical explanation of all phenomena: Newton, with his conception of aether to which he likened the will, ultimately believed in a religious and not a mechanical explanation of the world; Henry More held that there is a spirit of nature which explains phenomena like cohesion, magnetism, motion and gravity, and in man a soul which extends in the whole body, and sometimes beyond, like a kind of spiritual effluvia². Indeed, it will be seen that the constitution of the sun resembles that of the individual souls which compose it, and that its "embonpoint", its rays and its light are analogous to man's natural, vital and animal spirits. However, although he does mention as the seats of the vegetative, sensitive and intellectual powers the liver, the heart and the brain³, Cyrano refuses to recognize the third and more diffuse force in another passage: "...voilà de belles chimères: donc
 et
 outre l'Ame/l'Esprit il y auroit encore en nous une
 troisieme substance intellectuelle qui auroit ses fonctions
 et ses organes à part...."⁴ Intellectual or not, this third entity has been expressly recognized about man's response

1)p. 131

2) See E.A. Burtt: The Metaphysical Foundations of Modern Physical Science, second edition, London 1932, especially pp. 129 ff. and 271-272.

3)p. 131

4)p. 72

to truth in music: "nous ne le voyons pas, mais nous sentons que Nature le voit..." and its necessity is often inferred elsewhere. If this fundamental spirit is abundant, man experiences joy, and joy alone can keep the body together. It must then be kept at all costs: thus the sick tree of the Dodona forest is ordered as a cure by his physician the singing of a nightingale, a treatment which recalls those given by Rabelais' Entéléchie¹. On the contrary, sadness eventually brings death: Cyrano recalls how, in prison, "déjà la douleur d'une amère tristesse commençoit à me serrer le coeur et désordonner ce juste accord qui fait la vie"², and the worst death in the Kingdom of Birds is "la mort triste". The culprit is made to listen to lugubrious music until "l'amertume de son chagrin désordonnant l'oeconomie de ses organes, et luy pressant le coeur, il se consume à veüe d'oeil et meurt suffoqué de tristesse..."³ For the same reason, the Birds refrain from pronouncing any judgment when the state of the weather might make them melancholy⁴.

Thus the choice of combustion as a means of disintegrating the log was not fortuitous; for necessarily, since fire is the condition of the existence and conservation of bodies, all operations which modify them must be concerned

1) Le Cinquiesme Livre, chap. XX

2) p. II7

3) p. I56

4) p. I52

with fire: combustion allows the animal fire to escape, and so does death, which is its equivalent, being the loss of the soul. This identification compels Cyrano to give an account of the circulation of fire throughout creation.

He is greatly helped in that task by the identification of germs with atoms of fire. Thus the sun's rays become attached to the primary matter as germs; after a series of vicissitudes they eventually go back to the sun¹, only to start another cycle, possibly on some planet other than the earth, and so on, until the end of the whole planetary system, including the sun. This return is effected through the poles, "les bouches du Ciel par lesquelles il reprend la lumière, la chaleur et les influences qu'il a répandues sur la Terre (...); les soupiraux du Ciel sont les Pôles par où il se repaist des âmes de tout ce qui meurt dans les Mondes de chez luy, et tous les Astres sont ses bouches et les pores par où s'exhalent derechef ses esprits."² Two proofs of this are on the one hand the phenomenon of the Aurora Borealis, which sufficiently demonstrates the presence of a great number of fiery souls, and the attraction of the lodestone and of magnetised iron by the Pole, because they are nothing

1)p. 86; Campanella had already expressed that idea, in the same connection with the cremation of bodies in the City of the Sun.

2)p. 175; Cyrano quotes some sayings of the Ancients which may point out the origin of this particular idea. In spite of his adherence to Bruno's opinion that the stars are nothing but other suns (see chapter on "Cyrano's universe"), he seems to refer here to the hypothesis that the stars are holes in the sky showing the fire behind.

but the souls of Orestes and Pylades.

On the other hand, calling the active principle in an existent the soul inevitably gives it a philosophical and religious meaning which raises many problems, both of consistency and of orthodoxy, due to the extended comprehension of the term. For, despite the presence of a non-personal element - primary matter - which prevents Cyrano's metaphysics from being a thorough personalism, everything else is stated to have a soul, even earth, stones and plants. The difference between these various sorts of souls will be seen in the chapter on the Scale of Being in L'Autre Monde, but the process by which they become differentiated is worth notice. On his way to the sun Cyrano lands on a "macule" or sun-spot, and meets one of the inhabitants who enlightens him on the subject of creation, in particular that of the different beings through repeated "coctions" by the sun: "Ensuite de la retraite des eaux, il est demeuré sur la Terre une bourbe grasse et féconde où, quand le Soleil eut rayonné, il s'éleva comme une ampoule, qui ne pût à cause du froid pousser son germe dehors. Elle reçut donc une autre coction; et cette coction la rectifiant encor et la perfectionnant par un mélange plus exact, elle rendit ce germe qui n'estoit en puissance

que de végéter, capable de sentir. Mais parce que les eaux qui avoient si longtemps croupy sur le limon l'avoient trop morfondu, la bube ne se creva point; de sorte que le Soleil la recuisit encor une fois; et après une troisième digestion, cette matrice estant si fort échauffée que le froid n'aportoit plus d'obstacle à son accouchement, elle s'ouvrit et enfanta un homme..."¹ This operation, which affects bodies intimately and which Cyrano describes by the word "coction"¹ must be taken metaphorically as a sort of ontological genesis, in spite of the fact that Cyrano on the sun-spot sees it on the point of happening; the sun-spot, like the sun itself, is "the seat of pure act"² of the Schoolmen, "le lieu où vos miracles ne sont que des effets naturels".³ But it also happens on the earth and is called digestion, by which an inferior substance is transformed into a superior one. Cyrano often uses terms of alchemy in reference to these operations by which the ontological dignity of the creatures is increased until they pass into the sun itself, which is conceived as the result of this gigantic distillation and constituted by "la chaleur d'un million de ces âmes rectifiées dont la sienne

1) pp. 130-131; see on these "libertine" hypotheses about creation Vanini's Dialogues, especially "De l'origine de l'homme" (Oeuvres philosophiques de Vanini traduites pour la première fois par M.X. Rousselot, Paris 1842, p. 213). The word and the idea of coction probably come from the Hippocratic and Galenic theory.

2) J.S. Spink, "Form and structure: Cyrano de Bergerac's atomistic conception of metamorphosis" in Literature and science, Oxford, 1956. - 3) p. 141

est un élixir."¹

It will be seen in the chapter on the Scale of Being that all matter will eventually disappear, or rather be transformed into fire and be part of the sun. Does this mean that matter is a metaphysical fact which is to be deplored, as it were? No, for it is indispensable for the universe as we know it to exist. As the example of the comet has already shown, some matter must be there for objects and beings to exist at all; the allegory of the coctions seems furthermore to show that matter has a direct part to play in their essence: for is it not thanks to the resistance of "moisture" and of "cold" that the sun is made to give several coctions, thereby determining the nature of the creature? Thus, in spite of a theoretical identity between matter and its animating principle, there seems to be a practical dualism in Cyrano's novel, and it is the meaning of the allegorical episode of the fight between the Salamander and the Remora². Many signs point to this interpretation in the description of the two animals: first, the lightning and thunder which accompany their fight; then, the shape of the Salamander: "quoy que rond(e) par en bas, (elle) formait un triangle par le milieu; et sa teste fort élevée, avec sa rousse chevelure qui flottoit contremont, s'éguisoit en pyramide; son corps

1)p. 182

2)pp. 177-182

estoit troué comme un crible, et à travers ces pertuis déliez qui luy servoient de pores, on appercevoit glisser de petites flammes qui sembloient le couvrir d'un plumage de feu." In front of it the Remora represents "tous les principes de froidure" and its shape, significantly, is "pesante et carrée", the square atoms being endowed with a propensity to rest¹. Like the Salamanders, or principles of fire, the Remoras have seeds, just as quintessential: "cette semence, extraite de toute leur masse, en contient (...) éminemment toute la froideur", and the Remoras were supposed to immobilise ships in the Arctic Ocean². Juppont seems right in suggesting that Cyrano's hypothetical Histoire de l'Etincelle would have explained the obscurities of this allegory; it would at any rate certainly have been an allegorical and dramatized statement of Cyrano's cosmogony and of his metaphysics. One would expect the fight to end in the victory of the triumphant "Spark" of fire; it ends, instead, in its utter defeat. But if one notices that the Remoras fight at the request of "the forests, their friends", to heal them from the ardent fever and the eventual death which the Salamanders bring to them, perhaps one may see in this tale an illustration

1) p. 76; this description shows that Cyrano intends the episode to be allegorical, for both salamanders and remoras were otherwise taken very seriously in his time.

2) Campanella is seen to watch the fight with Cyrano, who possibly remembered this passage of the Philosophia realis epilogistica (Frankfurt, 1623): "Idcirco nati calor et frigus, principia activa principalia, ideoque suae virtutis diffusiva. Statim inimici fuerunt mutuo, dum uterque cupit totam substantiam materialiem occupere." (quoted by Fournel, op.cit.)

of the essential rôle of matter, without which nothing would exist, but fire.

The active principle is then distinct as a rule from the rest of matter. The latter is conceived, if it can be conceived at all, like the chaos which was informed by souls coming from the sun: "Regardez bien la Terre où nous marchons, elle estoit, il n'y a guères, une masse indigeste et broüillée, un cahos de matière confuse, une crasse noire et gluante, dont le Soleil s'estoit purgé. Or après que par la vigueur des rais qu'il dardoit contre, il a eu meslé, pressé et rendu compactes ces nombreux nuages d'atomes; après, dis-je, que par une longue et puissante coction, il a eu séparé dans cette boule les corps les plus contraires et réüny les plus semblables..."¹ the fertilizing flood and the coctions took place. Since matter plays in Cyrano's system its Aristotelian and Christian part, the crucial problem is that of the nature of the atoms of fire, especially in the Sun, which transcends the bundle of atoms which constitute it in the same way as every being transcends its physical elements. Cyrano's religious position cannot be construed unequivocally, but some meaning can be extracted from the various statements he made thereon. The Sun's nature and significance will on the other hand be understood better after an examination of

1)p. 130

the conception of the Scale of Being. In any case, the essential part played by fire in Cyrano's system has almost certainly been suggested to him by Gassendi's revival of the ancient idea of the anima mundi, also shared by Cardano¹; but whereas Gassendi had modified the pagan belief in a Christian way, accepting it only as an analogy, Cyrano is unimpeded by such scruples. As will be seen, this involved him in worse philosophical difficulties.

1) Cardano's opinion is in its turn cited by Vanini (op. cit. pp. 251-252). See also Cardano (op. cit. p. 131b) citing Hippocrates and Aristotle.

On Gassendi's belief in an anima mundi, see in particular Ch. Jeannel: Gassendi spiritualiste, Montpellier, 1859.

On the opinion that souls were made of fire, see Rosenfield, From Beast-Machine to Man-Machine (1941) pp. 113-118

and J.S. Spink, "Libertinage et 'Spinozisme': la théorie de l'âme ignée." in French Studies, Vol. I, N°3, 1947.

4 - Cyrano's scientific knowledge as seen in L'Autre Monde.

The foundations of Cyrano's ideas on physics have been reviewed in the last chapter; in this one will be examined his various statements about the other sciences. It will be found that his way of mentioning their results often gives useful clues for the proper understanding of his philosophical outlook. This is particularly evident in regard to the means of flight he imagines, which for this reason will be studied separately. Cyrano's cosmological ideas will also be the object of a special section because cosmology was then leading the other sciences, and because Cyrano's radical and enthusiastic acceptance of the recent discoveries makes him appear startlingly modern.

1° - Sciences other than physics

Cyrano has been well revenged for the contempt which was poured on him for two centuries after his death, for he has been acclaimed, after his rediscovery by Nodier, as a father of modern science. What are the causes of this change in appreciation? One of them is surely his praise of reason, which he opposes to authority, be it of the Church or of the Ancients, an attitude which has more and

more been found indispensable for a really modern outlook. Another is that many scientific theories, verging on metaphysics, which Cyrano extols, although sometimes looking like "galimatias" in his time, have since then rallied the whole of the scientific world: such as the unity of matter and its atomic structure. Chiefly, however, it is explained by strange occurrences when Cyrano seems to foresee inventions which were actually realised later; two particularly striking examples are those of the gramophone and of X-rays (both in fact inspired by contemporary publications). Startled by such coincidences, many commentators¹ have completely disregarded the spirit in which Cyrano wrote, and Juppont for instance, although he had the merit of examining L'Autre Monde in detail, could speak of Cyrano's "scientific work", which rests on a misunderstanding; for even if the Fragment de Physique is really by Cyrano², thus leaving no doubts as to his serious interest in science, he was more concerned in his novel with philosophy than with science proper.

The modern notion of atoms facilitates quid pro quo with the Epicurean atoms. When Cyrano states that "de toute

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- 1) such as Nodier, Gautier, Mansuy, Grente, Juppont etc... (See bibliography).
 - 2) The taste and gift for vulgarization of philosophical and scientific theories which ~~are~~ seen in L'Autre Monde make this attribution quite credible; the only puzzling fact is the unreservedly Cartesian outlook in the Fragment, but Cyrano may have meant it to be only a dispassionate exposition of a system he did not profess.

matière palpable se faisant une émission perpétuelle de petits corps; à mesure que nous la touchons, il s'en évapore davantage", and when Juppont reminds us about it that radioactivity is a property belonging to all existing bodies, it is easy for Lachèvre to be ironical: "Cyrano a de la chance d'avoir rencontré un commentateur du côté scientifique de son Autre Monde qui a certainement pénétré toute sa pensée!"¹ He has himself seriously underestimated Cyrano's eagerness to master the scientific knowledge of his time and to integrate it into an intelligible synthesis. Juppont was right in replacing Cyrano's periphrases or awkward terms by the well-defined modern ones, since scientific terminology was then only in the making; but his mistake and that of the others was to confuse an imaginative interpretation of the universe with a scientific statement, well borne out by careful experimentation. It is a fact that practically all the modern discoveries have been anticipated even well before the days of science-fiction; hypotheses dating back to the Greeks have often guided scientific research and been an incentive for the discovery of better scientific instruments. Cyrano's so-called prescience of X-rays, of the gramophone, of the montgolfière and various modern inventions must be viewed in that way.

1) p. 80, note 2.

There is no visible influence of Descartes' studies on meteorology; the chief mention of winds, clouds and thunder to be found in L'Autre Monde¹ does not so much refer to their scientific explanation as emphasize that they are natural phenomena and in no case the instrument of divine retribution. This shows that Cyrano's interest in science is inseparable from his desire to rid mankind from superstition, a combination to be found also in Lucretius.

The study of the active principle in Cyrano's metaphysical view of matter has shown his belief that fire can separate the pure from the impure in a body, an alchemical tenet which he seems to accept as an act of faith in spite of his satire of the "huile de talc" and the "poudre de projection"². One could not expect any sound chemical notion yet.

In several passages, Cyrano parades his notions of anatomy and physiology, and definitely intends to show that he is aware of their latest developments. True, he still holds the idea that excreta are the cause of all illnesses and falls back naturally on the old frame of the temperaments as an adjunct to psychology: "Je suis bilieux, mélancolique, c'est la cause pourquoy, depuis que je suis au monde, mes songes m'ont sans cesse représenté des cavernes et du feu"³,

1) p. 51

2) to be found among the purely imaginary things on the banks of the river of Imagination p. 188.

3) p. 106

he says, to explain a nightmare; and he holds that cowardice or courage are produced in a man according to whether "il sera bilieux ou qu'il aura plus de sang", excusing the former, "ce pauvre homme qui prévoit le danger, dont la chaleur est estouffée dans la pituite et de qui le coeur est trop vaste pour unir les esprits nécessaires à dissiper cette glace qu'on nomme poltronnerie"¹ - which is rather remarkable, coming from such a clever duellist! Already in the Lettre contre les Sorciers he explained the frequency of demoniacal apparitions to humble people "selon que l'humeur noire sera plus ou moins forte dans la tête mal timbrée d'un ridicule Berger"². He still believes that the blood is formed in the liver³, but takes care to show that he has heard of Harvey's discovery of circulation: "mes poulmons conservoient encore sous un rouge incarnat leur mole délicatesse; mon coeur toujours vermeil balançoit aisément entre le sistolle et le diastolle; mon foye semblait brûler dans un pourpre de feu, et cuisant l'air que je respirois continuait la circulation du sang..."⁴ His opinion of doctors, however, is as poor as it generally was in the seventeenth century, and for his own part, he trusts the imagination more. He believes it to function

1)p. 56

2)He also alludes on p. 72 to "les flegmatiques et les bilieux".

3) and even that "les bilieux changent en bile tout le sang que forme leur foye", p. 47

4)p. 135

in a way which is reminiscent of the widespread belief in panaceas: "la force de l'imagination est capable de combattre toutes les maladies ,à cause d'un certain baume naturel respendu dans nos corps contenant toutes les qualitez contraires à toutes celles de chaque mal qui nous attaque,et nostre imagination,advertie par la douleur,va choisir en son lieu le remède spécifique qu'elle oppose au venin et nous guérit"¹. This was the way theriac was supposed to act² and foreshadows the modern notion of antibody. Cyrano even declares that the drugs given by the doctors are the cause of the decline of the human race since its origins³. Finally, he believed, rightly, that the nervous influx travels at a measurable speed (like light, and for the same reasons, as has been seen).

Cyrano shares with his contemporaries a belief in spontaneous generation, at least for the lower species of animals: "Je leur demande, the Spaniard says, si l'eau n'engendre point du poisson. Quand ilz me le nieront, je leur ordonneray de creuser un fossé, le remplir du sirop de l'esguière qu'ilz passeront encore, s'ilz veulent, à travers un bluteau pour eschapper aux objections des aveugles, et je veux, en cas qu'ilz n'y trouvent du poisson

1)p. 92

2) see for instance Vanini (op. cit.) on theriac, pp. 291-292, and on the power of imagination pp. 283-284; on imagination see also chapter on the Scale of Being.

3)p. 92

dans quelque temps, avaller toute l'eau qu'ilz y auront versée..."¹ He speaks again later of "l'eau féconde des rivières"². The young Selenite, attacking "les beaux panegyriques de la virginité", asks "pourquoy Dieu ne vous a pas faict naistre à la rosée du mois de may comme les champignons, ou, tout au moins, comme les crocodiles du limon gras de la Terre eschauffée par le Soleil"³. The latter example is a hackneyed argument of the "libertines" and is found in Vanini's review of the pagan hypotheses about the creation of man⁴. The study of the active principle has shown, however, that Cyrano's belief is slightly different from that of his contemporaries, for matter does not in his system spontaneously produce living beings, however imperfect⁵, if it has not previously received a soul from the sun. Cyrano's system is only theoretically hylozoistic.

The experiment suggested by Gonsales recalls another famous one by Pasteur, who aimed at demonstrating precisely the contrary; Gonsales' "bluteau" could have appeared useful only in a century in which microorganisms were not yet known. It is all the more curious to find in L'Autre Monde a passage in which Cyrano, drawing with his customary

1) P. 50

2) P. 52

3) pp. 65-66

4) op. cit., dialogue "De l'origine de l'homme" p. 213

5) Cardano (op. cit.) discriminates between the "bestes engendrées de putréfaction" and the "bestes parfaites" (chapters 9 and 10).

intrepidity the implications from the old theory that the world is an animal, seems to presage modern pathology and microbiology¹. This conception, revived by Bruno² and Campanella³ and defended, with many authorities to the rescue, by Borel⁴ and Sorel⁵ after Montaigne⁶, was often invoked in the seventeenth century. It is however essential to distinguish between the two purposes which it was made to serve : some writers or apologists used it to support the principle of plenitude, whether they attributed the merit of it to God or to Nature; others saw through it the likelihood that matter was infinitely divisible, whether or not they added to this a feeling of admiration and gratitude for its creator. Failure to distinguish radically enough between both uses made of the theory has led many commentators⁷ to overlook the really original part in Cyrano's development of it: instead of comparing men on the earth and in the

1) pp. 71-73. The theory is given as the opinion of one of the Selenite philosophers.

2) Enchiridion physicae restitutae (published in 1622).

3) La Cité du Soleil (edition used by Lachèvre, p. 221).

4) op. cit. chapters 18 and 19.

5) Histoire comique de Francion, Book XI, p. 806.

6) in the Apologie de Raimond Sebond, which Borel cites.

7) Brun (op. cit.) in the chapter on Cyrano's Fragment de Physique confuses Cyrano's atoms with the modern atoms, and states that he believes in the infinite divisibility of matter, and that the latter is the modern theory, neither of which is true. Among other commentaries, see E. Jovy: Les antécédents de l'"infiniment petit" de Pascal, Paris, 1932, p. 47; A. Adam, op. cit., T. II, p. 270, and his paper published in the symposium on Gassendi (Centre International de Synthèse, Paris 1955): "L'influence posthume"; see also *ibid.* p. 155.

universe to "les poux et les cirons" in themselves, like Sorel and Campanella, he compares them to the very stuff of the human body. An important cause for the confusion **has** been Cyrano's use of the word "ciron", notoriously used also by Pascal¹ in a passage which resembles that of L'Autre Monde but cannot possibly be confused with it either in purpose or in method; Cyrano never defended the theory of the infinite divisibility of matter, which Gassendi had also rejected. Cyrano's passage is remarkable in many respects, be it for the picturesque description of the microscopic elements of the body or for the correction of his supposition :

"Peut-estre que nostre chair, nostre sang et nos esprits ne sont autre chose qu'une tissure de petits animaux qui s'entretiennent, nous prestent mouvement par le leur, et se laissant aveuglement conduire à nostre volonté qui leur sert de cocher, nous conduisent nous-mesme et produisent tout ensemble cette action que nous appelons la vie", and again: "Quant à cette ampoule et cette crouste dont vous ignorés la cause, il fault qu'elles arrivent... par la corruption des charognes de leurs ennemis que ces petits Géants ont massacrés..... cette mortalité arrive quand l'apostume est meure; car pour le tesmoignage qu'alors ces animaux de vie sont esteints, c'est que la chair pourrie

1) Pensées et Opuscules, ed° Brunschvicg, fragment 72.

devient insensible...."¹ Those are passages which Lachèvre chooses to ignore when he warns us that "Cyrano n'est ici nullement original"; for if by this "cironalité universelle"² is meant only the reflection that the human body is as big for some animals as the earth is for man himself and the universe for the earth, its scope is much more limited. It does not mean that it is devoid of all interest, since Pascal saw all the depth and the pathos in the idea of relativity, but the really bold stroke in L'Autre Monde was to extend to the very stuff of the human body this vision of increasingly small existents.³ This extension of the idea creates philosophical problems which Cyrano is often incapable of solving; his efforts towards a coherent view of "the great Chain of Being" will be reviewed later, showing that passages like those which have just been quoted, far from being an irresponsible fantasy, are a part of Cyrano's attempt to make of atomism the universal answer to the riddles of matter, of life, and of mind.

This section was dealing with Cyrano's ideas on sciences which were in the making or not born yet; the next will show how modern he could be when discussing the better-established results of astronomy and cosmography.

1) pp. 72-73

2) This is the term used by Cyrano in Lachèvre, Oeuvres libertines, I, p. 72; the Lacroix edition has "cironité", which is used by several commentators such as Brun.

3) This was well seen by Russen, op. cit., p. 130.

2° - Cyrano's universe.

Whatever his ambiguities elsewhere, there is a question on which Cyrano's opinion is known with certainty: he is a convinced Copernician¹. There were however several points in the new astronomy, all of which were not equally accepted, as well as several implications to be drawn from it, all of which were not equally safe to hold; thus Cyrano sometimes personally endorses his opinions, and sometimes attributes them to one of his characters. Among the first are those concerned with the mere exposition of Copernicus' system, the three movements of the earth, heliocentrism, and the unbounded space around the solar system; among the second are the plurality of worlds (quite possibly inhabited), generally admitted by those who had gone so far². Cyrano also accepts in his own name the eternity of the universe, although it is only inferred from his statement on the infinity of space; but it is more clearly explained afterwards, in the Sun, this time by some of the characters, owing to the close connection of this question with Cyrano's highly heterodox ideas on the nature of matter and its cyclical transformations.

1) The Ptolemaic solid heavens (p. 134) and the miracle of Joshua (p. 9) are mentioned merely as a rhetorical device.

2) See Grant Mc Colley: "The seventeenth century doctrine of a Plurality of Worlds" in Annals of Science, Vol. I, pp. 385-430. (1936).

Cyrano believes with enthusiasm that the earth rotates on its own axis, and as so often, he dramatizes his belief, making of it an essential circumstance of his trip to Canada¹: half a day elapses and, the earth having rotated in the meantime, our hero finds himself "nine hundred leagues" from Paris.² The governor, there, objecting to both the earth's diurnal rotation and its annual revolution, Cyrano undertakes to convert him, and succeeds with the aid of Gassendi's books which the governor had read previously. The reasons Cyrano gives are not, needless to say, scientifically convincing, since the laws of attraction, and the identity of this force with gravity were not yet found (it is remarkable that for all intents and purposes these forces were identified by all the authors of imaginary travels in space, Cyrano included, since they are both acting successively as impetus for travel and obstacle to safety, the earth having also a "sphere of activity"). These reasons are not original either and can be found in almost all the authors who held the modern view, sometimes even with the same selection of metaphors. But the choice Cyrano makes among all the available arguments, and the convincingly concrete aspect he gives them are very significant for an assessment of his personality and of his talents.

His methods, during his discussion with the governor,

1) Although he only "suspects" it then, and has the experimental proof only during his travel to the sun, see p. 127

2) p. 10

are typical of the "new philosophy". The governor cites authorities: "Ptolémée, Ticobraé (sic) et les Philosophes modernes" and Cyrano replies with common sense arguments; and when the governor invokes the testimony of the senses by which we feel the earth at rest and see the sun move, Cyrano corrects it by reason¹. Actually, common sense and reason appear in his demonstration enslaved by many assumptions, some of which are typical of nascent rationalism and others belong more specifically to a particular trend of thought shared for instance by Kepler and our author. An example of the latter is the idea that the sun must necessarily be in the centre purely because of its nature². This mystical sun-worship is accompanied by the idea that this body is "la cause des générations", an idea which is not essentially wrong but was in Cyrano's time far from being demonstrated and rested mainly on a free use of analogy about the structure of men, fruits and planetary systems: "Car cette pomme est un petit univers à soy-mesme dont le pépin, plus chaud que les autres parties, est le soleil qui respand autour de soy la chaleur conservatrice de son globe..."³ How exactly Cyrano conceived that essential part of the sun has already been seen; his faith in the sun, "ce Dieu visible", may have been derived from, or strengthened

1) The argument of the moving boat (p. 13) was also used by Wilkins (op. cit. II, p. 166) and later Fontenelle (Entretiens sur la pluralité des mondes, ed° R. Shackleton, p. 71)

2) see note on next page - 3) p. 12

by, the utterances of such eminent scientists as Copernicus and Kepler. "Then, in the middle stands the sun, Copernicus wrote; for who, in our most beautiful temple, could set this light in another or better place, than that from which it can at once illuminate the whole? Not to speak of the fact that not unfittingly do some call it the light of the world, others the soul, still others the governor. Tremigistus calls it the visible God; Sophocles' Electra, the All-seer. And in fact does the sun, seated on his royal throne, guide his family of planets as they circle round him."¹ In L'Autre Monde the sun is likewise compared to the king's torch which chances to light also the wandering pedlar - the earth. As for Kepler, he said in a youthful disputation on the motion of the earth: "In the first place, lest perchance a blind man might deny it to you, of all the bodies in the universe the most excellent is the sun, whose whole essence is nothing else than the purest light, than which there is no greater star; which singly and alone is the producer, conserver and warmer of all things (...) called king of the planets for his motion, heart of the world for his power, his eye for his beauty, and which alone we should judge worthy of the Most High God, should he be pleased with a material domicile and

2) from previous page: The Pythagorean belief that fire is in the centre was confused in the sixteenth and seventeenth centuries with the heliocentric theory. Thus Borel and Le Bret in his Preface cite numerous forerunners of Copernicus. See G. McColley, loc. cit.

1) quoted by E.A. Burtt, op. cit. p. 45

choose a place in which to dwell with the blessed angels..."¹

Thus in L'Autre Monde is also acclaimed "ce grand et parfait animal" which occupies the highest rank in the stellar hierarchy, in spite of Cyrano's belief, as we shall see, in a really acentric universe. Seventeenth century minds had not yet recovered from the shift in emphasis from the earth to the sun as the centre of the universe; but in Micromégas the sun will have already lost most of its prestige.

Such an argument is distinctly teleological, as many other pieces of reasoning are in L'Autre Monde, in spite of the Democritean theory of the universe which can be found there. For the sun is in the centre because that is the most convenient position for it to perform its functions and not, as a mechanical outlook would have it, because its mass and that of the planets make this order inevitable. Fontenelle also wrote: "Aussi le soleil est-il placé dans le centre, qui est le lieu le plus commode d'où il puisse là distribuer également, et animer tout par sa chaleur."² This is all the more interesting in that it runs directly counter to the next argument Cyrano uses in his defence of Copernicanism, and which is of a logical character. It rests on the assumption, persistent during the Middle Ages, that the superior cannot

1) *ibid.* p. 48

2) Entretiens... ed. cit. p. II5

be subservient to, or an effect of, or otherwise dependent on, the inferior. Thus the earth exists because of the sun, not the sun for the earth. Actually, heliocentrism such as Cyrano and others see it, makes the sun's existence closely dependent on that of the planets, since it has been placed in the centre "pour estre en estat de satisfaire promptement à leurs nécessitez". The explanation is to be found in the fact that in nature, no being is created for another; sun and planets form a whole which is self-sufficient and receives its meaning from the other parts as well as giving them theirs, as is the case with an apple or a human body. The simile of the roasting lark and of the fire in front of which it rotates, which Cyrano uses to evoke the absurdity of geocentrism, was often used in such a connection; but it is curious to notice that it could also be used to the opposite effect, for instance by Arroy in Le Prince instruit en la Philosophie¹.

An idea which played an essential part in the recognition of the Copernican theory because of its general acceptance throughout the ages also appears in Cyrano's discourse to M. de Montmagnie: it is that the simplicity of the new system augurs favourably of its being true because it agrees with a similar tendency in Nature itself. Akin to this

1) quoted in H. Busson: La Religion des Classiques (1948) p. II5
Arroy actually uses that of the torch, which is an equivalent.

is the conviction that Nature does things with the greatest possible economy; thus it is infinitely more likely that it is the earth which rotates and not the heavens¹. Cyrano does not mention the enormous speed which must necessarily be attributed to the fixed stars in their diurnal rotation round a motionless earth, an argument used by Borel² and later Fontenelle, among many others, and which was meant as a sort of *reductio ad absurdum*. But Cyrano does not need that argument since he rejects any boundary beyond the last planet of our system.

The trust in experimentation rather than in logic and metaphysics, which is the backbone of the "new philosophy", can also be found in his rapid review of all the arguments in favour of Copernicanism: why rely on a metaphysical hypothesis which is untenable if the heavens are not spherical, which will never be known experimentally, when it is certain that the earth has this necessary shape? One may also detect here, although it was by no means widespread among Copernicians, a positivistic tendency to be content with the mere likelihood of the facts: thus the governor, after having been lectured by Cyrano, finds Ptolemy's system "peu probable", and therefore, it is implied, not true³.

1) See also Fontenelle, Entretiens..., ed. cit., p. 68

2) op. cit., chapter I2

3) p. I3; Cyrano himself says that the rotation of the sun round the earth is not "vraisemblable" (p. I4) and that his reasons force him to assume the earth's movement.

Finally, the increasingly mechanistic outlook which tended to make the universe appear like a self-sufficient machine and God a mere **Primary Mover** results in Cyrano's endeavour to locate in the earth the cause of its movements (and therefore, one may infer, so much can be said about all the other planets); "Je dis donc que les rayons du Soleil, avec ses influences, venant à frapper dessus par leur circulation, la font tourner comme nous faisons tourner un globe en le frappant de la main, ou que les fumées qui s'évaporent continuellement de son sein du costé que le Soleil la regarde, répercutées par le froid de la moyenne région, rejaillissent dessus, et, de nécessité, ne la pouvant frapper que de biais, la font ainsy piroüetter."¹ Although in these explanations the sun is needed in combination with the earth and they cannot therefore be as self-sufficient as our author had announced, their purport is clear: to remove from astronomy and physics the medieval "virtues" to the benefit of mechanism (significantly, these explanations are in terms of collision, like those of Democritus). Such was eventually the success of that outlook that Newton later was accused by some of bringing back the "virtues" when he spoke of attraction. Cyrano rejected the explanation by the Intelligences, still accepted by Cardano and Bruno, in spite of his animistic and allegorical tendencies.

1)p. 13

The former of these "explanations" of the earth's rotation seems to be of Cyrano's own invention but may have been suggested to him by Kepler's idea of an "anima motrix" located in the sun which carried the planets round by exerting on them a push or "vis a tergo" sent from it like the spokes of a wheel¹. As for the second, it seems to indicate that Cyrano made the common mistake in dynamics which consists in thinking that an object thrown in the air from a moving place - for instance a fast-moving ship - will fall back behind that place. Galileo had denied this common objection to the movement of the earth² and Peiresc had the experiment successfully carried out at Marseilles. But it is the only interpretation possible for Cyrano's contention that the exhalations must needs hit the earth slantwise. In fact, the story of his trip to Canada show that such was his belief since he touches the earth well away from the point where he had left it; and the same mistake occurs again in his awkward copy of an idea of Campanella. In the City of the Sun, there are chariots with sails; in the moon, according to Cyrano, the houses also have sails, but the wind is now produced by bellows inside the houses themselves. The inventor of such an ingenious convenience evidently did not trouble to put it to the test and possibly kept illusions as to its

1) See Wolf, op. cit. p. 142. This hypothesis was used by Kepler and Galileo to counter the objection that Joshua's miracle disproved Copernicanism.

2) See Busson, La Pensée Religieuse... p. 290

soundness.

The very modern flavour of Cyrano's arguments for Copernicanism can be better understood by comparing them to those of Borel. Both books appeared in the same year and were written circa 1648, if one must believe Borel who hinted that somebody (probably Wilkins) might have taken most of his ideas in his own work as it circulated among friends¹. Borel's purpose is to prove once and for all the plurality of worlds, whereas Cyrano only takes advantage of a novel to defend a theory in which he believes enthusiastically. But in Borel's book too many means spoil the end, and the disorder of the chapters, the heterogeneous and redundant character of all the numerous reasons he finds to justify his opinion, are far less convincing than Cyrano's brief, clear and imaginative treatment. At bottom, the difference in the books is explained by the difference in the men; for whereas Cyrano is free from any religious scruples, and opposed to Aristotelianism, Borel still clings to cumbrous medieval metaphysics, and although well informed of the recent astronomical discoveries, is very keen to show that nothing contradicts them in the Scriptures. Thus the lack of order among all his arguments is understandable: experimental reasons are for him neither better nor worse

1) op. cit., Dedication to Sir Kenelm Digby.

than reasons drawn from finality, harmony, or the principle of plenitude¹. In this instance can be seen the two distinctive features of Cyrano: he unhesitatingly takes sides, whether in a duel or in the intellectual strife, and he has an aptitude for extracting the gist of every point and for conveying it very effectively and convincingly.

