

Attributed to Jean d’Espagnet

The Summary of Physics Restored

*A fresh English translation from the complete 1653 Latin
Enchiridion*

Diotimos Editions

2026

Complete Latin–English Edition with Annotations and Diotimos Study Features

Contents

Edition Statement.....	3
Introduction.....	4
Chronology.....	7
Note on the Text and Translation.....	8
The Historical Reading Text.....	10
The Historical Title Page.....	10
To Students of the Light of Natural Philosophy.....	12
On Physics Restored.....	17
The 245 Canons.....	18
Keyword Essays.....	137
Short Glossary.....	140
Contextual Lexicon.....	146
Relations within the Work.....	157
Reading Routes.....	158
Questions for Study and Discussion.....	159
Bibliography and Source Credits.....	160
Subject Index.....	162

Edition Statement

This Diotimos edition presents a fresh English translation from the complete *Enchiridion physicae restitutae* printed at Geneva by Jean-Antoine and Samuel de Tournes in 1653, using the copy held by ETH-Bibliothek Zürich as Rar 4790 and digitised by e-rara. The original book is anonymous; the conventional attribution to Jean d’Espagnet is retained as an attribution. The historical title, address to students, eight-line epigram, all 245 canons, original marginal notes and citations, and concluding FINIS are included.

The Summary of Physics Restored is the reading title used here. *Enchiridion* means a handbook or manual; *physica* is natural philosophy, a field wider than the modern academic discipline called physics. The historical English title *The Summary of Physicks Recovered*, documented in 1651, supplies the familiar title tradition. The new translation follows the linked Latin witness rather than modernising that earlier English version.

Latin and English are paired by stable passage identifiers. The annotations and supporting essays, glossary, contextual lexicon, reading routes, questions and subject index are modern Diotimos material. They are identifiable as commentary rather than additions to the anonymous author’s canons.

Five files accompany the edition: PDF, editable Word, Markdown, a Latin–English EPUB, and a separate English Reading EPUB. The English Reading EPUB retains every English historical passage, annotation and study feature while hiding the parallel Latin reading blocks. Latin terms and source titles remain where the commentary requires them.

No historical reading passage of the selected *Enchiridion* has been abridged. The combined title advertises a second work, the *Arcanum hermeticae philosophiae opus*. That independently paginated companion has its own Diotimos edition and is not part of the *Enchiridion*’s 245-canon sequence. The digitisation’s modern library notice, blank surfaces, repeated running heads, catchwords and ornaments are accounted for as physical features; the title device’s verbal maxim is translated.

Introduction

The Summary of Physics Restored proposes a world held together by intelligible relations. Light acts upon darkness, form gives determination to matter, celestial powers communicate with terrestrial bodies, and generation produces living individuals whose soul, spirit and body are joined without becoming identical. Love and harmony explain the cooperation of these differences. The book's title therefore promises more than a short survey: it promises to restore a coherent account of Nature.

What Is Being Restored?

The original address to readers makes restoration a claim about the condition of knowledge. Its author respects the great ancient philosophers while refusing to let their names close a question. He imagines Philosophy as a child whom the ancients nurtured, then asks why later generations should be denied a part in her growth. Time can confirm an error, but it can also remove its authority. His boundary stones are to be advanced, his inherited learning reconsidered at the anvil.

This criticism does not place the author outside every inherited framework. His arguments depend on creation, a divine archetype, the authority of sacred writing, the hierarchy of celestial and terrestrial things, and the exemplary language of classical poetry. Restoration means rearranging and defending that inheritance according to what he takes to be Nature's light. Readers can examine the force of his arguments without treating his account as either timeless revelation or an early statement of every modern scientific conclusion.

Read the appeal concerning Plato and Aristotle with the defence of advancing boundaries. The preface gives the canons a polemical setting: their short, assured form is part of a contest over what deserves belief.

A Natural Philosophy of Relations

The book proceeds from the first principles of created things into the constitution and activity of the world. Its light, fire, elements, qualities and seeds belong to an account of causation. A word can carry a physical function and a theological relation at once. Light can be invoked as a principle of form and life while its divine origin remains central to the explanation. Such uses cannot be reduced to the visible appearance of a flame, yet they continue to make claims about Nature.

The later account of individual life likewise depends on distinctions. Soul gives a living compound its specific activity; spirit mediates its relation to body. Innate heat and radical moisture cooperate but are

expressly distinguished. The world's higher and lower parts are joined through communication, nourishment, generation and measure. The interpreter's first task is to follow these relations before assigning a single modern equivalent to a term.

The final canons widen the field still further. They discuss the continuity of the heavens, the Earth's relation to other heavenly bodies, the possibility of inhabitants of the Moon, and the difference between God and the created whole. These speculative passages are part of the complete work, not peripheral curiosities.

Material Language and Symbolic Reading

This book's metaphors are philosophically active. Marriage expresses a joining whose terms remain distinguishable; nourishment describes the transmission of life; the commonwealth gives cooperation a political form; music makes proportion audible. The same figures can invite a reflective reading concerned with attention, judgment and the transformation of the reader. Such a reading is strongest when it shows how a particular passage supports it.

The edition therefore preserves the author's material and spiritual language together. It neither assigns each historical substance a speculative modern formula nor converts every physical assertion into a statement about the soul. The distinction matters especially where the book gives definitions, offers observations, argues from glass or ashes, describes generation, or speculates about celestial bodies. The historical claim and a later application can be considered in succession without being made interchangeable.

The contextual lexicon is designed for that practice. Each entry begins with one exact sentence from the new translation, supplies Latin forms present in the paired source, explains their local function, and offers related passages. Its reflective possibilities remain editorial proposals that readers can test.

Using the Edition

A first reading can follow the English sequence and use the annotations only when a term or reference interrupts understanding. A second reading can follow a relation—light and matter, heat and moisture, soul and spirit—through the canons and the linked study entries. The bilingual files place readable Latin beside the English so that readers can inspect the wording behind an interpretation.

Canon numbers identify the work's logical sequence. Original printed headings and page references remain available even where the printing is irregular. Subject-index links and reading routes lead to passages rather than to a page number that changes with the format or a reader's EPUB settings. The essays and discussion prompts support inquiry; they do not supply a compulsory code for decoding the whole book.

Chronology

Witnesses and the Present Edition

Date	Witness or editorial event
1651	London: The Summary of Physicks Recovered, an earlier English printing, published by W. Bentley and sold by W. Sheares and R. Tutchein. It is a transmission reference, not the wording governing this translation.
1653	Geneva: Jean-Antoine and Samuel de Tournes issue the Latin Enchiridion used here. The ETH Zürich copy ends with canon 245 on printed page 179.
2026	Diotimos Editions: fresh translation and readable Latin transcription of the selected 1653 witness, with separate modern study features.

The chronology identifies the documented witnesses relevant to this edition. It does not claim that 1653 was the work's first publication.

Note on the Text and Translation

The Governing Witness

The governing copy is ETH-Bibliothek Zürich, Rar 4790: *Enchiridion physicae restitutae*, Geneva, Jean-Antoine and Samuel de Tournes, 1653. Its persistent identifier is doi:10.3931/e-rara-21407. The downloadable scan contains 191 PDF pages including e-rara's added modern notice. Its historical reading text consists of the unnumbered title, the address on printed pages 3–8, the epigram on printed page 9, and the 245 canons on printed pages 1–179. The body's numbering begins again at 1 after the preliminaries.

Stable scan identifiers distinguish physical sequence from printed pagination. The title is PDF page 2; the address occupies PDF pages 4–9, the poem PDF page 10, and the body PDF pages 12–190. PDF pages 3, 11 and 191 contain no independent printed reading passage. Modern library information and incidental marks are not attributed to the historical author. The final FINIS is included; there is no separate errata sheet or further historical appendix in this digitized part.

Readable Latin and Fresh English

The Latin is a readable transcription, not a diplomatic facsimile. Long s is rendered s; line-end word divisions are joined; decorative initials are read as letters; repeated running heads and catchwords do not create duplicate text. Conventional u/v, i/j, ae/æ, accents and capitalisation may be regularised where readability requires. The source's meaningful wording, original citations, verse and marginal text remain available. Printed errors and uncertain readings that affect understanding are identified in annotations rather than silently replaced by conjectures.

The English has been newly translated from this Latin witness. It follows the original order and retains the work's theological, natural-philosophical, sexual, medical and mythological vocabulary. It uses present-day syntax while preserving distinctions that are important to the argument. Claims about generation, life, remedies or celestial bodies are translated as the historical author's claims. The commentary does not turn them into modern findings or practical instructions.

Classical and scriptural quotations are translated in the form in which the book gives them. A familiar English Bible or a modern translation of a poet is not silently substituted. The annotations identify secure parallels and preserve uncertainty when the printed abbreviation or altered wording does not justify a more exact attribution. Logical canon numbers provide navigation; the printed Roman heading is retained separately whenever it differs.

Physical and symbolic meanings can coexist. A note proposing a symbolic reading must still account for the words, argument and neighbouring canons. Conversely, an apparently familiar material name does not establish a precise modern substance or erase the term's wider causal role. The edition leaves these interpretive questions visible.

Text, Marginalia, and Commentary

The paired historical blocks contain the Latin and new English. Original marginal words and references appear as clearly marked original marginal notes in their own aligned units. Modern Diotimos annotations form the continuous footnote sequence. The essays, glossary and contextual lexicon are modern study material. Their headings and explanations are not extra canons.

The 1651 English printing is described in the bibliography to document the earlier English title and transmission. Its text has not been used to fill a supposed gap in the 1653 Latin, and no complete historical English appendix is included. The combined historical title's mention of the Arcanum is preserved and explained; the two works retain their distinct identities.

The separate English Reading EPUB contains the same complete English translation, annotations, source references and supporting material. It suppresses the parallel Latin historical blocks and their Latin source headings, while retaining Latin lemmata used in commentary. Descriptions of that reading format are adjusted without rewriting historical wording.

The Historical Reading Text

The Historical Title Page

Enchiridion Physicæ Restitutæ

PR-T001 1653, unnumbered title

Latin ENCHIRIDION PHYSICÆ RESTITVTÆ,
IN QVO VERVS NATVRÆ CONCENTVS exponitur, plurimique antiquæ
Philosophiæ errores per canones & certas demonstrationes dulcidè aperiuntur.
Tractatus alter inscriptus ARCANVM HERMETICÆ PHILOSOPHIÆ OPVS:
In quo occulta Naturæ & Artis circa Lapidis Philosophorum materiam & operandi
modum canonicè & ordinatè fiunt manifesta.
Vtrumque opus eiusdem Auctoris anonymi.
SPES MEA EST IN AGNO.
GENEVÆ,
Sumpt. Ioannis Ant. & Samuelis de Tournes.
M. DC. LIII.

English A HANDBOOK OF PHYSICS RESTORED,
in which the true harmony of Nature is expounded, and very many
errors of ancient philosophy are clearly disclosed through canons and
assured demonstrations.

A second treatise, entitled THE SECRET WORK OF THE HERMETIC
PHILOSOPHY:

in which the secrets of Nature and Art concerning the matter of the
Philosophers' Stone and the manner of working are made manifest in
canons and in an orderly sequence.

Both works are by the same anonymous author.

MY HOPE IS IN THE LAMB.

GENEVA,

Published at the expense of Jean-Antoine and Samuel de Tournes.

1653.^{1,2,3}

PR-T002 1653, unnumbered title

Latin QVOD TIBI FIERI NON VIS, ALTERI NE FECERIS.

English What you do not wish done to yourself, do not do to another.⁴

¹. The combined title advertises two distinct works. The linked digitized part contains the Enchiridion, ending with canon 245 and FINIS on printed page 179. This edition translates that entire work, including its preliminary address and epigram. The separately paginated Arcanum is a companion work, already issued as a separate Diotimos edition; its text is not duplicated here. The original title names no author; the attribution to Jean d'Espagnet follows the library catalogue.

². Enchiridion means a handbook or manual. The Diotimos reading title, The Summary of Physics Restored, follows the established English title tradition while retaining the sense of restitutae. Physics here means natural philosophy, encompassing matter, life, the heavens, and their divine cause. The source prints *dulcidè*, an unusual form where *dilucidè* ('clearly') appears to be intended; the Latin retains the printed form and the English follows that contextual sense. This is a disclosed editorial interpretation, not a claim that the scan prints *dilucidè*.

³. *Spes mea est in Agno* means 'My hope is in the Lamb.' It is an explicitly Christian motto. The ornamental title device is accounted for separately below; its maxim is publishing paratext rather than an additional canon.

⁴. The maxim is printed inside an ornamental device on the historical title page. Its wording is translated in full; the surrounding ornament is not an argument or a diagram requiring reconstruction.

To Students of the Light of Natural Philosophy

Lucis Physicæ Studiosis S.

PR-P001 1653, pp. 3, 4

Latin LVCIS PHYSICÆ STVDIOSIS S.

Postquam nuper à publicis curis & procellosis Curiae syrtibus sponte reuocatum in pacatum domesticæ tranquillitatis vadum me recepi (arcanorum Naturæ studiosi) ita vt dictum illud poetæ animo prægestienti frequenter occurreret:

Scilicet asserui iam me fugique catenas;

antiquam de rebus Naturæ cogitationem, quæ mecum olim ab ineunte ætate adoleuerat, redeuntem sensi, eique opportune accedenti lubens me obtuli, quo abdicatum vltrò Fortunæ splendorem præsentī quodam luminis sui beneficio Natura rependeret, tum etiam vt à publico reatu me vindicarem; parata enim iam in me videbatur, velut in transfugam, patriarum legum & publicorum munerum accusatio, quem ne suis suffragiis eo titulo proscriptum damnarent, ad sacram arcanarum legum Vniuersi, cui communis patriæ nomen debetur, tutelam confugi, quæ me innocentem à calumniâ seruaret. Neque enim politicas leges pudor feret grauem sententiam in virum decernere, qui posthabita ciuiliū curarum sollicitudine, mundanæ Reipublicæ studio cultuique se addixerit.