The evolution of thought through which men would more and more show, in their self-evaluation, a humility which they felt more suited to the new position of their planet in the universe, can be read in Cyrano's evocation of the "orgueil insupportable des humains, qui leur persuade que la Nature n'a esté faicte que pour eux." But whereas this is only, in L'Autre Monde, a moral commonplace which serves as an adjunct in the attack on geocentrism, Borel's treatment of the same idea is again religiously tainted: air is a "corps spirituel", purer around some more perfect

1) Two examples will show the confusion in Borel's mind: his twenty-third chapter purports to demonstrate the plurality of worlds "par une raison prise du lieu où s'arrestent les nuées"; they cannot rise higher, otherwise it would mean that they are really going down, that is, towards the centre of another planet, "ce qui seroit contre leur naturel qui est de monter tousjours"! (p. 34). The next chapter is even more curious. The argument this time is the existence of the bird manucodiata, which has strange peculiarities. Borel starts with admitting the reality of this bird, which is just hearsay then pursues: "cest oiseau ne se trouvant jamais sur terre n'est-il pas raisonnable (italics mine) qu'il vienne de quelque astre?or si dans les astres on trouve des oiseaux il faut que le reste des animaux y soient puis que tous ont mesme droit d'y habiter;..." He finally quotes Aldronandus as his authority, after this astonishing hotch-potch of arguments.

celestial bodies, among which the earth is "le plus vil et abject de tous"¹. This was also the medieval opinion, in which the earth occupied properly the bottom of the heavens, the exterior circles being the most perfect, and was redeemed only by the presence of Man, about whose fate Heaven and Hell were at war.

The way in which Cyrano develops this theme is a good example of his originality; for whereas it was sometimes merely included in a rational discussion, and was by Pascal developed with pathos to show man's condition², Cyrano persuades one of its truth by the sheer force of the very concrete examples he gives of it: "Comme s'il estoit vray-semblable, he says, que le Soleil, un grand corps quatre cens trente fois plus vaste que la Terre, n'eût esté allumé que pour meurir ses neffles, et pommer ses choux car comment, en bonne foy, s'imaginer que ces globes si spacieux ne soient que de grandes campagnes désertes, et que le nostre, à cause que nous y campons (or rampons) pour une douzaine de glorieux cocquins, ayst esté basty pour commander à tous? Quoy! parce que le Soleil compasse nos jours, et nos années, est-ce à dire pour cela qu'il n'ayst esté construit qu'afin que nous ne cognions pas de la teste contre les murs?"³

Cyrano's idea of the true relations between the sun,

1) *ibid.* especially chapters 6 and 7

2) *ibid.* p. 12. See also Fontenelle, *Entretiens...* p. 66. Pascal: *op. cit.* Fragment 72. Galileo, *Dialogo dei massimi sistemi* (Opere, T. VIII, p. 84) - 3) p. 14

the earth and the moon is thus sound; we shall see that his idea of the universe is equally sound and has not been substantially modified since. However, the imagination of a number of authors had already been fired by the new astronomy and it has been seen that one of them, Godwin's Man in the Moone, inspired Cyrano; he took from it, in particular, an episode, a kind of experimental proof of Copernicanism, in which the interplanetary traveller sees the receding earth rotate under his eyes, revealing successively all the continents. There is however something startling in Cyrano's description, according to which the earth seems to rotate in the wrong direction: "je voyois, en suite de la France, le pied de la bote d'Italie, puis la mer Méditerranée, puis la Grèce, puis le Bosphore, le Pont-Euxin, la Perse, les Indes, la Chine et enfin le Japon, passer successivement vis à vis du trou de ma loge; et quelques heures après mon élévation, toute la mer du Sud ayant tourné, laissa mettre à sa place le continent de l'Amérique."¹ Fontenelle took the episode in his turn, but in the Entretiens the earth rotates normally again. The mistake comes from the translation of Godwin's book, L'Homme dans la Lune, in which one can read: "...car j'obmets le sentiment de Copernicus qui tient qu'elle (the earth) ne cesse de tourner en rond de l'Est à l'Ouest,

1) p. 12

(laissant aux Planettes ce mouvement que les Astrologues appellent naturel) non pas sur les Poles du monde, mais sur ceux du Zodiaque...."¹ and again : "comme la terre selon son mouvement naturel (que je suis maintenant contraint d'avouer avec Copernicus) tourne en rond sur son pivot de l'Est à l'Ouest (italics in the text) de vingt-quatre en vingt-quatre heures..."² This is a mistake which is difficult to explain, and which Godwin had not made, for he wrote : "the Earth...turneth round upon her owne Axe every 24. howers from the West unto the East ..." (1638 edition) or: "the Earth is carryed about, and turneth round perpetually, from West to the East ..." (1657 edition) .The translator was apparently not perturbed by the following description in Godwin's book, which leaves no doubt as to the movement of the earth such as the author conceived it; nor was Cyrano conscious of the change in the rotation of the earth since his trip to Canada (for he would have otherwise landed in Persia or in India)! There is however a second error involved in such an imaginary suspension, even in Fontenelle's more correct version; for the earth would not only rotate but would also move away from the traveller, in its revolution round the sun.

1) L'Homme dans la Lune, ed. cit. p. 79

2) ibid. p. 83 - Edgar Poe after his tale "The Unparalleled Adventure of one Hans Pfaal" (op. cit. pp. 40-41) cites those passages as examples of "blunders", but this shows that he knew Godwin's book only in the French translation, to which he in fact refers.

Fontenelle replied to this criticism¹, implying that it was merely a device to make his point more cogent; he had nevertheless said to the Marquise that "Copernic....ne le comprendrait pas mieux."² It is very likely that he took the idea from Cyrano, merely correcting the direction of rotation, or even possibly from L'Homme dans la Lune, not noticing any more than Cyrano the different conditions. For the effect of the suspension was right in Godwin's novel, where the traveller is held in the "sphere of activity" of the moon, and therefore carried with it round the earth, instead of being, as in L'Autre Monde and the Entretiens, within the "sphere of activity" of the sun, and therefore totally detached from the earth's attraction. It is an adventure similar to that of Gonsales which the governor suspects at first, thinking that the sun has carried Cyrano along in its revolution round the earth, according to the Ptolemaic theory.

An important and significant aspect in the replacement of the old cosmology by the new, was that of the distances. During the Middle Ages, there had been no precise means of measuring them, and their critical evaluation was made impossible by the homocentric, sentimental and religious way of considering the universe. On the one hand, astronomical

1) criticism in a letter to the Nouvelles de la République des Lettres of 1699 (Oeuvres, IX, pp. 84-94); Fontenelle's reply in Histoire des Ouvrages des Savants, 1699 (ibid. pp. 415-418) - 2) Entretiens, p. 75

distances were thought to be big, but by no means as vast as the new astronomy showed them to be; and above all, the feeling of being at the centre of a well-delineated universe tempered the effect that such an immensity would have on a human soul. On the other hand, the idea of these distances was subjected to the exigencies of theology and sometimes fantastically increased to give man a suitably impressive idea of the heavens. Cyrano is as ironical as one would expect about the latter attitude, remarking that his Daemon made him travel "tout ce grand espace que nos astronomes mettent entre nous et la Lune " in one and a half days only, adding: "ce qui me fit connoistre le mensonge de ceux qui disent qu'une meule de moulin seroit trois cens soixante et tant d'années à tomber du Ciel, puis que je fus si peu de temps à tomber du globe de la Lune en celuy-cy."¹

The figures Cyrano quotes are not always very accurate: the sun is said to be four hundred and thirty-four times bigger than the earth, for instance; the size of the moon, however, is given almost correctly: forty-nine times smaller than the earth. An idea of the astronomical distances such as they are conceived by Cyrano can besides be inferred from various episodes of the novel, such as the time taken for travelling to the moon and the sun as well as on their surface, or the

1)p. 98, footnote (i.e. 1657 edition)

relative magnitude of the spheres of attraction. Godwin had already shown the way, attributing to the moon such a reduced sphere of attraction that its inhabitants could escape it by jumping high, and then fly about as they wished. There is no such effort towards realism in L'Autre Monde, although Cyrano does mention the difference in the spheres of attraction of the moon and of the earth: "Quand j'eus percé, selon le calcul que j'ay faict depuis, beaucoup plus des trois quarts du chemin qui sépare la Terre d'avec la Lune, je me vis tout à coup cheoir les pieds en hault sans avoir culbuté en aucune façon (...) Cela me fit imaginer que j'abaissois vers la Lune et je me confirmé dans cette opinion, quand je vins à me souvenir que je n'avois commencé de cheoir qu'après les trois quarts du chemin. Car, disois-je en moy-mesme, cette masse estant moindre que la nostre, il fault que la sphère de son activité soit aussy moins estendue et que par conséquent, j'aye senty plus tard la force de son centre."¹ Enoch and Elijah, in whose story, however, one does not hope to find scientific data, begin to counteract the moon's attraction respectively at four, and twenty "fathom" from the moon.

During Cyrano's ascent to the sun, he finds himself "au-dessus de la moyenne région", or "région des météores", in less than

1) p. 20

one hour (but does not mention any figures about the atmosphere), but it takes twenty-two months to go to the sun, which is a significant difference. On this star, the distances are suitably vast: Campanella who has lived there for some time knows it but imperfectly still, and our hero walks for a fortnight on its surface. True, Cyrano had previously claimed that there was no gravity in the sun, and this explains how he can walk fifty leagues in an afternoon stroll¹.

The theory of the plurality of worlds purported to establish that among the celestial bodies the planets were essentially distinct from the stars, that they were opaque and deriving their light only from the sun, that their substance and geography were comparable to those of the earth, and possibly that they had a similar origin. There were some who went even further and declared that all the visible stars were suns, doubtless surrounded by planets equivalent to those of our solar system. Cyrano, as might have been expected, accepted these two points fully. Borel, in the dedication and the first chapter of his book, evoked the ridicule to which one exposed oneself by professing such opinions; Cyrano opens his Voyage to the Moon by the mockeries of his friends when he declares that the moon is a world like ours. He afterwards broods on this thought "dont la

^{on}
1) See/p. 149 also : Cyrano is carried a thousand leagues away by the birds.

hardiesse plaisait à (son) humeur"¹, and, no doubt like many good minds of the time, bolsters "cette créance burlesque par des raisonnemens sérieux", being finally theoretically convinced (the practical demonstration is his travel there). For those who professed the doctrine of the plurality of worlds, Galileo Nuncius Sidereus, published in 1610², was very important, for it brought the beginning of an experimental proof to their belief; Galileo's discoveries are used by Borel and appear also in L'Autre Monde. Venus' phases had been seen by the Italian scientist; Cyrano describes them as observed by him during his ascension to the sun(3). In one of the sun-spots which, as has been already mentioned, were in Cyrano's time believed to be little planets similar to those Galileo had just discovered round Jupiter (these planets had even been called sidera Borbonia in honour of Louis XIII, imitating Jupiter's sidera Medicea⁴) our hero sees "des crevasses que des ruines d'eau tesmoignoient avoir creusées (...), du limon dont la terre estoit grasse", and finally "un petit homme tout nu"⁵: proof that he admitted the similarity between the earth and the opaque bodies, and the presence of inhabitants on them. The question of the inhabitants of these

1) p. 6

2) Translation: The Sidereal Messenger of Galileo Galilei, And a part of the Preface to Kepler's Dioptrics, containing the original account of Galileo's astronomical discoveries. A translation with introduction and notes by Edward Stafford Carlos. Rivington's, Oxford and Cambridge, 1880.

3) Also mentioned by Wilkins, Borel, Fontenelle, almost in the same terms. 4) Mentioned by Borel (chap. 40) & Fontenelle (p. II5)

5) p. 129

hypothetical worlds was raging before and after Cyrano. As far as the moon was concerned, the moot point was whether water, and consequently life, could be found there. Galileo, in his Nuncius Sidereus, had been ambiguous enough to let people believe (in spite of his later denial) that the dark spots on the moon were oceans. Before him, Cusanus, Bruno, Tycho Brahe (according to Kepler), Thomas Digges and Wilkins had believed in the presence of inhabitants in the moon. Campanella in his Apologia pro Galileo (1622), and later Borel, had founded their belief on the mention found in the Genesis of the separation by God of the "waters from above" and the "waters from under": there are then, they argued, "waters" above the earth. As late as 1647, Johann Hevelius in his Selenographia: sive Lunae Descriptio inclined to believe in the existence of water on the moon, whereas Giovanni Batista Riccioli, in his Almagestum Novum (1651)¹, represented the more general feeling that there was none. The similarity of moon and earth is the subject of Cyrano's Moon; let it not be believed, however, that he intended his description to be realistic. The description of the sun-spot is, from this point of view, more significant of Cyrano's conception of the plurality of worlds than that of the moon itself, which is as allegorical as that of the sun. At a given point on the

1) Almagestum Novum Astronomiam Veterem Novamque Complectens Observationibus Aliorum, etc. Bononiae, 1651.

moon, day succeeds night, which is a mistake; but once there, Cyrano does not trouble much with cosmological likelihood. It is difficult to say whether he actually believed in the presence of water and inhabitants on the moon itself; but it seems certain that this was his conception of the other worlds, at any rate. The sun will also be seen to be inhabited, by creatures proportioned to their abode, of which they are, as it were, a part, in the same way as men are part of the earth's substance.

The planets being shown to be like the earth, the earth is shown to be like the planets: as Cyrano moves farther and farther away from it, it first assumes the shiny appearance of the moon, then "encore il s'étressissoit, à mesure que je montois, jusqu'à devenir une estoille, puis une bluette, et puis rien; d'autant que ce point lumineux s'éguisa si fort pour s'égalier à celui qui termine le dernier rayon de ma veüe, qu'enfin elle le laissa s'unir à la couleur des Cieux."¹

Cyrano's remarkable aptitude at imagining three-dimensional space and the varying aspects of objects according to distance and movements can be seen in his ascent to the sun when he leaves on his right and his left the various planets of the solar system, and feels the pull of their sphere of activity.

There is an anomaly about the sun: Cyrano imagines that

1) p. 133; see also Godwin, L'Homme dans la Lune, p. 88, and Borel chap. 27: "Comment verrions-nous la terre si nous estions esloignez d'elle." and Busson, La Pensée Religieuse, p. 295.

there is no gravity on its surface, because the sun has no centre¹. This notion is an example of the difficulties which arise in Cyrano's ideas because of the double character, physical and metaphysical, of the sun. It probably comes from Cusanus' idea of God (of whom the sun is an equivalent in many respects in Cyrano's system), a sphere whose surface is nowhere and whose centre everywhere. This curious property (which, as Juppont pointed out, is that of the nebulous state, but this is a mere coincidence) is probably extended by Cyrano to all the stars. For the celestial bodies are divided by him in two very different kinds: the stars and the planets. This is more than Borel did, for he constantly confuses both terms - or rather both notions - as appears in the title of his book and numerous occasions². The difference between both, some giving light, the others receiving it, constitutes also an important part of our author's metaphysics, as has already been seen. As for the force which keeps the planets in their orbits (and the satellites in the planets' orbits), it is intimately linked in his mind with his semi-mystical idea of fire (and not of mass, since the planets alone are weighty and the sun is made of pure flame). Thus are explained the spherical shape of the stars and planets and their movements

1) p. 137

2) Discours nouveau prouvant.....que.....la terre (est) une Estoile... See also chap. 5, for instance.

- which he calls "pirouëtter" and "rouler" respectively - by the nature of the fire atoms, which implies constant movement. The specific way in which he imagines the origin and mechanism of the planetary order is obviously Cartesian, though the vortices are not mentioned in that connection; the whole system is however evidently immersed in ether¹. Since this ether is capable of replacing air as a source of power in Cyrano's machine after he has left the "moyenne région" behind, one must assume that it has the fairly dense quality which Descartes attributed to it, and which was necessary for his theory of the vortices, and was later attacked by Newton. Unlike Godwin, he does not trouble to explain how he can breathe during his travels, and never specifically mentions an atmosphere, although he feels the rarefaction of the ether near the sun².

The facts that the planets have satellites in spite of their coldness (and anticipating and outdoing Swift and Voltaire he imagines that all of them have some), Cyrano explains by supposing that they all have been suns once. This has appeared like a foretaste of Laplace's theory; the likeness consists mainly in the idea of a gradual cooling of the planets (occurring, according to the Cartesian hypothesis about the sun-spots, through the growing on the surface of the star

1) This, added to Cyrano's conception of the spheres of activity as extending until they are repelled by the neighbouring ones (which is also Borel's and Descartes' idea of the vortices) seems to indicate that he accepts the assumption of a plenum.
2) p. 135.

of a crust, which eventually obturates all the light), but in this case nothing tells where the suns came from. There is however another theory in L'Autre Monde, according to which the planets are "l'escume des soleils qui se purgent"¹, and it is that one which has the most links with the others of Cyrano's ideas; it implies that there has never been anything in common between stars and planets. The latter, after the completion of the generalised metempsychosis which has been already alluded to above, will eventually disappear and the fire, unattached, will seek more matter in another system, to distil it² anew. Wisely, Cyrano does not include the earth in such pagan cosmogonies: "Que si vous me demandés de quelle façon ces mondes ont esté faicts veu que la Sainte-Escriture parle seulement d'un que Dieu créa, je respons qu'elle ne parle que du nostre à cause qu'il est le seul que Dieu ayst voulu prendre la peine de faire de sa propre main..."³. This however did not appear safe enough, for another purely fideistic passage replaced it. Borel, with probably more sincerity than Cyrano, had used another dodge and invoked "la privation de la science des hommes après le péché d'Adam", which lowered so much the level of their understanding that

1) p. 15; Cyrano even believed that continents like America had the same origin (see same page and the Lettre against Montfleury).

2) Cyrano seems to be the only one in thinking that the decay of the solar system will start by the planets; all the others are concerned by the fate of the sun. Swift's Laputans, for instance, consider three possibilities: the earth falling into the sun, the sun becoming encrusted or spending its rays. - 3) p. 15

the Holy Scripture had to adapt its teaching and mention only one world instead of the full scale of God's creation.¹

This theory implies that Cyrano believes there exist an infinity of worlds, arranged in systems like ours, and it is in fact stated plainly in his conversation with M. de Montmagnie. Copernicanism was accepted by many people who nevertheless did not feel compelled to accept also the idea of infinite space beyond the visible stars (whether these were scattered in or fixed on the eighth sphere), still less that of an infinity of stellar systems. Whether Copernicus himself believed in fixed stars has been debated and, it seems, disproved²; but Kepler certainly did for most of his life, and Giordano Bruno is believed by many to be the first exponent of the doctrine of infinite systems in an unbounded universe. He is probably on this point, whether directly or indirectly, the direct source of Cyrano's belief³; the enthusiasm,

1) op. cit. chap. 9; this is also invoked by D'Alibray (See Beverly S. Ridgely, loc. cit. pp. 15-16) and Gassendi in his Institutio Astronomica.

2) See Grant McColley: "The Seventeenth Century Doctrine of a Plurality of Worlds", Annals of Science, I, 1936, and "The Eighth Sphere of De Revolutionibus", note in ibid., II, 3, 1937.

3) This is, together with other indices, what makes one suppose that Cyrano knew Bruno's works. Le Pédant Joué resembles Bruno's Candelaio; the development on the "petites parties" can also be found in the Enchiridion Physicae Restitutae; Bruno is probably the mysterious author of the book "le Grand Oeuvre des Philosophes", "un des plus forts esprits du Soleil", according to the Daemon, in which is proved the union of the contraries (p. 83). Bruno or Vanini are never mentioned by Cyrano, who certainly knew both. D'Alibray had studied him (see A. Adam, Histoire de la Littérature..., II, p. 272). On Bruno and Cyrano, see Christian Bartholmèss: Jordano Bruno, Paris 1846, I, (p. 261), II, (pp. 67, 218, 233) and D. Berti: Giordano Bruno da Nola 1889, pp. 155-56.

although less loquacious in the Frenchman than in the Italian, is certainly equal in both. Cusanus and Campanella are among other possible sources for Cyrano's conviction. Descartes himself, in spite of his usually prudent behaviour, confessed in his Principia his belief in an indefinite universe¹, the word infinite being applicable only to God. Even if he does not use the same terms, Cyrano describes an indefinite universe rather than a truly infinite one, thereby rendering it proper to be conceived by a human understanding: "Ma foy!, the governor exclaims, vous avés beau dire, je ne sçaurois du tout comprendre cet infiny. - Hé, dites-moy, luy dis-je, comprenés-vous mieux le rien qui est au-delà? Point du tout (...) mais l'infiny, si vous ne le comprenés en général, vous le concevés au moins par parties, car il n'est pas difficile de se figurer de la terre, du feu, de l'eau, de l'air, des astres, des cieux. Or l'infiny n'est rien qu'une tissure sans bornes de tout cela."² Cyrano seems to assimilate God to extension: "Et puis, Dieu seroit finy luy-mesme, supposé que le Monde ne fut pas infiny, puisqu'il ne pourroit pas estre où il n'y auroit rien, et qu'il ne pourroit accroistre la grandeur du monde qu'il n'adjoutast quelque chose à sa propre étenduë, commençant d'estre où il n'estoit pas auparavant."³

1) Principes de la Philosophie, Part. I, § 27 .Pascal, on the contrary, in the argument of the bet, carefully preserves the notion of infinity as a proof that inconceivable things can nevertheless exist (Pensées, Fragment 233)

2) p.15

- 3) p. 14; see also Borel, op.cit. p. 7

With the infinity of space, Cyrano had mentioned the eternity of the universe, deducing both from God's infinite power. The eternity of the universe, especially by continual appearance and disappearance of stars and systems, was heretical, in spite of the frequent mention of this conception of Democritus. The Selenites believe in it, because they find it "plus raisonnable"¹, but they doubtless mean that their world is everlasting. This is not the only case in which the Daemon is Cyrano's real spokesman, and not the atheistic Selenites, and what Cyrano probably believes is the everlasting transformation of fire and matter, throughout time as well as throughout space.

3° - The means of flight in L'Autre Monde

The misunderstanding, signalled at the beginning of this chapter, about Cyrano's value as a scientist, is almost complete apropos of the means of flight he imagines; however, his intent is sometimes not clear and he may possibly have hoped to benefit from its ambiguity in the eyes of posterity. The various inventions he mentions in his novel are often carefully elaborated and show a distinctly mechanistic trend²; this has attracted the attention of reviewers who

1)p. 58

2) See for instance how he transforms Sorel's idea of a sponge which, squeezed, restitutes sounds, into something looking like our gramophone (p. 84)

have credited him with the invention of the parachute and of the fire-balloon¹. It is therefore interesting to examine more closely Cyrano's descriptions of his imaginary flying attempts, putting the emphasis on a faithful wording, for they offer many opportunities to understand his outlook.

There is in fact in L'Autre Monde an abundance of means for interplanetary travel, and it is revealing to see that often commentators, in their analysis of the novel, have spoken only of the would-be scientific ones. This choice rests on the assumption that Cyrano in some cases was not serious and in others put forth well thought-out theories. To see whether this is justified, all the means indicated must be listed.

For the first ascension, Cyrano uses phials filled with dew(1). This fails only because of the impossibility to steer in the right direction. He lands in Canada, as has been seen. From there, he attempts again to go to the moon, this time with a "machine"(2) about which we know little apart from the fact that it has a "ressort", presumably moving wings, since Cyrano speaks of a "dragon de feu", and that its inventor thinks it will get him as high as he wishes. This, however, fails completely, and Cyrano attributes the failure to faulty calculation. The next ascension, this time successful, is the

1)Gautier,Lacroix,Brun,Löwenstein,Mansuy,for instance
(See Bibliography)

result of the combined consequences of the preceding failure: on the one hand, several rows of fireworks (3) launch the machine in the air (whereas they were placed there just for entertainment); this is purely a force acting against the attraction of the earth, as becomes evident as soon as the fireworks are exhausted: the machine falls back towards the earth. Another force then pulls up Cyrano alone, and is identified as the attraction by the moon of the beef-marrow with which Cyrano had anointed his bruises (4). It cannot be the moon's attraction in the Newtonian sense since it does not act on the machine. The travels of several characters of the Bible are then recounted by Elijah; they all have found different means. Adam actually made the trip in the opposite direction, going from the earthly Paradise in the moon to the earth. This he did thanks to the fire of his imagination (5) which lightened his mass and enabled him to ascend in ecstasy. Sympathy (6) attracted Eve behind him. The corruption of mankind soon made Enoch regret the moon, however, and he went there by tying two vases full of the smoke of his sacrifices to God under his armpits and being dragged by them toward Him (7). Deciding to stop at the moon (on the way from the earth to the Emyrean), he discards his "fins" but needs to use his robe as a parachute in order not to be hurt by his fall on this satellite. The "fire of

charity" is mentioned irreverently as having the same effect, and one must suppose its kinship with that of the imagination! Achab lands on the moon thanks to the high level of the Flood,⁽⁸⁾ a means comparable to the use of Jacob's ladder, probably a common jest among libertines. At last, Elijah recounts his own trip; he placed himself on an iron tray which followed a magnetic ball he threw in the air (9). There again, the moon's attraction had to be offset, this time by opposite movements of the ball. Cyrano's return to the earth is not so well explained. We just know that the Daemon transports him (10) in the same way as sorcerers command meteorological phenomena on the earth. It takes, however, a measurable time, as has been seen. Cyrano's trip to the sun and the machine used for that purpose have impressed commentators by the ingenuity and the care the author lavishes upon details. That episode looks more realistic than the others, although it seems to have put them too much in the shade: "Ce fut une grande boiste fort légère, et qui fermoit fort juste. Elle estoit haute de six pieds ou environ, et large de trois en quarré. Cette boiste estoit trouëe par en bas; et par-dessus la voûte qui l'estoit aussi, je posay un vaisseau de crystal trouë de mesme, fait en globe, mais fort ample, dont le goulot aboutissoit justement, et s'enchassoit

dans le pertuis que j'avois pratiqué au chapiteau.

Le vase estoit construit exprès à plusieurs angles, et en forme d'icosaëdre afin que chaque facète estant convexe et concave, ma boule produisit l'effet d'un miroir ardent. (...)

...j'avois bien préveu que le vuide qui surviendrait dans l' icosaëdre à cause des rayons unis du Soleil par les verres concaves, attireroit, pour le remplir, une furieuse abondance d'air dont ma boiste seroit enlevée; et à mesure que je monteroie, l'horrible vent qui s'engouffreroit par le trou ne pouroit s'élever jusqu'à la voûte qu'en pénétrant cette machine avec furie, il ne la poussât en haut." (11)

This attempt would have failed also, although being "digéré avec beaucoup de précaution", because of the rarefaction of the ether which eventually brings the machine to a standstill, had not Cyrano been able, by the fire of his imagination, to continue the trip by himself, first pushing the box up with his head, then discarding it altogether (this is again means N° 5).

How have critics of Cyrano reacted to his exuberant inventiveness? They mostly have taken the whole very seriously, Mansuy² for instance, who divides the different means into lighter and heavier than air. This seems at first reasonable, but is

1) pp. 122-124

2) "L'aviation à Varsovie et à Reims au XVII^e siècle et Cyrano de Bergerac" in Le monde slave et les classiques français aux XVI-XVII^e siècles, Paris, 1912.

Cyrano's own allusion to Poland as the place where his apparatus can still be seen confirms Mansuy's suppositions.

it really to the point? Let us notice the only means he thinks worthy of being related: the dew phials, the globes full of smoke, the machine with fireworks and springs, the planets' and the sun's attraction, the machine topped by an icosahedron. Brun lists different ones: the phials, the fireworks, the magnetic tray, the wooden bird (that is to say the same machine with fireworks again), the globes full of smoke.¹ The choice made by commentators is therefore often entirely arbitrary, for one could argue that Cyrano attributed the extravagant inventions to his Biblical characters and kept the more serious ones for himself; but the globes full of smoke, for instance, bear such an uncanny resemblance to the fire-balloon that, although used by Enoch, it is commonly treated as if Cyrano had used it himself. On the other hand, the beef-marrow sounds less scientific, and is accordingly just ignored, although the cause of the first successful trip. Is it dilatation, however, which causes the ascension by the dew-phials and the globes of smoke? It is never mentioned by Cyrano in this connection. Even if he had meant to use it, he did not grasp its mechanics properly², since his phials and globes, although "very thin", are rigid, and cannot expand and cause a diminution of density. Readers

1) op. cit. , p. 293

2) any more than anybody in his time, otherwise the fire-balloon would have been invented a hundred and fifty years earlier. Toldo (op. cit.) is therefore twice mistaken in writing: "Mais quelle application bizarre d'une science mal comprise!".

have probably been misled by the fact that Cyrano, to go down, breaks some of the phials, a process equivalent to the admission of cold air in a balloon. But if one reads carefully the relevant passages, especially the printed version, more explicit than the manuscript, one sees that it is not necessary to resort to the notion of density, even if it is what Cyrano meant by "weight": "Je m'estois attaché tout autour de moy quantité de fioles pleines de rosée, et la chaleur du Soleil qui les attiroit comme elle fait les plus grosses nuées m'esleva si hault qu'à la fin je me trouvay au-dessus de la moyenne région. Mais comme cette attraction me faisoit monter avec trop de rapidité..... je cassé plusieurs de mes fioles jusques à ce que je sentis que ma pesanteur surmontoit l'attraction et que je descendois vers la terre."¹ The word "attraction" is here definitely qualitative; Cyrano refers to the property of dew, mist, and "the bigger clouds" to go up. As we have already noticed, this notion of qualities was perfectly compatible with a quantitative aspect²; thus, when this attractive quality is too great for his purpose, Cyrano suppresses some of it by getting rid of some of the phials. His weight is here used

1) p. 9

2) Noël Pluche, rejecting Newton's discoveries, wrote: "Il est vrai qu'on calcule et qu'on algébrise les attractions. Mais qui empêchoit jadis de calculer et d'algébriser la sphère d'activité des qualités occultes?" (op. cit. p. 302), which probably also applies here. Cyrano speaks quite correctly of the dilatation of mist (p. 37) but nothing tells whether he made the connection with his "invention". However, see Appendix I on this.

purely as an opposite force without any idea of precise experimental measurements of both. The community of nature between the two forces (both being nothing else but an effect of gravity) is, it seems, not even suspected here, whereas it is correctly mentioned in a serious discussion on physics, as has been seen. This qualitative outlook is evident in the case of Enoch's globes, for not only is smoke treated like an element, but it is a specific tendency of that particular kind of smoke (of sacrifices) to go up, or rather, towards God. This is of the same scientific quality as the use of the fire of charity for parachute! One therefore understands why it is a mistake to exclude such driving forces as the "liking" of beef-marrow by the moon: not only the phials and the globes are no more scientific, but the nature of the force is identical in all three: movements explained by inherent qualities. This is equally the principle underlying Elijah's invention of a metallic tray attracted by a magnetic ball; that passage is really startling in showing how much Cyrano's thought, when he invents and does not merely repeat other people's theories, is still a prisoner of the ancient view of matter: "...je pris de l'aiman, environ deux piedz en carré, je le mis au fourneau; puis lors qu'il fut bien purgé, précipité et dissous, j'en tiré l'attractif, calciné tout cet élixir, et le réduisis en un

experiments on ballistics and from contemporary studies on the explosive power of gases in gunpowder, but it attracts little attention from Cyrano, whereas the beef-marrow idea is really his. This is important, for his descriptions of machines superficially resemble some of the various contrivances imagined to overcome gravity, some of which (such as that invented by Buratini in Poland and which Mansuy describes) were surprisingly naïve. Compared to them, Cyrano's inventions have a realistic look due to the simplicity of their principles, but they were never meant to be practicable, and are therefore free from the severely mechanistic rules to which contemporary inventors were reduced. Indeed, inventors of flying machines, whether in jest or in earnest, always had eventually to resort to "either vague principles or powerful springs"!¹

The same can be said about the machine with the icosahedron, (evidently faulty since the draught of air prevents the desired vacuum from occurring but perhaps inspired by Torricelli's research on winds and currents of air, which Cyrano might have heard mentioned), where there is no talk of gravity, but instead of nature's abhorrence of a vacuum. It is piquant to compare on this point Rostand's play to

1) in J.O. Bailey, Pilgrims through Space and Time, New York, 1947, p. 263.

more serious commentaries. The dramatist has listed seven means of going to the moon: the crystal phials, the icosahedron machine, the dragon-like machine, the globes of smoke, the beef-marrow, the magnetic ball, the tide (a result of the attraction of the sea by the moon, known to Cyrano but not used as a means of flight in his novel). Although Rostand also attributes to Cyrano two means used respectively by Enoch and Elijah, he rightly distinguishes two causes within one machine: the fireworks-chariot and the marrow, the true cause of the success. His rendering also is correct:

"Puisque la fumée a tendance à monter....

"Puisque Phoebé, quand son arc est le moindre,
Aime sucer, ô boeufs, votre moëlle...m'en oindre!"¹

and the moon is aptly personified: "L'astre l'aurait humée en humant la rosée....Phoebé aime sucer...." On this point, Rostand's opinion of Cyrano is then more exact and balanced than that of many other commentators, and Cyrano's importance is not attributed to his scientific achievements, though it is not where Rostand saw it either.

Cyrano, then, has no claim to be a pioneer of science. Why, aware as he obviously was of its recent developments, well-acquainted with the teaching of Gassendi, with its emphasis on experiment against theoretical considerations,

1) Cyrano de Bergerac, 1897, Act III.

did he still hold ideas which remind one more of the Renaissance and the Middle Ages than of his century? But also, why do his various "inventions" show a mechanistic trend which is quite new in that type of novel?¹ Both questions are answered by a consideration of the moment of the history of ideas in which Cyrano lived. He yearned to explain the whole universe (not only to describe it), and preferably by a simple, universal principle; but on the other hand, the emergence of the "new philosophy" had raised new hopes, which Cyrano certainly felt, and which a still imperfect knowledge could not possibly fulfil. Hence the resort to metaphysics or even occultism in many cases, even among the most famous scientists such as Descartes and Kepler. Newton wrote at the end of his Principia: "Whatever is not deduced from the phenomena is to be called an hypothesis, and hypotheses, whether metaphysical or physical, whether of occult qualities or mechanical, have no place in experimental philosophy." He ventured, however, to speculate on the nature of attraction, which he imagined to be an all-pervading medium. Cyrano does not mean to be deliberately irrational; but his belief in a kind of super-reason, essentially similar in nature and laws to ours which it prolongs, and to which the world is intelligible, allows him

1) It is a very modern trend, for techniques and machines had had a great importance since the Renaissance. See their place in Nova Atlantis and the other works of Bacon, in De Subtilitate, in the thinking of Vinci, Galileo, Rohault etc..

to accept theories such as panpsychism and universal sympathy which would have no place nowadays in a scientific system. Like his master Gassendi, he was not enough of a mathematician to take an active part in the birth of modern science; but whereas Gassendi extolled the virtues of experimentation, Cyrano's impatience to know immediately the meaning of the universe deterred him from choosing this lengthy and frustrating way.

So much unrestrained metaphysical speculation has had the most unfortunate effects on Cyrano's reputation as a thinker because of a partial assessment of the scientific and intellectual conditions of his epoch and, in the case of the means of flight, of a failure to detect the author's manifest irony and fantasy. However, since the revival of his fame, he has been rightly reckoned as one of the ancestors of modern thought. Cyrano was a man who felt deeply that a new era was beginning; like Borel (who experienced the same enthusiasm and also failed to adapt his mental picture to the new outlook) he could have written: "Tendons doncques les yeux vers les cieux, et comme de nouveaux Gymnosophistes qui regardoient perpétuellement le Soleil, remarquons y de nouveaux mondes dont il est merueilleusement enrichy, qui sont divers en grandeur, lumiere et autres qualitez (....); eslevons nous

jusques aux choses les plus esloignées, par la noblesse de notre esprit, quoy que ce soit une très-haulte entreprise..."¹

Borel also brooded upon means of flight, and promised a Magie Naturelle and a treatise De Arte Volandi. M. Georges Mounin in his article² opposes this attitude to that of Pascal: "Du temps même de Pascal, un grand nombre d'hommes, échappant à l'emprise de la sensibilité chrétienne, adoptait l'attitude inverse: prendre possession, dans la bonne santé de l'âme, au nom de l'humanité, de ce nouvel univers et de ce silence éternel de l'espace infini qui ne les effrayait pas." Cyrano's lucid understanding of astronomy, and his Lettre Contre les Sorciers which epitomizes his rationalistic faith, certainly justify such a comparison.

1) op. cit., p. 32

2) loc. cit. in Le Préclassicisme français.

5 - Cyrano's religious attitude

In spite of unusually frank statements of religious beliefs, for which Perrens suggests that he may have been appreciated in his century¹, Cyrano's attitude on that matter is neither so clear nor so consistent as one might think. It has been noticed that he seemed in his Lettre Contre un Jésuite assassin et médisant forcefully to state that he was not an atheist: "Père écervelé, me croyez-vous si stupide de me figurer que le Monde soit né comme un champignon², que les Astres aient pris feu et se soient arrangés par hasard, qu'une matière morte, de telle ou telle façon disposée, ait pu faire raisonner un homme, sentir une bête, végéter un arbre..." But, with reason, more importance is attached to L'Autre Monde in which the ideas expounded are quite different; in fact, they are so perfectly opposed that one might almost think that Cyrano enjoyed the luxury of stating his real beliefs under cover of a righteous indignation! The difficulty is the same for all the works of a period when unorthodoxy in religious matters could still entail torture, imprisonment and death, and Cyrano's works show his keen awareness of persecution. It is sometimes taken for granted that he is an atheist, who does not mention

1) op. cit., p. 244

2) This was one of the traditional objections to atheism and materialism; see Dom Juan, III, 1. (Sganarelle).

anything religious unless it is to sneer at it, and totally destitute of any religious feeling. This view does not correspond to reality.

Elijah does call Cyrano an atheist¹, and chases him from Paradise; but the word has its seventeenth-century meaning, very vast, very vague, often, as in the present case, used as an answer to blasphemy, even if the blasphemy consists only in doubting the most extravagant "miracles"². These gibes at religion, saints, Fathers of the Church, are found in abundance in Cyrano's novel: "Ce n'est pas si déraisonnable, que Saint-Augustin n'y eust applaudi si la découverte de ce païs eust esté faicte de son âge, puisque ce grand personnage, dont le génie estoit éclairé su Saint-Esprit, assure que de son temps la Terre estoit platte comme un four, et qu'elle nageoit sur l'eau comme la moitié d'une orange coupée..."³ he says to the governor of Canada after expounding his ideas on the sun-spots and the formation of continents. The first part of the Moon, in the earthly Paradise, is particularly fertile in ironical allusions; the tone is almost Voltairian, with its false ingenuousness and, in the conversation with Elijah, its

1) p. 31;

2) See Perrens, op. cit., pp. 13 ff.; Garasse calls Luther a "perfect atheist"; Dassoucy in his Pensées... dans le Saint-Office de Rome (ed° E. Colombey, Paris, 1858, p. 359) calls Gassendi "Athée parfait et accompli".

3) p. 16 [Cyrano's name appears in Sylvain Maréchal's Dictionnaire des Athées (1805).

false ignorance: "Touttefois, comment y aller?—Enoch asks about the Paradise in the moon - L'Eschelle de Jacob n'estoit pas encore inventée!"¹ The interpretation of the Flood by Cyrano is equally impudent²; as for the "proof" Elijah gives of the truth about Enoch's ascension³, it reminds one of that which an imam gives to Uzbek about impure animals, in the Lettres Persanes.⁴ Such speeches are all the more impious for being attributed to a prophet, let alone other times when Cyrano actually quotes the Lord's words, for instance about the snake and his part in the downfall and salvation of humanity⁵, or when with mock unction he remarks that God "se plaist à se servir de causes secondes"⁶.

It is worth notice that in this as in so many "libertine" works, the Bible, though always derided, is nevertheless a constant background, a sort of fund of particularly piquant jocular references, as popular and universal as the Fable; it was not ignored by its enemies any more than by its followers (and the same could often be said about Aristotelianism). Cyrano knew well the commonplaces of the believers, and equally well those of the "libertine"; this is evident in the ambiguous conversation he has, in his novel, with his host's

1)p. 24

2)p. 25

3)p. 24

5)p. 28

6)p. 29

4) Lettres XVI-XVIII

son who is a flamboyant atheist¹. The arguments Cyrano uses for replying to him seem rather weak, but they are soon bolstered by those of the Daemon, who speaks on that occasion exactly like a Catholic priest, a surprising state of affairs since the Daemon throughout the book is presented as a Mentor. Among the apologetic arguments, it is interesting to notice that of the bet², which appears contemptible to the young Selenite, and is quickly refuted by him.

The name of God, however, is sometimes pronounced with unmistakable seriousness. This is sometimes due to Cyrano's fideistic attitude. When he tries to convince the governor that space is infinite, and so is the number of worlds, he hastens to add: "Que si vous me demandés de quelle façon ces mondes ont esté faicts, veu que la Sainte Escriture parle seulement d'un que Dieu créa, je respons que je ne dispute plus (car c'est)...m'obliger de vous confesser que mon raisonnement le cèdera toujours en ces sortes de choses à la Roy..."³ But in other instances, this respect which accompanies the name of God does not seem perfunctory. But is this the "God of Abraham, of Isaac and of Jacob"? It is all the more doubtful that in the 1657 edition the word "God" is often replaced by the word "Nature". Does Cyrano, then, extend to Nature the powers usually attributed to God? Does

1) pp. 89 ff.

2) pp. 95-96

3) p. 15

he call Nature God and is he a pantheist, or does he think it is an aspect of God, in the manner of Spinoza? Without passions, love or hatred - this is stated without any doubt by Cyrano ¹ - this God is certainly not that of the Christians; is he that of the Quatrains du Déiste? ²

God is called "the Master of Nature"³, which implies in the context that he can modify its appearance and its laws, should he wish to do so. But the interesting point is that it is suggested by the Daemon that, far from doing so, the very religious rules that he imposes on men through the priests are meant to reinforce Nature's own laws⁴. Nature is essentially "provident"⁵, and religion, although in appearance directed against Nature, may have been instituted as an adjunct for Nature's purpose, which is the conservation and reproduction of the species. This is the lesson the Daemon gives in the Moon to the young man who attacks the praise of virginity in the Christian religion, opposing it to the purpose of Nature. The Daemon's wisdom is often, it seems, superior in Cyrano's eyes to the young man's short-sightedness. Needless to say, the young Selenite is right in feeling that the real spirit of religion is the enemy of too great an enjoyment of life on the earth, which would devalue the life promised after death. Thus the enlightened person, like the deist of the

1) p. 68 - 3) p. 66 - 4) *ibid.* - 5) *ibid.*

2) Les Quatrains du Déiste, l'Anti-bigot ou le faux dévotieux were kept and discussed by Mersenne, and published by Lachèvre (Le libertinage au XVII^e siècle, after Voltaire Mourant), 1908) See particularly quatrain 61.

Quatrains, will not heed religious prohibitions and will enjoy the pleasures life affords with an inner feeling of agreement with whoever bestowed them on him. But, and probably it is this point which would be the real blasphemy in the eyes of the religious authorities in Cyrano's day, should religious precepts be observed rigorously, Nature's purpose would be fulfilled just the same. There is then no obstacle to the respect man may feel for a God whose decisions bear the same mark of rationality as his own soul; and in fact there is evidence of such respect, the same as one sees in Rabelais' work, for instance in the religion of the giants. The tone of the Daemon is almost solemn, with his invocations to Cyrano as "mon fils", and he sometimes uses arguments which, as has been said, would not be out of place in the mouth of a theologian, at the end of his answer to the young man, for instance: "Enfin que sçavés-vous s'il ne l'a point voulu faire contre toute apparence de raison afin de récompenser justement ceux qui, contre toute apparence de raison, se seront fiez en sa parole?"¹, and when he objects that possibly God's justice cannot be inferred from human laws: "comme il sçait que ce qui est juste à nous, soit aussy juste à Dieu?"². But the young man is not satisfied, and the Daemon himself uses these arguments only after having

1) p. 67

2) p. 89

mentioned the more rational ones.

One of the main trends in Cyrano's thought is, indeed, a rationalistic approach which tends to substitute a natural, would-be scientific, explanation to the traditional, miraculous one. The interpretations he gives of several ascensions in the Bible are fantastic in intention and in fact, and it is interesting to notice that this effect is obtained through anachronism as it could hardly fail to happen when miracles are questioned and tentatively explained. In this instance one can understand how the burlesque may have helped to spread incredulity by accustoming people to jest about formerly sacred things.

It has been stated that miracles existed only in a small number if at all. The young man, who represents the most extreme philosophical position to be found in L'Autre Monde, insists that there are none: "Mais (s'escriva-t-il avec une cholère passionnée d'amour) ne déférés-vous jamais votre bouche aussy bien que votre raison de ces termes fabuleux de miracles? Sçachés que ces noms-là diffament le nom de Philosophe. Comme le Sage ne veoit rien au Monde qu'il ne conçoive ou qu'il ne juge pouvoir estre conçu, il doibt abominer toutes ces expressions de miracles, de prodiges, d'événements contre Nature qu'ont inventés les stupides pour excuser

les foiblesses de leur entendement."¹ And he explains away the medical miracles by his conception of the imagination². The rationalistic knife intervenes again when Cyrano explains the formation of the species³, and also to cut away the superstitious defiance of physical enjoyment man has acquired through religious prohibitions. Cyrano is there particularly audacious, putting together as arguments for his demonstration a traditionally reprehensible form of pleasure, another which could not even be mentioned until very recent times...and religious contemplation!⁴ All this culminates in the Lettre Contre les Sorciers, truly remarkable by Cyrano's sound and consistent reasoning, his keen respect for the mysteries of nature, man and possibly God, which are offended by the ludicrous lucubrations of the witch-hunters, and a passionate indignation before the senseless cruelty which was then all too frequent, which can be felt in his very lively style. Cyrano rejects here the principle of authority in unequivocal and celebrated lines: "Non je ne crois point de Sorciers, encore que plusieurs grands personnages n'ayent pas esté de

1)p. 91. The phrase "le sommeil n'est que...", "la faim n'est que..." is found very often in L'Autre Monde. "Natural" and supposedly "supernatural" phenomena are tentatively explained on the same lines.

2) See on this Vanini, op. cit., p. 263, and a similar passage in L'Autre Monde, pp. 92-93.

3)p. 76

4)p. 66; see Vanini, op. cit., p. 302, coolly including ecstasy among illnesses such as "la léthargie, la chute d'un lieu élevé, la strangulation, l'apoplexie et l'épilepsie", and justifying it afterwards.

mon advis, et je ne deffère à l'autorité de personne, si elle n'est accompagnée de raison, ou si elle ne vient de Dieu..... Ny le nom d'Aristote plus sçavant que moy, ny celui de Platon, ny celui de Socrate ne me persuadent point, si mon jugement n'est convaincu par raison de ce qu'ils disent. La raison seule est ma reyne, à qui je donne volontairement les mains..."¹

This is enlarged and dramatized in L'Autre Monde, where Cyrano is constantly déniaisé. It has been stated that his hatred for authority came from his quarrels with his father -typically, Lachèvre insists that the cause was Cyrano's desire to inherit quickly². True, Cyrano's refutation of the respect due to old men and fathers is unusually long³, but it seems that on the contrary it is based on a vaster rejection of anything superstitious and irrational. His demonstration, besides, calls to the rescue not only common sense, but his metaphysical conception of the union of souls and bodies⁴, showing that his resentment of authoritarian limitations is not a rootless peculiarity but part and parcel of his opinions. His main target, however, is not the fathers but "the priests". He includes under that name not only men of the Church but Aristotelian philosophers, whom he ridicules by attributing^{to} them absurd actions. For instance, it is decided

1) See Lachèvre, Oeuvres libertines, T II, p. 212. Cyrano's independence could but be encouraged by the reading of Cardano who does not hide his pride when he differs "d'uteurs non petits", chiefly Aristotle.

2) p. 62

3) pp. 61 ff.

4) pp. 64 and 67: there is no right of primogeniture in nature.

eventually ,in the Selenite court,that he is a bird,on futile grounds:"...ils confirmoient les persuadés sur ce que non plus qu'*un* oyseau,je n'avois que deux piedz"¹,or,more precisely,"possible quelque'espèce d'Austruche,veu que je portois comme elles la teste droite...."¹ The scholastic method is repeatedly attacked by the Spaniard:"...je ne suppose point à leur mode de maxime que je ne prouve"²;and when Cyrano, on trial,tries to defend himself in quoting Aristotle, everyone laughs³.No more than those of the earth can the priests in the moon rise to a wider cosmic conception;they believe that their world is the only one for the same superficial reasons as the doctors of the earth do for theirs. No stone where authority could hide is left unturned by Cyrano,and his multifarious criticism is often very entertaining,sometimes brilliant.

So the real religious rule in the Selenite world (except of course for the priests) is the fulfilment of Nature's purposes, accompanied by an enlightened respect for its possible legislator based on a rational understanding between creator and creature.This is the deeper meaning of the Daemon's phrase:"I understand with my senses...".It has been seen that man cannot pretend to such an understanding,and thus,the only

1) pp. 53 and 54.This is of course an ironical reversal of Ovid's famous lines on man.

2) p.50;see also p. 126

3) p. 58

way to real knowledge is revelation. The very strong rationalistic trend which exists in Cyrano, which impelled him to fight so virulently the principle of authority and its practitioners, cannot be sustained by his theory of knowledge. He feels too keenly the imperfection of man to adopt a kind of scientisme, however, and man, in his world, deprived both of revelation and of the powers which would render it useless, is reduced to a theoretical powerlessness. Men believe some things "à cause que nous voyons plus d'apparence qu'il soit ainsi..." and the wise man, when he cannot conceive some fact in Nature, at least understands that it is conceivable¹. Revelation, in L'Autre Monde, is obtained not from God but from characters such as Elijah and the Daemon. Through an inopportune show of libertinage, Cyrano the character gets thrown out of the earthly Paradise where the Tree of Knowledge would have given him total revelation, and saves Cyrano the author an embarrassing difficulty. The sensible teaching of the Selenites is an example of a dignified and satisfying approach to nature and contrasts with the futile and preposterous revelations of Elijah.

It remains to be seen / ^{whether} revelation is not possible after all: as a moral entity, God is not distinct from nature;

1) "le Sage ne voit rien au Monde qu'il ne conçoive ou qu'il ne juge pouveroir estre conceu...." See p. 127 of this study.

but is he distinct from it as a metaphysical entity? Since many people, such as Voltaire, find a God indispensable to explain the origin and the order of the world, it is interesting to see what Cyrano says on this point in his novel. He has a conversation with Selenite philosophers who expound very audacious opinions: "Le premier obstacle qui nous arreste, c'est l'Eternité du Monde; et l'esprit des hommes n'estant pas assez fort pour la concevoir, et ne pouvant non plus s'imaginer que ce grand Univers si beau, si bien réglé, pût s'estre fait de soy-mesme, ilz ont eu recours à la Création; mais, semblable à celui qui s'enfonceroit dans la rivière de peur d'estre moüillé de la pluye, ilz se sauvent des bras d'un nain à la miséricorde d'un géant..."¹, and this giant is God, one of

"Ces Dieux que l'homme a faicts, et qui n'ont point fait l'homme....."²

To explain the variety of the species, a prominent part is given to chance: "Mais, me dirés-vous, comment le hazard peut-il avoir assemblé en un lieu toutes les choses qui estoient nécessaires à produire ce Chesne? Je responds que ce n'est pas merveille que la Matière ainsy disposée n'eust pas formé un Chesne, mais que la merveille eust esté bien grande si la

1) p. 75

2) La Mort d'Agrippine, II, 4.

Matière ainsy disposée, un Chesne n'eust pas esté formé; un peu moins de certaines figures, c'eust esté un Orme, un Peuplier, un Saule.....; un peu plus de certaines/figures, c'eust esté la plante sensitive, une Huistre à l'escaille, un Ver, une Mouche..... un Homme."¹ Jacques Denis² objects that chance alone could not reproduce the same species for ever; but Cyrano never meant to say that. He is explaining the origin of the species, not their reproduction.

Being the result of a gamble, there is no finality to be found in them, least of all an organization entirely directed towards man's enjoyment and edification; this already was the position adopted by our author apropos of the Church's **geocentrism** and anthropocentrism. The various effects of the senses, as has been seen, are nothing but their specific reaction to a common fire; there is no necessity in them and nothing prevents us from imagining other and better senses³. Cyrano, who plays in his novel the part of the orthodox **Christian**, objects to the young man that, were his opinions true, resurrection could not be explained. This of course is not to embarrass his professor of atheism, who replies: "Hé! par vostre foy! s'escria-t-il, qui vous a bercé de ce Peau d'Asne?..... - Ce n'est point, luy respondis-je, un conte faict à plaisir; c'est une vérité indubitable que je vous

1) p. 76

2) loc. cit. , quoted on p. 77, footnote 1

3) Cardano, on the contrary, wrote a chapter "De la necessite et forme de l'Homme" in op. cit., in which he declares that the five senses are sufficient and a sixth inconceivable.

prouveray. - Et moy, dit-il, je vous prouveré le contraire...."¹
 He does so by alluding again to the Epicurean theory of matter. But the Daemon who is, as has been noticed, a more reasonable being, seemed to accept immortality as a matter of course², or at least, some kind of survival. The fate of all creatures after death is explained at length in the Sun, where it becomes evident that in a significant way Cyrano thinks like the Daemon, and not like the young Selenite. Thus, it seems fairly certain that he was not an atheist, inasmuch as the atheist does not acknowledge any directing principle. On the other hand, a sentence like : "Quoy! de tous les biens de l'estre, elle n'a que celui de végéter et nous le lui arrachons?"³ recalls Spinoza by the suggestion of a universal being of which different realities are but modes of existence; and the energy attributed to every atom, which allows a being like the nightingale, in the Sun, to be described as "créateur de soy-mesme"⁴ reminds one of Schopenhauer's remark that "Pantheism is only a polite form of atheism". During his trial, Vanini attempted to demonstrate his orthodoxy by a praise of the intricate mechanisms of vegetable life; but his judges objected that nature was sufficient to do that, and that it was no proof of God's existence. At any rate, there is no

1) p. 94

2) p. 69, for instance.

3) p. 68

4) p. 146

ambiguity when Jesus-Christ is concerned; Cyrano certainly is what Henri Busson calls an achriste¹, and if one considers the Incarnation and the Redemption to be the central tenets of the Christian religion, then Cyrano is definitely not a Christian. One must however remember that the place of rationalism in Christian apology became increasingly important during the seventeenth century, and men like Pascal more and more isolated.

An exposition of Cyrano's conception of a Scale of Being must now be made to show that it filled the place which orthodox religious beliefs had left vacant. Two aspects of Cyrano's attitude which have often been overlooked or misunderstood must however be stated once more: one is that there is in his work an authentic religious feeling. It is directed towards nature instead of God², and akin to that which is so conspicuous in Bruno. Cyrano's style, even if it is less lyrical than the Nolan's, is nevertheless often pervaded with poetry when he celebrates nature's magnificence; Voltaire, who believes in a maker, is less respectful and religious than Cyrano who, for all intents and purposes, does not believe in any. The other is that in spite of Dassoucy³ (and Lachèvre), Cyrano's conviction differs greatly from a boisterous assumed libertinage, which he blames in the young

1) La Pensée Religieuse, p. 91

2) and especially towards the sun; see pp. 137, 139: "glacé de vénération".

3) Pensées... dans le St-Office, quoted on p. XCV.

man, for the very reason which had been invoked by Garasse: "ce seroit un second Socrate s'il pouvoit régler ses lumières....et ne plus affecter le libertinage comme il fait par une chimérique ostentation et une affectation de s'acquérir la réputation d'homme d'esprit."¹ Dassoucy unwillingly clears him in telling how passionately he clung to his beliefs; and in spite of himself, the portrait he draws of Cyrano is easily recognized as that of the man who wrote the Letter against Sorcerers.

1) p. 61 .Racan also said of a famous libertin "qu'il n'a dit tous ces discours extravagants que pour se mettre en crédit parmy une certaine jeunesse vicieuse." (quoted in Busson, La Pensée Religieuse, p. 455)

6 - The Scale of Being in L'Autre Monde

There is, in Cyrano's novel, abundant evidence of his belief in a scale stretching from the lowest kinds of existents to superhuman beings. That he had accepted it from former centuries with all its implications appears clearly in several points of his demonstrations where indeed it proves difficult to reconcile with some other metaphysical tenets which have a different origin.

An example of this belief constitutes a part of our hero's plea to the Birds in the Sun: "comme on tombe - he says - plus facilement qu'on ne monte d'espèce..."¹, thereby assuming both the reality of a hierarchy of species and the possibility of ascending or descending in it. The principle of plenitude which, since Plato, has been a part of the conception of a Chain of Being², is the explanation of another episode of the Sun, where a woman sues her husband for the "double murder" of their youngest child, and explains: "Je vous ay dit que son Père l'a tué deux fois, pource que l'empeschant d'estre, il a fait qu'il n'est point, voilà son premier assassinat; et a fait qu'il n'a point esté, voilà son second: au lieu qu'un meurtrier ordinaire sçait

1) p. 151

2) See A.O. Lovejoy, The Great Chain of Being, Harvard University Press, 1942.

bien que celui qu'il prive du jour n'est plus, mais il ne sauroit faire qu'il n'aist point esté."¹ For every being which can exist must exist, existence being postulated as good and desirable; but the responsibility for carrying this out does not rest, in Cyrano's universe, on nature itself or on its Maker and Director, but on men once they have been enlightened; this being the case in the Sun, the husband is liable to punishment by the State. This implication of the same principle, by which the existence of monsters is justified, for all the possible sorts of imperfections must exist to realise the greatest possible variety, justifies the existence of man in the eyes of his judges the Birds: "...l'Homme enfin que la Nature, pour faire de tout, a créé comme les Monstres..."² Thus Aquinas wrote that although an angel is better than a stone, an angel and a stone are better than two angels³.

As Cyrano constantly alludes to the degree of "perfection" of the different sorts of beings, it is necessary to find his criteria. The three he uses are Aristotle's, though he did introduce a few modifications in the resulting "Chain" to make it more rational and

1) p. 194; see also p. 65, in the discussion about the respect due to fathers: the father is "obligé en conscience d'engendrer son enfant".

2) p. 150

3) quoted in Lovejoy, op. cit., p. 77. On the other hand, the "principle of continuity" plays little part in Cyrano's scale where distinctions are sharp and irreducible. It is rather a "scale" than a "chain"; even the tenet that "all is in all things", sometimes used to bridge the qualitative gaps, is not used for that purpose.

more suited to his own metaphysics.

There is a trace of the ontological scale when the Daemon in the Moon, trying to show to Cyrano the fraternity of all creatures, asks about the cabbage: "N'avés-vous pas esgallement tous deux pour père et mère Dieu et la privation?"¹ Usually Cyrano troubles little to find the final end of ontological inequalities, although if he had been asked to supply a reason for it he would no doubt have resorted, like the Schoolmen, to the principle of plenitude again.

The zoological scale, the criterion of which is the degree of perfection at birth,² is also found in L'Autre Monde; it is one of the revelations offered by the man on the sun-spot, and its justification is as awkward and unscientific as ever: the length of the period of gestation would be a good reason for man's superiority over animals if only that of the horse were not longer still. And Cyrano must resort to the "energy"³

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- 1) p. 67. Campanella, after Telesio, explained all existing beings by a mixture of God and privation. See Hesnault's famous sonnet L'Avorton: "Assemblage confus de l'estre et du néant". Dübi does not seem to have understood Cyrano's meaning (see op. cit. p. 77)
- 2) It is the only one used by Cardano (who also uses that of the "powers of soul" but does not try to connect them with the degree of zoological perfection): see op. cit., chapters 9 and 10 on "perfect" and "imperfect" animals. The number of senses, the nature of the food, the way of being born (whether from nothing, from putrefaction, from some sort of matter, from an egg or from a matrix) are various criteria.
- 3) This reference is explained by the revival of Pythagorean ideas at the end of the XVIth century. Sometimes interpreted geometrically, the theory of numbers also assumed a mystico-transcendental aspect, such as here.

of numbers" to save his demonstration.¹

The third and most important criterion of "perfection" is the psychological one of the "powers of soul": vegetative, sentient, and reasonable (itself a consequence of the ontological dignity of the different beings). This Cyrano, after many others, found the most reliable basis for the conception of a Scale of Being, because of its self-evident character. Although Cyrano, as a well-read would-be "Philosophe", could be supposed to be acquainted with such ideas, the existence and structure of a Scale of Being is the object of a revelation from the Daemon in the Moon: "apprenez qu'il n'a a pas tant de caillous que de terre, ny tant de plantes que de caillous, ny tant d'insectes que de plantes, ny tant d'animaux que d'insectes, ny tant d'hommes que d'animaux;....qu'ainsy il n'y doibt pas avoir tant de démons que d'hommes..."², that is to say, going upwards: the earth, the stones, the plants, the insects, the animals, men, the daemons. Several peculiarities are immediately noticeable.

First of all, these different beings exist in a number inversely proportional to their ontological dignity. This is an important deviation from the more usual conception whereby the number of beings of any sort is "the greatest possible

1) p. 131

2) p. 37

number"; it is caused, as will be seen, by Cyrano's belief in the possibility of an ascent from one degree of being to the next. Another interesting modification is that instead of a whole hierarchy of beings above man, as in the Christian theology, there is now only one sort: the daemons. Whether man can hope to rise to this highest point of the ontological scale remains to be seen; but this new conception is nevertheless more encouraging and optimistic. Furthermore, Cyrano alludes once in L'Autre Monde to the Christian dogma that man is the middle link in the Chain of Being, inasmuch as he partakes both of animal and of "angelic" nature¹. But this is probably a mere commonplace, since the difference between material (therefore mortal) and spiritual (therefore immortal) creatures, which made all the point of the "middle link" idea, disappears in Cyrano's conception in which even the higher creatures or daemons are material, as in fact everything is. The most momentous difference between Cyrano's and the Christian Scale of Being (and even the Platonic one) is that it is, as it were, beheaded. Whereas the former culminated in God, or the Idea of the Good, Cyrano's stops short at the highest sort of "creature" without mentioning any "creator". It exists, however; it is the Sun, "nostre Père

1) p. 90, in the "cabbage episode".

commun", whose attributes are quite suitable to put him at the top of the scale. But Cyrano always shows, in dealing with this particular point, a reticence which may well be due to fear of persecution, but is more likely to be due to its fundamentally vague and unsatisfactory character. This will be examined after discussion of the scale itself and of all the problems raised by every sort of being.

Earth, as has been seen, is the prima materia, the stuff out of which the whole creation is made; it therefore comes rightly at the beginning of the scale. That it was itself a product of the sun has been shown in the review of Cyrano's cosmological ideas, but it has a wider metaphysical significance. This is also why the stones come next: they are concentrates of earth, the first existent distinct from the amorphous primary matter. It has been seen that like all existents they are endowed with some sort of soul, in which "privation" dominates "being"¹. Plants are endowed with a vegetative soul², and animals, which come next, with a sensitive soul. Not that all animals are equal, however: there are different classes of birds, that of the insects being the lowest, for

1) See Cardano, op. cit., p. I26b, and again p. I64b: "J'ai montré cy-dessus que toutes choses qui sont mixtes vivent (see about those "mixtes" Appendix no. 2) et ce principalement convient aux pierres. Et non seulement elles vivent, mais aussi elles souffrent les maladies, la vieillesse, la mort."

2) *ibid.* p. I92b: "Les plantes sont plus nobles et excellentes que les matières métalliques, et quelque image de sens re-luit en elles. J'estime qu'il est assez connu que les plantes ont haine entre elles, et qu'elles s'entr'aiment: aussi qu'elles ont membres propres pour faire leurs opérations."

"...s'il se fait deux coctions, comme la seconde n'a pas le loisir de s'achever parfaitement, elle n'engendre qu'un insecte..."¹ Zoologically, monkeys are nearest to man, because of the length of their gestation which allows a near-human ontological level of development; but, because they are brutes, this is never attained...or at least not on the earth, for we shall see that Cyrano is inconsistent on this point. Before discussing the higher beings, one must mention with regard to them another principle inherent in Cyrano's conception of a Scale of Being, which is stated several times; it is the adaptation of the different creatures to their normal place of habitation by a participation in its essence². There are only two cases: that of the stars and that of the planets, which one could consider to represent, broadly, Soul or Mind, and Matter. The inhabitants of three planets can be studied in Cyrano's novel: they are men, Selenites, and the man on the Macule, and there is no essential difference between them. One ought to add to them the inhabitants of the dark regions of the sun. Philosophical speculation had, in Cyrano's century, hardly had the time to exercise itself on the

1) p. 131 (on the different classes of birds, see p. 148). See Cardano, op. cit., p. 234a: "Ilz sont deux principaux gerres (sic) des bestes: le premier est, qui a la vie en la part qui semble estre precise et coupée, dite en Latin insectum: et ce gerre appartient à l'imperfection, pource qu'il en advient aux plantes en cas pareil."

2) p. 86: "certains peuples plus immatériels que nous, plus intellectuels, parce que leur tempérament doit correspondre et participer à la pureté du globe qu'ilz habitent..."

subject of the other worlds' inhabitants; but it is noticeable that when later it did, it usually was concerned with the more realistic hypothesis of planets' inhabitants, without mentioning those of the stars which appeared improbable. However, there are various interpretations of this adaptation of inhabitants to their respective planets; Cyrano is not very clear on this point, but might well have assumed, considering his metaphysical theory, that the nearer to the sun, the greater the degree of wisdom: thus men are less wise than the Selenites¹ or the sun-spot dweller, let alone the sun's inhabitants². Kant, for whom also the sun is both a physical and a meta-psychological entity, but of a nature opposite to Cyrano's, imagines on the contrary that the farther from the sun, the more powerful and lucid the intellect, since the sun represents the troubling passions (this agrees with his mention of the spheres and the Empyrean, where the superior spheres are situated farthest from the centre)³. The criterion of Voltaire in Micromégas (in which appears the inhabitant of one star: Sirius) is not the distance from the sun, but the size of the star or planet. This absolute scale is understandable since he also includes the inhabitants of

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- 1) Living above the earth in pre-Copernician cosmology.
 - 2) This lucidity also has its material counterpart: spontaneous transparence appears in material bodies, and thus Cyrano and his machine become diaphanous "par une secrète propriété de la lumière dans sa source...". He can, however, "tout vif aller aux Cieux" since Campanella (p. 182) sees that he is alive.
 - 3) A.O. Lovejoy quotes a passage by Kant, op. cit., pp. 193-94.
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the stars. Their size and their life are proportioned to that of their abode, and so are their mental powers, measured by the number of their senses¹. Within the solar system, this is also the case in L'Autre Monde.

Now, and probably this is due more to the novelist's concern with variety than to the philosopher's opinion, there are in Cyrano's sun two sorts of countries: the light and the dark. The dark cannot be sun-spots which our author, as has been seen, believes to be little planets, but it is likely that this much-discussed phenomenon gave him his idea. They would be totally obscure without the light of a star which is visible from there² (but nothing really allows us to think with Lachèvre that they are situated on the part of the sun which cannot(?) be seen from the earth). These two parts are different in nature and populated accordingly, allowing the possibility for the two different sorts of inhabitants to travel into each other's countries.

The inhabitants of the dark regions are much like their terrestrial counterparts except for a few fantastic countries directly borrowed from medieval and précieux geography, such as the "Kingdom of Lovers", the Republics "of Peace" and "of the Justs", and the "Kingdom of Truth", which, in spite of

1) Micromégas, Chapter 2. Borel (op. cit. p.43) writes: "Quelques Stoiciens ont creu qu'il y avoit des peuples non seulement en la Lune, mais dans le corps du Soleil, et Campanella dit que ces vives et reluisantes demeures peuvent avoir leurs habitants qui sont possible plus sçavans que nous, mieux informez des choses que nous ne pouvons comprendre."

2) p. 191

their fundamental goodness in Cyrano's opinion, are there chiefly for the sake of piquant literary criticism. But two other sorts of countries in the sun are more remarkable: those of all the kingdoms of nature¹ and that of the Philosophers. These are not due to Cyrano's fantasy or literary likes and dislikes.

Surprising at first, the idea of giving a country to each kingdom of nature, stones, plants and animals, is better understood when one remembers the plea for humble creatures like the cabbage, in the Moon,² and that its author was the Daemon, an inhabitant of the sun. In the second part of the novel, our hero hears the same plea from the trees of the Dodona forest, and - but it is then fiercer than a plea - from the Birds. The stones would doubtless join in the chorus had they any organ for voicing their complaints. Cyrano's arguments are not original; on the one hand, the superiority of the animals over man was a commonplace, an example being the Apologie de Raimond Sebond,³ and on the other hand the ingenuity of the defenders of the animals' faculties had been whetted by the theory of the animal-machine. Cyrano ranks among those who passionately denied that animals were merely reacting to

1) p. 181

2) p. 68; see also p. 165: the trees cannot see but they feel with their "most secret senses".