English GREETINGS TO STUDENTS OF THE LIGHT OF NATURAL PHILOSOPHY.

Recently, students of Nature's secrets, I withdrew of my own accord from public responsibilities and the stormy shoals of the court, and took refuge in the peaceful shallows of domestic tranquillity. The poet's words often came to my rejoicing mind:

Indeed, I have now set myself free and escaped my chains.

I felt my old reflection upon the things of Nature returning—the reflection that had once grown up with me from my earliest years. I gladly offered myself to it as it approached at this timely moment, so that Nature might repay the splendour of Fortune, which I had freely renounced, with a present gift of her own light, and also so that I might clear myself of a public charge. For it seemed that the laws of my country and the duties of public office already had an accusation prepared against me as a deserter. To prevent them from condemning me by their votes as one proscribed on that charge, I fled to the sacred protection of the hidden laws of the Universe, which deserves the name of our common homeland, so that this protection might preserve my innocence from slander. For shame will prevent political laws from passing a harsh sentence upon a man who has put the anxieties of civic affairs behind him and devoted himself to the study and service of the commonwealth of the world.^{5,6}

⁵. S. abbreviates salutem, the conventional greeting. Curia can denote a court or governing assembly; the passage itself does not specify an office or a date of retirement. Its movement from public duties to the 'commonwealth of the world' makes natural inquiry a form of service rather than merely a private escape.

⁶. The verse is quoted without the poet's name or a work reference. The Latin reproduces the wording printed here, including catenas. Its image of release belongs to the author's account

PR-P002 1653, pp. 4, 5

Latin Versantem itaque animum circa Naturæ Imperium, leges, ordinem, præfecturam, concentum, effectus, causas, immensas denique opes, admiratio primum inuasit, quæ liberalibus ingeniis non minus addiscendæ scientiæ calcar, quam ignorantæ argumentum est, illa enim mentem in sublime rapit, quo motu desiderio accenditur adipiscendæ cognitionis rei, quam ignorare pudet. Tali animus exercitio incalescens plura antiquæ Principisque Philosophiæ decreta sub incudem reuocando illis assentiri recusabat, quippe aliud creperum ancepsque per nubila lumen Natura eminus, quasi in remoto veritatis confinio, primâ fronte porrigere videbatur, donec inualescente fulgore nubium stupor edomitus certiores lucem aperuit, quâ mens perfusa lucidior, & in arcanis naturæ eruendis confidentior facta est.

English As my mind turned over Nature's empire, laws, order, governance, harmony, effects, causes, and, finally, her immense resources, wonder first seized it. For minds of a liberal cast, wonder is as much a spur to acquiring knowledge as it is evidence of ignorance. It carries the mind upwards, and through that movement kindles the desire to gain knowledge of what one is ashamed not to know. Growing warm through such exercise, my mind brought many decrees of ancient and dominant philosophy back to the anvil and refused to assent to them. For at first Nature seemed to offer from afar, as though from a distant borderland of truth, a different light, dim and uncertain through the clouds. At length, as its radiance grew stronger, the dullness of the clouds was overcome and disclosed a surer light. Bathed in it, my mind became clearer and more confident in bringing Nature's secrets to light.⁷

PR-P003 1653, pp. 5, 6

Latin Primi antiquorum errores, qui & pessimi & cæterorum radices, circa Naturæ principia se mihi obuiam dedere: De materia prima & formâ vniuersali, à quibus cætera fluxerunt, de numero Elementorum, de eorum qualitativis, repugnantia, situ, reciprocatione altius cogitanti, alia mihi à receptâ sententiâ visa est; Neque me grauiorum philosophorum pondus, nec minus ancipites quam ingeniosæ eorum rationes à Naturæ lumine mentem amoliri potuerunt, quæ se tota illi mancipauerat. Admiratio itaque animum in amorem scientiæ traxit; Amor, qui igneis radiis pro telis vtitur, mentem accensam in sanctiores Naturæ aditus rapuit; hausta inde arcana, an vobis (philosophiæ alumni) communicare debuerim, diu hæsi, vobis enim forsitan ingratum, mihi verò periculosæ plenum opus alæ fore suspicabar; ab annis siquidem, qui optimi consultores sunt, monitum me sentiebam, vt alieno malo mihi saperem, quippe quanti famæ naufragium fecissent scriptores, satis mihi perspectum erat; quam parca in probandis, quam prona sint alienis lucubrationibus damnandis ingenia, quam audaces in larvis effingendis, fouendisque, quam perucaces in submouendâ veritate animi; quam denique arduum, necnon plerumque damnosum sit inueteratas receptarum opinionum radices conuellere, nouas inserere.

of retirement.

⁷. Princeps philosophia is the leading or dominant philosophy against which the preface argues. 'Back to the anvil' is the author's image of reconsideration and reworking. Wonder, light, and love describe an intellectual and affective progress without replacing the stated subject, Nature, with a solely psychological allegory.

English The first errors of the ancients to confront me concerned the principles of Nature; they were also the worst and the roots of the rest. As I reflected more deeply on first matter and universal form, from which the other things proceeded, and on the number of the elements, their qualities, opposition, position, and interchange, the matter appeared to me otherwise than in the received opinion. Neither the weight of the more authoritative philosophers nor their arguments, as uncertain as they were ingenious, could turn my mind away from Nature's light, to which it had wholly bound itself. Thus wonder drew my mind into a love of knowledge. Love, which uses fiery rays for weapons, carried my kindled mind into Nature's more sacred approaches. Yet I long hesitated over whether I ought to share with you, disciples of philosophy, the secrets drawn from there. I suspected that the undertaking might be unwelcome to you and full of dangerous hazard for me. For I felt myself warned by the years, which are the best counsellors, to learn prudence from another's misfortune. I had seen clearly enough how many writers had suffered shipwreck in their reputation; how sparing minds are in approving the labours of others and how ready to condemn them; how bold they are in fashioning and cherishing phantoms, how obstinate in removing truth from view; and, finally, how difficult, and often damaging, it is to uproot the entrenched roots of accepted opinions and plant new ones.⁸

PR-P004 1653, pp. 6, 7

Latin Vicit tandem veri vestrique amor (candidi Physicæ lucis assertores) vt qui perquirendæ veritatis author fuerat, idem esset publicandæ. Hoc vnum à vobis liceat obtinere, quo æquiores sedeatis iudices, excutite Platonis, Aristotelis, & grandia Antistitum Philosophorum nomina, exuite summorum virorum auctoritatem, vestram, quam sibi deuinxere fidem, apud vos integram seruate; in euoluendis ipsorum monumentis addite Præfiscini, ne populare præclari nominis fascinum mentibus obrepat. Absit vt de illorum famâ, ingeniique magnitudine tantillum detrahi iubeam, qui instar numinum colendi mihi semper fuere; omnem laudis ac gloriæ cumulum tantorum phisophorum gloriæ imparem censeo; ipsi vagientem è cunis Philosophiam suscepere, ac supra ætatem eius robur in tantum auxere, vt nitendi vltrâ vix spem posteris sublimes illæ animæ reliquerint; verum omnes Naturæ sinus & mæandros explicuisse, occultissimaque eius arcana exquisitè & citra errorem penitus aperuisse prima nascentis, nec dum pubescentis Philosophiæ ætas, vel ipsis iudicibus non patiebatur;

English At last love of truth and of you, candid champions of the light of natural philosophy, prevailed. The same love that had prompted the search for truth also prompted its publication. Let me obtain this one thing from you so that you may sit as fairer judges: shake off the names of Plato, Aristotle, and the great leaders of the philosophers; set aside the authority of these eminent men; preserve intact in your own

⁸. The printed clause *alia mihi ... visa est* is grammatically awkward. The English follows its clear contrast between the author's view and received opinion without silently supplying a new Latin noun. Larvæ are phantoms or masks, here opposed to truth, rather than insect larvae. The love armed with fiery rays evokes Cupid while also continuing the preface's language of illumination.

keeping the trust that they have bound to themselves. When you unroll their writings, add “No evil eye!” lest the popular spell of an illustrious name creep into your minds. Far be it from me to ask that the slightest thing be taken from their fame or the greatness of their minds. I have always held them worthy of reverence like divine powers. I judge every accumulation of praise and glory unequal to the glory of such philosophers. They took up Philosophy, crying in her cradle, and increased her strength so far beyond her years that those lofty souls left posterity scarcely any hope of striving further. Yet the first age of Philosophy, newly born and not yet mature, did not permit every fold and winding of Nature to be unfolded and her most hidden secrets to be thoroughly disclosed with precision and without error—even in their own judgement.^{9,10}

PR-P005 1653, p. 7

Latin *fæcunda successorum ingenia inuenta promouere, latentia prodidere, aspera coluere, perplexa fulciere; sic per sæcula in perfectam ætatem prouectæ sunt scientiæ; sic longa illis annorum series culmen addidit, quantum humani ingenii viribus hactenus licuit, plura forsân quærenda sunt adhuc quam possessa: senio detrita non fit, vt vestis, sed validior philosophia; qui erroribus anni fidem quærunt, iidem etiam adimunt. Nolite præcipiti iudicio & causâ non satis excussâ insontem damnare: Si sacros Philosophiæ terminos amouisse crimen videatur, nolite excandescere, & statim me sacrilegum pronunciare; at expendite, annon magis promoti, quam amoti vobis exhibeantur; annon magis restituta illius iura, quam corrupta; annon magis aucta illius Maiestas, quam imminuta; vnde forsân & ipsa beneficii gratiam repensura, nec patrocinium suum aduersus Sophistarum præstigias, nec præsidium aduersus liuoris & ignorantiae ferocitatem inficiabitur;*

English The fertile minds of their successors advanced discoveries, brought hidden things to light, cultivated rough ground, and gave support to what was entangled. In this way the sciences were brought through the centuries to a mature age. In this way a long succession of years gave them their height, so far as the powers of human intelligence have yet allowed. Perhaps more still remains to be sought than has been possessed. Philosophy does not become worn out with age like a garment, but stronger. The same years that win credit for errors also take it away. Do not condemn an innocent person by a hasty judgment before the case has been adequately examined. If moving the sacred boundary stones of Philosophy seems a crime, do not grow angry and immediately pronounce me sacrilegious. Consider instead whether those boundaries are presented to you as advanced rather than removed; whether her rights have been restored rather than corrupted; whether her majesty has been increased rather than diminished.

⁹. *Præfiscini* is a conventional expression intended to avert an evil eye or harmful fascination. The author turns it playfully against the spell cast by a celebrated name. The phrase has been translated rather than dropped. This paragraph expressly preserves respect for Plato and Aristotle while contesting the sufficiency of their authority.

¹⁰. The source prints *phisophorum* for the expected *philosophorum*. The Latin retains the printer's shortened form; the English gives the unambiguous sense. Philosophy is personified as a child whose later growth can exceed the work of her first guardians.

Perhaps she herself, in return for the benefit, will then refuse neither her advocacy against the tricks of the Sophists nor her protection against the savagery of envy and ignorance.¹¹

PR-P006 1653, pp. 7, 8

Latin instar belluarum latratus, prior alieno bono tabescens, altera cæcitate suâ insaniens, ambæ in cultiora scientiarum viridaria, in amœniora Philosophiæ sata petulanter irrumpunt, & laudandos fæliciorum ingeniorum labores vastant: Incassum illæ mihi sua terriculamenta obiicient; despecti mihi erunt illarum conatus, quandiu conspectum veritatis numen, cuius tutelâ tutus incedam. Hæc ocii nostri libamina, quo vobis offeruntur, excipite animo, quæ si parum arrideant, aut alia potiora vobis habeantur, munusculum hoc nostrum leui morsu quasi blandientes perstringite, eo ipso non ingratum, quod vos ad meliora prouocauerit.

English Barking like beasts, the former wastes away at another's good fortune, the latter rages in its own blindness. Both wantonly break into the more carefully tended gardens of the sciences and the more delightful plantings of Philosophy, laying waste the praiseworthy labours of more fortunate minds. They will set their terrors before me in vain. I shall look down upon their attempts so long as the divine presence of truth is before my sight, under whose protection I may walk in safety. Receive these first offerings of my leisure in the spirit in which they are offered to you. If they please you little, or you possess other and better things, brush this little gift of ours with a gentle bite, as though caressing it. It will be welcome for this very reason: that it has stirred you towards better things.¹²

¹¹. The Latin sentence continues directly from the previous unit. Its boundary stones and restored rights explain *restituta* in the title: the author claims to repair and extend philosophy's proper domain. The appeal to progress remains within his own religious natural philosophy; it should not be recast as a declaration of modern scientific method.

¹². 'The former' and 'the latter' refer to envy and ignorance in the previous unit. The printed construction *quandiu conspectum veritatis numen* is elliptical; the English supplies a minimal sense from the surrounding promise of truth's protection. *Libamina* are first offerings or libations. The final 'gentle bite' is the author's deliberately playful image for mild criticism, following his account of hostile attacks.

On Physics Restored

In Physicam Restitutam

PR-EPI001 1653, p. 9

Latin IN PHYSICAM RESTITVTAM. Epigramma.

En Physicæ iubar exoriens, quam sorte sinistra
Barbaries Stygiis merserat atra vadis.
Sic formæ & dotis Physice sibi damna rependi
Aspicit, vt plures speret habere procos.
O stupor! ô miro quem non percellit amore!
Non Venus è patrio gratior orta mari.
Nec se restitui putat his hæc aurea scriptis,
Sed nasci è cerebro parturiente Iouis.

English ON PHYSICS RESTORED. An Epigram.

Behold the rising radiance of Physics, whom, by ill fortune,
Dark barbarism had plunged into the waters of the Styx.
Physics sees the loss of her beauty and dowry so repaid
That she hopes to have more suitors.
O wonder! Whom does she not strike with marvellous love!
Venus did not rise more lovely from her native sea.
This golden lady thinks these writings do not restore her,
But give her birth from Jupiter's brain in labour.^{13,14}

¹³. The unsigned poem personifies physica, natural philosophy, as a woman restored to beauty and a dowry. The waters of the Styx evoke the underworld; Venus rises from the sea; the final birth from Jupiter's head evokes Pallas Athena or Minerva. These mythological images praise the book's restoration of learning. They do not name substances or give an encoded laboratory operation.