3) See also Vanini, op. cit., pp. 215-216. After making fun of man's illusion of superiority, Vanini concludes: "Je voulais dire que la faute d'Adam fut pour nous une heureuse faute, puisqu'elle nous a valu un si grand rédempteur, et qu'aujourd'hui non seulement nous commandons aux animaux, mais que nous avons les anges pour pédagogues."

mechanical stimuli. But he is much more than an anti-Cartesian, because of his panpsychist conception of the whole universe. He even goes so far as to endow all existing beings with a reasonable soul. This was in the Moon a mere paradox¹, the purpose of which was to convince man of the presumption of his judgments, but it is presented as certain in the Sun. However, this difference is not due to the creatures themselves, but in man, who now understands their language. He alone, then, is the guilty party, since he has degenerated to the extent of forgetting the "matrix of languages", "this energetic idiom", thereby cutting himself from the bulk of creation. A question then inevitably arises: how does Cyrano reconcile this universality of reason with the criterion of the "powers of soul" he used in his scala naturae? This has been the crux of the matter for many thinkers who have tried to find the inner logic of a scale of being: are there real inequalities between the different creatures, and in that case, how can one find a justification for them? Now Cyrano who had said in the same episode of the cabbage that man resembles God only by his soul, and not by the constitution or structure of his body² and ridiculed the much repeated line of Ovid about the upright position, now grants to all creatures this reasonable soul, while he keeps the notion of

1) It cannot be otherwise since the Daemon adds: "de tous les biens de l'estre il n'a que celui de végéter..." It is an example chosen precisely for its striking character (did the phrase "bête comme chou" already exist?)

2) p. 68

a fundamental superiority of man in the heat and energy of his germ (over the horse, for instance). The answer is that there may be in fact a scale in nature, whatever the criterion chosen, but what matters is the fundamental equality in love and appreciation which nature pours over all her creatures: nature acknowledges no birthright¹. What sort of ethics must be deduced from this principle will be discussed later, at the same time as the possibility of an ascent in the Scale of Being.

The "Province of the Philosophers" is the most significant among the countries lying in the dark parts of the sun. Campanella, who has lived there for three or four years when our hero meets him, tells him that the Philosophers are "les principaux habitants du Soleil"² Although we never get there, the novel being unfinished, we hear enough about it to persuade us that indeed, as one could have guessed already in the Moon, to be a Philosopher means for a man that he has ascended the whole Scale of Being. For if the Philosophers, being only men, have to live in the dark parts of the sun which are more suited to the imperfections of their nature, what matters more is that, alone among the inhabitants of the earth, they keep their individuality there: "Epicure dans le Soleil est le mesme Epicure qui vivoit jadis sur la Terre."³

1) p. 69; see also pp. 158-9 where all creatures are assumed to form a republic, in which the fundamental law is equality.

2) p. 182

3) p. 183

This is explained by the purity of their constitution, which allows a perfect mixture of elements in them. A similar idea is found in the Sun: a thread of silk, there, can stand the most enormous weight because, being of an even calibre, no particular point can break before the others¹.

Cyrano's conception of the type of the Philosopher, as well as the esteem in which he holds him, certainly is explained by the popularity of Stoicism in the first half of the seventeenth century, although, as the example he chooses shows, Gassendi's attempt to rehabilitate Epicurus did not contradict the teaching of the Stoics on this point. More will be said about this in the chapter on Cyrano's conception of an ideal life. He may have remembered, among numerous other sources, a passage of Cardano's De l'immortalité de l'âme describing the constitution, mores, and powers of the prophets, and quoted by Vanini in his Dialogues². Many things make us

1) p. 195

2) op. cit., pp. 252-3 . La Fontaine also places Descartes in a kind of Scale of Being in the Discours à Madame de la Sablière (Fables, Book IX):

"Descartes, ce mortel dont on eût fait un Dieu

Chez les païens, et qui tient le milieu

Entre l'homme et l'esprit, comme entre l'huître et l'homme

Le tient tel de nos gens, franche bête de somme..."

that is to say: brutes, the grossest part of humanity (Cyrano calls his servant, a "gros Lorrain": "huître à l'escaille" p. 6), then the bulk of humanity, then Descartes as a Philosopher, then spiritual beings. In the same Discours he alludes to one of the points which Descartes had not elucidated, in the manner of Cyrano:

"Et s'il faut en parler avec sincérité

Descartes l'ignorait encore.

Nous et lui là-dessus nous sommes tous égaux."

realise that the Philosophers are as similar to the super-human beings or daemons as human nature can become; it is therefore better to examine the latter's nature, purpose and fate after death, for they are the archetypes of those of the Philosophers.

The first we hear about these superior beings is the explanation of the Daemon who was the chief of a tribe coming from the sun, their place of origin and usual residence. He calls them "un composé si parfait"¹, and by him we have glimpses of how things happen in the sun (for instance when the Daemon can hold in his hands sun-rays which are, he says, the dust of the sun). He establishes the community of his nature with the other supernatural creatures (as men call them, for of course they are natural): "...on nous appelloit Oracles, Nymphes, Génies, Fées, Dieux-Foyers, Lemures, Larves, Lamies, Farfadets, Nayades, Incubes, Ombres, Mânes, Spectres, Phantosmes..."², the only cause for the varied appearance of these creatures being, as the Daemon puts it, that being obliged to build hurriedly the bodies which they need to communicate with men "ilz n'avoient pas bien souvent le temps de les rendre propres qu'à cheoir seulement dessous un sens, tantost l'ouïe comme les voix des Oracles, tantost la veuë comme les Ardens et les Spectres, tantost le toucher

1) p. 37

2) p. 34

comme les Incubes et les Cauchemars"¹ - an ingenious way of uniting various traditions. The reality with which the human senses come in contact is in every case only condensed air which light dissipates like mist². Why Cyrano chooses the name of daemons to designate them all is not only to remind us of that of Socrates, who is an important character in his novel, but also, no doubt, because of its provocative contrast with the name of angels who - apart from their spiritual nature - hold the equivalent place in the Christian scale.³ This is evident in two occasions when this facile pun occurs: one at the end of the Moon in the 1657 edition, in which Cyrano back on the earth asks some shepherds about his Daemon, thereby frightening them⁴; the second at the beginning of the Sun where it allows Cyrano to expose the ignorant and malevolent "neuf ou dix Barbes à longue robe" who think he is a sorcerer⁵.

These daemons are material, they have bodies, but unlike anything we can imagine, for other senses are necessary to perceive them; hence the transformations which they must

1) p. 37

2) unless it is the body of a recently dead person, see p. 36.

3) p. 128 . "Daemons" appear in Godwin's book, to tempt Gon-sales during his flight. Cardano's daemon was also famous, although Cardano himself made contradictory statements about it, so that Naudé and Nicéron said he did not have any. He denies it for instance in op. cit. p. 463, but says his father had one (p. 462).

4) p. 98

5) p. 102

undergo when they want to manifest themselves to human beings. They die after three or four thousand years¹. Cyrano, speaking in his own name, ventures to imagine their origin, and believing that the earth is nothing but an extinct sun (one of his cosmological theories, as has been seen), he supposes that the daemons were its former inhabitants who, if one must believe Plutarch, stayed there until the reign of Augustus, then abandoned it. He suggests a parallel with the story of the Fallen Angels, a little like modern scholars who hope to trace an historical event such as the Flood in different traditions.²

They have, as one would expect, a "hot" temperament, such as it has been defined; the sun therefore is apt to become overpopulated, and the daemons have to emigrate³. They choose then a planet which suits them, that is to say, where their chief propensity and, it seems, their sole aim in existing, can be properly fulfilled. This aim is the acquiring and the spreading of knowledge. In the Moon, the Daemon recounts his travels in Europe, ~~where~~ he met Tristan⁴, and his pedagogical vocation makes no doubt. In the same way, travel in the

1) p. 36. As the Daemon speaks now of the Selenites, now of the daemons, many commentators have attributed this long life to the Selenites, but there is no doubt left when the Daemon repeats the same thing p. 37. On p. 189, this becomes seven or eight thousand years.

2) pp. 34 and 128

3) p. 36; Derham suggested later interplanetary travel as an amenity enjoyed by departed souls, see Lovejoy, op. cit., p. 134

4) p. 35

sun is the main use the Philosophers make of their time, and it is again the main employment of the strange troop which Cyrano encounters on arrival there¹. These beings, which appear successively as a tree, a myriad of little men, a man of normal size and a group of eagles accompanied by a nightingale, are the inhabitants of the light parts of the sun, in other words the daemons themselves whose behaviour has already been described to some extent by Cyrano's Daemon. They introduce themselves in the same way: "C'est nous qu'au Monde de la Terre vous appelez les Esprits, et vostre présomptueuse stupidité nous a donné ce nom, à cause que n'imaginant point d'animaux plus parfaits que l'Homme, et voyant faire à de certaines créatures des choses au-dessus du pouvoir humain, vous avez crû ces animaux-là des Esprits..."² Some of the faculties which already appeared miraculous in the Philosophers, such as the ability to render their whole body diaphanous, to communicate thereby their thoughts, which, being made of material images, can be seen through their body, or to transport themselves through the air, are possessed by the Daemons in their entirety and seem to man the result of conjuring tricks. The most remarkable is certainly that of assuming the shape which they choose. This metamorphosis is purely due to the position of

1) p. 142

2) p. 145

the atoms, and not to any change in their nature, as the king of one of those organisms says clearly¹. Cyrano puts a strong emphasis on this idea of metamorphosis, and thinks he has found the secret of several famous ones recounted by the Ancients and repeated there by one of the trees of the Dodona forest. In the story of Pygmalion's statue, the inner and the outer shape of a being are equated as the starting point of a metamorphosis: the statue, animated by the juice of one of the apples from the Castor and Pollux tree (a quintessence of sympathy) becomes a real woman because "l'énergique vertu de cette pomme conduisant son labour selon le dessein de l'ouvrier, suivit au dedans de l'image les traits qu'elle avoit rencontrés à la superficie, car elle dilata, échauffa et colora à proportion de la nature des lieux qui se rencontrèrent sur son passage."² This correspondance of the inside to the outside can be applied to the divination of people's feelings by mimicking their facial and corporal expressions: thus the Daemon was not simply teaching Campanella a useful trick when he advised him to act in that way in order to know his judges' thoughts during his trial³; for this indication was tantamount to unravelling the riddle of the universe for a philosophically-minded

1) p. I45: "toutes nos transformations arrivent par le mouvement."

2) p. I7I

3) p. 35

person (characteristically, Cyrano dramatizes this theory and shows Campanella himself applying it and guessing the hero's thoughts in the Sun¹). But this belief could mean still more to Cyrano: with that sort of credulity which seems sometimes to be his, surprising in such a sceptical person but corresponding, it has been seen, to a deep need of his nature, he reports strange coincidences in the life and behaviour of twins which could easily pass for old wives' tales; but he adds: "Mais ne voyez-vous pas qu'il estoit impossible que la composition des organes de leurs corps estant pareille dans toutes ses circonstances, ils n'opérassent d'une façon pareille, puis que deux instruments égaux, touchés également, doivent rendre une harmonie égale?"² This seems a case when one could legitimately say that "le tempérament, c'est le destin" since the body appears like a pre-formed pattern which experience - the variety of which is completely disregarded - only serves to reveal. This deterministic conception comes, philosophically, from Cyrano's materialism, and sentimentally, probably from a revulsion from the contingency of experience. It is related to that of the correspondence between micro and macrocosm which Cyrano believed; many of his explanations show that he

1) p. I78

2) p. I78

admitted the Paracelsian theory of "signatures", of which there are such curious examples in Campanella's works¹; but the strange part of his belief is that he seems to admit that the reverse is equally true and that in forging, as it were, these signatures (for instance by counterfeiting an expression) it is possible to create, inside, a genuine meaning².

The force behind these metamorphoses is sympathy, as has been explained in the study of the active principle in matter; but sympathy is utilised by the imagination, and the theory of the power of the imagination as a substitute for supernatural explanations was very popular among "libertines" since Pomponazzi and Cardano. Vanini could not fail to give it an important place in his Dialogues, and indeed it was a frequent theme in the sixteenth century. After witnessing some of these metamorphoses, Cyrano remembers some prodigies again recounted in the Ancient tradition, that of Cippus, of Vibius, of Codrus," bref, Henri Busson writes, il se récite le chapitre de Montaigne Sur la force de l'imagination ."³

Many objections to this theory could be raised. One of

1) La Città del Sole in Bruno e Campanella, op. cit., p. 1077.

See also E. Jovy, op. cit., pp. 43-44 .

2) On the subject of metamorphosis see J.S. Spink, loc. cit.

3) pp. 146-8 ; Busson, La Pensée Religieuse, p. 336; Les Essais, Book I, chap. 21.

On imagination and its effects, see Cardano, op. cit., p. 333b and Vanini, op. cit., pp. 258 and 283ff.

them is the practical question of the quantity of matter needed for these transformations, which must necessarily vary from one object to the other¹. But it would of course be futile to try to determine exact relations between density and volume; the impression Cyrano wants to give is that of an unlimited freedom. But there is another, much more important difficulty: some people, such as Juppont and Brun, have seen in Cyrano's little atoms a prefiguration of the organic cell, and in himself a pioneer of evolutionism². But, as Juppont notices, he does not explain how a sum makes a whole. The atoms themselves we never see, even in the sun, since the "subjects" of the nightingale are already groups of atoms looking first like little men, then like eagles. But in spite of their individuality they are capable of uniting in the shape of a human sized being who also enjoys individuality: "il ne se sentit plus estre qu'un"³.

Now it is certain, in many passages of L'Autre Monde, that for organised bodies individuality is life itself: prior to being joined to its king "tout cet amas de petits Hommes n'avoit point encor auparavant donné aucune marque de vie..."⁴

The parts are then insufficient to constitute a whole without an extraneous element which plays the part usually

1) A case in point is that of the eagle who replaces her pierced eye without any addition of matter, p. 143.

2) Juppont, loc. cit. ; Brun, op. cit. p. 306

3) p. 142

4) p. 141

played by the soul (significantly, the king of these little men is seen to enter and leave the body by the mouth, as in primitive figurations of the soul). The allusion to a king and his subjects is hardly more than a face-saving metaphor, which nothing justifies in Cyrano's theory since all the atoms are supposed to be equal in the sun and to acquire an individuality in the three rivers of Memory, Imagination and Judgment only before leaving for the planets, and since the proportion is due to chance.¹

Besides, these metamorphoses which are multiplied by the daemons do not affect their real being; they are strictly limited to their outer appearance, and this is why they can assume shapes of every sort of being in nature: stones, plants, animals, men². There is no question of a generalised illusionism, however, for these newly-formed objects are not the real thing: the king tells Cyrano about the nightingale: "C'est un véritable oiseau qui n'est que ce qu'il vous paroist"³. What, then, are they, since a human being can grasp only their appearance, not their being? This is answered by a consideration of their fate after death - for in Cyrano's universe, everything is subject to change. - Their death and that of the Philosophers have the same

1) p. 190 .The same could be said about the inconsistent equivalence made by one of the Selenite philosophers in all the parts of matter (p.76): "Un peu plus de certaines figures...."

2) p. 144

3) p. 140

cause (but not the same mechanism): too great an appetite for knowledge and mental activity; the Philosophers' head bursts under the pressure of the material images it contains¹ and the daemons' constitution becomes muddled, after which they disintegrate "en particules semblables à de la cendre rouge"². Do they keep their individuality in doing so? This will be debated presently, in discussing Cyrano's belief in a kind of metempsychosis; in any case, one must suppose that the Philosophers' substance has the same fate as the daemons', that is to say, becomes extinct and retrogresses to the rank of gross matter of the sun's body until it becomes impregnated by the three rivers, ready to travel to the neighbouring planets and impregnate in its turn their matter, which otherwise is by nature inactive, "privation".

Is there any progress in Cyrano's Scale of Being? His oracle, the Daemon, seems to leave no doubt on the subject: "Vous sçavés, ô mon fils, que de la terre quand il se faict un arbre, d'un arbre un pourceau, d'un pourceau un homme, ne pouvons-nous/^{donc} pas croire, puisque tous les estres en la Nature tendent au plus parfaict, qu'ilz aspirent à devenir hommes, cette essence estant l'achèvement du plus beau mixte, et le mieux imaginé qui soit au Monde..."³ And he adds a

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- 1) p. 191 .One can hardly agree with Juppont who finds the pun "crever d'esprit", "du meilleur aloi" (loc. cit.)
 2) p. 190
 3) p. 90

startingly concrete example: "Ainsy ce Grand Pontife que vous voyez la mitre sur la teste estoit il n'y a que soixante ans, une touffe d'herbe en mon jardin." He is aware of the philosophical origin of his belief and mentions **Pythagoras'** idea of metempsychosis; but he thinks he has found a more satisfactory interpretation for it, because it is based on materialism and therefore "plus raisonnée que la Pitagoricque"¹. And the teleological supposition that this doctrine "n'est vraysemblablement parvenuë jusques à nous, qu'afin de nous engager à en rechercher la vérité" agrees with his sometimes unacknowledged conviction that a superior mind organises the whole thing, and even that there might be a Last Judgment after all, when the whole of matter has passed by the human incarnation². This conception of metempsychosis raises two questions: on the one hand, how can the individuality subsist after digestion by another species?³ On the other hand, Cyrano admitted in his physics the impenetrability of matter; but in his panpsychist conception of metempsychosis, he admits the existence of beings in one another, instead of their rebirth as another. Leibniz showed later that psychology can give an idea of how new experiences can be integrated into the unity of a personality,

1) p. 91

2) *ibid.*

3) See especially the discussion between Cyrano and the young Selenite on the case of a Mohammedan eaten by a Christian.

but this more acceptable conception is not found in L'Autre Monde where it would have saved Cyrano many difficulties. To what purpose does the whole process occur? Campanella, in the Sun, tells Cyrano that it is to acquire an infinite knowledge. But in answering, he seems to refute a possible objection: "...nous mourons plusieurs fois....ce qui n'est point un mal..."¹ But neither the necessity for these successive deaths, nor why it should be the only way to further one's knowledge, are clear. For it has been seen that the daemons after death become for some time the gross matter of the sun, and then pass through all the subsequent forms of beings: can one suppose that mere men, even if they are philosophers, would be more privileged than daemons? Probably not, and they probably lose their individuality after a slightly longer lease, and increase of knowledge could then hardly be possible. As for ordinary men, this universal course is certain. Cyrano, condemned to death by the Birds, receives from two birds of paradise a "consolation" which, although differing by some of its arguments from the usual examples of the genre, resembles them nevertheless by its inadequacy: "La matièrepeut-elle pas, en se remeslant arriver à une disposition requise pour faire que tu te sentes

1) p. 191

estre encore une autre fois? OÛy mais, me diras-tu, je ne me souviendray pas d'avoir esté. Hé, mon cher frère, que t'importe, pouveu que tu te sentes estre?"¹ And it is evidently also to the feeling of identity, and not to the material elements, however spiritual the function of some of them seems to be, that another of these birds refers, as well as the famous lines uttered by Séjanus, which are almost identical: "un clin d'oeil après la vie, tu seras ce que tu estoit un clin d'oeil devant"². As for the material elements to which Cyrano unsuccessfully tries to reduce the whole of the being, their fate differs according to their mind, for there are three sorts: the grossest among them constitute the bulk of the sun; the more subtlé become sun-rays, and seem therefore more privileged than both Philosophers and daemons, who eventually, as has been observed, share the fate of the lowest level of humanity! This of course concerns the souls alone, for the bodies stay on the earth, to be transformed.

It is puzzling to remark that nowhere does Cyrano declare that men - or perhaps only Philosophers - become daemons after death, which would have given his system a consistency which it often greatly lacks. His materialist creed cannot have kept him back since the daemons are also material, but

1) p. I62. See an article on "Une idée de Nietzsche chez Cyrano de Bergerac" by V. Cornetz, Revue des Idées, octobre 1912.

2) p. I62. Agrippine, V, 6:

Une heure après la mort, nostre âme évanouïe
Sera ce qu'elle estoit une heure avant la vie", a remembrance of Seneca.

simply better organised sensorially and intellectually to cope with the complexity of reality. It is quite possible that it is his concern with unifying the different bodies of tradition, Christian, philosophical, and even perhaps occultist, which influenced him on this occasion; for according to the Christian dogma, men never become angels, and there are even several cases foreseen for them according to the time when they lived, before or after the Incarnation and the Redemption. There is therefore the idea of an ascent in Cyrano's Scale of Being, but to consider without important reservations that Cyrano is a forerunner of the theory of evolution, as some critics of his work have done¹, is to confuse two views of the universe which have similarities, but are very different in origin and content, especially in two points.

Firstly, what is the mechanism by which this evolution occurs? Cyrano had seemed to attribute to chance the existence of the various species; but this clashes with the criterion of the "powers of soul" which are obtained by a definite process derived from alchemy, and due to a deliberate will of the sun, and symbolize the phenomenon of digestion. Apart from this operation, which remains (understandably) obscure for Cyrano, since he needs the metaphor of the still to grasp and

1) For instance Brun, op. cit., p. 306, or Löwenstein, loc. cit., p. 50. Cardano, on the contrary, and from the same sources as Cyrano, shows a real insight in the evolution of species: "Et véritablement Epicurus disoit bien, que Nature avoit fait tout ce qu'elle avoit peu: mais que seulement les choses estoient demeurées qui ont eu quelque force et vertu excellente pour se défendre..." (op. cit., p. 300)

communicate it, there is no evolution of the species themselves.

Furthermore, this "evolution" does not happen in time. Cyrano, as alchemists believed that all metals would be transmuted into gold, believes that all creatures will be transmuted into men, and could have written:

Striving to be man, the worm
Mounts through all the spires of form"¹;

but once there it would have died again for new worms to be born out of its body, and so on, for eternity. It is an ontological, not an historical, evolution. Not that he does not have an idea of a possible ending: he states that the sun will disintegrate after it has used up all its matter, and wonders about the possibility of a Last Judgment. But in the first case the same development would start anew in another part of the universe, and the second possibility is not further explained.

We now come to the sun, the top of the scale. It is at the summit of both hierarchies: materially, it is the source of the planets, as well as of the germs which will fertilize them; it is also the final end of the souls which, being made of fire, are attracted to it by sympathy. Spiritually, its powers are necessarily superior to all others since it

1) A. O. Lovejoy, op. cit., p. 251, quotes "Emerson's familiar couplet".

is made of the sum of the souls¹:"...vous ne devez point douter que le Soleil n'opère de l'esprit bien plus parfaitement que vous.....il connoist le secret de la vie,..... il influë à la matière de vos Mondes la puissance d'engendrer,il rend les corps capables de se sentir estre,et enfin.... il se fait voir et fait voir toutes choses."² Thus,although being made by all the existing beings,the Sun has an individuality,the only permanent one in the universe,or at least this part of the infinite universe which it controls. But this calls for the same objections as Cyrano's conception of the human body as a republic of ciron-like organisms,or his fantasy of the little men which form in dancing a human-sized being.

There was an idea that the sun was the religion of the pagans above all others³;besides,the names of Cardano and Averroës,who had illustrated the theory of a universal mind,could hardly make Cyrano's system look orthodox.Fortunately,the patronage of Gassendi could be claimed,however speciously,as that of Cusanus had been by the upholders of the Plurality of Worlds.The idea of the Christian God obviously had also some part in the elaboration of Cyrano's system;

1)The different part played by unequal souls:"embonpoint",head and heart,recalls the natural,vital and animal spirits.

2)p. 182;compare with God (p.96)who wantonly gives or withdraws revelation and grace.The "City of the Sun" was so called because the sun is the symbol of divine reason.

3)See Von der Mühl,Denis Veiras et son Histoire des Sévarambes,Paris,1938.The Sévarambes also have the sun as a god,but adore besides a "Grand Etre",creator of all the systems in the universe.

it was difficult to avoid since after so many centuries of theological and philosophical speculation it had become rather protean, and even in some cases self-contradictory. The essential Christian idea of love¹ is however comparatively unimportant in L'Autre Monde, although, as has been seen, the notion of equality of all creatures, which rests on it, is the key-vault of Cyrano's thought .

Equally important is the idea of an all-knowing God. To be told and to understand the sense of the universe is definitely Cyrano's only possible conception of a Paradise, and it is not by chance that he mentions among all the other features of the sun its power to make itself and everything else visible, where sight most certainly also means knowledge.

In many ways, Cyrano's metaphysics seem to be an idealism in materialistic clothing. The Preface of the 1662 edition mentions Plato in connection with the episode in which Cyrano's body becomes transparent on ascending to the sun, and Plato might have inspired him in more than one way (doubtless through the revival of Platonism and neo-Platonism which started during the Renaissance). For men on the earth are like the candle, the flame of which tends towards the sun

1) Cyrano imagines that the Last Judgment might be performed by "un examinateur des esprits", the rest of the human being being of no importance. There is therefore almost no notion of charity, nor any problem of evil, and indeed no justification for the existence of such a scale at all. It will be seen that Cyrano's aristocratic prejudice makes such a justification unnecessary.

"malgré le suif qui la tient par les pieds"¹, as the body holds the soul, and the transformation they undergo when they die is symbolized by the gradual invisibility of Cyrano's body and apparatus, after the completion of which he says: "je me voyois, me touchois, me sento is le mesme, et si pourtant, je ne l'estois plus"². Conversely, the germs in the sun can be likened to the Ideas, which are degraded by existence, for they lose during life the character they had in the sun: thus the substance of the foetus is "beaucoup plus chaude et plus mobile" than the mother's³.

But it is nevertheless the effort to give a materialistic account for every phenomenon which makes Cyrano's thought original, if not always consistent and sometimes conveniently obscure. It possibly originated more in Cyrano's impatience with the credulity exacted by orthodox faith than in any philosophical conviction of the value of Epicurism and Democritean atomism, though these systems seemed to be in many cases able to by-pass religion, and were attractively aggressive.

Sentimentally, his conception is bound to be unsatisfactory, since it practically amounts to impersonal pantheism; but it has important ethical implications.

First of all, man is guilty. He is condemned to death by

1) p. I82

2) p. I35

3) p. I46. Cyrano's ideas on the sun, source and end of the souls explain his conception of the separate generation of embryos and souls, (see p. 64), which Descartes had also expressed in his Meditations.

the Birds even after they have decided that he does not enjoy their privileges of reason and immortality, and in spite of the fact that, Monster or not, he has been created by wise Nature like the others, and even has to exist if she must fulfil her plenitude. Cyrano holds that man used to enjoy a higher estate but lost it, not through any original sin but, as has been seen, through misuse of his nature. Thus Adam was capable of feats which are impossible today, such as flying to the moon by the force of his imagination (the example is burlesque but the idea behind it sincere).

In what ways can this be repaired? The first requisite is to rid oneself from all prejudices and learn as much as possible about Nature's ways, which are fundamentally rational. True, human reason is sometimes hopelessly unsuited to the task, but at least man can achieve a progress in wisdom which will make revelation fruitful. Education is a moral duty, and is the best way in which man can take part in the working of the universe: thus travelling is called by the king of the daemons whom Cyrano meets on arrival in the sun "la plus utile de nos occupations"¹. Cyrano is blamed by Campanella for having not purified his mind enough, which the Philosophers have done, with rewarding results after death². This is why all those who already possess a certain amount of knowledge are

1) p. 142

2) All is therefore not deterministic in Cyrano's system, and it seems implied that some amount of free will is granted in the making of a Philosopher - in spite of repeated allusions to an inescapable fate (p. 116 for instance).

intent on communicating it, and the device of the talkative inhabitant, so widely used in that type of novel before and after Cyrano, receives in L'Autre Monde a deeper significance. From this point of view, Cyrano resembles more the medieval thinkers who recommended the study of nature as a means of knowing God than some writers of the Enlightenment who advised man to refrain from ambitious metaphysical speculation and not to aspire to rise higher than his position in the scale of nature. In the relation of Cyrano's two unsuccessful flying attempts, there is no suggestion of human pride punished, so frequent otherwise since the myth of Icarus. There is no eulogy of "la docte Ignorance" either, whereas it was the conclusion of the series of sonnets sent by d'Alibray to Le Pailleur¹. Cyrano is uninterested on the whole in social and political reform, except for the eradication of tyranny, whether paternal or royal; but had it been otherwise, he would have been as spirited as other Renaissance utopists, for there is no hint of the necessity of a strong political restraint owing to man's imperfect nature. Everybody except the Pédants must, according to Cyrano, be trusted to develop into a philosopher, possibly with the reoffered help of the daemons.

1) See B.S. Ridgely, loc. cit.

The second principle is the acknowledgment of the fraternity of all creatures, an outcome of the respect for Nature's fecundity. If one remembers the friendly participation of flowers and stones in the Earthly Paradise¹, does not the sun appear, filled as it is with enlightened creatures, a sort of Paradise Regained?

The third is the practice of faithful friendship, for is not sympathy, attraction, one of Nature's principles? Friendship founded on common recognition of the truth is the highest possible relationship.

Finally, with regard to the necessity of dying, resignation is the attitude of the sage (Cyrano's "consolation" repeats the arguments of Seneca and Lucretius²). Even then, Cyrano speaks with ambiguity, and may keep a hope of life after death, not in Paradise, but in the sun, whether real or metaphorical, among his beloved Philosophers.

Such ethics are those of the Selenites.

1) p. 21

2) pp. 161-62

7 - The SelenitesTheir significance as satire and example.

The impression one gets from the first part of Cyrano's novel is at first confusing. One can see that it is partly a satire and partly an Utopia, but one cannot without reflection see the link between them. Brun, for instance, depreciates that part by pointing to the poverty of its devices¹, which seem to consist almost only in a tedious reversal of the ways of the earth. It becomes however evident that Cyrano had, more or less consciously, a double purpose in writing the Moon, and that he could not fulfil both with consistency.

In the moon, in spite of the praise lavished on its inhabitants by the Daemon and the Spaniard, absolutism reigns as well as on the earth. Social/^{classes} also exist, and are so sharply divided as to necessitate a totally different language². More than that of the King, however, it is the power of the priests - the Doctors, as the printed version mildly puts it - which holds sway over the citizens. They are represented as the guardians of orthodoxy, and are past-masters in the art of deluding and impressing the people. They know all the effects of imagination, such as Pascal will describe them, and use

1) op. cit., p. 181

2) The idea of these languages certainly came from a reading of L'Homme dans la Lune, in which Godwin described the two languages of the Chinese, and the musical language of the Selenites.

them liberally. They can fight public opinion by threats as is shown during the three trials of Cyrano. In fact, the resemblance to the earth and the satire are so evident that Lacroix could find in this episode an allusion to Galileo's trial¹. This supposition seems well founded, especially with regard to the opinion then existing that Galileo was not convinced after his recantation, of which there seems to be an echo in the Daemon's plea that Cyrano can be condemned but not convinced. There is therefore a twist in the tail of the satire: the conditions of contemporary Europe are exposed by mere repetition, but piquancy and purport are added by the fact that the ideas for which Cyrano is persecuted are the very opposite of those which would have the same effect on the earth, namely, that the earth is a world and that the moon is not, that he is a man, and that the Selenites are not. Thus the insistence of Cyrano in showing everything the other way round in the moon, which has passed for mere fantasy (which it is of course in part) takes its full significance, and gives rise to the effect of relativity which was sought. Hence, pointing to the fact that he very probably took the idea of his novel from Sorel's Francion is an underestimation of Cyrano's intent: he is not merely a man of letters who is in search of an unheard-of subject, but a convinced "libertine"

1) See also the community of the Birds, in which the King is weak but the organisation for police and justice formidable.

who deliberately wants to expose the narrow-mindedness and the tragic persecutions existing on the earth.

However, the **Selenites** are in many passages undoubtedly presented as models for men. This side of Cyrano's novel is the constructive one, and is not always connected with consistency to the satirical. The opinions of the Daemon and of the Spaniard appear rather out of place after one has read the account of the hero's persecution, and the greeting formula of the Selenites: "Songez à librement vivre"¹ seems sadly belied by the whole situation. Traces of former Utopias, usually rigidly organized, are found in the pre-eminence of the State over the individuals. There is for instance a sexual rule, though not as strict as in the City of the Sun, and a physionome who decides on the food and on the sort of flowers used in the mattress of every individual. Cyrano's real religion is natural, and accordingly the morals of the Selenites are chiefly derived from their metaphysics. The moral rule is very powerful, causing the transgressors to be punished, and consists chiefly in respect for nature, and in friendship.

Cyrano had then a double intent, and he could not choose. One country was not sufficient for all his criticism and all

1) p. 83

his propaganda at the same time: it is as if Swift had wanted to amalgamate the Lilliputians and the Houyhnhnms. He should have kept the positive side for the second part, the trip to the sun, where he enlarges and connects some of these themes. However, as the Selenites are superior to men, one can choose to think that Cyrano depicts a sort of "militant humanity", the best which can exist owing to the imperfection of its nature. The Selenites' nature and habits will now be described.

They are essentially men¹, that is to say similar to the inhabitants of the earth and different from those of the sun. It has been stated that the moon is the perfect equivalent of our world, whether this means the geological origin of both planets, their geographical aspect, their inhabitants and their social organisation. Accordingly, the earth is constantly called the moon, and vice-versa². The two parts of L'Autre Monde are therefore not repetitive; the Moon is an introduction to the theories developed in the Sun, and it appears afterwards as a retrospective confirmation.

It is immediately evident that the Selenites differ in many ways from men in spite of a community of nature. Their physical aspect and behaviour, as well as their customs are at

1) p. 32

2) p. 33; the Daemon says to Cyrano that his (Cyrano's) country is the moon, and that he is a "Gaulois". The idea of the plurality of worlds was, as far as the moon was concerned, bolstered by the ancient idea of an antichton (See McColley, The seventeenth-century doctrine... loc. cit.). See Borel, op. cit., p. 40: "Icetes Pythagoricien et Philolaus ont creu deux terres opposées..."

variance with those of the earth; last but not least, their moral, theological and philosophical ideas are unorthodox. It soon appears that Cyrano intends the moon to be a better country, and this is the reason for many customs which appeared at first gratuitously fantastic.

Cyrano, who showed his knowledge of proverbs in Le Pédant Joué, dramatizes one of them in the Moon where the larks actually fall roasted from the sky¹, thus leaving no doubt both about the excellence of the country and about its ideal character! The payment of goods in verse is another example to the same effect: "de cette sorte quand quelqu'un meurt de faim, ce n'est jamais qu'un bufle, et les personnes d'esprit font toujours grand'chère"². One could quote many others, the travelling and sedentary towns³, for instance, and the use of glow-worms as lamps⁴. Other proofs that the moon is an elect country are the facts that the Earthly Paradise was there, that several characters of the Bible chose it later for their residence, that the Daemon came there after having deserted the earth, as did the Spaniard who, although a lover of freedom⁵,

1)p. 42

2)p. 43. This, as Cyrano himself indicates, comes from Francion.

3)The means by which the houses can be moved comes from The City of the Sun, as has been said.

4)Cardano, op. cit. p.245, suggests the idea of a luminous liquor made from glow-worms, but does not know how to make it.

5)His words: "il n'avoit peu trouver un seul païs où l'imagination mesme fust en liberté" (p.45) recall those of Saumaise: "Vivent Venise et la Hollande, qui sont les deux seuls lieux de l'Europe où il y a encore quelque reste de liberté: car par tout hors de là, ce n'est que tyrannie et moinerie." (quoted in Pintard, op. cit., p.104)

does not seem to resent his captivity in a monkey-cage (it is true that, unlike Cyrano, he had not the wit to learn the Selenites' language).

Everything, then, is better in the moon, although - and this is precisely the point - managed with purely human resources, better utilised. Even the mythical larks are cooked and seasoned not by magic, but by art!

The Selenites' musical language has already been mentioned. Not only its nature but its effects are superior to human words, for Cyrano writes with irony: "...de sorte que quelquefois ilz se rencontreront jusques à quinze ou vingt de compagnie qui agiteront un point de Théologie, ou les difficultez d'un procès par un concert le plus harmonieux dont on puisse chatouïller l'oreille."¹ They refuse to "prostitute their throats" to pronounce words.

The way they eat is to be understood in the same light. Their nourishing smoke is like the ball Elijah held, which was not a magnet but the quality of attraction in its pure state. In Cyrano's metaphysical universe, where perfection is measured by the degree of identification with the active principle in all things, with little or no waste, the Selenites rank higher than men, for they use virtually pure alimentary

1) p. 39

principles. Cyrano and Gonsales, who are believed to be only brutes, are fed with solid aliments, "des noix, de l'herbe..." It is interesting to notice that Cyrano, although coming from a planet where eating habits are less ethereal, is capable of enjoying these particular meals, after an intermediary stage when the larks prove useful; this stresses his opinion that all human possibilities are not fully taken advantage of. The question of his real belief in many of the improvements he suggests is raised again here.

The Selenites go on all fours, and go ~~fast~~ faster than any man could on two feet. But is not that the natural posture man would take without his education? Vanini in his Dialogues had already written: "Je voudrais voir une expérience de cette nature, et si un enfant nouveau-né, élevé dans une forêt, marcherait comme une brute ou sur deux pieds..."¹ One of the punishments among the Selenites is to be condemned to walk in the erect posture for a day. In this case again, the reversal of the customs of the earth is far from being a wanton fantasy.

In spite of their habit of going about unprotected by any clothes, these people thrive so much that their size is twelve cubits, and they live longer than men². Their ethnical

1) op. cit., p. 215

2) The pseudo-Plutarch wrote: "The moon is terraneous, is inhabited as our earth is, and contains animals of a larger size and plants of a rarer beauty.... The animals in their virtue and energy are fifteen degrees superior to ours, emit nothing excrementitious, and the days are fifteen times longer." (Placita, II, xxx, quoted in McColley, The XVIIth century doctrine)

superiority extends to the shape of their nose, and is obtained partly by a kind of eugenics¹. Enough has been said about Cyrano's firm ideas on this subject; these ideas certainly are older than his Adlerian reaction, and his times were fertile enough in celebrities with long noses to justify his encomium!

However, more than a few contrivances which only stress the point, the Selenites' moral behaviour, their psychological habits and their religious beliefs are the real ground of their superiority.

What is their religion? Their theologians often pronounce the name of God² and generally behave like their terrestrial counterparts. However, one of the Queen's ladies-in-waiting wants to follow Cyrano when he returns, in order to become a Christian. True, she is attracted especially to the bells and hymns which grace her future religion, and which are probably for Cyrano a proof of its folly. He cries nevertheless on hearing Italian peasants pray: "Dieu soit loué! J'ay donc enfin trouvé des chrestiens au Monde de la Lune."³ from which one infers that he had not done so before. In fact,

1) p. 82. There are Priests and a seminary, whose duty it is to preserve the long nose of the race.

2) pp. 52-53

3) p. 98

at the end of the manuscript (but not of the printed version), he calls the Selenites "ces hommes naturellement impies"¹ and the conclusion is a prefiguration of Molière's Dom Juan² in which the young atheist is ravished by "un grand homme noir tout velu" who takes him straight to Hell, thereby bringing our hero back to earth. The first ending contained an answer to the well-known difficulty of all writers of Utopias: how to explain that a people could exist without being descendants of Adam and without benefiting from the Redemption. Campanella in his City of the Sun made the inhabitants consider Jesus like another prophet³; the inhabitants of the New Atlantis have received more revelations than the other peoples⁴. Fontenelle, in his preface to the Entretiens, alludes to the same difficulty and solves it as Wilkins had done⁵ by saying that the inhabitants of the other worlds are not men in the sense we usually give to that word: "Que sont-ils donc? Je ne les ai point vus; ce n'est pas pour les avoir vus que j'en parle; et ne soupçonnez pas que ce soit une défaite

1) p. 99

2) Both may have been borrowed from the Spanish legend. Le Pédant Joué was borrowed in part from a play by Lope de Vega.

3) Wilkins, referring to Campanella, wrote (Le Monde dans la Lune, pp. 211-12): "Si ce sont des hommes (the inhabitants of other worlds) il croit qu'ils ne peuvent pas être infectés du péché d'Adam"; it is more likely that they are not men "mais quelque autre espèce de créatures qui ont quelque proportion et ressemblance avec notre nature."

4) See Henry Morley, Ideal Commonwealths, London, Routledge.

5) Fontenelle, op. cit., p. 56; Wilkins' opinion quoted in *ibid.*, note 6.

dont je me serve pour éluder votre objection, que de dire qu'il n'y a point d'hommes dans la lune; vous verrez qu'il est impossible qu'il y en ait, selon l'idée que j'ai de la diversité infinie que la nature doit avoir mise dans ses ouvrages."Cyrano's manuscript ended on a masterpiece of irony in the style of the Provinciales or of the Lettres Persanes, a perfect imitation of Christian style and thought which hides the inherent absurdity: "J'admire mille fois la Providence de Dieu qui avoit reculé ces hommes, naturellement impies, en un lieu où ilz ne pussent corrompre ses bien-aimés, et les avoit punis de leur orgueil en les abandonnant à leur propre suffisance. Aussi je ne doute point qu'il n'ayst différé jusques icy d'envoyer leur prescher l'Évangile, parce qu'il savoit qu'ilz en abuseroient et que cette résistance ne serviroit qu'à leur faire mériter une plus rude punition dans l'Autre Monde."¹ The young Selenite, in his refutation of the argument of the bet, had already done justice to this, and the Quatrains du Déiste had also sought to demonstrate the impossibility of a vindictive God.

The philosophical ideas of the Selenites, as has been seen, are heretical: they do not believe in resurrection or in the immortality of the soul. Their bodies are cremated, only those

1) p.99

of the criminals being buried¹. The Philosophers, however, have a different fate altogether. The rites observed by their friends before their suicide would dissipate any doubts about their heterodoxy: "...ceux-cy se purgent, et s'abstiennent de manger pendant vingt-quatre heures; puis arrivés qu'ilz sont au logis du Sage, et après avoir sacrifié au Soleil, ilz entrent dans la chambre, où le Généreux les attend appuyé sur un lit de parade."² The influence of the City of the Sun is evident there, as it is in the submission of the individual to the race³ and in the nature and application of the moral rule.

This rule can be inferred from the habits of the Selenites' habits and from their discussions with our hero. It consists in three principal points: reason, freedom, friendship. The Selenites, the Daemon says, love truth. The criterion of truth being its agreement with reason, the pedants are not needed, since they thrive on the principle of authority: "...l'autorité d'un sçavant, ny le plus grand nombre, ne l'emportent point sur l'opinion d'un batteur en grange, si le batteur en grange raisonne aussy fortement."⁴ The only enemies are those who tend to corrupt the free use of reason: sophists and orators. It has been seen that the chief use the Selenites make of their reason is to try to understand and

1) pp. 85-6

2) p. 86

3) Here are the principal features borrowed by Cyrano from the Solarians: the chariots with wings, the physionomes, the hatred of ingratitude, the Copernician ideas, the long life, the natural religion.

4) p. 36

observe the ways of nature. Their philosophers have reached the highest point of human nature. Cyrano uses the word only with evident respect and is chary in applying it. Tristan is called by the Daemon "le seul Poète, le seul Philosophe et le seul Homme libre que vous ayez"¹; he also says: "J'ay fréquenté pareillement en France La Mothe Le Vayer et Gassendi; ce second est un homme qui escrit autant en Philosophe que ce premier y vit" . Séjanus is called "un Soldat philosophe"² because of his views on the human origin of the gods and on the mortality of the soul. "Philosophe" expresses then for Cyrano the notion of a man whose mind works unimpeded by human or divine allegiance; it also implies that he has a certain Weltanschauung, that of Cyrano and of the boldest of the "libertines", the only one that a free mind, according to him, could possibly evolve.

The emphasis Cyrano puts on friendship (it will be seen that he tried to carry that ideal in his own life) reminds one of the high degree of morality of all the peoples who are the heroes of Utopias, and which accounts for the impression of unreality which they generally give; their governments are not made for men as they are, but for men as they ought

1) p. 35

2) La Mort d'Agrippine, V, Scène dernière. It was well known that Vanini had gone to the stake while saying: "Allons, allons allègrement mourir en philosophe."

to be. L'Autre Monde contains very little about the best sort of government otherwise, and one is forced to admit that the Selenites are naturally "spirituel(s), prudent(s), courtois, affable(s), généreux et (libéraux)"¹, the only practical measure extant being the sterility of the snub-nosed. The real reason is of course that Cyrano is not interested in political, social or moral problems; the only improvements he hopes for are those which would lead to the general and free recognition of his philosophical viewpoint.

1) p. 87

8 - The picture of reality and of ideal life
in L'Autre Monde

Although the most famous aspect of Cyrano's novel, and also the most original, is the account of the hero's travels to the moon and the sun, there is in L'Autre Monde a realistic Voyage sur terre, as Brun calls it, which is no less interesting. The word "realism" must however be qualified for, especially when it is applied to the literature of Cyrano's time, it is often restricted to the description of the lowest and grossest events or people, and to works written in the worst language, as Magendie deplures in the Avant-Propos of his book on the seventeenth-century novel¹. In spite of Brun's squeamishness, there is little of that sort of realism in Cyrano's novel, which its author evidently conceived as a poetic fantasy and an intellectual satire. It is hardly necessary to say that he could, when he wanted, use the best satyrique style; one can find examples of it in his poem on his illness: "Mon Grand Ami, je suis malade"² (which recalls a sonnet by Ronsard on the same subject and written with the same savagely realistic detail³), and especially in his violent mazarinades or letters of abuse to Scarron or Montfleury.

The examples of realistic description which are found

1) Le roman français au XVII^e siècle de l'Astrée au Grand Cyrus, Paris, 1932.

2) Oeuvres libertines, I, p. XLIII

3) "Je n'ay plus que les os, un squelette je semble..." in Oeuvres Complètes de Ronsard, La Pléiade, 1938, II, p. 635.

principally at the beginning of the Sun are often corroborated by reflections in other parts of the book; thus the double function of the Selenites, both objects of satire and Utopian models, has already been noted.

The first striking fact about Cyrano's view of humanity is that he divides it in two sharply opposed classes, which he calls once "les habiles et les idiots"¹. We shall try to define these terms and to find their implications.

It appears at first sight that the majority of the people are the "idiots"; but many of them have excuses for being so, and their description is often sympathetic and affectionate; it is the properly realistic part of the book. As for the others, habiles, spirituels, esprités, Généreux, they are less described than idealised, and the account Cyrano gives of their life, although containing nothing impossible in itself to human nature, is in fact a Utopia, as will be shown.

Let us then first deal with such aspects of reality as can be found portrayed and usually satirized in L'Autre Monde, then with the picture of the happy few.

Cyrano's black bug in Le Pédant Joué was the Pédant himself; the peasant Gareau was there also but, although an insensitive character, he was not presented altogether unsympathetically. In particular, the accuracy of his portrait,

1) p. 102

especially of his language, the country jargon, heard for the first time on the stage, has often been noticed. Both types reappear in L'Autre Monde, with the same connotation: the pedants (and the priests who are in league with them) are satirized, the peasants are shown truthfully but not attacked, since they are felt to be ^a different sort of creature, whom one could not expect to behave like a civilized human being at all.

The first appearance of the peasants shows them hopelessly in the clutches of "la superstition"¹ which Cyrano hates with Lucretian passion; led by their vicar and duly protected by oral and written conjurations, they capture the hero whom they have been taught to believe a sorcerer. Their main interest in this feat is not spiritual victory over "la Beste" but the preservation of their crops, which would have been endangered by his spells, a belief of which des Barreaux had almost been the victim, as is recounted by Tallemant². Religious belief, although naïve, is very deeply rooted in the people's minds, and makes them an easy prey to cleverer and more sceptical people like Cyrano and their own evil vicar. During the arrest, they act in spite of intense fear, and even lose their traditional shrewdness in the upset, to the

1) p. IOI

2) ed. cit. , T.V, p.95

point of not being able to notice that the hero's horse is not lost for everybody: Mathurine, the vicar's servant, devoutly chases the pseudo-demon towards the stable of the vicarage "de peur qu'il n'allast dans le cimetière poluer l'herbe des trépasses."¹ Religion and self-interest, the main motives of these characters, are not coldly stated by the author but shown in their effects and in the words, wonderfully exact with their dialectal characteristics and awkward syntax, that they are made to pronounce. This gift for an exact observation of life also includes felicitous renderings of the peasants' comic gestures, and added to the quick tempo in which it is told, make of the arrest scene very enjoyable reading. Not romanesque enough to enjoy the insipid and unreal picture of country life given by the pastorals, Cyrano describes genuine people, and no psychological movement escapes him: neither the curious mixture of credulity and suspicion in the younger jailer's soul, when, offered by the so-called sorcerer twenty pistoles if he lets him out, he accepts, but still fears to see them suddenly transformed into oak-leaves, like so many presents from the devil², nor the readiness with which the passers-by hit the jailer himself whom they believe to be the escaped prisoner, when they are

1) p. 109

2) p. 112

promised money for it,"et d'autant qu'ilz se figuroient que leur récompense seroit mesurée aux outrages dont ils insulteroient à la foiblesse de ce pauvre dupé..."¹ The same accurate psychology, which makes this part of L'Autre Monde so interesting and so original, is applied to the hero himself, and particularly on two occasions: when he has escaped from jail and is obsessed by the idea that everyone knows it², and when he is disguised as a beggar, but dares not play the part and attracts attention instead of distracting it; he eventually overcomes his shame and is soon interested by the behaviour of the different people who give him money³.

First and foremost among those who pull the strings which manoeuvre the peasants (chiefly money and the quasi-magical aspect of religion) stands the vicar, Messire Jean, the villain of the novel, who is probably the same "ecclésiastique bouffon" of one of the Letters⁴. Whereas Cyrano feels too far above the lower classes to bear them any particular hatred (there is no trace of contempt towards the jailer and his assistant, but rather amusement, and even pity for their fate), the vicar has not a single redeeming feature. Even more possessed by the love of money than his

1) p. II3

2) p. II4

3) p. II4

4) "Lettre satyrique XI" in the Oeuvres Diverses, I654.

flock, he sues like a true Norman the Marquess of Colignac who is his lord, and having lost his case, seeks revenge on his guest, Cyrano, denouncing him to the Parliament of Toulouse. Later, trying to steal the donkey and the horse of the prisoner, he is killed by the horse and no one regrets him. His part is then exactly that of the Selenite priests who, luckier than he, succeed in having the hero condemned through their fanatical efforts; no reason is suggested for those, but one may suppose that, in the last analysis, it is again self-interest. This interpretation was already admitted, at least in the case of the pagan priests and their oracles, and was to be freely applied to the Christian priests in the following century. The Jesuits had been ridiculed in the Moon because of their old-fashioned theories and of their intolerance. The same mixture of ignorance and spite characterizes the "cinq ou six Barbes à longue robe"¹, members of the famous Toulouse Parliament², who come to Colignac and ask for the sorcerer to be delivered to them. Their appearance is as solemnly ridiculous as that of Perrin Dandin or Molière's³

1) p. 102

2) "Hé quoy, Monsieur, says one of them (p. 102), y a-t-il aucun Parlement qui se connoisse en sorciers comme le nostre?"

3) To emphasize this comical character Cyrano makes one of them use the famous phrase of the Pédant Joué, which Molière took later: "Car enfin, dites-moy, qu'alloit-il faire chez la Lune?"

doctors; but they are made odious by their callousness in supposing that Colignac is afraid only for his reputation, as well as by their cruelly hypocritical mention of the stake: "les choses iront à la douceur...., nous engageons nostre honneur à le faire brûler sans scandale."¹

Beside the description of country folk, priests, members of Parliaments, there is in L'Autre Monde abundant information on the way of life in Cyrano's time: on the state of the prisons, on the corruption of the jailers, on the rivalry between royal and municipal justice, on the customary behaviour of people suffering from infectious diseases, on the vogue of fireworks. Above all, there is an interesting picture of literary habits by a contemporary of the précieux and burlesque movements, at a time when literary life was very lively. Thus, mention is made of the prestige which was to be gained from a well-developed literary taste, and of the large number of snobs who accordingly pretended to enjoy books beyond their understanding: "Parmy les gens qui lurent mon livre, il se rencontra beaucoup d'ignorans qui le feüilletèrent. Pour contrefaire les esprits de la grande volée, ils applaudirent comme les autres jusqu'à battre des mains à chaque mot, de peur de se méprendre..."² Naturally, these people are the first

1) p. 102

2) p. 101

to condemn the book when opinion changes. Reputation is obtained at first by conversations in the salons, and books are read there as their composition progresses, for it was at the time considered fashionable to know and discuss a work before it was printed. The beaux-esprits divide in two factions when opinion differs, and this in its turn enhances the reputation of the book. Thus about Cyrano's tale of his first travel, he says, "chaque famille se divisa, et les intérêts de cette querelle allèrent si loin, que la ville fut partagée en deux factions, la lunaire et l'Antilunaire".¹ which recalls the famous querelle des sonnets between Uranistes and Jobelins, which had just taken place as Cyrano was writing, in 1649-1650, the querelle du Cid, later the cabale de Phèdre between the friends of Pradon and Racine, and other such episodes of literary warfare. When the book in manuscript attracts too many enemies, it is not published immediately, but circulated clandestinely². It seems likely that Cyrano, without describing specifically any real sequence of events, is alluding here to the fate of his own book, which was known in manuscript during his lifetime, at least among his friends. The portraits to which he alludes in his novel might be those which still exist to-day; but even if they were executed

1) p. 102

2) p. 102

in his lifetime one must not look to them for accuracy, since the engravers, hurrying to sell while the vogue lasted, had not even seen their sitter!

Finally, it would be interesting to know what the writer of fantastic travels thought of the real travels which were so eagerly read in his time. Domingo Gonsales, which inspired Cyrano, began by a long description of a sea-voyage. The only comparable feature in Cyrano's novel is his trip to Canada, for he chooses to land, when he returns, in classical Italy, perhaps because of the scepticism he expressed, as has been seen, about the enrichment an honnête homme could derive from travels to savage lands. The picture of the indigenous Canadians, whether or not based on real accounts, is not flattering. Besides, they may already be lost to the life Cyrano thinks worth while, since the Jesuits are there, with all their intellectual and scientific prejudices. It seems that one must find, in the opinion of the Selenites about Cyrano and his Spanish companion, an echo of the prevalent ideas on the New Continent: "Aussi tost les nouvelles coururent par tout le Royaume qu'on avoit trouvé deux hommes sauvages plus petits que les autres à cause des mauvaises nourritures que la solitude nous avoit fournies..."¹ It was

1) p. 52

generally thought that all things, plants, animals, men, were smaller in America, whatever the reason given to explain this phenomenon. Probably also, the terror experienced by these savages when they see our traveller, covered with his dew-phials and hardly touching the ground, recalls the way in which they welcomed the first Spaniards. It is difficult to know whether Cyrano was acquainted with travellers' tales; one may suppose he was, being generally well-read. He mentions Greenland, and the presence in the sun of "condurs"¹.

One must then claim for Cyrano's novel a place among the works which constitute, in handbooks of literature, "la réaction réaliste": Francion, Le Page Disgracié, Le Roman Comique, Le Roman Bourgeois, three of which were published later than L'Autre Monde. The realistic passage is relatively short in the latter book, but it is original, lively, crammed with interesting and picturesque details, and far better written than all of these works, as a study of Cyrano's style will show. One must regret once more his early death, which perhaps prevented him from being one of the best French realistic writers of his century; he obviously enjoyed recounting his experiences among men, and certainly had an eye for the picturesque and the amusing. One must however discern

1) pp. 179 and 194

carefully the spirit in which realistic passages are written. Their purpose is not to establish that "low events" are just as interesting as the adventures of royal protagonists: Cyrano belonged too much to his century to be able to think like that. Besides, the pride he took in his own nobility¹ made him separate himself carefully from the plebs, and even the noblesse de robe, as the scene with the members of the Toulouse Parliament shows. Thus there is, in the same realistic passage of L'Autre Monde, an idealised description of the way of life of Cyrano's equals: the few months he spends with his friends Colignac and Cussan.

These friends, who have all the qualities of the "véritable Généreux"² are noble, this goes without saying: Colignac is an earl, Cussan a marquess³. They live in the middle of their lands, in their castles which can withstand a siege if necessary⁴. They live in retirement, except for the presence

1) One of his portraits bears the inscription: "Savinianus de Cirano de Bergerac, nobilis Gallus..." but this nobility was proved false in 1668, and his brother Abel had to pay a fine (see Oeuvres Libertines, I, p. CI). In the anonymous Combat de Cirano de Bergerac avec le singe de Broché, au bout du Pont-Neuf, published in 1704, one reads that Cyrano "se vantoit de tirer son origine des Mages", although only in jest. "L'éthimologie comique" of the name Cirano, which follows, is a joke, but Cyrano was convinced that he was noble, and behaved accordingly.

2) pp. 56 and 86

3) p. 103

4) p. 103

of a few friends who visit them, and for their own visits to the salons of the next town, and live according to the true Epicurean principles which Cyrano, following Gassendi, deemed perfectly honourable. They have a psychology and an art of pleasure which consists mainly in varying the activities and abandoning them before boredom sets in: "Les plaisirs innocens dont le corps est capable ne faisoient que la moindre partie de tous ceux que l'esprit peut trouver dans l'étude et la conversation, aucun ne nous manquoit; et nos bibliothèques unies comme nos esprits appeloient tous les doctes dans nostre société. Nous meslions la lecture à l'entretien, l'entretien à la bonne chère, celle-là à la pesche ou à la chasse, aux promenades; et, en un mot, nous jouissions pour ainsi dire et de nous-mesme, et de tout ce que la Nature a produit pour nostre usage, et ne meslions que la Raison pour bornes à nos désirs."¹ Books play an important part in the life of the hero; it is because he wanted to ride slowly and accompany his library that he is separated from his friends and captured; when he sees the comfortable cell that his friends have obtained for him, he comments: "Il ne me manque rien sinon des livres."² Theoretical, and even practical, interest is taken in science: one of Cyrano's books is Descartes'

1) pp. 103-104

2) p. 120

Principia¹, and he had spoken to the governor of Canada of "une lunette fort excellente"² that he owned. He has brought into his cell several of the contrivances which were then invented, and which he calls "gentilleses de mécanique", such as "une horloge à vent, un oeil artificiel avec lequel on voit la nuit, une sphère où les astres suivent le mouvement qu'ils ont dans le Ciel."³ Now this type of life was certainly led by people whom Cyrano had known intimately; it is that of the libertins érudits who come to life again in M. Pintard's book:⁴ the Dupuy brothers, Lhuillier, La Mothe le Vayer, above all Peiresc whom Cyrano perhaps met, but of whom he certainly had heard. It seems very likely that the Daemon and the host's young son, in a passage of the Moon which recalls the erudite conversations Cyrano's friends had in their learned societies, evoke to some extent Gassendi and Chapelle, Lhuillier's illegitimate son⁵. It is certainly in those groups that Cyrano formed his conception of an ideal life, the very life of Rabelais' Thélémites, utterly pagan but governed by reason, and

1) p. 109. The episode in which the peasants, seeing the geometrical drawings, believe them to be magical circles may have been suggested to Cyrano by the fifth chapter of Naudé's Apologie pour les grands hommes soupçonnés de Magie (1625): "Que les mathématiques ont fait soupçonner comme magiciens beaucoup de ceux qui les ont pratiquées".

2) p. 16

3) p. 123. Many of the érudits, and some of the nobles, owned such costly objects. The "oeil artificiel" may be a lamp.

4) op. cit.

5) pp. 60-61

in which the pleasures of the mind and those of the body are merged, as Nature urges us to do¹. Pleasure becomes then the guide of reason, since it indicates the requirements of Nature, and that this optimistic view of man excludes the possibility of disobeying the dictates of reason. Like Sorel, Cyrano wants to teach men how to live "comme des dieux".

There is nonetheless an essential difference between Cyrano's description of those who led that sort of life, and reality: Cyrano's characters are nobles, which the great majority of the libertins érudits were not; they often were magistrates, like those who are made fun of at the beginning of the Sun. Actually, those who practised this harmonious mixture of pleasures which Cyrano advocates were on the whole few and far between: the members of the Tiers-Etat cultivated the sciences and cared little for fencing and dancing, the nobles were more often than not content with the grosser aspect of Epicureanism. There seems to be in Cyrano's selection more than the aesthetic tenet of putting preferably noble characters on the stage; it indicates in him the belief, contrary to facts he could well observe, that

1) At the time of the lessons with Gassendi, Cyrano also had lessons in dancing and fencing, see Oeuvres Libertines, pp. XXXVII-XXXVIII. This is more the ideal of the Renaissance than that of the libertins érudits, and recalls a sonnet by Du Bellay:

Je me feray sçavant en la philosophie,
 En la mathématique et médecine aussi....
 Du lut et du pinceau, j'esbateray ma vie
 De l'escrime et du bal... (Regrets, XXXII)

humanity is to be divided in two classes: "les habiles", "les Généreux" in whom all the qualities, mental and physical, are to be found, and the others, commoners, "sots", who cannot possibly enjoy a good piece of writing, and who are given to "superstition" like the others to science. It is then essential to protect oneself against the attacks of this second class, the pedants and the rabble, who could become dangerous. The first reaction of the nobleman when he is attacked is to laugh: thus Colignac when the members of the Parliament visit him, and Cyrano before he is arrested. They must afterwards renounce their optimism¹. The behaviour they must observe had already been defined by Cyrano in the Lettre Contre les Sorciers: "Il doit suffire au peuple qu'une grande âme fasse semblant d'acquiescer aux sentimens du plus grand nombre pour ne pas résister au torrent, sans entreprendre de donner des menotes à sa raison; au contraire un Philosophe doit juger le vulgaire, et non pas juger comme le vulgaire."²

The highest feeling which can be experienced by the favourites both of nature and of society, and at the same time the highest virtue, is friendship, as has been said. Such as it is described in the tale of the arbres-amants, it is identical to love in nature, but nevertheless superior to it, since it is

1) pp. 102 and 108. Cyrano's feeling is like La Fontaine's in "Démocrite et les Abdéritains" (Fables, VIII, 26)

2) Œuvres Libertines, II, 213

addressed to a male. This Epicurean opinion was held by many of the "libertines"¹, but rarely with the intensity which Cyrano displays in praising it and in showing its effects in his novel. A bird is condemned in the sun for not having made a friend in six years, a crime so black that another bird can hardly bring itself to voice it; among the Selenites, a man is condemned to die in his bed, instead of being allowed suicide like the others, because he has been envious and ungrateful,² defects which were also punished in the City of the Sun. The nightingale falls in love through admiration of the beautiful and learned singing of a daemon who is metamorphosed and, like a Cornelian hero, would not think he deserves any love in return if he did not conquer the esteem of the other one by dying for him³. On the earth, friendship is hardly less ardent. Colignac is more concerned with his friend's glory than with his own; the civilities are spectacular and time-consuming (like those of Molière's petits marquis but more sincere): "Transporté de ravissement, il me sauta au col, et après m'avoir baisé plus de cent fois, tout tremblant d'aise, il m'entraîna dans son chasteau..."⁴ One must make clear that Cyrano was believed to be dead when his friend saw him. The same tragic

1) See for instance Saint-Evremond, in a letter to the Duchesse de Mazarin, quoted by Adam, op. cit., T.V, p. 205. He admires the preference given by Epicurus to friendship.

2) p. 85. Ungratefulness is "un vice de coquin".

3) pp. 142 ff.

4) p. 100

circumstances apply to the following scene which occurs in prison: "...si-tost que je fus entré deux hommes me saisirent que d'abord je ne pûs connoistre, à cause qu'ils s'estoient jettés sur moy en mesme temps, et me tenoient l'un et l'autre la face attachée contre la mienne. Je fus longtemps sans les deviner; mais les transports de leur amitié prenant un peu de trêve, je reconnus mon cher Colignac et le brave Marquis. Colignac avoit le bras en écharpe, et Cussan fut le premier qui sortit de son extase."¹ This yearning for an ideal and complete life, which probably was often frustrated, explains many of Cyrano's quarrels with his friends. His noble acquaintances, whom Le Bret enumerates in his Preface, were no doubt less learned than he, and possibly abandoned him when he became poorer and poorer; the libertins érudits perhaps did not feel much sympathy for him² (even if the story of his imposing himself, sword in hand, on Gassendi's circle is disbelieved) and this is surely a pity, for their interests corresponded to a deep need of his nature, and his seriousness could not be satisfied with the company of Dassoucy or Scarron. There are proofs that he tried to carry his ideal of friendship into life:³ his praise of Tristan, the

1) p. II8

2) The Daemon lavishes praise on La Mothe le Vayer, saying that he lives as a philosopher as much as Gassendi writes as one. In fact, La Mothe's character seems to have been less admirable; see Pintard, op. cit., pp. 131 ff.

3) To explain Cyrano's reserve with women, as is suggested by Le Bret's Preface, Lacroix (op. cit., p. XXVII) cites "une particularité secrète que Dassoucy nous laissè deviner". He identifies the (see next page)

testimony of Le Bret, and all the duels he fought as a second, and which entitled him to say like Colignac speaking of defending his friend: "en tous cas je sçay fort bien comme on meurt glorieusement."¹

Optimism on the subject of human nature, as well as the establishment of the sovereignty of reason over it, seem to lead naturally to a self-government, at least for those who are worthy of it. What are Cyrano's ideas on the subject of royal authority? They have been said to be contradictory. Cyrano seems to be for absolutism in the Lettre contre les Frondeurs, but against it in L'Autre Monde. It could hardly be otherwise in the first case, since Cyrano very probably was paid for writing the Letter by Mazarin; but there is perhaps more consistency in his views than would seem at first sight. Cyrano's mazarinades attacked only the private life of the Cardinal, although the Lettre contre les Frondeurs shows that he knew the numerous points on which the Minister was criticised; but in this Letter, his declarations against democracy are unambiguous: "Je soutiens que la Gouvernement populaire est le pire fléau, dont Dieu afflige un Etat, quand il le veut châtier."² Even if it was written by command, this does not contradict the ideas expressed in L'Autre Monde,

1) p. II9

2) Oeuvres libertines, II, p. 287

over from previous page: Socrate of the Entretiens Pointus with Cyrano, and Lachèvre agrees (Oeuvres Libertines, II, p. 292) without drawing the obvious conclusion.

since the reason Cyrano gives for it is the same division of humanity in two unequal classes as we have shown to exist in the novel: "N'est-il pas contre l'ordre de la Nature, qu'un Batelier ou un Crocheteur soient en puissance de condamner à mort un Général d'Armée...?" This state would be "chaos". This aristocratic prejudice, which makes nonsense of Christian humility and charity, is a powerful motive in the young Selenite's refusal of the belief in resurrection: "Quoy! vous? Quoy! moy? Quoy! ma servante ressusciter?"¹

True, paternal authority is attacked in the novel and defended in the Letter as a mark of the necessity for a chief at every level; but it is more the protracted tyranny of the father than his authority as such which is criticised. Thus there is no republic in Cyrano's novel, but there is an ideal government: that of the Birds, who have a king, and obey him, but have chosen one so weak that he cannot become a tyrant. This example does in fact occur in the selfsame Lettre contre les Frondeurs: "O stupide Vulgaire!.... prends garde de tomber dans le malheur des oiseaux de la Fable², qui ayant demandé un chef, ne se contentèrent pas du gouvernement de la Colombe que Jupiter leur donna, qui les gouvernoit paisiblement, et crièrent tant après un autre, qu'ils obtinrent

1) p. 94 - The italics are mine.

2) See La Fontaine, "Les Grenouilles qui demandent un Roi" (Fables, III, 4)

un Aigle qui les dévora tous."This tells us the source of this original government. One may also notice that the Daemon, eager to make mankind benefit from his experience, and choosing the most eminent men of every age, attaches himself to Brutus and Cato the Younger¹. The ideal state seems then to be for Cyrano monarchy, if the sovereign is either reasonable or weak enough not to become a tyrant. One may suppose that gentlemen like Colignac, Cussan and "Dyrcona" would expect not to be disturbed by him in their Epicurean pursuits; they could make theirs the indictment of man's servile nature, pronounced by our hero's counsel, when he is being judged by the Birds: "Ils sont... si enclins à la servitude, que de peur de manquer à servir, ils se vendent les uns aux autres leur liberté... (....).... ces pauvres serfs ont si peur de manquer de maîtres, que comme s'ils appréhendoient que la liberté ne leur vint de quelque endroit non attendu, ils se forgent des Dieux de toutes parts, dans l'eau, dans l'air, dans le feu, sous la terre; ils en feront plutôt de bois, qu'ils n'en aient..."²

There is another point on which Cyrano feels strongly: the evil and absurd quality of war, all the more if ideas of honour are mixed with it. Here again, his ideas do not appear

1) p. 34

2) p. 159

very consistent, seeing his reputation as a duellist; it may of course be pointed out that he fought mainly as a second. Whatever the reason for his change of opinion, pacifism is a distinct trend of L'Autre Monde. The sensible lady-in-waiting inveighs against the carrying of a sword, and the other Selenites justify her in a passage probably borrowed from Charron's Sagesse; the magpie calls war "le canal de toutes les injustices", and it is ridiculed by the absurd way the Selenites have to make it, striving to achieve perfect equality on both sides before fighting¹. Cyrano boasts of the way it is made on the earth, but the lady-in-waiting answers that, since the pretext of the chiefs is the rightness of their cause, "Pourquoy lors...ne choisissent-ils des arbitres non suspects pour estre accordez?" There followed in the manuscript a very bold passage, in which the war against Spain (and Austria) was condemned in unequivocal terms: "Et cependant qu'ilz font casser la teste à plus de quatre millions d'hommes qui valent mieux qu'eux, ilz sont dans leur cabinet à goguenarder sur les circonstances du massacre de ces badauds; mais je me trompe de blasmer ainsy la vaillance de vos braves sujets; ilz font bien de mourir pour leur patrie; l'affaire est importante,

1)p. 56

car il s'agit d'estre le vassal d'un Roy qui porte une fraize ou de celuy qui porte un rabat." This, which was suppressed by Le Bret (who did not need such prompting), was already the theme of the Remonstrances des Trois Etats à la Reine Régente pour la Paix, addressed by Cyrano to Anne d'Autriche. Protestations and supplications became even more frequent after Cyrano's death, when the wars of Louis XIV followed those of the Regency.