¹⁴. Eight verse lines are retained. The first Latin verse wraps in the original printing; the typesetter's wrap is not counted as a ninth line. The decorative head below the poem and the printed ornaments are recorded as page furniture.

The 245 Canons

Enchiridion Physicæ Restitutæ

PR-C001 1653, p. 1

Latin I. Deus est Ens aeternum, unitas infinita, radicale rerum omnium principium; cuius Essentia est lux immensa: Potestas omnipotentia: Voluntas bonum perfectum: Nutus opus absolutum. Plura desideranti occurrunt stupor, silentium, & abyssus gloriae profundissima.

English 1. God is eternal being, infinite unity, the root principle of all things. His essence is immeasurable light; his power, omnipotence; his will, perfect good; his nod, a finished work. Whoever desires more encounters wonder, silence, and the deepest abyss of glory.

Original marginal note PR-M-C001-01 1653, p. 1

Latin DEUS.

English GOD.

PR-C002 1653, pp. 1, 2

Latin II. Mundum ab aeterno in Archetypo suo descriptum fuisse sapientum plurimi duxerunt: Archetypus autem ipse, qui totus lumen est, ante universi creationem in se complicatus, ceu liber, sibi soli illuxit; in Mundi verò productione, quasi parturiens, se aperuit & explicuit, opusque suum in mente, velut in matrice, prius occultum, quadam sui extensione manifestum fecit, ac Mundum Idaealem quasi duplicatâ divinitatis imagine, actualem & materialem eduxit: Hoc annuit Trismegistus, dum Deum formam suam mutasse, ac universa subito revelata & in lucem conversa fuisse refert: Nihil aliud quippe est Mundus, quàm patens occultae divinitatis imago. Hunc Universi ortum intellexisse videntur antiqui per Palladem suam è Iovis cerebro, Vulcani, nempe ignis sive luminis Divini ope extractam.

English 2. Many of the wise have held that the world was delineated from eternity in its archetype. That archetype, being wholly light, was folded within itself like a book before the creation of the universe and shone for itself alone. In producing the world, however, it opened and unfolded itself as though giving birth. Through a certain extension of itself it made manifest its work, previously hidden in the mind as in a womb, and brought the ideal world into actual, material existence, as though the image of divinity had been doubled. Trismegistus intimates this when he relates that God changed his form and that all things were suddenly revealed and turned into light. For the world is nothing other than the manifest image of hidden divinity. The ancients seem to have understood this birth of the universe through their Pallas, drawn from Jupiter's brain with the aid of Vulcan, that is, divine fire or light.¹⁵

¹⁵ The unfolding book, womb and birth of Pallas are the author's ways of explaining the archetype's manifestation. The marginal reference names the Pimander; no modern scientific mechanism is implied by "extension".

Original marginal note PR-M-C002-01 1653, p. 1

Latin MUNDUS.

English THE WORLD.

Original marginal note PR-M-C002-02 1653, p. 2

Latin * In Pimandro.

English * In the Pimander.

PR-C003 1653, pp. 2, 3

Latin III. Aeternus rerum parens, non minùs in ordinando sapiens, quam in creando potens, organicam Mundi molem in tam praeclarum ordinem digessit, ut summa imis, & ima summis, citra confusionem intermixta, & analogiâ quadam similia sint; unde extrema totius opificii, secreto quodam nexu, per media insensibilia strictissimè inter se cohaerent, ac sponte omnia in supremi moderatoris obsequium, & inferioris naturae commodum consentiunt, solo nutu eius, qui colligavit, solvi se passura: Rectè itaque Hermes id quod inferius est, simile esse ei quod est superius, affirmavit.

English 3. The eternal parent of things, no less wise in ordering than powerful in creating, arranged the world's organised mass in so splendid an order that the highest things are mingled with the lowest, and the lowest with the highest, without confusion, and resemble one another through a certain analogy. Thus the extremes of the entire fabric adhere most closely to one another through imperceptible intermediaries, bound by a secret connection. All things willingly agree in obedience to the supreme governor and for the benefit of lower nature; they will allow themselves to be dissolved only at the nod of him who bound them together. Hermes therefore rightly affirmed that what is below is like what is above.

Original marginal note PR-M-C003-01 1653, p. 3

Latin * in tabula Smaragdina.

English * In the Emerald Tablet.

PR-C004 1653, pp. 3, 4

Latin IIII. Qui summum ius Universi in Naturam transfert aliam à divinâ Naturâ, Deum negat; neque enim aliud increatum Naturae Numen, aut in producendis, aut in conservandis expansae huius machinae individuïs, agnosci fas est, praeter spiritum illum divini opificis, qui primis aquis incubuit, & confusa in chaos rerum semina de potentiâ in actum eduxit, educta per constantem alterationis rotam versans componendo & resolvendo haec inferiora Geometricè tractat.

English 4. Whoever transfers the supreme authority of the universe to a nature other than divine nature denies God. For it is not lawful to acknowledge any other uncreated divinity of nature in either producing or preserving the individual things of this vast fabric than that spirit of the divine maker which brooded over the first waters. It brought the seeds of things, confused in chaos, from potentiality into actuality and, turning what it brought forth through the constant wheel of alteration,

governs these lower things geometrically by composing and dissolving them.¹⁶

Original marginal note PR-M-C004-01 1653, p. 3

Latin NATURA.

English NATURE.

PR-C005 1653, p. 4

Latin V. Quicumque spiritum illum Mundi creatorem & rectorem, Naturae operibus continuo quasi afflatu infusum, & per omnia largè diffusum, secreto & perenni quodam actu universa & singula, secundum genus suum, moventem, Animam Mundi esse nescit, Universi leges ignorat; is enim qui creavit, creata regendi sibi ius vindicat; eundemque spiritum creationi, generationi & conservationi praeesse fatendum est.

English 5. Whoever does not know that this spirit, the world's creator and governor, is the soul of the world is ignorant of the universe's laws. It is poured into nature's works like a continual breath and spread abundantly through all things, moving all together and each individually according to its kind by a secret, unceasing act. For he who created claims the right to govern what he created, and we must acknowledge that the same spirit presides over creation, generation and preservation.

PR-C006 1653, pp. 4, 5

Latin VI. Naturam tamen causam secundam universalem, primae ancillantem, & tanquam instrumentum ab eâ motum, immediatè singula in Mundo materiali ex ordine movens, qui agnoverit, à Philosophorum & Theologorum mente non recedet, qui illam naturantem, hanc naturatam dixerunt.

English 6. Yet whoever recognises nature as a universal secondary cause, serving the first and, like an instrument moved by it, directly moving individual things in the material world in their proper order, will not depart from the understanding of philosophers and theologians. They called the former nature creating and the latter nature created.¹⁷

PR-C007 1653, p. 5

Latin VII. Naturam illam secundam, primae ministram, Spiritum esse Universi, sive luminis in principio creati, & in corpus solare contracti virtutem vivificam & secretâ foecunditate dotatam, arcanorum Naturae peritus non inficiabitur. Spiritum illum igneum, ignem invisibilem, & animam Mundi dixere Zoroaster & Heraclitus.

English 7. One versed in nature's secrets will not deny that this secondary nature, the servant of the first, is the spirit of the universe, or the life-giving power, endowed with hidden fertility, of the light created in the

¹⁶. "Geometrically" belongs to the author's account of order, proportion and the composition of things. It does not convert the theological argument into an experimentally established account of creation.

¹⁷. The distinction between *natura naturans* and *natura naturata* is introduced within this argument about a first cause and its serving secondary cause. It should not be silently assigned the meaning of a later philosophical system.

beginning and gathered into the solar body. Zoroaster and Heraclitus called that fiery spirit invisible fire and the soul of the world.¹⁸

PR-C008 1653, p. 5

Latin VIII. Ordo Naturae nihil aliud est, quam series explicata legum aeternarum, quae à summo Principe sancitae, ac innumeris suis variae naturae populis, in multiplici paginâ exaratae & conscriptae fuerunt; quarum auspiciis moles Universi motus suos peragit; extremas novissimi voluminis oras vita & mors per vices occupant, caetera motus ad alterutrum.

English 8. Nature's order is nothing other than an unfolded sequence of eternal laws, ordained by the supreme prince and written out across many pages for his countless peoples of varied nature. Under their authority the mass of the universe performs its movements. Life and death alternately occupy the outer margins of the last volume; everything else is movement towards one or the other.

PR-C009 1653, p. 6

Latin IX. Mundus est quasi opus fabrilè in orbem giratum: partes eius quasi cathenae annuli se mutuis amplexibus stringentes: Natura tanquam vicaria in medio sita, rerum vices exercens: Opifex ubique praesens quasi faber attritas continuò reparans.

English 9. The world is like a craftsman's work turned into a circle; its parts are like the links of a chain, clasping one another in mutual embraces. Nature sits in their midst as deputy, administering the changes of things, while the maker is present everywhere like a craftsman continually repairing the worn links.

Original marginal note PR-M-C009-01 1653, p. 6

Latin MUNDUS.

English THE WORLD.

PR-C010 1653, pp. 6, 7

Latin X. Mundi universitas ut triplici natura constat, sic triplici regione distinguitur, supercaelesti nempe, caelesti, & subcaelesti: Supercaelestis, quae intelligibilis dicta, omnium suprema, omninò spiritualis & immortalis est, divinae Maiestati proxima. Caelestis medio loco sita, quae perfectissimorum corporum sortem nacta, spiritibus abundans virtutes innumeras, vitalesque auras per rivulos spirituales effundit, corruptionis impatiens, mutationis tamen, absolutâ quandoque periodo, non expers. Denique subcaelestis, quae vulgo Elementaris nuncupata, infimam mundi plagam obtinet. Haec tota corporea ex se cùm sit, spiritualia dona & beneficia, quorum supremum in vita positum est, precariò tantùm caeloque repensura possidet. In sinu eius generatio nulla sine corruptione, ortus nullus sine interitu.

English 10. As the totality of the world consists of a threefold nature, so it is distinguished into three regions: the supercelestial, celestial and subcelestial. The supercelestial, called intelligible, is highest of all, wholly spiritual and immortal, nearest to divine majesty. The celestial occupies the middle place. Having received the lot of the most perfect bodies and abounding in spirits, it pours forth countless powers and

¹⁸. The names of Zoroaster and Heraclitus are authorities invoked by the author. Their appearance here does not independently verify that both taught this precise formulation.

life-giving breaths through spiritual rivulets. It cannot undergo corruption, yet is not exempt from change when its period is at last completed. Finally, the subcelestial region, commonly called elemental, occupies the world's lowest tract. Since it is wholly corporeal in itself, it possesses spiritual gifts and benefits, the highest of which is life, only on loan and with repayment due to heaven. Within its bosom no generation occurs without corruption, no arising without passing away.¹⁹

PR-C011 1653, p. 7

Latin XI. Lege creationis cautum est, ut inferiora mediis, media superioribus, superiora autem supremo rectori suo ad nutum immediatè obsequantur: Hic est totius universi ordo & symmetria.

English 11. The law of creation provides that lower things obey intermediate things, intermediates obey higher things, and the higher obey their supreme ruler directly at his nod. This is the order and symmetry of the whole universe.

PR-C012 1653, pp. 7, 8

Latin XII. Soli rerum creatori, ut ex nihilo licuit, quaecunque placuit, creare; sic eidem soli creata in nihilum vertendi ius competit: quicquid enim entis aut substantiae caractere signatum est, ab eo deficere, & ad non ens reflecti Naturae lege prohibitum est: Nihil itaque in Mundo mori, sed omnia transire & immutari rectè statuit Trismegistus: Ex Elementis siquidem componuntur mixta, quae iterum per naturae rotam in sua Elementa resolvuntur.

Huic accedit uti quicque in sua corpora rursum
Dissolvat natura; neque ad nihilum interimat res.

English 12. Just as the creator of things alone was permitted to create from nothing whatever pleased him, so he alone has the right to turn created things into nothing. For whatever is stamped with the character of being or substance is forbidden by nature's law to fall away from it and return to non-being. Trismegistus therefore rightly held that nothing in the world dies, but all things pass over and are changed. Compounds are composed of elements and through nature's wheel are resolved again into their own elements.

To this is added that nature dissolves each thing
back into its own bodies, and does not destroy things into nothing.²⁰

¹⁹. These are the author's three regions, not three modern physical layers. "Intelligible" contrasts with what the senses perceive; "only on loan" conveys precario and the subsequent obligation to return what is received.

²⁰. The author connects divine creation with the persistence and recomposition of created substance. The marginal citation assigns the verse to Lucretius, book 2; the printed wording and that locator are retained rather than silently replaced from another edition.

Original marginal note PR-M-C012-01 1653, p. 8

Latin * In Pimandro.

English * In the Pimander.

Original marginal note PR-M-C012-02 1653, p. 8

Latin * Lucret. lib. 2.

English * Lucretius, book 2.

PR-C013 1653, pp. 8, 9

Latin XIII. Materiam quandam primam, Elementis antiquiorem crediderunt Philosophi, sed illam quia parum cognoverunt, parum etiam & tanquam in nube explicarunt; ut sit qualitatum & accidentium expers, primum tamen eorum subiectum: quantitate vacua, per quam tamen omnia quanta sunt: simplex, contrariorum tamen sedes: sensibus incognita, sensibilibus tamen basis: ubique extensa, nullibi tamen percepta: formarum semper cupida, nullius tenax: Corporum omnium radix, quae tamen sola mentis operatione concipi, nec senti potest: denique actu nihil, potestate omnia. Ita fictitium & umbratile naturae fundamentum posuerunt.