Such are the picture of Cyrano's time, and the criticism he had to offer; the former is excellent, the latter is often bold and stimulating. Both recall one author more than any other: La Fontaine, also a libertin for the best part of his life. Beside metaphysical questions like that of the animals' souls, on which both men hold the same opinion and defend it similarly, by passionate pleas and ingenious descriptions, there are many ideas and tastes that they have in common, in spite of an obvious difference in temperament. La Fontaine also is interested in the scientific developments which take place before the eyes of his contemporaries, frequents learned circles and knows which are the problems of the day. He detests "le vulgaire" and celebrates the charms of friendship; he enjoys describing contemporary life, but is also capable of experiencing the delights of solitude. Can

one suggest that in many instances Cyrano is not unworthy of the more famous author who lived a little after him, who certainly knew his works and perhaps borrowed ideas from them, as the frequent coincidences seem to indicate? Cyrano was writing in prose, a medium much less perfect than verse in his time, but for which he was unquestionably gifted. The richness and density of his observations, the vivaciousness of his style, certainly excel those of Sorel, Scarron, Furetière and Tristan. Had he lived longer, he might have written the great realistic novel of his century.

9 - Style and aesthetics in L'Autre Monde

The classical ideal sometimes already appears in L'Autre Monde. When the hero wakes up in the sun, he first sees a wonderful tree, then watches it disintegrate into several little men, who in turn form a ballet and soon are united again, in the shape of a normal-sized man whose description follows: "un jeune Homme de taille médiocre, dont tous les membres estoient proportionnez avec une simétrie où la perfection dans sa plus forte idée n'a jamais pû voler."¹ One can find other instances in the book where "médiocres", or average, proportions, as well as the harmony of the parts, are praised as being the only way in which perfection can be obtained. Again, the belief in a universal human nature, and therefore in common sense and a common good taste in literary matters (as seen in the study of Cyrano's epistemology), the assimilation of the Beautiful and the True, and the feeling that outside those "on (est) toujours éloigné du facile", show in Cyrano a budding classical theorician.

On the whole, however, Cyrano's genius is eminently pre-classical. Comparatively recent studies² have done justice to this long-misunderstood period and outlined the baroque view of the world, with its manifold aesthetic expressions, nearly

1) p. 141

2) See for instance M. Raymond, Baroque et Renaissance poétique, Paris, 1955; J. Rousset, La littérature de l'âge baroque en France, Paris, 1953; O. de Mourgues, Metaphysical, Baroque and Précieux Poetry, Oxford, 1953.

all of which are represented in Cyrano's work. He had already given proof of a surprising versatility when he began L'Autre Monde; no other writer has had the same uncommon literary career: a comedy, a tragedy, letters which, although hallmarked by the mannerisms of the period, are nevertheless pleasantly varied, all of which had some distinction in subject or style in spite of Tallemant's cursory judgment of La Mort d'Agrippine as "un pur galimatias"¹. The same versatility is found again in L'Autre Monde where the tone is as varied as the subject-matter: ironical, dialectical, or full of enthusiasm and veneration, which does not exclude a deeper kind of unity, to be found in the very tone of tale-telling. The impression of rapidity which was noticed in Cyrano's way of telling a story is partly explained by the command he has of the language. Nowhere does one feel that he is dominated by his subject, be it philosophical discussion or comic description; on the contrary, the impression is that he could at leisure concentrate on choosing the most effective words. This is chiefly why he could have made a good vulgarizer of knowledge, scientific or philosophic, in spite of Mr. Aldington's contention that his style becomes confused when he tackles similar subjects². For not only

1) ref. cit.

2) In, Introduction to Cyrano de Bergerac's Voyages to the moon and the sun, London, 1923.

can he imagine the way the ignorant person will feel and think, but he can also find similes, familiar and often amusing, which will best appeal to him. The best example of this is his explanation of Copernicanism to the governor of Canada, who could have said like Cyrano himself of one of the daemons: "Il continua sa preuve et l'appuya d'exemples si familiers et si palpables qu'enfin je me désabusay d'un grand nombre d'opinions mal prouvées dont nos Docteurs aheurtés préviennent l'entendement des foibles."¹

For such a task of vulgarization, Cyrano is aided by his command of the art of dialectics. No doubt, the young Savinien had been trained like every other student in the technique of disputation, first by the country priest whom he compared to Théophile's Sidias, and later by the same Grangier whom he ridiculed in Le Pédant Joué. There is in fact a lot of disputing in L'Autre Monde, the main subject of which is the conversion of "Dyrcona" and the readers themselves to the new philosophy and the pantheistic leanings of the author. It often resembles the Renaissance dialogues, but with the art added. The demonstrations progress pitilessly to the desired conclusion. Listen to the Daemon's defence of the Selenite custom of respecting youth more than age; the articulations of his speech are

1) p. 145

uninhibitedly conspicuous: "Dites-moy je vous prie si.... Pourquoi donc.... Si vous adoriés.... Pourquoi donc... Pourquoi donc... Enfin lorsque... Concluez par là mon fils..."¹ Listen also to the hero arguing with the governor: "Que si vous me demandés... Car comment... Or le feu... De mesme ainsy le Soleil..."². The lady-in-waiting's refutation of the honourable character of wars and duels³ is just as faultlessly constructed and implacably delivered. Often, there is no dialogue proper, but a well-articulated monologue where the speaker anticipates and answers the objections: "Mais, dirés-vous... Oüy, me dirés-vous..."⁴ These pseudo-objections are sometimes voiced in the direct form, usually with an ironical intent: "Dirés-vous: "O le grand Miracle! à chaque dé il est arrivé mesme point, tant d'autres points pouvant arriver; ô le grand Miracle! il est arrivé en trois dez trois points qui se suivent; ô le grand Miracle!..."⁵ All the numerous characters of L'Autre Monde defend their point of view at the slightest provocation, and they all show the same impeccable knowledge of the art of argumentation. This was indeed a trend which was already established in the novel, often resulting in the destruction of all credibility when well-ordered analysis replaced the true expression of emotion. But this rational way of speaking, out of place in a

1) pp. 61-62

2) p. 15

3) p. 56

4) p. 63; see also pp. 15, 69 - 5) p. 77

romanesque novel, is not so in L'Autre Monde where it sounds, besides, more like impassioned speech than cold reasoning. From this, there is only one step to the parody of stiff juridical style which occurs in the Histoire des Oiseaux, where it stresses all the more the unreliability of the contents: (this creature is a man) "secondement en ce qu'il rit comme un fol; troisièmement en ce qu'il pleure comme un sot, quatrièmement, en ce qu'il se mouche comme un vilain."¹ In fact, gifted with a memory for speech worthy of Proust, Cyrano excels at reproducing in extenso the words of his characters, however varied. Accurate observation of ways of speaking does not go without accurate observation of character, and thus, these passages are little masterpieces of comedy. There were already in the Moon some convincingly drawn soldiers: "Oh, oh, me dirent-ils, me prenant par le bras, vous faites le gaillard! Monsieur le Gouverneur vous conoistra bien, luy!"², but the most remarkable passages are at the beginning of the Sun. Here is first the comically contrasting words of the peasant who, covered with missalpages, tries to arrest Cyrano: "Satanus Diabolas, cria-t-il tout épouvanté, je te conjure par le grand Dieu vivant..." But frightened to see himself alone with a supposedly

1) p. 157

2) p. 10

powerful sorcerer, he cannot remember the end of the pompous conjuration he has learned by heart and, Cyrano adds, "d'un regard ny doux ny rude, où je voyois son esprit floter pour résoudre lequel seroit plus à propos de s'irriter ou s'adoucir: "Ho bien, dit-il, Satanus Diabolas, par le sangué! je te conjure au nom de Dieu et de Monsieur S. Jean, de me laisser faire, car si tu groüilles ny pied ny pate, Diable t'emporte, je t'étriperay."¹ Not only do the words sound true, but the feelings are realistic, especially the naïve anthropomorphism which the vicar is exploiting, like Cyrano later. Another situation where comedy arises out of such a contrast is that ⁱⁿ which the jailer tries in vain to find what money the prisoner might have, and flies in a rage when he can discover none: "Ho! vertubleu! s'écria-t-il, l'écume dans la bouche, je l'ay bien veu d'abord que c'estoit un sorcier, il est gueux comme le Diable. Va; va; continua-t-il, mon camarade, songe de bonne heure à ta conscience." Frightened by the possible consequences of the jailer's spite, Cyrano nimbly produces one of the coins he had hidden and offers it to him: "Il la receut fort gracieusement, et me protesta que mon désastre le touchoit." Two further coins, and the jailer's feelings are completely altered: "Ravy de ma prodigalité, il

1) pp. 107-108

me promet toutes choses, m'embrassa les genoux, déclama contre la Justice, me dit qu'il voyoit bien que j'avois des ennemis, mais que j'en viendrois à mon honneur, que j'eusse bon courage, et, qu'au reste, il s'engageoit auparavant qu'il fut trois jours de faire blanchir mes manchettes."¹ This scene could have been lifted off and put into a comedy, if such things as jails could then have been put on the stage.

One more rung down the social ladder is one more step towards complete incoherence in speech and inability to express the simplest feelings. Here is the "puissant rustaut" whom the jailer has sent to keep Cyrano company, expressing his appreciation of the prisoner's lack of snobbishness (he was dipping his fingers in the soup like him - "travaillant d'après l'original" - to win him over): "Morguiene, s'écria-t-il, vous estes bon frère! On dit qu'ou savez des envieux, jerniguay sont des traistres; oüy testiguay sont des traistres: hé qu'ils y viennent donc pour voir. O bien, bien, tant y a, toujours va qui danse."² Cyrano often imagines snatches of conversation between trees or animals: "Holà, fourchu, dormez-vous?"

"Non, fraische écorce, pourquoi?"³

This gift for realism explains why Cyrano, the friend (before he quarrelled with ~~him~~) of Scarron, and of **Dassoucy**,

1) p. IIO

2) p. III

3) p. I65. See also the Histoire des Oiseaux.

L'Empereur du Burlesque, uses so rarely the latter device as a comic source. For the burlesque is the stiffened, degenerate and monotonous aspect of the much vaster conception of the grotesque, itself, as has been seen, banned from L'Autre Monde. The burlesque, significantly enough, occurs in that novel only in relation to the biblical characters¹, showing thereby how much its vogue may have helped to spread irreligion by ridiculing formerly sacrosanct characters .

Even outside these purely comical scenes, Cyrano's style is never flat, and always rich in apt metaphors. He describes, for instance, the threats of the members of the Toulouse Parliament as "tonnerres de parchemin"². The syntax, sometimes heavy but always expressive³, as well as the abundant vocabulary⁴, sometimes recall Montaigne. Many words used by Cyrano, such as "pomme escachée, voix arborique"⁵, although more pleasant to us because of their old-fashionedness, were nevertheless picturesque when they were written. Cyrano's imagination readily supplies him with concrete ways of presenting his case: "A-t-elle fait pacte avec nostre corps, he asks of the soul, que, quand il auroit un coup d'épée dans le coeur, une balle de plomb dans la cervelle, une mousquetade à travers le corps, d'abandonner aussi tost

1) Elijah's tales are a kind of "Genèse en belle humeur". This usual reserve of Cyrano in his use of the burlesque did not prevent Boileau from writing his famous couplet about him (Art Poétique, IV, l. 39.

2) p. 103 - 3) See for instance p. 38.

4) See p. 161 e.g. - 5) pp. 10, 168

sa maison trouée?"¹ And arguing against the belief that respect for his father lengthens the life of the dutiful son, he asks again: "Quoy! Ce coup de chapeau dont vous chatoüillés et nourrissés la superbe de vostre père crève-t-il un abcès que vous avez dans le costé, répare-t-il vostre humide radical, faict-il la cure d'une estocade à travers vostre estomach, vous casse-t-il une pierre dans la vessie?"² Those are already Voltaire's style and devices, and it is no coincidence that the sceptical passages are also those in which Cyrano's verve is at its best. To understand all the convincing force which can be lent to an argument by a lively and concrete style, one has but to compare a passage of the Moon with its source in the Berger Extravagant: "N'y a-t-il rien plus vilain, Sorel asked flatly, que de pourrir et d'estre mangé des vers? N'est-ce pas une chose abjecte que de se donner au plus bas et au plus grossier des élémens...." But Cyrano amplifies this, beginning, as he often does, with a familiar exclamation which expresses the emotion of the speaker: "Hé! par vostre foy, pouvez-vous concevoir quelque chose de plus expouvantable qu'un cadavre marchant sur les vers dont il regorge, à la mercy des crapeaux qui lui maschent les joües, enfin, la

1) p. 93

2) p. 63

peste revestue du corps d'un homme? Bon Dieu! la seule imagination d'avoir, quoyque mort, le visage embarrassé d'un drap, et sur la bouche une picque de terre, me donne de la peine à respirer!"¹ One must be as prejudiced as Lachèvre to ignore all that has been brought by Cyrano and to point merely that Sorel's works are for him "une mine inépuisable." Cyrano, besides, did not need to read Sorel to be aware of this ancient theme, developed already by Charron.

Often, two ways of expressing the same thought present themselves; Cyrano keeps both, and the ample periodic movement lends force and passion to the discussion between the characters.²

Above all, this gift for the concrete is useful to make the reader of a fantastic voyage see the strange situations which are described to him, and realise all their implications. The hero, ascending to the sun in his machine, finds the speed suddenly reduced and in his emotion reverts to Ptolemaic thinking, supposing that he has met the crystalline sphere! "Je commençay à craindre d'y demeurer enchassé", he says.³ Later, wanting to resume his travel, he sees his machine hopping here and there when the heat of the sun attracts it, and tries to get hold of it: "et certes, he

1)p. 85 and note 3.

2)See several instances on p. 63

3)p. 134

confesses, c'estoit un passe-temps agréable de contempler cette nouvelle façon d'aller à la chasse; car quelquefois que j'avois presque la main dessus, il survenoit dans la boule de verre une légère augmentation de chaleur qui, tirant l'air avec plus de force, et cet air devenu plus roide enlevant ma boiste au-dessus de moy, me faisoit sauter après comme un chat au croc où il voit pendre un lièvre."¹ L'Autre Monde is full of such evocative similes which come naturally to Cyrano's mind and delight the modern reader so much more than the elaborate style of the Lettres; sometimes, picturesqueness and poetry are mixed in them, as in the description of his beggar's costume, "cent guenilles qui, comme un bransle de petits gueux, dansoient à l'entour de moy..."² or the description of the tiny man holding on to Cyrano's hair "et s'y donnant l'estrapade", a passage worthy of Swift.³ Finally, another proof of Cyrano's ability to write with ease on every subject is given in the tale of the "arbres amants" where his elegant, fluent style, and his skill at telling scabrous stories announce the writers of the eighteenth century, Laclos or the Voltaire of the Contes.

If his original use of similes and metaphors singles Cyrano out from his contemporaries, there are on the other

1) p. I33
 2) p. II4
 3) p. I40

hand, many instances when he is particularly indebted to his time for literary tastes and standards. The baroque outlook, such as it has been rediscovered nowadays, as an entity separate from classicism or romanticism¹, certainly helps to connect some traits in L'Autre Monde which, being unequally evident, might otherwise lose greatly in significance.

Firstly, it is impossible to notice the most striking feature of the Selenites' world and the main satirical device in Cyrano's novel, the systematic reversal of all the customs of the earth, without remembering this to be a favourite baroque theme. There had been in Paris a ballet in 1625 called Le Monde Renversé, and by no means the only one in using this appealing theme. One could hear in it these words:

Du monde renversé l'éclat
Est de changer l'ordre et l'état
Et loger tout dans la surprise...²

One could also see, inter alia, a schoolboy flogging his master, as an example of the habits of this world, with an ensuing disruption in the public's thinking habits caused by the temporary annihilation of traditionally accepted patterns. Now the Moon had been commented on by Royer de Prades in a sonnet written while it was circulating in

1) M. Raymond's opinion (against aestheticians like D'Ors) that the baroque is distinct from both classicism and romanticism is borne out by Cyrano's personality as a man and a writer; he shows unmistakable baroque trends, but no romantic ones.

2) quoted in Rousset, op. cit., p. 27

manuscript, in very baroque terms which recall the verse in the ballet:

...l'inconstante Fortune
 Semble avoir trop d'empire en celuy de la Lune,
 Son pouvoir n'y paroist que pour tout renverser....¹

and one remembers the Selenites' "burlesque pédagogie"². The likelihood, mentioned by Rousset, that this particular aspect of the baroque mind was one of the factors which brought about the vogue of the burlesque is reinforced by an examination of the use Cyrano makes of it: for the essence of the Selenites' customs is to surprise and amuse the reader by their apparent absurdity. Whether there is a deeper intent, chiefly shown in their relatively easy rationalization, has already been discussed. Cyrano is the first in having applied, almost instinctively, as it seems, a very successful device for spectacular entertainments to the criticism of human institutions. This has not been understood by Brun, who treated all baroque writers, after Lanson, like "attardés et égarés"; it does not seem to have been evident to Cyrano's contemporaries either and this aspect, one of the most fertile of L'Autre Monde, has had an influence without being clearly appreciated.

Closely related to this is the delight in change and metamorphosis, the importance of which has already been

1) Oeuvres Libertines, p. LXXX

2) p. 74

stressed. Cyrano waking up in the sun finds himself lost in a world of ever-changing shapes which is the very world of the ballet. This is rationalized by the king of the little men, but there is little doubt that the whole atmosphere, and these beings who are not "only what they seem to be", has been suggested to Cyrano by the contemporary relish for the changements à vue. These metamorphoses are in fact possible only through a kind of ballet, and the giant who "se sentit estre" recalls the inchoative world described for instance by d'Aubigné:

Ici, un arbre sent des bras de sa racine
Grouiller un chef vivant, sortir une poitrine;
Là, l'eau trouble bouillonne, et puis, s'éparpillant,
Sent en soi des cheveux et un chef s'éveillant...!"¹

The myth of Daphne, complacently described by many baroque writers, is evoked in several passages of the tale of the "arbres amants", and the Daemon's startling exchange of bodies gives the Selenites the same surprise that Cyrano's contemporaries enjoyed. "Certes, he says in his novel, ma surprise fut si grande que, dès lors, je m'imaginé que tout le globe de la Lune, tout ce qui m'y estoit arrivé, et tout ce que j'y voyois, n'estoit qu'enchantement..."²

The symbol which was often chosen for this world in movement was that of flame; it is a common theme in the collections of

1) Les Tragiques, Livre VII (Jugement), 5, lines 671-674

2) p. 39

poems, especially around 1640. One could in fact already read in the Cabinet des Muses, recueil collectif published in 1619 these lines by Motin:

Mon esprit est léger car ce n'est rien que flamme,
Et si pour tout le monde il n'est qu'une seule âme,
L'Âme de tout le monde est le seul mouvement..."¹

Thus an old idea, revived by the Renaissance Italian philosophers and later Gassendi, coincided with a widespread baroque theme to suggest to Cyrano his romanesque synthesis.

Finally, a few elements can be traced to the same source, such as the refined cruelty of some descriptions on which Cyrano dwells. Agrippine already said to Séjanus:

Tu vas sentir chez toi la mort s'insinuer
Par tout où la douleur se peut distribuer...
Et de ton dernier coup la Nature en suspens,
Promènera la mort en chacun de tes sens..."²

In the same way, the Birds condemn Cyrano to be eaten by the weakest of them (that is to say the insects), but with refinements of "malice", the description of which verges on the pun and is typical of the period in content and in form: "on assigna mes yeux aux Abeilles, afin de me les crever en me les mangeant; mes oreilles, aux Bourdons, afin de me les étourdir, et me les dévorer tout ensemble; mes épaules, aux Pucés, afin de les entamer d'une morsure qui me démangeât; et ainsi du reste."³

1) quoted by Rousset, op. cit., p. 124

2) La Mort d'Agrippine, V, 6

3) p. 163

From the stylistic point of view, there is one figure of speech, among all those which sought to express satisfactorily the baroque outlook, that Cyrano especially cherishes, and which is to his eyes the indispensable ingredient of good writing: "la pointe", the conceit. He can even claim some pre-eminence among all those who practised, around 1650, this "agréable jeu de l'esprit", as he calls it in the Preface to his Entretiens Pointus.¹ In an attempt to define the nature of the pointe and the source of enjoyment it can give, our author says in the same Preface: "on ne pèse pas les choses; pourvu qu'elles brillent, il n'importe; et s'il s'y trouve d'ailleurs quelques défauts, ils sont purifiés par le feu qui les accompagne". This seems to restrict the use of the conceit to conversation, of which an example is given at the beginning of the novel, when several friends, walking back from the country, while the time away by vying with one another in finding similes applicable to the moon. This explains the favour of hackneyed subjects, about which personal ingenuity can best appear; an example of this is the theme of "la Belle Matineuse", illustrated by Malleville and Voiture, after Du Bellay. In print, these light jests are likely to appear very poor, not only because the genre itself is unpleasant

1) On the vogue of the pointe, which came to France from Italy, see for instance Boileau, Art Poétique, II, lines 105 ff.

to some people, as Cyrano admitted in his Preface, but because spontaneousness was their main charm. The conceit comes easily to the "personne d'esprit" such as he has been defined, and he cannot pretend to be different from the "bufles" without that ability. The pointe is the essence of the merit of some genres; poems like Sonnets, "Sixains", Odes, Eclogues and Epigrams, which are the currency in the moon, are valued by a special tribunal "non pas selon leur poids mais selon leur pointe"¹. In fact Cyrano, unlike Théophile or Saint-Amant, cannot conceive poetry except as a form of epigram. We shall see that he nevertheless can achieve genuine poetry, such as it is nowadays conceived; but the essence of poetry is a concentration of meaning which also occurs in the metaphor and the pointe which, Cyrano says in his Preface, "réduit toutes choses sur le pied nécessaire à ses agréments, sans avoir égard à leur propre substance". Erudition and mythology made a pointe all the more appreciated in Cyrano's time, owing to the universal knowledge of the Fable; it is therefore surprising to notice the extremely reduced place it holds in L'Autre Monde. Diana and Apollo are evoked at the beginning; Echo and one of these allegories so frequent in seventeenth century writing,

1) p. 43

"la Nymphé de la Paix", are mentioned without the tedious descriptions which often accompanied them; Euterpe and Nature appear in Cussan's dream, protecting Cyrano against his persecutors¹. Mythology obviously did not fire Cyrano's imagination so much as did the real world, and this unusual moderation is welcome with the modern reader; had he lived until the end of the century, it is likely that Cyrano would have been found among the ranks of the Modernes.

The conceit can be used in any context, with varying purposes. Among various types of conceit, those which appear in the narrative itself are usually not too strained and often assume a definite function: to prevent the tone from becoming too blatantly pathetic when tragic events are recounted. It is felt that a man of honour must be able to rise above his fate and in no circumstances allow himself to lose his wits. For instance, when Cyrano describes his cell, in spite of a great realism about the exiguity, the darkness, the toads in the mud which stagnates on the floor and the rats which gnaw the prisoner's straw, some fun is made of every one of these details, and the description ends thus: "...Enfin il n'y a personne qui me voyant en ce lieu ne m'eust pris pour une bougie allumée sous une ventouse."² His address to the jailer

1) pp. 5, 21, 186, 105

2) p. 109

is in the same vein, and equally devoid of any romantic self-pity. About the jail which is made of old tombstones, he says: "Je me voyois travaillé de la pierre qui ne me faisoit pas moins de mal pour estre externe."¹ The wise Daemon himself uses the conceit as a rhetorical device: Tristan, he says, "est la honte de son païs". But, satisfied with the effect of surprise thus produced, he explains: "car c'est une honte aux Grands de vostre Estat de reconnoistre en luy, sans l'adorer, la vertu dont il est le throsne."² The device of reversing every human usage in the moon is extended to words: Cyrano is subjected to an "amande honteuse" - "car il n'en est point en ce païs-là d'honorable."³

The conceit of course lends itself very well to a comical use, as in the Entretiens Pointus. At the sight of the gold coins, the jailer opens "l'oreille, le coeur et la main"⁴, and the magpie, remembering an excellent cheese she ate once when she lived on the earth, exclaims: "je ne scaurois y songer sans que l'eau m'en vienne aux yeux et à la bouche."⁵

The quibble is in fact a constant temptation for Cyrano, and its untimely use sometimes casts doubts about the seriousness of an otherwise quite sensible development⁶.

1) p. 110

2) p. 35

3) p. 60

4) p. 110

5) p. 155

6) For instance the pun on "crever d'esprit", already quoted.

The long allegory contained in the Sun about the five senses and the three faculties of mind (memory, imagination and judgment) are the triumph of the sort of ingenuity which was acclaimed in Cyrano's time; every abstract characteristic receives its concrete counterpart in those six pages whose raison d'être appears to be primarily Cyrano's desire to show his virtuosity, for there is very little in it about philosophy, even of the most allegorical sort. There is however a slight difference between the description of the senses and that of the mental faculties; whereas the former is only a tedious reminiscence of medieval symbolism, particularly of the Bestiaries, the latter is interesting by a psychological analysis which recalls the Carte du Tendre. This analysis is perhaps less searching in L'Autre Monde, but it is more ingeniously illustrated. The river of Memory is surrounded by all sorts of symbolical beasts, among which can be seen monsters "qui ont la teste cornue et quarrée et à peu près semblable à celle de nos Pédans"; near the river of Imagination are all the fantastic conceptions which appear in tales, and in L'Autre Monde itself: Phoenix, Salamanders, Remoras, as well as the "huile de talc" and the "or potable" which the Daemon had offered Tristan in the Page Dsignracié. The description of the river of Judgment is

the most outstanding as an allegory: "Proche de là coule d'une lenteur incroyable la rivière du Jugement: son canal est profond, son humeur semble froide; et lors qu'on en répand sur quelque chose, elle sèche au lieu de mouïller.... elle se distribuë comme ses deux germaines en une infinité de petits rameaux; elle grossit en cheminant, et quoy qu'elle gagne toûjours païs, elle va et revient éternellement sur soy-mesme!"¹

This description is not done without quibbles, one of which is the description of the river of Imagination as "creuse"² which means in French both hollow and deep. The disproportion, in this long passage, between the ingenious description and the lesson it contains is characteristic of the Sun, in which a purely literary purpose can be felt more than in the Moon. Another passage which is little more than a purple patch is the tale of the "arbres amants"; it is not out of keeping with the rest, since it contains the explanation of sympathy, but it is longer than would be necessary for merely didactic purposes, and could be culled out like one of these numerous detachable stories which our ancestors liked to include in longer prose works, to show their ability at tale-telling.

The allegory willingly took yet another form in the seventeenth

1)p. 189

2)p. 188

century: many novels or poems contained, according to their authors, a moral lesson, and each character and event had a deeper significance which was to be found by the reader. An illustrious precedent was Tasso's epic¹. One could maintain that Cyrano's L'Autre Monde must be viewed in that light and that it is, in its entirety, a long philosophical **ar** alchemical allegory²; while this does not seem to be the case for the whole of the novel (what is known of the origin of L'Autre Monde seems to make clear, for instance, that Cyrano conceived the second part after having written the first, and not as a coherent whole from the start), it is very likely indeed when several episodes are concerned, such as Cyrano's ascension to the sun, and the transformations he undergoes in doing so. It does not necessarily mean that Cyrano was convinced of the truth of alchemy; but he certainly knew its main tenets, as has been seen, and probably worked them into the pattern of his novel to give it an added significance.

Boileau's dictum on the use of ornate descriptions:

Soyez vif et pressé dans vos narrations;
Soyez riche et pompeux dans vos descriptions....³

describes well the movement which can be felt in Cyrano's

1) On the pretensions of writers to moral depth, see P.V. Delaporte, Aspects du merveilleux dans la littérature française sous le règne de Louis XIV, Paris 1891, pp. 163 ff.

2) This is the point of view of E. Cansliet, loc. cit.

3) Art Poétique, III, lines 237-238

novel where the narrative is sometimes suddenly interrupted by a long description. Pure reality was felt as being not worth recording unless it was accompanied by some human ornament which civilised it. Boileau recommended mythology in the epic, but for Cyrano nothing could be better than a pointe, and thus he thus he does not so much say things as say something about them. This does not mean that the first impression was not strong and genuine; there are many places in L'Autre Monde where the freshness of the sensation still persists; M.G. Mounin has rightly pointed out Cyrano's delight in contemplating high trees and the reflection of objects in deep water, which can be felt in spite of an awkward rendering¹. However, one wonders how much exactly Cyrano himself felt such passages to be different from the more elaborate achievements of the Lettres, since he introduced a long descriptive passage taken from one of them into his novel where the tone is markedly more simple². This passage shows how his love of the conceit could spoil his writing by an excess of préciosité. No doubt, he had a gift for that sort of style, unfortunately completely discredited as early as 1655, and the enthusiastic compliments paid to him by his

1) "Cyrano de Bergerac et Pascal", loc. cit.

2) Lettre XI in the Oeuvres Diverses, entitled "Le Campagnard" (Oeuvres Libertines, II, p. 205). Passage on p. 21. The pleasant beginning of the Letter, less high-flown than the rest, has not been used by Cyrano in his novel.

English translator are not entirely unjustified¹. Nevertheless, sentences like the following one about a fountain: "elle est encore au berceau car elle ne faict que de naistre, et sa face jeune et polie ne monstre pas seulement une ride: les grands cercles qu'elle promène, en revenant mille fois sur soy-mesme, monstrent que c'est bien à regret qu'elle sort de son païs natal; et comme si elle eust esté honteuse de se veoir caresser auprès de sa mère, elle repoussa, tousjours en murmurant, ma main folastre qui la vouloit toucher..."² seem nowadays involuntarily ridiculous. The précieuse influence is chiefly felt in such descriptions of fantastic lands like the Earthly Paradise and the sun, and this is not a coincidence, since it is precisely a case in which personal ingenuity is pitted against a classical conception. The source is here the fund of legends about the luoghi d'incanti to which Tasso and Ariosto had already resorted, providing later Cyrano with several details³. Otherwise, and in spite of his gift for the conceit, in spite of the presence in his novel of words like "débrutaliser" or "brutification" which had been recently coined by the précieuses, and of some unexpected uses of some well-known ones as in "je rengainé ma harangue"⁴, in spite of the Marinist description

1) quoted in Oeuvres Libertines, I, p. XCVIII

2) p. 22

3) See Appendix N° I

4) pp. 42, 45, 59

of a nightingale as a "voix emplumée", the influence of the préciosité is far less marked in Cyrano's novel than in his Lettres. His temperament is far too ironical, and his realistic observation too acute, to make him speak in phébus too often, and a satire of préciosité can be found in L'Autre Monde. Cyrano imagines a long metaphor to describe the coming of sleep: "mes sens, gagnés par la volupté, forcèrent mon âme de sçavoir bon gré au tyran qui enchaînoit ses domestiques; car le sommeil, cet ancien tyran de la moitié de nos jours, qui, à cause de sa vieillesse, ne pouvant supporter la lumière, ny la regarder sans s'évanouir, avoit esté contraint de m'abandonner à l'entrée des brillans climats du Soleil, et estoit venu m'attendre sur les confins de la région ténébreuse dont je parle, où m'ayant rattrapé(sic), il m'arresta prisonnier, me ferma les yeux, ses ennemis déclarez sous la noire voûte de mes paupières; et, de peur que mes autres sens le trahissant comme ils m'avoient trahy, ne l'inquiétassent dans la paisible possession de sa conquête, il les garota chacun contre leur lit." All this had already been expressed in one sentence before: "je devins las et le sommeil me saisit", but his intention is unveiled afterwards when he adds, in an ironical anticlimax: "Tout cela veut dire en deux mots, que je me couchay sur le sable fort assoupy."¹ At the end of the novel

1) p. 138. See pp. 68 and 168 for other lengthy metaphors.

Cyrano, in the steps of Sorel, pokes fun at the précieux novel by imagining the thoughts of a woman born in the Kingdom of Truth who goes to live in the Kingdom of Lovers, and very perfect lovers they are. Their protestations announce those of Boileau's "Héros de Roman", and their literal interpretation (the woman pulling her cruel heart out, and the flood of tears which threatens her house¹) are reminiscent perhaps of the famous portrait of Charite, drawn after her description in the Berger Extravagant. This story compensates that of the nightingale² (which, in spite of the author's evident complacency for his subject seems a mere exercise in style) and shows the gaulois trend which exists in Cyrano, alongside of the précieux trend, making him the theatre of the struggle of these two powerful and eternal French tendencies.

In the story of the woman, the usual jingle-jangle of antitheses between fire and ice was satirized; that Cyrano could handle them poetically is proved by his description of the surface of the sun as "flocons de neige embrasée"³. Such instances are not rare in L'Autre Monde, a reading of which, better than the dated Lettres, is sufficient to convince one that Cyrano had the soul and the mind of a poet. His sensitiveness is shown by his evocation of sensations, as

1)p. I97

2)pp. I40 ff.

3)p. I37

has been said, and by the fragment of autobiography in which he recounts a dream of his childhood. He describes his temperament to his friends as "bilieux, mélancolique"; "le beau temps et mon humeur m'entraînent à la solitude", he writes in the Letter Le Campagnard. He describes the feelings he is supposed to experience in prison in terms which seem to indicate that he knew such swift changes of emotion: realising his feeble chances of escaping from prison, his friends are in despair; but suddenly, Cyrano writes, "comme si tout à coup nostre douleur eut fléchy la colère du Ciel, une soudaine joye s'empara de mon âme; la joye attira l'espérance, et l'espérance de secrettes lumières dont ma raison se trouva tellement ébloüye, que d'un emportement contre ma volonté qui me sembloyt ridicule à moy-mesme: "Allez, leur dis-je, allez m'attendre à Colignac, j'y seray dans trois jours..."¹ Of a poet, he also has the delight in contemplation. Describing sunlight through the icosahedron of his machine: "cette vigueur de clarté tempérée convertissoit ma châsse en un petit Ciel de pourpre émaillé d'or", he adds: "j'admirois avec extase la beauté d'un coloris si mélangé..."; and again, having caught sight of a wonderful bird, which he later learns to be a phoenix, hovering like "un petit Univers balancé sur

1)p. 120

son propre centre", he notices the sensorial impairment which follows prolonged contemplation: "je me tenois tellement collé à tout ce qu'il devenoit, que mon âme s'estant toute repliée et comme racourcie à la seule opération de voir, elle n'atteignit presque pas jusqu'à celle d'ouïr, pour me faire entendre que l'oiseau parloit en chantant."¹ These feelings sometimes find their true expression in spite of the contemporary taste in literary matters; indeed, as has already been said, this taste can equally account for the worst metaphorical jargon and for those poetic finds which were tolerated in pre-classical times. Metaphors like Théophile's "je baignerai mes mains dans les ondes de tes cheveux" were thought after 1660 to be too far-fetched²; they are to-day common in poetry. Cyrano's description of the materia prima as "un marc froid, ténébreux et presque impuissant", and the phrase "j'abordai enfin très heureusement aux grandes plaines du jour"³ belong to the same kind.

Many critics have seen Cyrano only as a grotesque or a minor précieux; we have seen that he could achieve distinction in several other styles. However one may appreciate the polemist, the comical writer or the poet in him, his most remarkable feature is his versatility, and from this point of view none of his works better than L'Autre Monde can show that Cyrano was a born writer.