English 13. Philosophers believed in a certain first matter older than the elements, but because they knew little of it, they explained little, and that as though through a cloud. It is without qualities and accidents, yet their first subject; empty of quantity, yet that through which all things have quantity; simple, yet the seat of contraries; unknown to the senses, yet the basis of sensible things; extended everywhere, yet perceived nowhere; always desiring forms, holding none; the root of all bodies, yet something that can be conceived only by an operation of the mind and cannot be sensed. In short, it is actually nothing, potentially everything. Thus they posited a fictitious and shadowy foundation of nature.²¹

Original marginal note PR-M-C013-01 1653, p. 8

Latin MATERIA PRIMA.

English FIRST MATTER.

PR-C014 1653, p. 9

Latin XIV. Cautiùs Aristoteles, qui licet mundum aeternum crediderit, materiam quandam primam & universalem indicavit, cuius anfractus fugiens sobriè & ambiguè de ea disseruit; ut melius esse dicat facere unam eandemque rerum omnium materiam inseparabilem, quae tamen ratione differat; ex qua prima corpora & caetera, quae sensu percipiuntur, constant, primumque esse eorum principium, eamque ab illis inseparabilem, sed semper cum repugnantia copulatam; quae contrariis subiiciatur; ex qua Elementa oriuntur.

English 14. Aristotle was more cautious. Although he believed the world eternal, he indicated a certain first and universal matter, avoiding its windings and discussing it soberly and ambiguously. He says it is better to posit one and the same inseparable matter of all things, though

²¹ The final sentence criticises the account just reported. This list should therefore not be mistaken for an unqualified statement of the author's own doctrine. "Subject" means the underlying bearer of qualities, not an observer.

distinguished in thought, from which the first bodies and the other things perceived by sense consist. It is their first principle and inseparable from them, yet always joined with opposition, underlying contraries and giving rise to the elements.²²

Original marginal note PR-M-C014-01 1653, p. 9

Latin * cap. 5. lib. 1. de ortu & inter.

English * Chapter 5, book 1, On Coming-to-Be and Passing-Away.

Original marginal note PR-M-C014-02 1653, p. 9

Latin * cap. 1. & 2. lib. 2. de ortu & interitu.

English * Chapters 1 and 2, book 2, On Coming-to-Be and Passing-Away.

PR-C015 1653, pp. 9, 10

Latin XV. Meliùs Philosophus, si materiam illam primam à contrariorum pugná vindicasset, eamque à repugnantia liberam agnovisset, cum ne quidem ipsis Elementis ulla inhaereat contrarietas, quae à qualitatum intensione resultat, ut ignis & aquae communi experientia docemur, quibus quicquid inest oppositi ab intensione qualitatum procedit: At in veris rerum Elementis, quae in mixtorum generatione coeunt, nequaquam illae qualitates, quae illis remissè insunt, sibi invicem adversantur; temperata enim contrarietatem non admittunt.

English 15. The philosopher would have done better had he freed that first matter from the conflict of contraries and recognised it as free from opposition. For not even the elements themselves contain an inherent contrariety: contrariety results from the intensity of qualities, as our common experience of fire and water teaches us, since whatever opposition they contain proceeds from the intensity of their qualities. But in the true elements of things, which come together in the generation of compounds, the qualities present in a moderated degree do not oppose one another. Temperate things admit no contrariety.

PR-C016 1653, p. 10

Latin XVI. Thales, Heraclitus, & Hesiodus Aquam, primam rerum materiam esse existimaverunt; quorum opinioni sacrae Geneseos scriptor assentiri videtur, illam abyssum & aquam vocitans; per quam non aquam nostram, sed quasi fumum, aut vaporem humidum & tenebrosam, huc illuc errantem, & sine ulla lege incerto motu actum, intellexisse suspicio est.

English 16. Thales, Heraclitus and Hesiod considered water to be the first matter of things. The writer of sacred Genesis seems to assent to their opinion, calling it the abyss and water. It may be suspected that he understood by this not our water, but something like smoke or a moist and dark vapour, wandering this way and that and driven by an uncertain motion without any law.²³

²². The marginal references give Aristotle's On Coming-to-Be and Passing-Away, book 1, chapter 5, and book 2, chapters 1–2. The canon reports an interpretation of Aristotle; it does not quote a complete continuous passage from him.

²³. The grouping of the three ancient names is the author's attribution. The first marginal reference gives only a title-like description, without identifying an author; it remains unresolved rather than receiving an invented bibliographical identity.

Original marginal note PR-M-C016-01 1653, p. 10

Latin * De variis Philosoph. opinionibus.

English * On the Various Opinions of Philosophers.

Original marginal note PR-M-C016-02 1653, p. 10

Latin * cap. 1. Genes.

English * Genesis, chapter 1.

PR-C017 1653, p. 11

Latin XVII. De antiquo illo rerum principio quid certi decernere in promptu non est; cùm illud in tenebris creatum nondum in lucem ingenii humani emergerit; quamobrem quaecunque de illo Theologorum, tum etiam Philosophorum turba censuit, talia sint, necne, solus Naturae author novit; quod verisimilius est, de obscuris dicenti venia debetur.

English 17. It is not easy to decide anything certain about that ancient principle of things, since, created in darkness, it has not yet emerged into the light of human understanding. Whatever the multitude of theologians and philosophers have judged about it, whether it is so or not, nature's author alone knows. One who speaks of obscure matters in terms of what is more probable deserves indulgence.

PR-C018 1653, pp. 11, 12

Latin XVIII. Antiquissimum aliquod, sed obscurum & ineffabile principium materiale improprio nomine Hylam dictum, materiam primam praecessisse nonnulli Rabinorum opinioni assentientes crediderunt, quod non tam corpus, quam umbram immensam; non tam rem, quam rei imaginem opacissimam, aut Entis larvam quandam fuliginosam, noctem tenebrosissimam, tenebrarum latibulum dici convenit, quod actu nihil, potestate omnia mens humana nisi somnians sibi valet fingere. Anceps illud principium, Orcum illum tenebrosus imaginatio non aliter nobis exhibere potest, quam à Naturâ caeco Solis lumen aures indicant.

English 18. Some, assenting to the opinion of the rabbis, believed that first matter was preceded by an exceedingly ancient, yet obscure and ineffable material principle, improperly called Hyle. It should be called not so much a body as an immense shadow; not so much a thing as the darkest image of a thing, or a sooty phantom of being, the darkest night, a hiding place of darkness. Actually nothing and potentially everything, it is something the human mind can fashion for itself only in a dream. The imagination can present that uncertain principle, that dark underworld, to us no more adequately than the ears can convey the sun's light to someone blind from birth.²⁴

Original marginal note PR-M-C018-01 1653, p. 11

Latin MUNDI CREATIO.

English THE CREATION OF THE WORLD.

²⁴ Hylam is the Latin accusative form used for Hyle, matter. The unnamed "rabbis" and the proposed principle are reported positions; the author explicitly stresses the inadequacy of human imagination here.

PR-C019 1653, p. 12

Latin XIX. Ex remotissimo illo principio Abyssum quandam caliginosam, informem ac indigestam, proximam Elementorum & Mundi materiam Deum eduxisse ac creasse iisdem visum est: Molem autem hanc modò terram inanem & vacuam, modò aquam sacra pagina nuncupat, licèt actu neutra esset, sed utraque potestate ac destinatione; illam fumo aut vaporì tenebroso haud dissimilem fuisse licet conicere, cui stupens quidam spiritus frigoris & tenebrarum inerat.

English 19. Those same thinkers held that from that most remote principle God brought forth and created a certain dark, formless and undigested abyss, the immediate matter of the elements and the world. Scripture calls this mass now an empty and void earth, now water, although it was neither in actuality but both in potentiality and destination. We may conjecture that it resembled smoke or a dark vapour, containing a certain numb spirit of cold and darkness.

PR-C020 1653, pp. 12, 13

Latin XX. Divisio aquarum superiorum ab inferioribus in sacrâ Genesi expressa, facta videtur separando subtile à spisso, & tenuem quasi spiritum à fuliginoso corpore: id opus fuit spiritus luminosi à divino verbo prodeuntis; lux enim, quae spiritus est igneus, segregando heterogenea, densiores tenebras à viciniori ac eminentiori plagâ deorsum versus profligavit, materiamque homegeneam, tenuiorem & spiritui proximiorum colligendo, in lumen immortale, quasi oleum incombustibile ante divinae Maestatis thronum accendit: Caelum illud Empyreum est, medium inter mundum intelligibilem & materialem, quasi utriusque Horizon & finitor; à superiori spirituales dotes suscipiens, & inferiori proximo caelo medio nempe communicans.

English 20. The division of the upper waters from the lower, expressed in sacred Genesis, seems to have been made by separating the subtle from the thick, and a tenuous, spirit-like part from a sooty body. This was the work of the luminous spirit proceeding from the divine word. For light, which is a fiery spirit, separated unlike things and drove the denser darkness downwards from the nearer, higher region. Gathering the matter of like nature, finer and closer to spirit, it kindled it into immortal light, like incombustible oil before the throne of divine majesty. This is the empyrean heaven, intermediate between the intelligible and material worlds, as though the horizon and boundary of both. It receives spiritual gifts from the higher world and communicates them to the next lower heaven, namely the middle one.²⁵

PR-C021 1653, pp. 13, 14

Latin XXI. Abyssum tenebrosam, seu materiam mundi proximam, aqueam, sive humidam esse ratio exigebat, quò attenuari commodiùs, & per attenuationem universa caelorum & totius fabricae moles fluxu materiae diduci, & in corpus continuum extendi posset; fluere enim humoris proprium est, omnisque corporis continuitas solius humoris beneficio debetur; humor enim Elementorum & corporum glutum est ac ferrumen: Ignis verò in humorem agens calefaciendo illum rarefacit; calor siquidem est ignis instrumentum, cuius ope duo opposita uno

²⁵ The source prints homegeneam, retained here and understood as homogeneous, "of like nature". The separation is the author's speculative reading of Genesis; "empyrean" names his fiery or luminous heaven, not a modern astronomical region.

eodemque labore operatur; humidam quippe naturam dum à terrestri separat, illam rarefaciendo hanc condensat: sic per heterogeneorum separationem fit homogeneorum congregatio: Hac arte protochimiâ spiritus increatus Mundi faber confusas rerum naturas distinxit.

English 21. Reason required the dark abyss, or the world's immediate matter, to be watery or moist, so that it could be made fine more readily and, through that refinement and the flow of matter, the entire mass of the heavens and the whole fabric could be spread out and extended into a continuous body. Flowing is proper to moisture, and the continuity of every body is owed to moisture alone, for moisture is the glue and solder of elements and bodies. Fire, acting on moisture, rarefies it by heating it. Heat is fire's instrument, through which it performs two opposite effects in one and the same labour: as it separates moist nature from earthy nature, by rarefying the former it condenses the latter. Thus the separation of unlike things brings about the gathering of like things. By this primordial chemical art the uncreated spirit, the world's craftsman, distinguished the confused natures of things.²⁶

PR-C022 1653, pp. 14, 15

Latin XX. Spiritus Mundi Architectonicus à duobus principiis universalibus creationis opus inchoavit, unum formale fuit, alterum materiale; quid enim aliud verba illa Prophetæ sonant (In principio creavit Deus caelum & terram &c.) quam quod Deus in principio informationis materiae, eam in duo summa distinxit principia, nempe in principium formale & materiale, caelum videlicet & terram: terrae autem nomine ipsam tenebrosam & nondum formâ indutam aquarum & abyssi massam intelligi verba sequentia indicant (Terra autem erat inanis & vacua, & tenebrae erat super faciem abyssi &c.) quam creator caelo supremo, Emphyreo nempe, inclusit ac terminavit; quod in Natura primum principium formale est, licet remotum.

English 22. The world-building spirit began the work of creation from two universal principles, one formal and the other material. For what else do the prophet's words mean—"In the beginning God created heaven and earth", and so forth—than that, at the beginning of giving form to matter, God distinguished it into two supreme principles, namely the formal and material principles, heaven and earth? That the name earth means the dark mass of waters and abyss, not yet clothed in form, is shown by the following words: "The earth was empty and void, and darkness was upon the face of the abyss", and so forth. The creator enclosed and bounded this mass within the highest heaven, the empyrean, which is nature's first formal principle, though a remote one.²⁷

²⁶. Protochimica is rendered "primordial chemical": the author frames creation through the language of separation and combination. "Moisture", "fire", and "earthy nature" retain that historical explanatory setting.

²⁷. The body prints the heading XX again; this is canon 22 in the continuous sequence before XXIII. The Latin keeps that original heading. The formal/material distinction concerns what gives form and what receives it, rather than two modern substances.

Original marginal note PR-M-C022-01 1653, p. 14

Latin MATERIA ET FORMA SUNT ANTIQUISSIMA RERUM PRINCIPIA.

English MATTER AND FORM ARE THE MOST ANCIENT PRINCIPLES OF THINGS.

Original marginal note PR-M-C022-02 1653, p. 14

Latin * cap. 1. gen.

English * Genesis, chapter 1.

PR-C023 1653, pp. 15, 16

Latin XXIII. Spiritu enim Dei, qui divinitatis splendor est, in ipso creationis momento super aquas, id est, super humidam & opacam Abyssi faciem effuso, lux statim apparuit, quae partem eminentiorem & subtiliorem materiae in ictu oculi invasit, lucidâque circumferentiâ quasi limbo, eam sepsit; veluti coruscatio, quae ab Oriente in Occidentem lumen igneum iaculatur; aut flamma, quae celerrimè fumum proximum accendit: Sic prima dies orta est, pars autem tenebrarum inferior luce vacua, nox remansit; ita in diem & noctem divisae sunt tenebrae.

English 23. For when the Spirit of God, which is divinity's radiance, was poured over the waters at the very moment of creation—that is, over the moist and opaque face of the abyss—light immediately appeared. In the blink of an eye it seized the higher and subtler part of matter and enclosed it with a shining circumference like a border. It was like lightning casting fiery light from east to west, or a flame swiftly kindling the smoke beside it. Thus the first day arose, while the lower part of the darkness, empty of light, remained night. In this way darkness was divided into day and night.

PR-C024 1653, p. 16

Latin XXIV. De Caelo illo primo, formali principio, non enunciatum fuisse inane, vacuum, & tenebris obsitum, quod satis indicat, Caelum illud imprimis expansum illicò luce distinctum fuisse à massâ tenebrosâ subiacenti, propter vicinitatem gloriae & Maiestatis Divinae, & praesentiam spiritus luminosi ab ipsâ fluentis.

English 24. Of that first heaven, the formal principle, it is not said that it was empty, void and covered in darkness. This sufficiently indicates that this heaven, first spread out, was immediately distinguished by light from the dark mass below it, because of its nearness to divine glory and majesty and the presence of the luminous spirit flowing from them.

PR-C025 1653, pp. 16, 17

Latin XXV. Duo itaque rerum principia ab initio creata fuerunt, unum luminosum & spirituali naturae proximum, alterum omninò corporeum & tenebrosum; illud ut esset principium motus, luminis & caloris; istud verò principium stuporis, opacitatis & frigoris; illud activum & mascaleum, istud passivum & foemineum: ex parte prioris, motus ad generationem in Mundo elementari, unde vita: ex parte posterioris, motus ad corruptionem, unde mors initium trahit: Hic est uterque mundi inferioris limbus.

English 25. Two principles of things were therefore created in the beginning: one luminous and close to spiritual nature, the other wholly corporeal and dark. The former was to be the principle of motion, light

and heat; the latter, of numbness, opacity and cold. The former is active and male, the latter passive and female. From the former comes movement towards generation in the elemental world, and hence life; from the latter begins movement towards corruption, and hence death. These are the two bounds of the lower world.²⁸

PR-C026 1653, pp. 17, 18

Latin XXVI. Quoniam autem Amor totus extra se porrigitur, divina Natura solitudinis impatiens, & pulchritudinem suam in lumine iam creato, tanquam in speculo mirata, in eius extensionem & simulachri sui multiplicationem exardescens lumen illud protendi & propagari iussit: Tunc lumen, spiritu igneo à mente divinâ progressu, ac se in gyrum volvente, coepit in proximiores tenebras agere, illisque debellatis ac deorsum, centrum versus depressis, illuxit secunda dies, & substitit secunda luminis mansio, sive caelum secundum, totam regionem aetheream complectens, in cuius plagâ superiori tot faces postea sparsae & affixae sunt; in inferiori autem septem errantia sydera ex ordine sita fuere, quae lumine, motu & influxu suo naturae subiacenti, tanquam rectores & praefecti, legem dicerent.

English 26. Because love stretches entirely beyond itself, divine nature, unable to endure solitude and admiring its own beauty in the light already created as in a mirror, burned to extend that light and multiply its own image. It commanded the light to spread and propagate. Then, as a fiery spirit proceeded from the divine mind and turned in a circle, the light began to act upon the neighbouring darkness. When this had been conquered and pressed down towards the centre, the second day shone forth and the second dwelling of light was established, or second heaven, embracing the entire ethereal region. In its upper part so many torches were afterwards scattered and fixed; in its lower part the seven wandering stars were placed in order, to give law to the nature beneath them through their light, motion and influence, like rulers and governors.²⁹

²⁸. The male/female language assigns roles within the author's cosmology. It is retained as a historical claim, without turning it into an editorial rule about human beings. The source spelling *masculinum* is preserved.

²⁹. The "seven wandering stars" are the traditional planetary group within the author's celestial scheme. Their asserted influence and the image of divine love remain parts of his account, not independently established astronomy.

PR-C027 1653, pp. 18, 19

Latin XXVII. Et ne quid operi tanto in mente divinâ iampridem exarato deficeret, idem Spiritus igneo & micante gladio tenebras condensatas, umbramque ex adverso subterlabentem profligavit, & in centrum abyssi detrusit, sic postremum caelorum spatium lumini pervium factum est, quod aërem, sive caelum inferius rectè dicimus; tertia tunc dies effulsit: Tenebrae autem, quae totam abyssi faciem in principio obumbrabant, à mine superveniente in regionem infimam per triduum depressae ita condensatae sunt, propter spatii angustiam & frigoris constrictionem, ut in aquae naturam & molem ingentem migraverint, librato in medio aquarum firmatoque ex faece & crassiori abyssi materiâ, in solidum & opacum terrae corpus, totius opificii nucleo & centro, quasi tenebrarum valle ac tumulo. Postmodum, Spiritu impellente, aquae à terrae facie ad eius latera circumvolutae recesserunt, & apparuit Arida, ut infinita penè plantarum genera in lucem ederet, totque animalium species, hominem potissimum caeteris praedominantem hospitio exciperet, illisque victum, homini verò amplam rerum supellectilem exhiberet. Terra itaque & Aqua in unum globum desierunt, cuius propter densitatem opacitas, sive umbra, Abyssi tenebrosae imago totam Aëris viciniam Soli oppositam continuò obsidet ac involvit; persequentem enim lucem pari spacio adversa refugit, &

Labenti similis semper fugitiva recedit.

English 27. So that nothing might be lacking to so great a work, long ago delineated in the divine mind, the same spirit drove away the condensed darkness and the opposing shadow slipping beneath it with a fiery, flashing sword, and thrust them into the centre of the abyss. Thus the last space of the heavens was made open to light, which we rightly call air, or the lower heaven; then the third day shone forth. The darkness that had overshadowed the whole face of the abyss in the beginning, pressed down for three days into the lowest region by the incoming light, was so condensed by the narrowness of the space and the contraction of cold that it passed into the nature and immense mass of water. In the midst of the waters the kernel and centre of the whole fabric was poised and fixed, formed from the dregs and thicker matter of the abyss into a solid, opaque body of earth, like a valley and tomb of darkness. Afterwards, at the spirit's impulse, the waters withdrew from the face of the earth and rolled around its sides; dry land appeared, to bring forth almost countless kinds of plants, offer a dwelling to so many species of animals, and especially to the human being ruling over the rest. It was to provide them with food and humankind with an ample furnishing of things. Earth and water thus ended in one globe, whose opacity or shadow, due to its density and imaging the dark abyss, continually occupies and envelops all the neighbouring air opposite the sun. For, facing away, it retreats from the pursuing light at an equal distance, and

like one slipping away, forever fugitive it withdraws.³⁰

³⁰. The body appears to print à mine superveniente; an initial syllable is missing or unclear. English takes the intended word as lumine, "light", from the surrounding argument, without silently inserting it into the Latin. The isolated concluding verse has no printed source attribution here.

PR-C028 1653, pp. 19, 20

Latin XXVIII. Lucem autem illam, quae, profligatis & demersis tenebris, omnia Abyssi spatia sparsim occupaverat, in lucentem & nobilissimum egregiae magnitudinis & formae Solis globum contrahere summo opifici visum est, ut quo contractius lumen, eò etiam efficacius esset, & radios potentius iacularetur; tum etiam ut lux creata, proxima divinae gloriae natura, ab unitate increatâ procedens, per unitatem in creaturas effunderetur.

English 28. The supreme maker chose to gather that light, which had occupied all the spaces of the abyss in dispersed form once darkness was defeated and submerged, into the shining and most noble globe of the sun, of outstanding size and form. The more concentrated the light, the more effective it would be and the more powerfully it would cast its rays. It was also so that created light, the nature closest to divine glory, proceeding from uncreated unity, might pour forth through unity into creatures.

Original marginal note PR-M-C028-01 1653, p. 19

Latin SOLIS CREATIO.

English THE CREATION OF THE SUN.

PR-C029 1653, p. 20

Latin XXIX. Ab illâ face Mundi luminosâ lucem mutantur caetera omnia corpora: quam enim in Lunae globo opacitatem sensu deprehendimus, propter Terrae vicinitatem, & eius umbrae extensionem, similem in caeteris globosis corporibus credere verisimilitudo suadet, licet percipere distantia prohibeat: Prima siquidem & omnium sensibilium praestantissima Natura lucis fons Unitati debebatur, à quâ spiraculum vitae haec inferiora susciperent; Unde optimè philosophus, Sol & homo generant hominem.

English 29. All other bodies borrow their light from that luminous torch of the world. Probability suggests that we should believe the other globular bodies have an opacity like that which our senses detect in the moon's globe because of the earth's nearness and the extension of its shadow, though their distance prevents us from perceiving it. For the first and most excellent nature among all sensible things, the source of light, was owed to unity, from which these lower things would receive the breath of life. Hence the philosopher's apt saying: "The sun and a human being generate a human being."³¹

PR-C030 1653, p. 21

Latin XXX. Non citra probabilitatem philosophorum nonnulli, animam Mundi in Sole, Solem autem in medio Universi constituerunt; aequitatis enim & Naturae ratio postulare videtur, ut aequali spatio Solare corpus distet à fonte & origine lucis creatae, Caelo Empyreo nempe, & à centro tenebroso Terra, quae totius opificii sunt extrema, quò fax Mundi, tanquam natura media, & utriusque extremorum conciliatrix, in medio sedem habeat, unde commodius à summo cardine immensas virtutum opes suscipiat, & in pari distantia ad inum transmittat.

³¹ The lunar explanation and the extension to other globes are presented as the author's reasoning. The final saying is attributed only to "the philosopher" in this passage; it is not silently expanded into a new citation.

English 30. Not without probability, some philosophers placed the soul of the world in the sun and the sun in the midst of the universe. For the reasoning of equity and nature seems to require that the solar body stand at an equal distance from the source and origin of created light, namely the empyrean heaven, and from the dark centre, earth, which are the extremes of the whole fabric. Thus the world's torch, as an intermediate nature reconciling both extremes, may have its seat in the middle, where it can more readily receive immense stores of powers from the highest pole and transmit them an equal distance to the lowest.³²

PR-C031 1653, pp. 21, 22

Latin XXXI. Ante lucis creatae in Solare corpus contractionem, Terra in solitudine penè ociabatur masculum expectans, ut ex eius copulâ praegnans facta omne genus animalium pareret; hactenus enim effoetus & quodammodo imperfectos foetus, vegetabilia nempe, enixa erat; debilis quippe & impotens sparsae lucis calor humidae frigentique materiae praedominari, neque ulterius vires suas extendere potuerat.

English 31. Before created light was gathered into the solar body, earth lay almost idle in solitude, awaiting the male so that, made pregnant by coupling with him, she might give birth to every kind of animal. Until then she had borne feeble and in a certain way imperfect offspring, namely plants. For the weak and powerless heat of dispersed light had been unable to prevail over moist, cold matter or extend its powers any further.

PR-C032 1653, p. 22

Latin XXXII. A luce igitur materia prima, tum etiam Elementa informationem suam receperunt; & ita per communem luminis naturam, quasi iure sanguinis, strictissimum inter se amorem, non odium & pugnam, ex vulgari sententiâ, contraxerunt, seque mutuo necessitudinis vinculo amplexa sunt, ut in varia mixtorum corpora, secundum species suas coalescant. Lux autem Solaris priori longè potentior est forma formarum, sive forma universalis, quae omnes formas naturales in opere generationis, in materiam dispositam & rerum semina infundit: quodlibet enim individuum naturae lucis scintillam in se recondit, cuius radii virtutem activam & motricem semini occultè suggerunt.

English 32. First matter and the elements therefore received their formation from light. Through their shared luminous nature, as though by kinship of blood, they entered into the closest love of one another, not the hatred and conflict taught by common opinion. They embraced one another in a bond of affinity so that they might grow together into the varied bodies of compounds according to their species. Solar light, far more powerful than the earlier light, is the form of forms, or universal form, which in the work of generation pours every natural form into prepared matter and the seeds of things. For each individual

³². The middle is defined between empyrean heaven and earth within this cosmology. The passage should not be silently recast as a statement of a modern heliocentric planetary model.

thing in nature contains a spark of light within itself, whose rays secretly impart active and moving power to the seed.³³

Original marginal note PR-M-C032-01 1653, p. 22

Latin LUX EST FORMA UNIVERSALIS.

English LIGHT IS THE UNIVERSAL FORM.

PR-C033 1653, p. 23

Latin XXXIII. Totam materiae primae portionem, quae huic plagae inferiori addicta fuit, tum etiam Elementa, quae ex ipsâ fluxerunt, tenui primae lucis tincturâ ab initio imbui necesse fuit, quò maiori potentiorique luci suscipiendae in mixtorum informatione apta fierent: Sic ignis igni, aqua aquae, & lux luci, quia homogeneae naturae sunt, perfectè uniuntur ac coeunt.

English 33. The entire portion of first matter assigned to this lower region, and also the elements that flowed from it, had to be imbued from the beginning with a slight tincture of the first light, to make them fit to receive a greater and more powerful light in the formation of compounds. Thus fire unites and comes together perfectly with fire, water with water, and light with light, because they are of like nature.

PR-C034 1653, p. 23

Latin XXXIV. Ex situ & efficaci Solis virtute licet inferre, eum cordis vice in Universo fungi, ab eo enim vita in omnes partes defluit; lux quippe vitae vehiculum est, imò fons & causa proxima; & viventium animae sunt radii lucis caelestis, qui vitam rebus inspirant; solâ hominis animâ exceptâ, quae lucis supercaelestis & increatae radius est.

English 34. From the sun's position and effective power we may infer that it performs the heart's office in the universe, for life flows from it into every part. Light is the vehicle of life, indeed its source and immediate cause; and the souls of living things are rays of celestial light that breathe life into things. The human soul alone is excepted: it is a ray of supercelestial, uncreated light.

PR-C035 1653, p. 24

Latin XXXV. Deus triplicem divinitatis suae imaginem in Sole expressit, primam in Unitate; neque enim Solem multiplicem Natura, sicut nec Deorum pluralitatem Divinitas patitur, ut sic ab uno fluant omnia. Secundam in Trinitate, seu triplici munere; Sol enim tanquam Dei vicarius omnia naturae beneficia distribuit per lucem, motum & calorem, inde vita, quae supremus & perfectissimus est in Mundo nostro Naturae actus, ultra quem progressus non fit, sed regressus: A luce autem & motu calor procedit, sicut tertia à prima & secunda Trinitatis persona. Postremò Deus qui est lux aeterna, infinita & incomprehensibilis, per solam lucem seipsum exprimere & Mundo exhibere potuit. Nemo itaque miretur, cur Sol aeternus praestantissimam suiipsius imaginem, cuius ipse sculptor fuit, Solem caelestem tantis dotibus decoraverit; in eo enim tabernaculum suum posuit.