1) p. 147

2) quoted in M. Raymond, op. cit.

3) p. 128

IO - The tale in L'Autre MondeIts characters, structure and influence

The choice of a tale as a suitable medium for Cyrano's purpose in writing L'Autre Monde was not novel, and the real originality of our author, as a careful examination can show, is to be found in the application of a new content to a traditional form. In doing so, some pre-existing tendencies were confirmed, and others were created, and often the synthesis proved so durable owing to an agreement between the themes and the romanesque episodes that a pattern emerged, recurred (sometimes emptied of its former meaning) with each fantastic voyage, and still persists in modern science-fiction.

The tale was not the only form Cyrano could choose; one may speculate all the more freely about his reflections on the subject since his output before L'Autre Monde seems to indicate a desire to try his hand at several genres. A long poem like those of Du Bartas or d'Aubigné would have been suitable for philosophical exposition as well as for satire; it is however remarkable that apart from La Mort d'Agrippine, the stoicism of which came easily to him, and some minor poems, Cyrano did not write much verse. Thus, his choice of a novel was probably motivated as much by his gifts for prose

writing as by the existence of precedents by Rabelais or Godwin. For even to-day, when the metaphysical and religious questions which are discussed at length in it seem old-fashioned and unnecessarily entangled, L'Autre Monde remains an interesting tale. An analysis of this feeling reveals that it is due to Cyrano's naturally alert style, but also to self-conscious skill.

The overall impression one derives from a reading of L'Autre Monde is that of rapidity in story-telling. The exposition is exemplary from that point of view: within three pages, the hero is in the air. How well does Cyrano's tale compare with Domingo Gonsales, where the subject proper, namely flying, starts only on page 68, after more than a third of the book¹, or with Laurent Boudelon's Gomgam, where a long irrelevant narration precedes any mention of the promised prodigies!² Or rather, such works show no notion of composition and subordination to the main subject, and adopt the rambling plan of the picaresque novel, whereas this classical composition exists in L'Autre Monde.

This lively pace, kept up by a skilful use of the tenses³, is chiefly due to the fertility of the novel in events over

1) In the translation L'Homme dans la Lune, ed. cit.

2) See next chapter.

3) pp. 101-102 for instance, where Cyrano switches to the present tense as quickly as opinion changed in Toulouse: "Voilà donc..."

which the author does not linger unnecessarily. He thus compensates for the exhaustive discussions and for the purple patches of the descriptions of nature. There is nothing, in Cyrano's novel, comparable to the minutiae which make up most of Gulliver's Travels or to the rollicking enumerations of Rabelais, in spite of the presence of the giant Selenites and the diminutive creatures in the Sun. Nothing is irrelevant or justified only by its picturesque value, and Cyrano's imagination, a fire when it must work on the peculiarities of a curious apparatus or an unexpected situation, refuses to function gratuitously, leaving the conceptions somewhat streamlined. Swift and Rabelais would have enlarged considerably on the picturesque features of the Selenite world, whereas Cyrano gives only a sketch; for everything is significant in the universes he invents, and to give more details than are necessary to suggest the meaning would have seemed otiose to him. It has been seen that this minimum is always enjoyably written, with a particular sort of pithy humour. On the other hand, some details appear only because of their significance, either philosophical or satirical, and sometimes do not fit very well with others; but as Cyrano is more concerned with their symbolic value than with their realism, this matters little.

We know for instance that the Selenites have a height of twelve cubits; but, apart from being transported by them on their backs, there is no indication of the inconvenience the hero must suffer because of his human size, a situation whose latent pathos and fun would have been thoroughly exploited by Swift. We do not know if the houses also are bigger than those of the earth. The Selenites, who feed on smells alone, have nonetheless invented a method of killing and roasting fowls at the same time. Cyrano, who will learn their language only when he is in the company of the Spaniard¹, thinks long before this time² of asking the valets about a custom he has observed. This very custom (to undress before a meal so as to feel all the beneficial effects of the smoke) is incomprehensible in a country where one usually goes naked. The reason for these inconsistencies is Cyrano's desire to keep the reader's interest by continually surprising him. In spite of his lack of interest in realism, he sometimes makes an effort to justify some of his hero's reactions. The Daemon, for instance, assumes that Cyrano has already witnessed the meals of the Selenites, and for this reason does not think it necessary to explain them³; now this was not the case since he had prior to this been fed on

1) p. 52

2) p. 41

3) p. 41

solid food like the brute he was supposed to be.

The rapid pace of the tale and the startling nature of the events are not the only means by which Cyrano tries to hold the reader's attention. Many events are made more striking by the use of suspense or of quid pro quo, and the centre of interest is definitely the hero, whose psychological states are described whenever he has a new experience, and with whom the reader identifies himself.

Forebodings, such as the dreams of Colignac, Cussan and their friend¹, are only one aspect of an all-pervading feeling of predestination which appears from the very beginning of the book. With his mind intent on the subject of the moon, the hero comes back home to find not only evidence of a prodigy, a book which has mysteriously flown onto his table, but also, by an apparent coincidence, that it is open at a page where the inhabitants of the moon are mentioned. He reads it "comme par force", and the conjunction of so many strange events could at the time only make him suppose that they were connected by some purposeful meaning. This he assumes to be the choice made of him by a greater power whom he calls successively "la Providence ou la Fortune" and "Dieu" (the latter suppressed in the printed version) for revealing a

1) pp. I05-I06. All these devices are also used, much more awkwardly, by Bordelon in Gomgam (See next chapter).

secret of nature:"Je demeuré si surpris,tant de veoir un Livre qui s'estoit apporté là tout seul,que du temps et de la fueille où il s'estoit rencontré ouvert,que je pris toute cette enchesnure d'incidens pour une inspiration de (Dieu qui me pousoit à) faire connoistre aux hommes que la Lune est un monde."¹Such thoughts were common in Cyrano's time; the interpretations as to the source of such warnings varied with the intelligence of the man who fancied himself the object of supernatural care,and it may be remembered that Descartes and Kepler themselves,in spite of the part they played in the establishment of the new philosophy,believed that they had been singled out by God for the discoveries they made².Again,at the beginning of the Sun Cyrano,with soldiers and jailers hot upon his tracks,describes himself as a toy in the hands of his fate,and suggests that no one can hope to escape one's destiny,resistance serving only to bind one more surely³.Cyrano,whose agnosticism has been discussed,possibly still kept a subjective belief in a personal fate.Often,an event is announced by the author,in a rather heavy transition:"Mais écoutez une aventure qui

2)See also Cardano,op. cit.,p.453:"Souvent j'ay esté admonesté en songeant d'escrire et composer cest oeuvre divisé,comme il me sembloit,en vingt et une parties..."And he tells how he augmented the book until it resembled that which he could see in his dreams.

1)p.6

3)pp. 135,136

vous surprendra..." "Mais à quoy bon me rafraischir la mémoire d'une aventure dont je ne sçaurois me souvenir qu'avec la mesme douleur que je ressentis alors?" "Mais écoutez un miracle que les siècles futurs auront peine à croire"¹

The quid pro quos contribute to keeping the reader in a state of uncertainty, and therefore of curiosity. Cyrano and the soldiers he meets in Canada both use the term "en France" but do not mean the same country²; the Italian shepherds flee in alarm when they hear the hero asking for his Daemon³; lastly, the Selenites' notion of a "potage" is not the same as Cyrano's, who thinks he is being made fun of⁴.

Understandably, the main impression received by the hero of so many remarkable adventures is one of bewilderment. The reasons for Cyrano's complacency in describing this state are to be found not only in his desire to keep interest alive but also, as has been seen, in a contemporary taste for situations where the hero, lost in a world of changing appearances, experiences a continual feeling of uncertainty. All along the book, his supposed feelings are recorded, confirming the tale to be primarily an exciting intellectual adventure. At the beginning of the novel, the particular mixture of astonishment, wonder and audacity which characterizes

1) pp. 133, 135

2) p. 10

3) p. 98

4) p. 41

the tone throughout can be seen in a monologue in which the conflicting feelings fight as in a classical tirade: "Quoy, disois-je en moy-mesme... Sans doute, continués-je.... Mais, adjoutois-je.... Et pourquoy non? me répondois-je aussi tost.." ¹

Cyrano's novel, from that point of view, is richer than many of the same type because of his sensitiveness which results in a wide and varied range of feelings, which usually play an important part in the action. Let us see, for instance, the hero's successive emotions before and during his second ascension: "La douleur de rencontrer l'ouvrage de mes mains en un si grand péril me transporta tellement que je courus saisir le bras du soldat qui l'allumoit. Je luy arraché sa mesche et je me jetté, tout furieux, dans ma machine pour briser l'artifice dont elle estoit environnée; mais j'arrivé trop tard, car à peine y eus-je les deux pieds que me voilà enlevé dans la nue. L'espouvantable horreur dont je fus consterné ne renversa point tellement les facultez de mon âme que je ne me sois souvenu depuis de tout ce qui m'arriva dans cet instant... Cette aventure extraordinaire me gonfla d'une joye si peu commune que, ravy de me veoir délivré d'un danger si assuré, j'eus l'imprudence de philosopher dessus.." ²

The last word express the detachment from material cares, and the ever alert spirit of observation which characterizes the

1) pp. 6-9

2) p. 19. The italics are mine.

heroes of fantastic voyages. The ecstasy of contemplation, friendship, admiration, fear of death also have their place in L'Autre Monde, and show that Cyrano understood the added source of interest human feelings could bring to a type of fiction which otherwise easily becomes mechanical and meaningless.

Finally, another proof of Cyrano's concern to write a well-balanced tale is the careful alternation he keeps between the discussions and the events which demonstrate them practically. The passage from the one to the other is as much as possible made to appear realistic and not arbitrary. After the Daemon has explained at length the nature of superhuman beings and their faculties, "il en estoit là de son discours quand mon basteleur s'aperceut que la chambrée commençoit à s'ennuyer de nostre jargon qu'ilz n'entendoient point, et qu'ilz prenoient pour un grognement non articulé; il se remit de plus belle à tirer sur ma corde pour me faire sauter..."¹ The same thing happens to the conversation with the Spaniard: "Je pense qu'il vouloit encore parler quand on nous apporta nostre mangeaille, et parce que nous avions faim, je fermé les oreilles et luy la bouche pour ouvrir l'estomach."² The demonstration of the unity of matter is resumed afterwards. Conversely, the events sometimes start a new argument, as when

1) p. 38

2) p. 49

Cyrano asks the Selenite philosophers about some customs he has observed in the street. There is an effort to suit the nature of the discussions to the circumstances and the personality of Cyrano's interlocutor: the defence of Copernicanism is justified by the interest of the governor of Canada in the sciences and by Cyrano's claim to have applied its principles in coming from Europe; the discussion on matter, by the Spaniard's passion for this subject, which was the cause of his self-exile from the earth. This ideal cannot, however, always be respected, and revelations run riot in the Sun.

Are the elements of the tale entirely of Cyrano's invention? Certainly not, and the study of his sources has made that point clear¹. There already was a pattern of events to be found in several kinds of literary production, and it provided a ready skeleton for L'Autre Monde. This pattern is outlined by Marjorie Nicolson in the following terms: "From Kepler and Francis Godwin to Swift's contemporary Daniel Defoe, writers of such voyages introduce details which become part of a conventional pattern. In addition to long passages describing the means of flight, each of the characteristic voyages includes certain details which Swift clearly had in mind: the voyagers, when they have passed

1) See also Appendix N° I

beyond the orbis virtutis or the "sphere of gravity" comment with surprise upon the fact that they feel no motion and that they yet move with rapidity; there comes a moment when the traveller, realising that he is approaching the moon, finds himself amazed by its apparent increase in size, expresses interest in finding it an opaque body, which reflects but does not emit light, and comes to realize, as he approaches more closely, that this is an inhabited world. There follows, as a rule, a passage in which the traveller comments upon the peculiarities of the lunarians, and they in turn express their surprise at the peculiarities of their visitor from another world."¹ This is roughly the plan of L'Autre Monde, apart from minor points like the stories of unsuccessful attempts. We shall now review the elements of this pattern in L'Autre Monde, and trace their development after Cyrano.

Firstly, such travels are always written in the first person of the singular, and the heroes enjoy practically the same traits of character: spirit of adventure, imperviousness to ridicule, scientific interest rather than fear for their lives when strange adventures befall them, and a slightly megalomaniac acceptance of the most unbounded revelations from their interlocutors as being perfectly normal: "Je vais

1) See "Swift's 'Flying Island' in the 'Voyage to Laputa' " in Annals of Science, II, 4, October 15, 1937, pp. 420-21

(...) vous étaler des secrets qui ne sont point connus en votre climat" says the man on the sun-spot; and Campanella to Cyrano: "asseurément tu mérite (sic) bien qu'on ait pour toy la dernière complaisance."¹ The hero of L'Autre Monde has in fact more personality when he is on the earth than during his interplanetary travels, when he is not substantially different from the heroes of similar novels. All the audacity of his thought, which can be guessed when he lives at Colignac, disappears when he is speaking to the avowedly bolder inhabitants of the moon and the sun.

Like the other writers of fantastic travels, Cyrano uses "probability devices", many of which were already part and parcel of the genre. Among the latter is the trick of embedding the fantastic among the normal events, which is the case especially at the beginning of the Sun,² or that of supplying an alleged token of the author's veracity, such as Gulliver's Lilliputian sheep and Cyrano's machine which can still be seen in Poland.

The order of the events in Cyrano's novel conform to the type described by Marjorie Nicolson; one could add to the latter the familiar pattern of exploration, which alternates with bouts of sleeping and suffering from hunger. But Cyrano

1) p. 199

2) It occurs also in the Lettre pour les Sorciers.

invented a particularly interesting event, which Swift borrowed¹ but divested from its significance: in his novel, the hero becomes the possession of a mountebank who forces him to perform tricks. This is more pathetic and ironical in L'Autre Monde than in Gulliver's Travels, for the victim is a philosopher who tries at the same time to carry^{on} with the Daemon or the Spaniard, a metaphysical discussion. The real point of that episode is that the inhabitants of other planets cannot conceive that the hero is a man (being in that more narrow-minded than he) or, in the case of the Birds (as of the Houyhnhnms) that he is a rational creature whose soul is endowed with immortality, and this, merely because of a difference in size, configuration, or habits. This part of L'Autre Monde in which the human characteristics are mercilessly criticised, in answer to the finalists who deemed them the noblest and the most convenient of the whole creation, comes chiefly from the Apologie de Raimond Sebond, and is without doubt that which has had the greatest influence on later writers. This was all the easier because the Histoire des Oiseaux, a picturesque dramatization of Montaigne's teaching, bears a separate title in the Sun, and enjoyed great popularity. The final decision of the Selenites and of the Birds about Cyrano foreshadows that of the Brobdingnagians

1) In "A voyage to Brobdingnag". Swift also took the episode of the lady-in-waiting who becomes attached to the hero, and the hatred of the Queen's dwarf for him is reminiscent of the magpie's story in the Sun.

who conclude that Gulliver is a "Relplum Scalcath" or Lusus Naturae. The most daring and the most amusing example of misunderstanding is the behaviouristic description by the Birds of man when he is praying: "il lève en haut tous les matins ses yeux, son nez et son large bec, colle ses mains ouvertes la pointe au Ciel, plat contre plat, et n'en fait qu'une attachée comme s'il s'ennuyoit d'en avoir deux livres; se casse les jambes par la moitié, en sorte qu'il tombe sur ses gigots; puis, avec des paroles magiques qu'il bourdonne, j'ay pris garde que ses jambes rompues se rattachent, et qu'il se relève après aussy guay qu'auparavant."¹ Thus are criticised at the same time two rash assumptions: that the animals are irresponsible because man does not understand the meaning of their gestures, whereas his own, divested from their symbolical significance, look just as irrelevant, and that every mysterious phenomenon must be attributed to magic (believing a priori that magic is bad also seems to be among the criticised assumptions). Beside being the source of the main theme of Gulliver's Travels and of Micromégas, such passages of L'Autre Monde may well be that of a particularly effective piece of irony in the Esprit des Lois: "De l'esclavage des nègres:.....Ceux dont il s'agit sont noirs depuis les pieds jusqu'à la tête; et ils ont le nez si écrasé

1) p. 158.

qu'il est presque impossible de les plaindre.

On ne peut se mettre dans l'esprit que Dieu, qui est un être très sage, ait mis une âme, surtout une âme bonne, dans un corps tout noir..."¹ - not to mention the famous "Comment peut-on être Persan?".

But this inability to adapt one's thinking to different circumstances also applies to the hero, who proves incapable of standing so much surprise without being disconcerted and angry. Thus man, after having been criticised from the outside, is now criticised from the inside, as it were. The traveller always unconsciously expects what he is used to and being constantly disappointed, suspects that he is being made fun of: "Hé, où diantre est ce potage? (lui criés-je tout en colère); avez-vous donc fait gageure de vous moquer tout aujourd'hui de moy?"². Should he happen to be in the stronger position, it is felt that the present victim would easily become a persecutor in his turn, and that his intolerance would be a match for that of the other creatures. This is what happens in L'Autre Monde, where the hero must stand ^{for} trial in the moon, the sun and again on the earth, man being the persecutor in the latter case. The hero narrowly escapes various symbolical forms of death: the paradoxical "supplice de l'eau", being devoured by the insects, and the

1) Esprit des Lois, XV, 5

2) p. 41

stake, a familiar argument of his fellow-men; the lesson in relativism is thus brought home in complementary ways. The persistence of the theme of persecution in L'Autre Monde shows that it is closely linked to the ideas which form its subject-matter. When one notices how often it recurs in the novel, one is not surprised in reading about the author's familiar nightmare¹. A mysterious sentence seems to imply that Cyrano himself has known the anguish of being chased through the streets, and possibly imprisoned: "Certes qui n'a franchy, je dis en original, des agonies semblables, peut difficilement mesurer la joye dont je tressaillis quand je me vis échappé."² The sentence, being a familiar one in novels, would have been just as effective without this precision, if it had been mere rhetoric. His Letter Contre un Jésuite Assassin et Médisant, the mysterious circumstances of his death and the disappearance and reappearance of his manuscripts (in the case of the Sun) have for a long time encouraged speculations about the reality of an organized persecution of his person and of his works, but it is still an open question to which commentators of opposite philosophical and religious leanings have given conflicting but equally dogmatic answers³. But even without being personally involved

1) p. 106

2) p. 115 (The italics are mine).

3) Paul Lacroix (ed. cit.) and Marc de Montifaud (in his edition of the Voyages fantastiques de Cyrano de Bergerac, 1875) believe in Cyrano's persecution; Lachèvre (in several volumes of Le Libertinage au XVII^e siècle) and Brun (op. cit.) do not.

Cyrano could all too easily be supplied with exemplary victims. The choice of Toulouse as a location for the first part of the Sun might be attributed to several causes; it may have been the home town of one of Cyrano's Gascon friends. But it was impossible, having done so, not to think of Vanini's fate. One of the victims of the Inquisition, Bruno, whose writings were certainly known by Cyrano, had also stayed in Toulouse during his peregrinations. Grandier and Gauffredi had perished, victims of the witch-hunting hysteria stigmatised in the Lettre contre les Sorciers, and Kepler's mother was almost fatally compromised by the unfortunate allusions to witchcraft in her son's Somnium. Théophile had nearly had the fate of Vallée and Fontanier. Among those whose influence is conspicuous in L'Autre Monde, Cardano, Campanella and Galileo had suffered imprisonment; Descartes, rightly or wrongly¹, had given up publishing "son Monde" when he heard of Galileo's trial, to which Gassendi alluded only with the greatest circumspection.¹ In brief, there is in L'Autre Monde a definite feeling that the author belongs to a persecuted sect whose motto is "Bene latuit", and for whom it is imperative to avoid suspicion; for, Cyrano says to his friend, "je ne serois pas moins mort, quand une douzaine d'habiles

1) See M. Pintard's article: "Modernisme, Humanisme, Libertinage. Petite suite sur le "cas Gassendi"." in Revue d'Histoire Littéraire de la France, T. XLVIII, Jan.-March 1948.

gens qui m'auroient veu griller diroient que mes juges sont des sots" (adding:"car j'enragerois au double de mourir pour une chose à laquelle je ne crois guères..."¹ which may apply to magic, but also to religion). Thus the prominence of the idea of persecution is inseparable from the metaphysical ideas which are discussed in the Moon and the Sun; but because it lent pathos to the related idea of the indictment of man and could easily be developed with picturesque detail, it has often been detached from its context in subsequent fantastic voyages, and the trial and imprisonment of the hero has become almost a regular feature of their pattern. One might further suggest that another element of that pattern, that of the crisis which occurs in the strange country shortly after the arrival of the hero was also born with L'Autre Monde, where it is justified; for there is nothing of the kind either in Domingo Gonsales or in the Somnium.

However, as in the case of the Selenites, the whole of the discovered populations are not bad, and of course, as in the case of the Daemons and the Philosophers, they are sometimes far better than men. It then happens, in most travels of that type, that the hero eventually learns the indigenous language, and is instructed by one of the inhabitants. This is

1) p. 103

all too often an awkward means of imparting knowledge to the reader, and the insistence of the Mentor (usually a noble old man like Elijah in L'Autre Monde¹) to volunteer information looks completely artificial. This is sometimes the case in Cyrano's novel: the Daemon asks Campanella to write a book De Sensu Rerum²; Elijah forces Cyrano to take a basketful of mysterious fruit in the Garden of Eden, and launches on a lengthy story of several Biblical characters.³ The same willingness is shown by the man on the sun-spot who, Cyrano says (possibly ironically), spoke "pendant trois grosses heures"⁴. In spite of his extraordinary revelations, Cyrano does not appear to have been very interested, for he confesses to having forgotten part of them, and does not even stay to witness the unusual birth of a man out of a clod of earth! This is one of the rare cases in which Cyrano sacrificed realism to didacticism. Like the Daemon and Elijah, the Phoenix feels the need to tell the story of his life as soon as he sees Cyrano (like many heroes of contemporary novels), and justifies his desire by "cette propension secrète dont nous sommes émeus pour nos compatriotes..."⁵. However, there is an

1) On the various aspects of this character, see G. Atkinson, The Extraordinary Voyage in French Literature before 1700, New York, 1920.

2) p. 35

3) p. 30

4) p. 129

5) p. 148

original aspect of this familiar feature in L'Autre Monde: the passage in which Campanella, thanks to an appropriate mimicry, guesses what Cyrano wants to know and answers him before he is able to speak; this time, the dialogue becomes a monologue with more justification than usual. But a more important difference is that this often arbitrary device is based in Cyrano's novel on the naturalistic creed of the creatures the hero encounters, which makes the spreading of knowledge a moral obligation for them, as has been seen in the study of the Scale of Being. This is again shown in the solemn promise exacted from the traveller to tell everything he has seen in the moon, which is much more than a mere reversal of the common oath of secrecy¹. A cosmic tour as a means of education can also be found in Kircher's Itinerarium Extaticum², in the Memoirs of Martinus Scribblers³, in Micromégas, in The Earths in the Universe whose author, Swedenborg, supposed that there might be in the planets "spirits whose sole study is to acquire for themselves knowledge in which alone they find delight, and who are therefore permitted to wander about and even to pass out of this solar system into others, in order to extend their knowledge..." exactly like Cyrano's daemons⁴. This is not by any means the

1) p. 97. In Bacon's Nova Atlantis, great care is taken by the inhabitants not to be known by the rest of the world.

2) See next chapter.

3) Published before Voltaire came to England, in the 1741 edition of Pope's works. See Nicolson, Voyages to the moon.

4) quoted in *ibid.*, p. 64.

only case in which an idea, whether invented or borrowed by Cyrano, receives a deeper significance through its connection with his philosophical beliefs. This is indeed very striking in his novel, when one compares it to others of the same type, and the strong need to synthesise which has been discovered in the study of his theory of knowledge appears to be a definite advantage from the point of view of aesthetics as well as of intellectual satisfaction. To cite a few examples at random: the choice of the moon and the sun as subjects for a novel is not gratuitously fantastic as in Hortensius' lucubrations in Francion, and is much more self-consciously modern than it is in Domingo Gonsales. The choice of the moon justifies the device of the systematic reversal of the customs of the earth (far from existing, as in the contemporary ballet, only for the fleeting thrill of surprise: for at bottom, Cyrano hates anything irrelevant¹). The satire which this device allows goes much deeper than in works like Mundus Alter et Idem from which Cyrano may have borrowed the idea. The means of ascent show a mechanistic trend which is quite new in that type of fiction, or are based on "principles" which, like imagination, are an

1) This is why it is misleading to emphasize too much (like Toldo, op. cit., and G. Saintsbury, A History of the French Novel, 1917, (in his review of Cyrano's works) the kinship between the Vera Historia, Rabelais' works and Cyrano's, the fantasy being in the latter severely controlled.

indispensable part of Cyrano's metaphysics. He even retrospectively lends meaning, as has been seen, to the characters of previous works, such as the Daemon or Gonsales. The latter does not go ^{to} the moon by pure chance, as in the original work, but because he cannot stand any longer the lack of freedom on the earth. During his ascent, he notices that he is not hungry and "mesme.....ma vigueur estoit beaucoup au-dessus de ma force ordinaire", but he does not know why. He supposes that it is because of the purity of the air or "une autre cause que je confesse m'estre inconnüe..."¹ It is not unknown to Cyrano, who thinks he can explain it. The Selenites' greetings, their greater size, their musical language call for the same remark. The idea of the transparent men, taken from the Berger Extravagant², (who become so, in Sorel's work, by a kind of alchemical coction, as it is curious to notice), Campanella's physiognomy, the baroque love of metamorphoses, all are put into the melting pot of L'Autre Monde, where they acquire meaning, and this remarkable character, rarely found with such consistency in similar works, would be sufficient to single out Cyrano's novel from many of his undistinguished forerunners and followers.

1) L'Homme dans la Lune, ed. cit., p. 81

2) Le Berger Extravagant... (1627 edition), Livre X, p. 233.

II - The Inheritance of L'Autre Monde

In trying to assess what influence L'Autre Monde has had on later works¹, one must bear in mind what Brun said in the same circumstances: it must not be thought that all the novels whose subject bears some relation to that of Cyrano's either inspired it or were inspired by it. It is all the more important to remember this since Cyrano's work has numerous aspects, many of which proved fertile: cosmic voyages, description of original contrivances, a satire of human institutions and beliefs presented through the device of a country of giants and a country of reasoning animals, philosophical and cosmological discussions, and generally a free use of fantasy.

One must also make the point clear whether L'Autre Monde is a Utopia or not. Lachèvre consistently used the word in connection with it and edited the works of those whom he called "les successeurs de Cyrano de Bergerac", Denis Veiras, Jacques de Foigny, who are genuine Utopians. Brun, in his study of L'Autre Monde, tried to treat it as a Utopia, but warped its meaning in doing so. A commentator wrote an article on "A neglected Utopian: Cyrano de Bergerac"².

1) The question of the possible influence of Le Pédant Joué on Molière and La Mort d'Agrippine on Racine is not discussed here. May we suggest that a line in Phèdre: "Mon époux est vivant, Oenone, c'est assez..." (III, 3) by which Phèdre interrupts Oenone's description may have been inspired by the last line of Agrippine?- 2) J.F. Normann (see Bibliography)

The question has been confused for a long time. Jean Baudouin, in the "Advis du traducteur" printed with the translation of Godwin's book The Man in the Moone, compared it to "la Vraye Histoire de Lucian, ou l'Utopie de Thomas Morus, ou la Nouvelle Atlantique du Chancelier Bacon", and summarized it as follows: "qu'il y a dans la Lune divers Peuples qui l'habitent, et qui se gouvernent entre eux d'une façon différente de la nostre". The latter part of the sentence is misleading. The English translation of the Moon, appeared in 1659, transformed Les Etats et Empires de la Lune into Selenarchia, or the Government of the World in the Moon¹, thus emphasizing a social and a political aspect which we have found to be very unimportant. The question of the imaginary voyage was in fact so entangled that a modern critic, P. B. Gove, has felt it necessary to devote a whole book to the causes of the difficulty and the means of alleviating it². From his book and from a consideration of the previous collections of such voyages it clearly appears that the difficulty in classification is due to the confusion between the structure of such novels and their contents. Particularly, the category of the Utopia, or Staatsromane, is responsible for most of the confusion; for whereas

1) Translated by T. St. Serf.

2) The Imaginary Voyage in prose fiction, A History of its Criticism and a Guide for its Study, with an Annotated Check List of two hundred and fifteen Imaginary Voyages from 1700 to 1800, New York, 1941.

Nova Atlantis or Veiras' Histoire des Sévarambes are within the frame of an imaginary voyage, Plato's Republic or Campanella's Civitas Solis, which otherwise resemble them so much, are not. The question of the structure leads to further complication if one also wishes to take into account as a criterion the fact that some voyages have a realistic setting and others a fantastic one, whether their contents are Utopian or not. In fact it appears, and this is certainly not due to chance, that genuine Utopias - in spite of their name - are generally associated with a realistic setting, and contain only a minimum of fantastic elements. They form the greatest part of the "extraordinary voyages" such as they have been defined by G. Atkinson: "voyages imaginaires dans des cadres géographiques"¹. It is easy to see why L'Autre Monde has been called a Utopia, but the name is best reserved for the serious-minded (and sometimes humourless) description of an imaginary state which functions far better than any known to men, and makes perfectly happy "des peuples sages et amis de la vertu, qui habit(ent) des contrées particulièrement favorisées de la nature", as Garnier puts it, complaining of the too numerous imitations of the Histoire des Sévarambes.²

There was indeed something which the writers of Utopias

1) Les Relations de voyages du XVII^e siècle et l'évolution des idées, Paris, 1924. Introduction.

2) op. cit., T.V, before the reprinting of Veiras' work.

could, and probably did, take from L'Autre Monde: the religious attitude of the Selenite philosophers and the inhabitants of the sun, as well as the general tone of libertinage. It has been seen to what extent metaphysics and a code of ethics consisting only of an intelligent obedience to the laws of nature replaced orthodox religion in Cyrano's novel, without prejudice to a quasi-religious feeling which lingers in it. This was not as yet eighteenth century deism; but added to the attacks on orthodox religion, it certainly was instrumental in leading to it (for in spite of the cuts by Le Bret, no one could confuse L'Autre Monde with the work of a devout Christian).

Very different is the case of what is best called the fantastic voyage. The criterion used for its definition is again that of the credibility of the setting; imagination plays a more conspicuous part in those "voyages merveilleux", the second class of Garnier's Voyages imaginaires: "Si elle (l'imagination) prend son vol, c'est pour fendre les airs avec rapidité, et visiter, sans obstacles, toutes les planètes. . . elle ne craint pas les torrents de flammes dont le soleil est enveloppé, et sa marche n'est pas ralentie par les glaces de Jupiter et de Saturne. La même rapidité qui l'a élevée au-dessus de nos têtes et l'a fait voyager dans les

astres lui fait percer notre globe jusqu'au centre....enfin il n'est pas jusqu'au séjour des ombres où elle ne porte un oeil curieux,et où elle ne se promène à son gré..."¹ There, we find numerous tales and novels where the influence of L'Autre Monde is evident,and a consideration of the contents of such works affords a proof a posteriori of the true character of the novel,such as it was intuitively felt by its imitators.We shall now review them,following a strict chronological order in spite of its occasional disadvantages because it is convenient for showing the popularity of Cyrano's novel.

In 1656,a year before the first printed edition of the Moon,there appeared Kircher's Itinerarium Exstaticum, sold out before the publication,according to the preface to the second edition (Iter Exstaticum Coeleste,1660).The main character,Theodidactus,started on a general cosmic tour to complete his education,with an angel guide,Cosmiel,who recalls Cyrano's Daemon;like him,he corrects the heterodox beliefs of the young man.Stories of supernatural companions and guides existed of course before Cyrano,but the success of his book may have assured their establishment as a device,which Fénelon will use again in 1699 in Télémaque.

1) op. cit.,Avertissement,in T. XIII.

In another novel, Les Voyages de Milord Céton dans les sept Planettes:ou le nouveau Mentor, published in 1765 by Anne-Marie de Roumier, and of which it will be spoken again here, the theme of the interplanetary voyage is also united to that of the supernatural guidance. This new Mentor is, this time, a genius, Zachiel.

A comedy by Montfleury, Les Bêtes Raisonables, published in 1660, was inspired in its author by Cyrano's novel, according to Brun¹. In 1661, the year of the fraudulent edition of Cyrano's works by Somnaville, appeared Le Roman des Oiseaux by the sieur Boucher. This work, which according to Lacroix had nothing to do with the famous part of Cyrano's Sun, is not in the British Museum.

In 1676, a Voyage de Galilée mentioned in Barbier's Dictionnaire des Ouvrages Anonymes (and qualified with the word "douteux") and attributed to François Savinien d'Alquié, appeared in Paris. This work is not in the British Museum either and it is impossible to know whether its title indicates an attempt similar to Cyrano's and Father Daniel's Voiage du Monde de Descartes.

La Terre Australe Connue, by Gabriel de Foigny, which appeared in 1676, contained a trip on a great bird, perhaps a

1)op. cit.,p. 263

reminiscence of the Condur of the Kingdom of Lovers in L'Autre Monde. The Histoire des Sévarambes (1678-79) has not been greatly influenced by Cyrano's novel either, except, as has been said, where natural religion is concerned. This is not discussed here since it is generally admitted that Cyrano was one of the forerunners of the esprit philosophique whereas his part in establishing the philosophical novel or tale as a genre is commonly overlooked. The Histoire des Sévarambes is a proper Utopia which could have been written even if L'Autre Monde had not existed.

In 1684, a commedia dell'arte entitled Arlequin Empereur dans la Lune was represented in Paris by the Italian Comedians¹. It was very successful, and from this may be inferred that the theme still held some attraction some forty years later than the first significant moon-voyages. This explains the title, for most of the comedy is no different from the usual comédie de mœurs of these Comedians. The last act, however, sees Arlequin in disguise, a scene which recalls similar ones in Le Malade Imaginaire and Le Bourgeois Gentilhomme, and might possibly bear a scatological interpretation, in keeping with the usual level of the jokes which made these actors popular.

1) Le Théâtre Italien, ou recueil de toutes les comédies et scènes françoises, qui ont été jouées sur le théâtre italien. Par la troupe des Comédiens du Roy de l'Hôtel de Bourgogne à Paris. Troisième édition. Revue et augmentée. 1695, Paris. On its success see Garnier, op. cit. T. XVII.

The first famous work in which Cyrano's influence may legitimately be found is Fontenelle's Entretiens sur la Pluralité des Mondes, published in 1686, and often reprinted. Although he mentions only the Georgics and Ovid's Art of Love as examples of pleasant works on difficult subjects, Fontenelle may have remembered the Preface of the Sun which announced the same intentions (so did that of Gargantua, the subject of which has however less close affinities with that of the Entretiens than L'Autre Monde). Although many of Fontenelle's ideas can be traced back to the translation of Wilkins' works¹, the influence of Cyrano seems unquestionable in several parts of the book, such as the imaginary suspension during which an observer is supposed to see the earth rotating and revealing the various continents (with the mistake that this conception implies, and which did not exist in Godwin's book), or the discussions about sun-spots, their origin and effect on the sun. The gradation Fontenelle imagines between the faculties of the inhabitants of the various planets may also indicate a remembrance of the Selenites' language, and of the animals, philosophers and daemons which people Cyrano's sun and constitute for him a Scale of Being. One can also find in the

1) See the edition of the Entretiens by R. Shackleton, Oxford, 1955.