³³ "Form" means an informing or determining principle, not merely outward shape. The author's solar light is assigned a generative function within his natural philosophy; the translation does not identify it with a modern account of electromagnetic radiation.

English 35. God expressed a threefold image of his divinity in the sun. The first is in unity: nature permits no multiplicity of suns, just as divinity permits no plurality of gods, so that all things flow from one. The second is in trinity, or a threefold office: as God's deputy the sun distributes all nature's benefits through light, motion and heat. From these comes life, nature's highest and most perfect act in our world, beyond which there is no advance but only a return. Heat proceeds from light and motion as the third person of the Trinity proceeds from the first and second. Lastly, God, who is eternal, infinite and incomprehensible light, could express himself and show himself to the world through light alone. Let no one therefore wonder why the eternal sun adorned the celestial sun, that most excellent image of himself which he himself fashioned, with such great gifts: for he set his tabernacle in it.³⁴

PR-C036 1653, p. 25

Latin XXXVI. Sol lucidum est divinae gloriae speculum; illa enim cùm supra materialium creaturarum sensus viresque attollatur, speculum sibi condidit, cuius splendore aeternae suae lucis radii in omnia sua opera reflecterentur, & per reflexionem innotesceret: divinum quippe lumen immediatè intueri mortali naturae prohibitum est. Regius hic divinitatis oculus est, qui praesentiâ suâ libertatem ac vitam supplicibus indulget.

English 36. The sun is the shining mirror of divine glory. Since that glory rises beyond the senses and powers of material creatures, it made itself a mirror through whose splendour the rays of its eternal light might be reflected into all its works, and through reflection become known. For mortal nature is forbidden to gaze directly upon divine light. This is divinity's royal eye, which by its presence grants liberty and life to those who supplicate it.

PR-C037 1653, pp. 25, 26

Latin XXXVII. Postremus opificis labor, tanquam operis umbilicus aut corollarium, homo tandem prodiit, mundanae fabricae compendium, & divinae naturae imaguncula. In partem sextae lucis & totius operis novissimam eius ortum distulit creator, ut dives universae naturae supellex, omniaque superiorum & inferiorum munera in humanam naturam, tanquam in alteram Pandoram, confluerent. Sic rebus Universi iam ordinatis, operis complemento, qui solus deficiebat, additus est homo; quò Natura multiplici luce robustior facta mundiora elementa in temperamentum perfectum contribueret; & limus purior ad vas fictile tam exquisitum effingendum haberetur. Talem globus inferior eiusque incolae rectorem postulabant, ut obsequii iugum non detrectarent.

English 37. As the maker's final labour, like the work's centre or crowning addition, the human being at last appeared: a compendium of the world's fabric and a little image of divine nature. The creator deferred his birth to the last part of the sixth day and of the whole work, so that

³⁴ The "eternal sun" designates God in the passage's analogy, distinguished from the created celestial sun. The theological comparison and claim of a single sun are retained in their historical setting.

all nature's rich furnishings and all the gifts of higher and lower things might flow into human nature as into another Pandora. Thus, when the things of the universe were already ordered, the human being was added to complete the work, the one thing still lacking. Nature, strengthened by manifold light, could then bring purer elements together into a perfect temperament, and purer clay was available to fashion so exquisite an earthen vessel. The lower globe and its inhabitants required such a ruler, so that they would not refuse the yoke of obedience.³⁵

Original marginal note PR-M-C037-01 1653, p. 25

Latin HOMINIS CREATIO.

English THE CREATION OF THE HUMAN BEING.

PR-C038 1653, pp. 26, 27

Latin XXXVIII. Sexto à creatione, tertio ab ortu Solis die è terra surrexit homo; quo productionis tempore & dierum numero summum mysterium adumbratum est: quemadmodum enim quarto die creationis in unum Solis corpus universum caeli lumen coactum fuit; à tertio autem die nati Solis, qui sextus fuit creationis, terrae limus vitae spiraculum suscepit, & in hominem viventem, Dei imaginem, surrexit: Sic die quarto, millenario videlicet, ab origine mundi Sol increatus, divina scilicet natura infinita & nullis terminis ante comprehensa, humani corporis claustro comprehendi, & quodammodo terminari voluit: Tertio autem die sive millenario; mille anni siquidem coram Deo, sicut dies unus, computantur; post primum Solis illius ortum sive adventum, & circa finem sexti diei, nempe millenarii à creationis tempore, fiet gloriosa humanae naturae resurrectio in secundo supremi iudicis adventu; quod etiam per beatam illius tertiâ die resurrectionem nobis indicatum fuit. Sic arcanam Mundi aetatem & fata sub eius genesi occultavit Propheta.

English 38. On the sixth day from creation, the third from the sun's birth, the human being arose from the earth. In this time of production and number of days a supreme mystery was foreshadowed. Just as all heaven's light was gathered into one solar body on the fourth day of creation, and on the third day from the sun's birth, which was the sixth of creation, the earth's clay received the breath of life and rose as a living human being, God's image, so on the fourth day—that is, millennium—from the world's origin, the uncreated sun, namely the infinite divine nature previously confined by no bounds, chose to be enclosed within a human body and in a certain way bounded. On the third day or millennium after that sun's first rising or advent—for a thousand years before God are counted as one day—and around the end of the sixth day, or millennium from creation, the glorious resurrection of human nature will occur at the supreme judge's second advent. This was also indicated to us by his blessed resurrection on the

³⁵ Umbilicus can mean a navel, centre or finishing point; corollarium adds the sense of a crowning addition. Pandora is invoked here as a recipient of gifts, within the author's account of humanity as a compendium of nature.

third day. Thus the prophet concealed the world's secret age and destinies beneath its genesis.³⁶

PR-C039 1653, pp. 27, 28

Latin XXXIX. Licet Omnipotens, ut ei placuit, Mundum creaverit, imò in momento & solo nutu illum, si libuerit, è tenebris in lucem eduxerit; dixit enim & facta sunt omnia; ordo tamen creationis principiorum & Naturae successivae secundum prius & posterius, antequam natura creata esset, in mente divinâ descriptus erat, quem ordinem potius quàm ipsum creationis opus in suâ genesi exposuisse videtur sacer philosophus.

English 39. Although the Almighty created the world as he pleased, indeed may, if it pleased him, have brought it from darkness into light in a moment and by a mere nod—for he spoke and all things were made—nevertheless the order of the creation of principles and of successive nature, according to before and after, was delineated in the divine mind before nature was created. The sacred philosopher seems to have expounded that order in his Genesis rather than the work of creation itself.

PR-C040 1653, p. 28

Latin XL. Informationis materiae primae ratio generalis triplex in principio fuisse videtur; in quâ portione enim materiae lucida forma irrationalis fuit, & citra ullam proportionem longè superior, ut in caelo Empyreo, ubi primum lux materiam delibavit, tunc forma virtute penè infinitâ praepollens materiam suam absorpsit, ac in naturam ferè spiritualement, & ab omni accidente liberam transtulit.

English 40. There seem to have been three general modes of giving form to first matter in the beginning. In the portion of matter where luminous form was incommensurable with it and superior beyond all proportion, as in the empyrean heaven, where light first touched matter, form, prevailing with almost infinite power, absorbed its matter and carried it into a nearly spiritual nature free from every accident.³⁷

Original marginal note PR-M-C040-01 1653, p. 28

Latin INFORMATIONIS MATERIAE PRIMAE RATIO TRIPLEX.

English THE THREEFOLD MODE OF GIVING FORM TO FIRST MATTER.

PR-C041 1653, pp. 28, 29

Latin XLI. Ubi verò ad iustam lancem & aequalitatem formae & materiae vires concurrerunt, quâ ratione caelum aethereum & caelestia corpora informata sunt, tunc lucis actio, cuiusvis in agendo potentissima, eò progressa est, ut materiam suam mirum in modum illuminando & attenuando ab omni labe originali, necnon à virulentâ corruptionis tabe redemerit; eaque verè perfecta informatio habenda est.

³⁶. This is the author's Christian typological chronology, reading creation days as millennia and connecting them with incarnation and resurrection. Its future claim is reproduced as a historical prediction; no modern calendar date is supplied as its fulfilment.

³⁷. Irrationalis concerns a lack of proportion or commensurability here, not unreasonable thought. These three modes continue through canons 41–42; "accident" is a property distinguished from underlying substance.

English 41. Where, however, the powers of form and matter met in a just balance and equality, as in the formation of the ethereal heaven and celestial bodies, the action of light, mightiest of all in acting, advanced so far that by wonderfully illuminating and refining its matter it redeemed it from every original stain and the virulent wasting of corruption. This must be regarded as truly perfect formation.

PR-C042 1653, p. 29

Latin XLII. Informata in tertiâ ratione materia dicenda est, in quâ impotentior forma remansit; qualiter, licet diversimodè, in regione hac nostrâ Elementari contigit; in quâ appetitus materiae qui defectus & imperfectionis argumentum est, in basi & radice suâ luxuriantis ac recalcitrantis, propter remotionem & distantiam à formali principio sufficienter expleri non potuit, nec eius infirmitas sanari: unde materia non plenè ad votum informata novae formae desiderio languet, quâ tandem potitâ ei tanquam marito in dotem amplam corruptionis & vitiorum supellectilem confert: Haec morosa, pervicax, rebellis, inconstans semper novos concubitus exardet, omnium formarum avida, nullâ contenta, quas absentes desiderat, praesentes odit.

English 42. Matter is said to be formed in the third mode where form remained less powerful, as has happened, though in various ways, in this elemental region of ours. Here matter's appetite, a sign of deficiency and imperfection, luxuriant and rebellious in its base and root, could not be sufficiently satisfied, nor its weakness healed, because of its remoteness and distance from the formal principle. Hence matter, not fully formed according to its desire, languishes with longing for a new form. When it finally obtains one, it brings it, as to a husband, a rich dowry of corruption and faults. Fretful, obstinate, rebellious and inconstant, it always burns for new couplings, greedy for every form and content with none: it desires them absent and hates them present.³⁸

PR-C043 1653, p. 30

Latin XLIII. Ex quibus constat alterationis & corruptionis fermentum, ac tandem fatale mortis venenum non à qualitatibus repugnantiam, sed ex infectâ matrice & venenato materiae tenebrosae menstruo, tum Elementis, tum etiam huius infimae regionis mixtis contingere, quod à labe & imperfectione suâ debilis & sufficiens forma, nec ad iustitiam librata in primâ & radicali utriusque unione purgare non potuit; cuius rei sacra pagina fidem auget, in quâ licet observare primum parentem nostrum non immortalem secundum materiam creatum fuisse; verum ut à corruptione & labe originali materiae securus fieret, arborem fructu vitae abundantem Deum in Paradiso statuisset, quo tanquam vindice & assertore contra materiae labilitatem, & caducitatis mortisque servitutem uteretur, à cuius usu & praesentia post lapsum & latam mortis sententiam remotus fuit.

English 43. From this it is clear that the ferment of alteration and corruption, and finally the fatal poison of death, comes to the elements and the compounds of this lowest region not from the opposition of qualities but from the infected womb and poisoned menstrual fluid of dark matter. Weak and insufficient form, not justly balanced in their

³⁸ The wife, dowry and sexual appetite personify matter within the author's account of unstable compounds. The historical gendered rhetoric is retained without treating it as an editorial characterisation of women.

first and radical union, could not purge this matter of its stain and imperfection. Scripture strengthens belief in this: we may observe there that our first parent was not created immortal in respect of his matter. To secure him against corruption and matter's original stain, God placed in paradise a tree abounding in the fruit of life, which he might use as a defender and deliverer against matter's instability and servitude to decay and death. After the fall and the pronouncement of the sentence of death, he was removed from its use and presence.³⁹

Original marginal note PR-M-C043-01 1653, p. 30

Latin CORRUPATIO A QUALITATUM CONTRARIETATE NON PROCEEDIT.

English CORRUPTION DOES NOT PROCEED FROM THE CONTRARIETY OF QUALITIES.

PR-C044 1653, p. 31

Latin XLIV. Duo itaque tantum ab initio simplicia Naturae principia, quibus caetera omnia posteriora, nulla anteriora fuere, materia prima scilicet, & sua forma universalis, ex quorum copulâ orta sunt Elementa, tanquam secunda principia, quae nihil aliud sunt, quam materia prima diversimodè informata, ex quorum mixtione materia secunda conflatur, quae proximè accidentibus subest, generationis & corruptionis vices patitur: Hi sunt gradus, hic ordo principiorum Naturae.

English 44. There were therefore only two simple principles of nature in the beginning, with everything else later than them and nothing earlier: first matter and its universal form. From their coupling arose the elements as secondary principles, which are nothing other than first matter variously formed. From their mixture second matter is compounded, the immediate subject of accidents, undergoing the alternations of generation and corruption. These are the degrees and this the order of nature's principles.

PR-C045 1653, pp. 31, 32

Latin XLV. Qui materiae & formae tertium addunt rerum principium, privationem videlicet, Naturam calumniantur, à cuius mente alienum est, aliquod principium fini suo contrarium admittere; finis autem eius in generando cum sit adeptio formae, cui privatio adversatur, haec de intentione Naturae esse non potest. Veriùs illi, si Amorem Naturae principium agnovissent; materia enim priori orbata formâ novae formae assequendae desiderio flagrat: At privatio nihil aliud est, quam mera formae absentia, cui propterea augustum principii Naturae nomen non debetur, sed multò magis Amori, qui mediator est inter appetentem & appetibile, inter pulchrum & deforme, materiam & formam.

English 45. Those who add a third principle of things to matter and form, namely privation, slander nature, whose intention is foreign to admitting a principle contrary to her own end. Since her end in generation is the attainment of form, which privation opposes, privation cannot belong to nature's intention. They would have spoken more

³⁹. The body prints *sufficiens*, "sufficient", beside *debilis*, "weak", although the argument says form could not purge matter. English follows the contextual conjecture *insufficiens*, "insufficient"; Latin preserves the printed word. The womb and menstrual language is explicit in the source.

truly had they recognised love as a principle of nature, for matter deprived of its former form burns with desire to attain a new one. Privation is nothing other than the mere absence of form, and therefore does not deserve the august name of a principle of nature. That name belongs far more to love, which mediates between what desires and what can be desired, between the beautiful and the formless, matter and form.⁴⁰

PR-C046 1653, pp. 32, 33

Latin XLVI. Corruptio principio generationis longè proximior est, quàm Privatio; cùm illa sit motus materiam per successivos alterationis gradus ad generationem disponens: Privatio autem nihil agit nihil exequitur in opere generationis: at corruptio materiam promovet ac praeparat, ut capax fiat suscipiendae formae; & quasi mediatrix lenocinium exercet, quò facilius materia naturae libidinem adimpleat, atque eius ope formae copulam assequatur: Est itaque corruptio causa instrumentalis & necessaria generationis: At privatio nihil aliud est, quam mera principii activi ac formalis carentia; & tenebrae super faciem Abyssi, materiae scilicet informis ac tenebrosae.

English 46. Corruption is far closer to being a principle of generation than privation, since it is a motion disposing matter for generation through successive degrees of alteration. Privation does nothing and carries out nothing in the work of generation, whereas corruption advances and prepares matter to make it capable of receiving form. Like a go-between it acts as a procurer, so that matter may more readily satisfy nature's lust and with its aid attain coupling with form. Corruption is therefore an instrumental and necessary cause of generation. Privation, however, is nothing other than the mere lack of an active and formal principle, and darkness upon the face of the abyss, namely formless and dark matter.

PR-C047 1653, p. 33

Latin XLVII. Universi harmonia in diversâ & graduâ materiae informatione consistit; à ponderatâ enim materiae primae & formae suae mixtione fluxit Elementorum, tum etiam Mundi plagarum differentia; quod paucis, sed verissimis verbis indicavit Hermes, dum id, quod est superius, simile ei quod est inferius, dixit; superiora enim & inferiora ex eâdem materiâ & formâ condita sunt, sed ratione mixtionis, situs & perfectionis differunt, circa quae partium Mundi distinctio, & universae Naturae latitudo versatur.

English 47. The universe's harmony consists in the varied and graduated formation of matter. The differences between the elements, and also between the world's regions, flowed from the proportioned mixture of first matter and its form. Hermes indicated this in few but most truthful words when he said that what is above is like what is below. For higher and lower things were made from the same matter and form but differ

⁴⁰ Privation is the absence of a form, not an independently acting material ingredient. The proposed replacement by love is a positive claim in the author's natural philosophy, continued by the personification of corruption in canon 46.

in their mixture, position and perfection; upon these turn the distinction of the world's parts and the whole range of nature.

Original marginal note PR-M-C047-01 1653, p. 33

Latin HARMONIA UNIVERSI.

English THE HARMONY OF THE UNIVERSE.

PR-C048 1653, pp. 33, 34

Latin XLVIII. Materiam primam post susceptam à luce informationem, & rerum distinctionem, totam extra se migrasse, ac in Elementa & ex illis conflata transmissam, totamque in opere Universi perficiendo exhaustam fuisse credendum est; ita ut iam manifestatis, & in lucem editis, quae prius in illâ occultabantur, coeperit tota in ipsis occultari, nec ab ipsis separatam dari posse fatendum est.

English 48. We must believe that after receiving form from light and after the distinction of things, first matter passed wholly beyond itself, was transferred into the elements and the things compounded from them, and was entirely expended in completing the work of the universe. Thus, once the things formerly hidden within it were manifested and brought into light, it began to be hidden wholly within them; we must admit that it cannot exist separately from them.

PR-C049 1653, p. 34

Latin XLIX. Antiquae illius massae confusae, seu materiae primae specimen aliquod nobis natura reliquit in aquâ siccâ non madefaciente, quae ex terrae vomis, aut etiam lacubus scaturiens, multiplici rerum semine praegnans effluit, tota calore etiam levissimo volatilis; ex quâ cum suo masculo copulatâ qui intrinseca Elementa eruere & ingeniosè separare, ac iterum coniungere noverit, pretiosissimum Naturae & artis arcanum, imò caelestis Essentiae compendium adeptum se iactet.

English 49. Nature has left us a certain specimen of that ancient confused mass, or first matter, in a dry water that does not wet. Springing from the earth's cavities or even from lakes, it flows forth pregnant with the manifold seed of things, wholly volatile under even the slightest heat. Whoever knows how to draw out its inward elements once it is coupled with its male, skilfully separate them and join them again may boast that he has attained nature and art's most precious secret, indeed a compendium of heavenly essence.⁴¹

PR-C050 1653, p. 35

Latin L. Simplicia corporum Elementa, ab omni mixtione separata qui quaerit, vano torquetur labore, ingenio quippe humano incognita sunt: quae enim Elementa vulgò habentur, nequaquam simplicia, imò inter se inseparabiliter mixta sunt. Terra, Aqua, Aër partes integrantes universi sunt veriùs, quàm Elementa, sed rectè eorum matrices dici convenit.

English 50. Whoever seeks the simple elements of bodies, separated from every mixture, torments himself with vain labour, for they are unknown to human understanding. What are commonly regarded as elements are

⁴¹. The description deliberately combines "dry water", non-wetting, volatility and generation. It does not by itself securely identify a modern substance, and none is supplied here.

by no means simple, but inseparably mixed with one another. Earth, water and air are more truly integral parts of the universe than elements, though they may rightly be called the elements' matrices.⁴²

Original marginal note PR-M-C050-01 1653, p. 35

Latin ELEMENTA.

English THE ELEMENTS.

PR-C051 1653, pp. 35, 36

Latin LI. Terrae, Aquae & Aëris corpora, quae sphaeris suis sensibilibiter distinguuntur, alia sunt ab Elementis, quibus in opere generationis utitur Natura, quaeque mixtorum corpora constituunt; haec enim in mixtione prae tenuitate imperceptibilia & sensibus occulta sunt, donec in materiam densam & corpus coierint:

Ex insensilibus namque omnia confiteare
Principiis constare.

Illa autem, quae globum inferiorem Universi constituunt, tanquam nimis densa, cruda, impura & indigesta à perfectae generationis lege arcentur; magis enim Elementorum idola & simulachra sunt, quàm vera Elementa.

English 51. The bodies of earth, water and air, sensibly distinguished in their own spheres, are different from the elements that nature uses in generation and that constitute the bodies of compounds. In mixture these are imperceptible through their fineness and hidden from the senses until they come together into dense matter and a body:

For acknowledge that all things consist
of imperceptible principles.

Those that constitute the universe's lower globe, however, are excluded from the law of perfect generation as too dense, crude, impure and undigested. They are images and likenesses of the elements rather than true elements.⁴³

Original marginal note PR-M-C051-01 1653, p. 35

Latin * Lucret. lib. 2.

English * Lucretius, book 2.

PR-C052 1653, p. 36

Latin LII. Elementa, quibus in mixtionibus suis & fingendis corporibus plastes utitur Natura, licet ante mixtionem deprehendi nequeant, in opere tamen absoluto & mixto perfecto, quia partes eius partibus Mundi proportionem quadam respondent, & quodammodo sunt analogae, iisdem nominibus illas nuncupare liceat: solidiores enim partes terram; humidiores Aquam; spirituales aërem; calorem innatum ignem Naturae; occultas verò & essentiales virtutes non malè caelestes & Astrales naturas,

⁴². Matrix retains the sense of a receiving or generating ground. The distinction between the visible regions and the elements used by nature is developed in the next canons; these elements are not entries in a modern periodic table.

⁴³. The original margin attributes the verse to Lucretius, book 2. The terms "imperceptible principles" and "elements" belong to this historical distinction and are not silently replaced with modern atoms.

sive quintam essentiam quis dixerit; & ita quodlibet mixtum analogicè Microcosmi nomine gloriabitur.

English 52. Although the elements that nature the modeller uses in her mixtures and in shaping bodies cannot be detected before mixture, once the work is finished and the compound perfected its parts may be called by the same names, since they correspond by a certain proportion to the world's parts and are in a way analogous. One may call the more solid parts earth, the moister parts water, the spiritual parts air, and innate heat nature's fire. The hidden and essential powers may aptly be called celestial and astral natures, or quintessence. In this way every compound will by analogy glory in the name microcosm.⁴⁴

PR-C053 1653, p. 37

Latin LIII. Qui prima rebus generandis Elementa constituit, idem solus ex iis rerum individua componere, & composita in ea novit resolvere.

English 53. He who established the first elements for the generation of things alone knows how to compose individual things from them and resolve what has been composed back into them.

PR-C054 1653, p. 37

Latin LIV. Lumen igitur non refugiant, qui circa Naturae Elementa operantes, in aliquo corpore ex iis producendo, vel naturaliter productum in ea resolvendo crucem sibi ponunt; Elementa quippe illa ex pleno Naturae dominio sunt, eique soli ab ortu suo mancipata, arti & industriae penitus ignota.

English 54. Let those who torment themselves in working upon nature's elements, trying to produce some body from them or resolve a naturally produced body into them, therefore not shun the light. Those elements belong wholly to nature's dominion and have been subject to her alone from their birth, utterly unknown to art and human industry.

PR-C055 1653, p. 37

Latin LV. Elementum naturae dici potest simplicissima materiae primae portio, per propriam differentiam & qualitates distincta, partem essentialem in materiali mixtorum compositione constituens.

English 55. An element of nature may be called a most simple portion of first matter, distinguished by its own specific difference and qualities and constituting an essential part in the material composition of compounds.

PR-C056 1653, p. 38

Latin LVI. Per Elementa Naturae, principia materialia intelliguntur, quorum alia aliis puriora & perfectiora sunt, pro maiori & potentiori virtute formae perficientis. Distinguuntur autem plurimum raritate & densitate, quae rariora & spirituali naturae proximiora, ea puriora & leviora, motui & actioni aptiora sunt.

⁴⁴ The qualification "by analogy" is explicit. The canon provides a vocabulary for corresponding parts and powers, rather than saying that a compound contains miniature geographical regions.

English 56. By nature's elements are understood material principles, some purer and more perfect than others according to the greater and more powerful efficacy of the form that perfects them. They differ chiefly in rarity and density: those that are rarer and closer to spiritual nature are purer and lighter, and more suited to movement and action.

PR-C057 1653, pp. 38, 39, 40

Latin LVII. Universum Orbis imperium inter tres fratres Saturni filios cohaeredes propterea divisum fuisse veneranda finxit antiquitas, quia tres tantum Elementorum naturas, aut veriùs universi partes agnovit: Per Iovem enim omnipotentem caeli dominium sortitum, trisulco fulmine armatum, caeteris fratribus superiorem, aetheream caelestium corporum regionem in haec inferiora ius imperii sibi vindicantem intellexerunt illi arcanorum mystae: infimae autem caeli plagae, sive aëri nostro, lunonem Iovis coniugem praefecerunt, quia haec regio vaporibus inquinata, humida & frigida, ac quodammodo impura est, foemineoque temperamento proxima; tum etiam, quia superiorum decretis subiicitur, eorum affectiones suscipit, easque nobis communicat, crassioribus naturis se commiscens, ac eas ad caelestium vota inflectens: quia autem mas & foemina sexu tantum, non specie differunt, propterea aërem sive caelum inferius aliud omnino Elementum à caelo superiori essentiâ & specie distinctum noluerunt, sed loco & accidentibus tantum diversum. Neptuno maris Numini ius in aquas tribuerunt. Per Plutonem inferorum tyrannum, opibus affluentem, terrae globum significarunt, divitiis refertum; quarum tum etiam honorum desiderio, & omni cupiditatum aestu ferventes hominum mentes acerbè torquentur. Tres itaque tantum Universi partes, seu tria, si placet, Elementa sapientes illi admiserunt, quia ignis Elementum sub aethereâ naturâ comprehendendi voluerunt; Iovem fulmine armatum propterea pinxerunt.

English 57. Venerable antiquity imagined that the empire of the whole world was divided among three brothers, Saturn's sons and coheirs, because it recognised only three elemental natures, or more truly three parts of the universe. By omnipotent Jupiter, who received dominion over heaven, armed with the three-forked thunderbolt and superior to his brothers, those initiates into secrets understood the ethereal region of celestial bodies, claiming authority over these lower things. Over the lowest region of heaven, or our air, they set Jupiter's wife Juno, because that region is tainted with vapours, moist and cold, in a way impure, and close to a female temperament. It is also subject to the decrees of higher things, receives their influences and communicates them to us, mingling with grosser natures and bending them to the purposes of the heavenly ones. Since male and female differ only in sex, not in species, they did not regard air or the lower heaven as an entirely different element, distinct in essence and species from the upper heaven, but as differing only in place and accidents. To Neptune, divinity of the sea, they assigned authority over the waters. By Pluto, the wealthy tyrant of the underworld, they signified the globe of earth, filled with riches. The desire for these, and for honours, and the heat of every craving bitterly torment human minds. Those wise men therefore admitted only three parts of the universe, or, if one wishes, three elements, because they

intended the element fire to be included within ethereal nature. For that reason they depicted Jupiter armed with the thunderbolt.⁴⁵

PR-C058 1653, p. 40

Latin LVIII. Omnia mixtorum corpora in siccum & humidum per analysim resolvi: omnia animalium excrementa iisdem differentiis terminari experientiâ docemur: Unde liquidò constat mixtorum corpora ex duobus tantum Elementis sensilibus terrae & aquae respondentibus conflata esse; quibus tamen caetera virtute ac potestate insunt: Aër autem, sive caeli inferioris Elementum sensus fugit, quia de genere spiritualium quodammodo est, ratione nostri. Ignis etiam Naturae, quia principium est formale, nullâ analyticâ destructione, nullo artis ingenio deprehendi & separari potest; formarum enim natura sensuum censurae non submittitur, quia spiritualis est.