Entretiens the indictment of human anthropocentrism which was one of the main themes of L'Autre Monde.

The likelihood that Fontenelle had the latter book in mind when he imagined his own is increased when one notices that Gabriel Daniel, in his anonymous Voyage du Monde de Descartes, published in 1691 (later republished and augmented owing to its success) and aiming also at presenting agreeably a difficult philosophy, cites Cyrano, and treats him as a forerunner and the principal author who upheld the theory of the moon inhabitants. This Voyage is an interesting work which purports to attack Descartes "dans son fort", that is to say, in his reputation of being able to explain everything with simple principles. It contains ingenious dramatizations of the tenets of the Cartesian philosophy, a device already noticed in L'Autre Monde. The following passage is worthy of the allegories to be found in the Sun and deserved a more lasting fame as an amusing description of Cartesianism in a nutshell: "Si on en croit les uns, ce n'est pas un Monde, mais un cahos(sic) : tout y est en désordre et en confusion. On ne peut même pas s'y remuer. Il n'y a ni lumière, ni couleurs, ni chaud, ni froid, ni secheresse ni humidité. Les plantes,

les animaux n'y vivent point. On y a non seulement droit, mais même on y a ordre de douter de tout. On vous y disputera hardiment la qualité d'homme.... jusqu'à ce que.... on y soit convaincu que vous ayez de la raison. Les gens y paroissent fiers, méprisans, n'ayant nul respect pour l'antiquité... On n'y est pas même, disent-ils, trop bon chrétien, ni trop bon catholique."¹ Descartes' dualism is also dramatized by the power of getting into a trance and leaving one's body behind, a power which Descartes, Mersenne and their followers enjoy, and which alone explains the philosopher's death at fifty-four when he had announced that he would live a hundred years. At the end, the megalomaniac pride with which his enemies reproached him is satirised by implication when he is allowed to rebuild a world exactly similar to our own by using only his own principles, thus vying with the Creator. The idea of populating the moon with philosophers (Plato's Republic and "l'île d'Aristote" can be found there), the allusions to Gassendi and Cardano, show what Daniel owes to Cyrano.

Huygens' Cosmotheoros, although concerned with the likelihood of inhabitants in the planets, does not appear to owe anything to L'Autre Monde, from which it is very

1) Voyage du Monde de Descartes, A Paris, chez la Vve de Simon Bénard, 1691, p. 2

different in outlook. The scientist supposes by a series of reasonings that life on the planets is perfectly identical with life on the earth, and the way in which he seeks to establish this recalls rather Borel's Discours than L'Autre Monde.

Although the Sun had been translated for the first time in 1687 by Lovell, David Russen, of Hythe, evidently knew only the Moon in the translation by St. Serf. He felt an unbounded enthusiasm for it: "I could not read it without abundance of delight; and having read it, could not return it to the Owner, of whom I had borrowed it, without having a longer Day for restitution: Which having obtained and read it again, I could not part with it without making some Notes and Observations thereon; which is the subject of these following Lines...."¹ that is to say Iter Lunare, or a Voyage to the Moon, published in London in 1703. In spite of its title, it is almost a word for word commentary of the Moon. Russen took many of Cyrano's jests seriously but, as has been said, occasionally understood his purpose better than other commentators. Surprisingly, he rejected after discussion all the means of flight imagined by Cyrano, finding Gonsales' gansas more realistic! He himself made some

1) Iter Lunare, or a Voyage to the moon, containing Some considerations of the Nature of that Planet, The possibility of getting thither, With other pleasant conceits about the Inhabitants, their Manners and Customs, London, 1703, pp. I-2.

wildly improbable suggestions on that subject. He approved of the name Selenarchia given to the translation of L'Autre Monde, but put it in the same category as "Sir Thomas Moor's (sic) Utopia, Don Quixot's Romantick Whymseys, or Poor Robin's Description of Lubbardland"¹, a classification where the confusion between Utopias and fantastic voyages appear.

In 1706, Thomas D'Urfey published Wonders in the Sun; or, the Kingdom of Birds; A Comick Opera, obviously taken from Cyrano's Sun, and also from Godwin and Defoe's Consolidator. The Birds and the Daemon appear in it, but it contains nothing very new otherwise. It has however the merit of emphasizing that the purpose of the trip is the acquisition of knowledge.

Laurent Bordelon's Gomgam², published in 1711, does not fulfil many of its ponderous promises, and except for a quick dip in the Red Sea after which Gomgam dries himself in the crater of the Etna, the main part of the flying is done in Paris, a few feet above the ground. Gomgam is really a roman de moeurs, written with a deplorable lack of composition but many amusing details and a leisurely pace which is not altogether unpleasant. It recalls rather

1) op. cit., p. 3

2) Gomgam, ou l'Homme Prodigeux, transporté dans l'air, sur la terre et sous les eaux. Livre véritablement nouveau. Paris, 1711; Amsterdam, 1713, Nouvelle édition enrichie de figures et augmentée du Grand Chemin de l'Hôpital.

Le Diable Boîteux (1707) than L'Autre Monde.

Brun¹ traced Cyrano's physionome in a comedy, Arlequin, Roi de Serendib (II,7) contained in Lesage's Théâtre de la Foire.

It has already been suggested that the particular brand of irony in L'Autre Monde, especially about religious matters, announced the Provinciales (written, if not published, after Cyrano's novel), the Lettres Persanes, and Voltaire. It was a more sombre sort of irony which characterised Gulliver's Travels (1726), a work in which most people now recognize the influence of L'Autre Monde. The question of the sources of Gulliver has been thoroughly threshed, and some of the various suggestions on that subject are listed in "Le Fonti dei Viaggi de Gulliver", an article by A. Faggi². Borkowsky and Toldo admit Cyrano's influence; Hönncher and Bangham deny it; Eddy emphasises the likelihood that Swift derived many ideas from D'Ablancourt's continuation of Lucian's Vera Historia. It has been seen that Cyrano himself very probably took several details of his Autre Monde from

1) op. cit., p. 265

2) In Studi filosofici e letterari, Torino, 1938. See also Hönncher's article in Anglia, X, and Borkowsky's in Anglia, XV, 1892; Poll's "Sources of Gulliver's Travels" in the Bulletin of the University of Cincinnati, 3, II, 1903; W.A. Eddy, "A source for Gulliver's Travels", M.L.N., 1921, and id., "Cyrano de Bergerac and Gulliver's Travels", M.L.N., 1923; R.E. Bennett, "A Note on the Cyrano-Swift criticism", M.L.N., 1928; D.E. Bangham, "Swift's source for the Houyhnhnms", E.L.H., 5, 1938.

D'Ablancourt third and fourth books. Commentators have been painfully embarrassed in noticing that D'Ablancourt's animals, which are supposed to be the source of the Houyhnhnms, were "heterogeneous", that is to say, of several kinds; Cyrano's Birds, at least, are "homogeneous"¹. But they are not horses; to which one could answer that Swift, although more dependent on his sources than it used to be believed, as Bangham points out, could all the same invent something by himself. He could hardly take birds again as heroes; but he may have derived the "homogeneity" from L'Autre Monde. The points of resemblance which will presently be listed (some of which have already been mentioned in the course of the study) are only the external evidence; the internal one is that Swift could hardly have neglected the new meaning that Cyrano had put into the episodes of his novel, even when they had previously been borrowed from another one, a meaning, furthermore, which suited so well his pessimism and his caustic misanthropy.

Some details of "A Voyage to Lilliput" may have been taken from, or suggested by, Cyrano's novel. Such is the case for several absurd customs of the Lilliputians (their burial rites, for instance); the Selenites also, among many customs inspired by their love of nature, had some others which are

1) On the possible sources for Cyrano's Birds, see Appendix I.

less easy to explain, such as their way of fighting. The Lilliputians consider ingratitude to be the capital crime, like the Selenites, and the relations between parents and children are carefully divested of any misplaced sentimentality in both countries (the feeling, in the latter case, resembles that which inspired Cyrano's attack on paternal authority, but the educational scheme is that of the Republic and of the City of the Sun). "A Voyage to Brobdingnag" shows more similarities, and this is understandable, since the Selenites also are giants. It opens with a reflexion on the idea of relativity which is the very lesson of L'Autre Monde and could be used as an exergue for Micromégas¹. The lady-in-waiting and the mischievous youngster, as has been seen, are also found in the Moon and the Sun, as well as the hero's humiliating dependency on an owner who forces him to entertain an audience. The disputes with scholars, at the conclusion of which the hero is proclaimed to be a Lusus Naturae, are found in the Sun, and especiallyⁱⁿ the Moon. The magnetic island of Laputa very probably owes something to Elijah's chariot, although this does not seem to be the only source of Swift's idea². An island of magicians could already

1) See Gulliver's Travels, Oxford University Press, The World's Classics, 20, p. 94

2) See M. Nicolson, "Swift's 'Flying Island' in the 'Voyage to Laputa' ", Annals of Science, II, 4, 1937.

be found in D'Ablancourt; but the dead servants in the Island of Glubbubdrib are reminiscent of the Daemon and his reincarnations. It is remarkable that the list of famous men whom Gulliver wants to see is almost word for word that of the Daemon's protégés (a list which D'Urfey had repeated in Wonders in the Sun): "I had the honour to have much conversation with Brutus, and was told that his ancestors Junius, Socrates, Epaminondas, Cato the Younger, Sir Thomas More and himself, were perpetually together, a sextumvirate to which all the ages of the world cannot add a seventh."¹ and one is reminded of Cyrano's political ideas by Gulliver's choice: "I chiefly fed mine eyes with beholding the destroyers of tyrants and usurpers, and the restorers of liberty to oppressed and injured nations."² Descartes and Gassendi are afterwards confronted with Aristotle; they all confess that their systems were mistakes, and predict the same fate for that of Newton: Swift is there profoundly different from Cyrano, whose Philosophers have a hope of knowing, after death, a Truth which exists without any doubt. Finally, the Yahoos certainly owe a great deal to the debased image of man that emerged from L'Autre Monde. The idea of making them walk on all fours is the same as has already

1) ed. cit., p. 238

2) *ibid.*, pp. 238-39

been found in L'Autre Monde and Vanini's Dialogues even if it is used in Gulliver with a pejorative intent; later in the book, however, Gulliver's master speaks like a Selenite when he says that there is no part to be ashamed of in a human body¹. This body is nevertheless fiercely derided in still another passage², much more cruel than the good-humoured banter of the Birds on man's physical appearance and habits.

The mutual disbelief of Gulliver and the Houyhnhnms is evidently that which the Selenites, then the inhabitants of the sun, and Cyrano himself felt in L'Autre Monde; but there again, there is a difference in tone, for nothing could really convince the Houyhnhnms that a being in the shape of a Yahoo could be capable of any good.

Without repeating with Perrens, Rostand and others that Cyrano's chief claim to glory are "ces emprunts réitérés du génie", it is right to see in the adoption by a great writer of several themes of L'Autre Monde a proof of the philosophical and literary flair of Cyrano.

The following year, the Birds reappeared in Samuel Brunt's Cacklogallinia. This is the only common feature of this book and Cyrano's, for otherwise it is a satire on

1) *ibid.*, p. 292

2) *ibid.*, pp. 299-300

the South Sea Bubble.

One of the means of flight used by McDermot in A Trip to the Moon (1728), that of firecrackers, may well come from Cyrano's second ascension, but this time the success is not due to inadvertance but to deliberate preparation.

Ludwig Holberg's famous novel Niels Klim¹, beside using the hackneyed device of the supernatural beings to transport the adventurous traveller, shows a distinct remembrance of the speaking trees of Dodona and the panpsychist theories of the Sun. Those trees live in society on a planet which is supposed to exist in the centre of the earth, and the traveller learns their language. The Copernican theme in L'Autre Monde has its counterpart in the Newtonian theme in Niels Klim; one of the first episodes of that novel, the hero is seen to rotate around a planet, while his loaf of bread rotates around him like a satellite!

A novel less well known, but which makes pleasant reading, La Relation du Monde de Mercure, published anonymously in 1750 by the Chevalier de Béthune, shows unmistakable traces of Cyrano's novel, in spite of the author's mentioning only Fontenelle. The hero can see all that is happening on the planet Mercury thanks to a "microscope philosophique"

1) Voyage de Nicolas Klimius dans le monde souterrain, contenant une nouvelle théorie de la terre, l'histoire de divers pays, et d'une monarchie inconnue jusques à présent. Ouvrage traduit du Latin de M. Abelin par M. de Mauvillon. Deuxième édition, Copenhague et Leipsick, 1753 (1st ed°: 1741).

which shows objects both far and near, and "les peuples élémentaires, les atomes d'Epicure, et jusqu'aux mouvements de l'âme, et aux intentions des hommes"¹. It was a Rosicrucian who lent it to him, and there follows a scene of metempsychosis in which the hero's soul is made to inhabit a myrtle. This, the Rosicrucian says, is what happened in the case of the dryads, the fauns, and the oaks of Dodona - an explanation which the Daemon had already given. The inhabitants of Mercury, living nearer to the sun, resemble Cyrano's Philosophes in being to a great extent the masters of their bodies. They have a very long life, and are often tempted to end it and to become reunited to the "great principle", "c'est-à-dire, d'aller peupler le soleil"². Their bodies crumble into a golden powder. As for the inhabitants of the sun, they absolutely conform to their description in L'Autre Monde³. The inhabitants of Mercury know at birth the language of the beasts, and learn human language afterwards. The author evidently knew the occultist theories and repeatedly pokes fun at Nicolas Flamel and his wife. The religion in Mercury is founded "sur les seules lumières de la raison"; metempsychosis is an article of faith.

1) See Garnier, op. cit., T. XVI, p. 166

2) *ibid.*, p. 188

3) *ibid.*, pp. 178, 182 etc...

In brief, Le Monde de Mercure has been constituted by shameless plundering from L'Autre Monde; to mention all the common points they have would be to quote the whole of the Chevalier de Béthune's work. There lingers about it, however, a grace which belongs to the century in which it was written, and which makes Cyrano's work appear, for all its verve, naïve and uncouth in comparison.

Another illustrious author had been inspired by Cyrano's novel: Voltaire, whose Micromégas, written probably long before, appeared in 1752. It is less a direct imitation of L'Autre Monde than of Gulliver's Travels, of which it is the logical continuation. In the passage of "A Voyage to Brobdingnag" which has been alluded to here, Gulliver, remembering the Lilliputians, reflected that "undoubtedly philosophers are in the right when they tell us that nothing is great or little otherwise than in comparison."¹ In Micromégas, all the populations of different sizes are brought in contact in the persons of one or several of their representatives, with startling aesthetic and philosophical results.

Several points which Cyrano's novel has in common with Voltaire's have already been mentioned, such as the variation in the number of senses enjoyed by the inhabitants of different planets, or their means of cosmic travel. The idea

1) ed. cit., p. 94

of relativity is curiously extended, in Micromégas, to the properties of matter, which differ in the various celestial bodies¹. Voltaire names Swift², and evidently derived inspiration and a certain type of flippancy from his works; but his debt to the unfortunate Cyrano, although just as evident, has never been acknowledged by him. This was all the easier since Swift himself had enlarged and perfected some episodes of L'Autre Monde; Voltaire could come last and reap the benefits. The indictment of war, a favourite theme of Voltaire, had also been made by Swift in Gulliver, as has been seen; but it could already be found in L'Autre Monde, and a comparison of the latter with Micromégas is very instructive: "Savez-vous bien, par exemple, says one of the philosophers of the earth, qu'à l'heure que je vous parle il y a cent mille fous de notre espèce, couverts de chapeaux, qui tuent cent mille autres animaux couverts d'un turban, ou qui sont massacrés par eux....?"³ These chapeaux and turbans are singularly reminiscent of the fraizes and rabats by which the lady-in-waiting ironically distinguished Spaniards from Frenchmen in L'Autre Monde. Voltaire, who was pleased with this rhetorical device, makes his point still clearer when he adds: "Il ne s'agit que de savoir s'il appartiendra à un certain homme

1) Voltaire: Romans et contes, La Pléiade, p. 106

2) ibid., p. 115

3) ibid., p. 116

qu'on nomme Sultan ou à un autre qu'on nomme, je ne sais pourquoi, César..." which is a mere transposition of the passage in L'Autre Monde. To make the imitation evident, there follows the same cynical conclusion: "D'ailleurs, ce n'est pas eux qu'il faut punir: ce sont ces barbares sédentaires qui, du fond de leur cabinet, ordonnent, dans le temps de leur digestion, le massacre d'un million d'hommes, et qui ensuite en font remercier Dieu solennellement."¹

Victor Hugo also wrote on this a flippant quatrain.

When it comes to philosophical discussion, the means are similar in both books but, as was the case with Cyrano and Swift, the conclusion is different. The laughter which greets the presumptuous anthropocentrism of the Peripatetician in Micromégas is an echo of the Selenites' laughter; but the praise of the positivistic beliefs of the "petit partisan de Locke", as well as the agnostic conclusion of Voltaire's tale (borrowed from the Cymbalum Mundi) recall more Swift than Cyrano. Such a conclusion clearly shows in contrast Cyrano's uncomfortable epistemological position: desiring to know the secret of the universe, "le bout des choses", as the inhabitant of Sirius puts it, he has occultist leanings; his good sense and the success of the "new philosophy" prevent him from yielding to them completely;

1) ibid., p. II V

he could not have been content with the positivism of the Enlightenment, and yet his keen consciousness of man's limitations makes him anything but a scientiste.

The tone in Micromégas, however, is more that of L'Autre Monde than that of Gulliver's Travels; man's weakness and his pretensions are lucidly exposed, but they are indulgently attacked rather than mercilessly lashed.

A third translation of Cyrano's work into English was published in 1754; most of his works had now been translated, and a review of all the fantastic voyages in English would be necessary to assess the influence of L'Autre Monde in England, where the genre was as appreciated as it was in France. In 1756 appeared a translation and imitation of the Lettre pour les Sorciers called The Agreement. A Satyrical and Facetious Dream. The title, inside, becomes The Dream of Cyrano de Bergerac, presented as "a French writer whom my Lord Orrery mentions, and gives his opinion of, in his Remarks on the life and writings of Dr. Swift".

Francis Gentleman's A Trip to the Moon, inspired, the author says, by a reading of L'Autre Monde, appeared in York in 1764; already in 1748, in the posthumous publication of Telliamed, ou Entretiens d'un Philosophe Indien avec un Missionnaire François, de Maillet had ironically acknowledged

Cyrano's priority in the field of the fantastic and philosophical tale.

Les Voyages de Milord Céton dans les Sept Planettes (1765) has already been mentioned. Like all such works published during the same period, it shows some evidence of a reading of Cyrano. There is for instance in it a "ville des Philosophes", which shows that, even for mediocre authors, the introduction of philosophy in a fantastic voyage had become an obligation of the genre. This work contains but little realism, and is mainly concerned with traditional astrology.

Philosophy was not the only content possible for the fantastic voyages, however; the interrelations of this type of fiction with another inspired by the relations of real voyages had accredited the satire of manners as a suitable subject for the frame of the voyage. This could of course be found in L'Autre Monde also but, except for the trials of the hero in the moon and the sun, it was rather a satire by contrast than by imitation. Thus Jacques Dulaure's Le Retour de mon pauvre oncle, ou relation de son voyage à la Lune (1784) is chiefly a satire of Parisians (with a Rebelaisian beginning), whereas in La Découverte Australe by Restif de la Bretonne (1781) and Tiphaigne de la Roche's

Giphantie (1760) philosophy and satire are mixed. The latter book is besides remarkable for a curious detail: whereas Cyrano gave a description of an apparatus resembling our gramophone, Tiphaigne de la Roche gives a description...of photography! This should help to put Cyrano's "discoveries" in perspective.

An important fact had occurred in 1783-84: the fire-balloon had this time been invented for good, giving the fantastic voyage a definite twist. From this moment onwards, through the tales and novels of Edgar Poe, Jules Verne and others, science-fiction such as it is known to-day will be slowly elaborated. To outline its history would be outside the scope of the present study; it owes little to Cyrano and except for writers like H.G. Wells, Aldous Huxley or C.S. Lewis the balance between the philosophic contents and the scientific or pseudo-scientific paraphernalia has not always been kept. The aim of review which has just been made was to show how science-fiction was born out of the philosophical novel, and that in the birth of the latter from the fantastic voyage Cyrano played an essential part.

Conclusion

Ira O. Wade, in his Introduction to Micromégas¹, explains that there was, at the beginning of the eighteenth century, a crisis in literary forms, the existing ones being inadequate for the new ideological content. He states that the philosophic tale is "Voltaire's own literary invention"², after having compared Micromégas to L'Autre Monde and Gulliver's Travels, putting the emphasis on the difference between the loose structure of the latter works and the close composition of Micromégas. Are Voltaire's aims, and the ways in which he fulfils them, very different from Cyrano's, however? And is not the gap much wider between a work like Rabelais' and L'Autre Monde than between the latter and a tale like Micromégas? It has been seen that Cyrano extolled definite philosophical opinions, and did not merely express an attitude to life as Rabelais did in Gargantua and Pantagruel; it has also been seen that the intention to put these ideas across is indissolubly linked to the conception of the novel. In spite of an occasional brilliance, Cyrano's style, compared to that of his gifted imitators, sometimes appears rather heavy, and its graces old-fashioned; but those are the defects of his century. Besides, the flippant tone of Voltaire and of

1) Voltaire's Micromégas, Princeton University Press, 1950.

2) ibid., p. 80

Swift is the outcome not only of the general style of their century, but also of their epistemological attitude: they want to ridicule man's pretensions to metaphysical certainty, and are easily resigned to having a finite intelligence. Cyrano, on the contrary, cannot give up the hope, of having a glimpse of the true explanation of the phenomena, and his criticism of man's limitations is therefore half-hearted.

Geruzez, speaking of La Mort d'Agrippine, wrote: "cent ans avant Voltaire, la tragédie philosophique était trouvée."¹ This also applies to L'Autre Monde as a philosophical novel. Busson has acknowledged Cyrano's "exceptionnelle indépendance de pensée"², and this courage is the most striking feature of Cyrano's personality and works. Startingly different from his contemporaries, from this "libertinage militant....hésitant, combattu, embarrassée de scrupules et de craintes, et qui n'arrivait à s'exprimer qu'en se reniant"³, he heralds, and already represents the "libertinage triomphant": Cyrano is the first Philosophe.

1) Mélanges et pensées, Paris, 1866, p. 233.

2) La Pensée Religieuse...

3) R. Pintard, Le libertinage érudit..., p. 576.

Appendix I

The source of some elements of L'Autre Monde

I - Means of flight:

a - The parachute: Cyrano has sometimes been credited with having, if not invented the parachute, at least suspected its principle. Actually, apart from the studies of Leonardo da Vinci, circa 1500, and Fausto Veranzio, circa 1595, the use of a cloak as an improvised parachute, facetiously attributed to Enoch in L'Autre Monde, is not even the first in literature. In a book by Desmarets de Saint-Sorlin, Ariane.... (Paris, 1632), one of the characters, Mélinte, is seen at the end of the fifteenth book to jump from a tower and to land safely thanks to his wide cloak. This source was indicated by Carl von Klinckowstroem in his article "Luftfahrten in der Literatur" published in Zeitschrift für Bücherfreunde, N.F., III, ii, 1911-12.

b - The dew-phials: Klinckowstroem, in the same article, quotes the title and a passage of a book where a trick of "natural magic" is described:

L'Oeuf de Pasques ou pasqual..... A Paris, 1616
(reprinted in E. Fournier, Variétés historiques, 1855, T.V)

Ne faict on pas les oeufs aller
Comme oyseau a mont dedans l'air
Quand ilz sont remplis de rosee
Dont l'herbe est en May arrosée?
Mais pour avoir ce pasetemps
On les met aux rays bluetans
D'un soleil ardent, qui les tire
Après qu'il a fondu la cire
Qui clost la rosee avec l'Oeuf....

Cyrano may have read that book; it is even more likely that he had seen the trick or had heard of it. The idea occurred again in a book published circa 1712: Der Staat von Schlaraffenland, s.l.n.d. (pp. 19 ff.) whose author had probably read L'Autre Monde, since phials of dew, and not eggs, are used as a means of flight.

c - The magnetic tray: Several details in L'Autre Monde seem to show that Cyrano knew the

Histoire des faits, gestes, triomphes et prouesses du chevalier Guérin, auparavant nommé Mesquin, fils de Millon de Bourgogne, Roi d'Albanie, lequel en son temps eut plusieurs grandes aventures, tant en allant aux arbres du Soleil et de la Lune, qu'au milieu des montagnes d'Italie, où il trouva la belle Sibille en vie, et fut transporté par les Diables en Purgatoire. Traduite d'Italien en François par Jean de Cuchermois, en accomplissant le saint voyage de Jerusalem, Paris 1490. (By André Patria, first edition: Padua 1473).

Guérin goes to see Mohammed's tomb. The author supposes that the explanation of the famous peculiarity of that tomb, which remains floating in the air, is an application of the properties of the magnet.

II - The custom of feeding on smells: Several sources have already been suggested for this in the course of this study. Toldo traces this Selenite custom to the description by Rabelais of the "Royaume d'Entéléchie" (Fifth Book). It was

also a traditional element of the descriptions of the Earthly Paradise. In the thirty-fourth canto of Orlando Furioso Astolfo describes a mountain thus: "Ce vent mollet va si bien desrobant les odeurs des fleurs, des pommiers et de la verdure il en compose une si douce mixtion, que ceste douceur sert de nourriture à l'âme." (Le divin Arioste, ou Roland le Furieux, traduit nouvellement en François par F. de Rosset, Paris, 1615, p. 318b). Camus, in a "Dessert au Lecteur", a commentary which follows his novel La Pieuse Julie, writes: "Qui voudroit avant le repas entretenir un hoste affamé avec des eaux de senteur, en l'oignant de parfums.....s'il n'estoit de ces peuples astomes ou sans bouche qui se nourrissent par l'odorat, auroit trouvé le moyen d'essayer parfaitement sa patience..." (Quoted by Magendie, op. cit., p. 445). Some of these beings can be seen feeding on the smell of apples in the Hereford mappa mundi for instance; they were traditionally known as the Gangines, living near the Ganges, one of the four rivers flowing from Paradise. It is unlikely that the "Royaume d'Entéléchie" is the real source of Cyrano's idea, because the Selenite practice is praised by him from a naturalistic point of view, and not derided like the quintessential feeding of Entéléchie.

III - The speaking trees of the Dodona forest:

The trees of the Moon and the Sun, which appear in the Histoire . . . du chevalier Guérin, and in medieval legends of which Alexander is the hero, are oracles, but refuse to be adored like divinities. The idea of introducing into his novel the well-known trees of Dodona may besides have come to Cyrano from a contemporary English work: Dodona's grove, published in 1640 by James Howell. It is a political satire which does not bear any relation to L'Autre Monde otherwise. The beginning recalls Cyrano's poetic description of the language of the trees:

"It fortun'd not long since, that Trees did speake, and locally move, and meet one another; Their ayrie whistlings, and soft hollowe whispers became Articulate sounds, mutually intelligible as if the Soule of vegetation, the sensitive faculties and powers of the intellect also, had been co-infus'd into them..."
(p.I).

IV - The gems given to Domingo Gonsales:

When Gonsales left the moon, in Godwin's book, he was given three wonderful gems; one of them, the "maorbus" stone, had the property of being naturally luminous, and Cyrano may have remembered it for his description of the eyes of the salamander, which Campanella keeps as eternal lamps, and also when he mentions an "oeil artificiel avec lequel on voit la

nuit". There was also the "ebolus" stone, which appears in L'Autre Monde without that name, in the country irrigated by the river of Imagination - a comment of Cyrano on the likelihood of their existence - but, instead of mentioning Godwin, Cyrano evokes "ces cailloux dont parle Pline, avec lesquels on devient pesant quand on les touche par l'envers, et léger quand on se les applique par l'endroit." (p. 189) He may have wanted to expose Godwin's debt to Pliny, but he himself used the description of the strange feeling of lightness experienced by Gonsales when he uses the stone in two parts of L'Autre Monde: in Canada, with his dew-phials, and in the sun, which he supposes to be without attraction.

V - Traditional features of the Earthly Paradise which are found in L'Autre Monde: Cyrano obviously knew the legends which have been imagined in numerous countries about the Earthly Paradise (such as they are listed by Arturo Graf, op. cit.); he also borrowed from Ariosto who had already used some of them. Cyrano composed with them his descriptions of the moon and the sun.

In the moon are found the four rivers (in the legends the Euphrates, the Tigris, the Nile and the Ganges), the Tree of Life and the Fountain of Youth, Enoch, Elijah and St John.

In the sun are some more interesting mythical features: the Phoenix, an embellishment added to the conception of the Earthly Paradise in the Middle Ages, a tree made of precious metals and stones, the river Lethe in which the creatures must be immersed before undergoing metempsychosis (in L'Autre Monde the Lake of Sleep) and speaking birds. Speaking of the more and more numerous prestigious features added to the idea of the Earthly Paradise, Arturo Graf wrote: "...introduceva, come in istanza sua propria, quella immortale Fenice...., e vi piantava alberi dalle fronde d'oro e d'argento, e popolava i boschi d'ucelli parlanti..." (op. cit. pp. I7-I8). The belief that Adam's body was luminous, shared by some people, may be the source of several episodes of Cyrano's novel: that in which the hero and his box become diaphanous, or that in which the head of the philosophers becomes transparent. Finally, a passage in the same book of Graf: "Il mito ariò antichissimo rappresenta la sempre verde natura in figura di un albero immenso che nelle sue radici chiude la terra e si spande coi rami e con le fronde a formar la volta dei cieli" (op. cit. p.43) recalls the description of the Garden of Eden which Cyrano took from his Letter Le Campagnard, and seems to bear out M. Canseliet's interpretation of some episodes of the Sun as occultist symbols.

VI - The Kingdom of Birds: E.Roy, in his book La vie et les oeuvres de Charles Sorel (Paris 1891) gives a list of the chief episodes which Cyrano borrowed from Sorel (pp.386-87). He suggests that the idea of the Kingdom of Birds, the celebrated episode of L'Autre Monde, comes from Le Berger Extravagant (Livre X, p. 232). Brun mentioned Aristophanes' famous play, as well as Pierre Leloyer's Néphélococugie. There may still be another source. In his edition of Chaucer's Parlement of Foules (London, University Tutorial Press, 1914) C.M. Drennan traced Chaucer's source not to Aristophanes whom he did not know but to two Fables of Marie de France: Li parlemens des oiseax por faire Roi (Fable 22) and De totes les Bestes è des Oiseax li parlemens (Fable 31). Cyrano may have known these. This is all the more likely since La Fontaine whose Fables show such similarities with L'Autre Monde, used both themes in Le Renard, le Singe et les Animaux (VI, 6) and La Chauve-souris et les deux Belettes (II, 5), possibly taking them from Marie de France and not directly from Aesop. Finally, Cyrano's knowledge of all the legends attached to the theme of the îles fortunées allows one to suppose that he might have known, or might have heard of, the Voyage de Saint Brendan in which there was an island peopled with birds, who actually were metamorphosed angels. Rabelais' Isle Sonante (Fifth Book) must be mentioned, but does not appear to have influenced Cyrano greatly.

Appendix II

The Scale of Being in the Table of Contents
of Cardano's De la Subtilité

- I - Des principes, matière, forme, vacuité, répugnance des corps, du mouvement naturel et du lieu.
- 2 - Des elemens...
- 3 - Du Ciel.
- 4 - De la clarté et lumière
- 5 - De la mixtion et matieres composees, ou des metaux et choses metalliques.
- 6 - Des metaux.
- 7 - Des pierreries.
- 8 - Des plantes, des arbres et des herbes.
- 9 - Des bestes engendrees de putrefaction.
- 10 - Des bestes parfaites.
- 11 - De la necessité et forme de l'Homme.
- 12 - De la nature et du tempérament de l'Homme.
- 13 - Des sens, choses sensibles et de volupté.
- 14 - De l'ame et de l'intellect, ou entendement.
- 15 - Des Subtilitez incertaines et inutiles.
- 16 - Des sciences.
- 17 - Des Ars et inventions artificieuses.
- 18 - Des inventions merueilleuses, et de la maniere de représenter choses diverses, presque incroyables.
- 19 - Des esprits.
- 20 - Des anges et Intelligences.
- 21 - De Dieu et de l'univers.

In the first chapter, Cardano gives a classification of all things, "choses desquelles est quelque science"; it is evident that Cyrano had read it and that he thought in relation to it when he elaborated his own Scale of Being. This classification, such as it can be reconstituted from Cardano's indications is as follows:

Cardano distinguishes the things that are from the things that only seem to be, and the latter when we are awake and when we are asleep. The things that are, are accidents or substances; the accidents are different when they are applied to the elements or to the compounds ; the substances can be with or without a body. If they are without a body, they are immortal and incorruptible. Among those, one only does not depend on another but is the cause of everything: God; the others depend on some other substance. If they are at the same time the cause of something else, they are angels or intelligences, the functions of whom Cardano defines; if they are the cause of nothing else, they are demons, the existence of whom is not quite certain for him.

The substances which have a body can be immortal or mortal; if they are mortal, they can be simple or "mixtes". These "mixtes" are by far the most interesting part of the classification. If they are imperfect or "metalliques", that is to say with some amount of fluidity, they are "terres" and "sucs"; if they are perfect, that is to say remain solid, there are two cases: either they have life in themselves, and are metals (if they are of aqueous substance) or stones (if they are of earthly substance), or they attract life from somewhere. Among the latter are some beings not endowed with

movement, such as trees and herbs; others are endowed with movement, and **may** be generated from seeds or not. Among the former, man is the most interesting.

From this curious and ingenious classification in which some categories are mentioned only for the sake of the next one, opposed to the first (for instance Cardano does not cite any substance with a body but immortal, or among mortal substances with bodies, the so-called "simple" ones, opposed to the vast category of the "mixtes"), several facts appear. Firstly, metals and stones are unambiguously stated to have life; secondly, "matières métalliques" does not include metals and is a vast category; thirdly, in spite of an important admixture of his own theories, Cardano still relies on Aristotelianism. It has been seen in what Cyrano resembles him and in what he differs from him.

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Histoire Comique, par monsieur de Cyrano Bergerac.
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 chez Charles de Sercy, au Palais, dans la Salle Dauphine,
 à la Bonne-Foy couronnée. M.DC.LVII. (1657)

First edition of the Sun:

Les Nouvelles Oeuvres de Monsieur de Cyrano Bergerac
contenant l'Histoire comique des Estats et Empires du
Soleil, plusieurs Lettres, et autres pièces divertissantes.
 A Paris, chez Charles de Sercy, au Palais, dans la Salle
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