English 58. Experience teaches us that all compound bodies are resolved by analysis into dry and moist, and that all animal excretions end in those same distinctions. From this it is clearly evident that compound bodies are made from only two sensible elements, corresponding to earth and water, though the others are present in them in power and potentiality. Air, or the element of the lower heaven, escapes the senses because in relation to us it belongs in a certain way to the order of spiritual things. Nature's fire too, being a formal principle, cannot be detected and separated by any analytic destruction or ingenuity of art. For the nature of forms is not subject to the judgement of the senses, because it is spiritual.

PR-C059 1653, pp. 41, 42

Latin LIX. Terra est corporum Universi densissimum, ideò gravissimum & centrum habitum: eius naturam per se frigidam, & per accidens siccam esse contra vulgarem opinionem statuendum est; quia plus retinet de natura opacâ & tenebrosâ primae materiae; umbra autem & tenebrae frigoris latibulum existunt, unde lucem fugiunt, & ex diametro ei opponuntur; at terra propter summam eius densitatem umbrae & tenebrarum mater est, luci & calori difficilè pervia, ideò summo frigore rigescit. Atra bilis humor omnium frigidissimus ea de causa censi debet, quia terrae dominio subiicitur, Terra autem Saturno, qui frigidi & melancholici temperamenti author habetur. Praeterea, quae in terrae visceribus ex terreâ substantiâ generantur, veluti marmor & lapides, frigidae sunt naturae; quamvis de metallis aliter sentiendum, quia aëreae naturae magis sunt, habentque in se ignis plurimum, propter infusas caelitus ignis Naturae scintillas, & spiritum sulfureum ipsorum materiam humidam & frigidam congelantem: Mercurius tamen humiditate & frigiditate caeteris praepollens, terrae frigidum & aquae humidum suum acceptum refert. Aliter se res habet in iis, quae in mari producuntur, ut per Ambarum & Corallium, aliaque plurima à mari & fluminibus genus ducentia, quae calido temperamento gaudent, satis constat: Ratione itaque & experientiâ docemur frigiditatem maximam terrae, non aquae deberi.

English 59. Earth is the densest of the universe's bodies and is therefore regarded as the heaviest and as its centre. Against common opinion, we must hold that its nature is cold in itself and dry accidentally, because it

⁴⁵ This is the author's allegorical explanation of the classical gods and their allotted regions. Its gendered temperaments and claim that fire belongs within the ethereal region are retained as parts of his argument.

retains more of first matter's opaque and dark nature. Shadow and darkness are hiding places of cold; hence they flee light and stand diametrically opposed to it. Because of its extreme density earth is the mother of shadow and darkness, difficult for light and heat to penetrate, and therefore stiffens with the greatest cold. For this reason black bile must be regarded as the coldest humour of all, because it is subject to earth's dominion, while earth is subject to Saturn, held to be the author of the cold and melancholic temperament. Moreover, things generated from earthy substance in the earth's entrails, such as marble and stones, are cold in nature. Metals must be judged differently, however, because they are of a more airy nature and contain much fire, through sparks of nature's fire poured in from heaven and a sulphurous spirit congealing their moist and cold matter. Mercury, exceeding the others in moisture and cold, owes its coldness to earth and its moisture to water. It is otherwise with things produced in the sea, as is sufficiently evident from ambar, coral and many other products of sea and rivers, which possess a hot temperament. Reason and experience therefore teach us that the greatest cold belongs to earth, not water.⁴⁶

Original marginal note PR-M-C059-01 1653, p. 41

Latin TERRA.

English EARTH.

PR-C060 1653, pp. 42, 43

Latin LX. Siccitas autem per accidens & remissè terrae competit, in medio enim aquarum creata fuit; & rerum ordo postulabat, ut prae gravitate sua aquis immersa ab humido nunquam recederet; verùm creator summo iure usus, aquis remotis, liberam eius faciem exhibuit, ut mixtorum creationi, tum habitationi locus daretur: Terra itaque non secundum naturae legem, sed per gratiam à naturali servitutis iugo & humoris tyrannide liberata est, ut siccâ fronte in auras emergeret, gratumque Mundi lumen perciperet.

English 60. Dryness belongs to earth accidentally and in a moderated degree, for it was created in the midst of waters. The order of things required it, submerged by its own weight, never to withdraw from moisture. But the creator, exercising his supreme right, removed the waters and exposed its free surface to provide room for the creation and dwelling of compounds. Earth was therefore freed from its natural yoke of servitude and the tyranny of moisture by grace rather than by nature's law, so that with a dry brow it might emerge into the air and receive the world's welcome light.

PR-C061 1653, p. 43

Latin LXI. Omne frigidum & siccum à facultate generativâ alienum est, nisi externo iuvetur auxilio; propterea rectè sapientissimus Naturae author frigidum Terrae uterum Igne caelesti incalescere voluit; & sicco Terrae globo humidam Aquae

⁴⁶. Coldness, dryness, black bile and Saturn belong to the author's elemental, humoral and astral explanation. The text says metals are more *aërae*, "airy", not "fiery"; that reading is preserved. The historical name Ambarum is rendered ambar without forcing a modern identification from the marine context.

Naturam adiunxit, ut admixtis duabus generativis calidi & humidi causis, terrae sterilitati succurreretur, ac mediante omnium Elementorum concursu & mixtione, Terra physicum uberrimae generationis vas fieret. Terrae itaque omnes qualitates & omnia Elementa insunt.

English 61. Everything cold and dry is without generative power unless helped from outside. Nature's most wise author therefore rightly willed the earth's cold womb to be warmed by celestial fire, and joined the moist nature of water to the dry terrestrial globe. By mixing the two generative causes, heat and moisture, he remedied earth's barrenness, and through the concurrence and mixture of all the elements made earth a natural vessel of most abundant generation. All qualities and all elements are therefore present in earth.

PR-C062 1653, pp. 43, 44

Latin LXII. Spongiosum Terrae corpus sapienter à Mundi conditore creatum fuit, ut aëri, imbribus ac caelestibus influentiis aditus pateret: ut etiam vi caloris interni vapores humidi à centro ad superficiem per terrae meatus expulsi rerum semina modicâ putrefactione corrumpant, & ad generationem praeparent; quae ita disposita calorem caelestem vivificum excipiunt: Natura siquidem amorem Magneticum in rerum profundo demersit, cuius vi superiorum virtutes evocant & sugunt, quae informationis robur augent, & vitalis aerae dulcedinem accelerant.

English 62. The world's founder wisely made earth's body spongy so that air, rains and celestial influences might enter. Moist vapours, driven by internal heat from the centre to the surface through the earth's passages, could then corrupt the seeds of things by a moderate putrefaction and prepare them for generation. Thus disposed, they receive life-giving celestial heat. For nature has placed magnetic love in the depths of things, by whose power they call forth and draw in the powers of higher things, which strengthen their formation and hasten the sweetness of the vital breath.⁴⁷

PR-C063 1653, pp. 44, 45

Latin LXIII. Calor è terrae sinu emergens humidus & impurus propter terrae & aquae admixtae labem corrumpit, purissimus autem caelestis generat excitando, dilatando, & ad vitam urgendo calorem insitum, in rerum seminibus abstrusum, & tanquam naturae arcanum in eorum centro occultatum: Quia verò homogenei sunt ambo calores illi, blandè in opere generationis coeunt, & inseparabiliter uniuntur, donec in vitam & amplam vegetationem exeant.

English 63. The heat rising from earth's bosom, moist and impure through the taint of mingled earth and water, corrupts. The purest celestial heat, however, generates by rousing, expanding and urging into life the implanted heat hidden in the seeds of things, concealed in their centre like nature's secret. Because those two heats are of like nature, they gently come together in the work of generation and unite inseparably until they issue in life and abundant growth.

⁴⁷ "Magnetic love" explains attraction and reception within this natural philosophy. The phrase need not be reduced either to a modern magnetic mechanism or to an exclusively psychological state.

PR-C064 1653, p. 45

Latin LXIV. Aqua est natura media, inter densum & tenue, inter Terram & Aërem; menstruum Naturae, corpus volatile, fugax, ignis impatiens, calore etiam mediocri in vaporem exhalans, multiplicem induens figuram, Protheo denique instabilis.

English 64. Water is an intermediate nature between dense and fine, between earth and air: nature's menstruum, a volatile, fugitive body unable to endure fire, breathing out into vapour under even moderate heat, taking on many forms, and finally more unstable than Proteus.⁴⁸

Original marginal note PR-M-C064-01 1653, p. 45

Latin AQUA.

English WATER.

PR-C065 1653, p. 45

Latin LXV. Humidum Elementum Mercurius est, qui modò corporis, modò spiritus naturam induens superiorum & inferiorum virtutes suis revolutionibus in se trahit, & quasi eorum mandata suscipiens inter remotas universi naturas, velut earum actor & sponsor negotiatur ac commercium exercet; nec à nundinationibus suis temperabit, donec omnia naturae corruptibilis Elementa ab igne purgata & fixata sint, fiatque sabbatum universale.

English 65. The moist element is Mercury. Taking on now the nature of body, now of spirit, it draws into itself through its revolutions the powers of higher and lower things. As though receiving their commissions, it negotiates and conducts commerce between the distant natures of the universe as their agent and guarantor. Nor will it cease its trading until all the elements of corruptible nature have been purified and fixed by fire and a universal sabbath comes to pass.⁴⁹

PR-C066 1653, pp. 46, 47

Latin LXVI. Aqua, quia materiae primae proxima natura est, facile eius simulachrum induit: Chaos enim antiquus rerum parens vapor quidam subtilis & tenebrosus fuit, seu humida quaedam tenebrarum, fumo tenui similis, substantia, ex cuius subtilissimâ portione caeli ex ordine educti & expansi sunt, quorum triplex differentia tres etiam eius provincias constituit, nempe supremam, quae nobilissima est: mediam, quae secundum praestantiae & dignitatis locum occupat: postrema autem situ & nobilitate caeteris est inferior. Densior materiae substantia in aqueam molem, quae media quaedam natura est, cessit. Densissima pars quasi faex totius massae in fundo substitit, & in compactum Terrae globum firmata est. Extrema totius opificii, Caelum videlicet & terra, magis à primo materiae suae statu & antiquâ figurâ recesserunt; caelum propter summam raritatem & levitatem; Terra propter summam densitatem & gravitatem; Aqua verò, quae medium inter utrumque sortita est, informi abyssu proximior natura remansit; unde fit, ut facile per rarefactionem in fumum, seu vaporem, quae Hyles antiquae imago est, se convertat.

⁴⁸. Menstruum combines a bodily, generative image with the function of a fluid medium. Proteus supplies the image of changing shapes; no single modern solvent is identified.

⁴⁹. Mercury is personified through commerce and mediation; the moist element is assigned shifting bodily and spiritual roles. The passage does not simply name ordinary metallic mercury.

English 66. Water readily assumes the likeness of first matter because it is the nature closest to it. For chaos, the ancient parent of things, was a certain subtle, dark vapour, or a moist substance of darkness resembling thin smoke. From its subtlest portion the heavens were brought forth and spread out in order. Their threefold distinction also established its three provinces: the highest, which is noblest; the middle, which holds second place in excellence and dignity; and the last, inferior to the others in position and nobility. The denser substance of matter passed into a watery mass, which is a certain intermediate nature. The densest part settled at the bottom like the dregs of the entire mass and was made firm into the compact globe of earth. The extremes of the whole fabric, namely heaven and earth, departed further from their matter's first state and ancient shape: heaven because of its extreme rarity and lightness, earth because of its extreme density and heaviness. But water, allotted the middle place between them, remained a nature closer to the unformed abyss. Hence it readily converts itself through rarefaction into smoke or vapour, which is the image of ancient hyle.

PR-C067 1653, p. 47

Latin LXVII. Humiditas magis propria est aquae, quàm frigiditas, quia magis rara & luminosa est Aqua, quam Terra; at quae maiorem cum lumine participationem habent, magis à frigido recedunt: rariora verò corpora lumini viciniora sunt. Aqua humiditatis symbolum à materiâ primâ & Abyssu retinuit; sicuti terra frigiditatem: Densiores enim partes in duas illas affines naturas Spiritus mundi Architectonicus divisit.

English 67. Moistness is more proper to water than coldness, because water is rarer and more luminous than earth. Things that participate more fully in light depart further from cold, and rarer bodies are nearer to light. Water retained its mark of moistness from first matter and the abyss, just as earth retained coldness. For the world-building spirit divided the denser parts into those two related natures.

PR-C068 1653, pp. 47, 48, 49

Latin LXVIII. Frigiditas siccitatem amat, eamque induit, ubi strenuè dominatur humida constringendo ac desiccando, ut ex nive, glacie & grandine docemur; Aquam enim, quâ nihil humidius, frigore tanquam proprio instrumento constringere ac desiccare Naturae opus est; imò praecipuum & commune caloris & frigoris subiectum est humor, qui ab utroque fortiter oppugnatur, donec expugnetur; unde fit, ut tot autumnī frigore primo sicca cadant folia; debiliū plantarum caules, urgente hyeme, ad summam siccitatem humore destituantur & arescant; sic penetrabile frigus adurit, vitalesque rerum humores hostiliter invadit; inde flaccida & marcescens senectus, mors tandem acerrimo frigore, quasi falce chalibaea, omnia desiccata metens, & in horrea sua conferens. Quomodo igitur frigus humido Elemento indulgere, & tanquam maximè proprium inesse quis profiteatur? cū Natura elementa in seipsa agere non patiatur, ne vires suas destruant aut opprimant, at frigiditas intensior remissam imbellemque humiditatem statim proculdubio debellaret, ac fortiter per constrictionem desiccando totam exhauriret, aut invalidam prosterneret; sic uno ex Elementis ruinam passo,

reliquorum operâ imperfectâ, & rerum generationem omninò deficere necessariò sequeretur. Aquae igitur summam frigiditatem tribuere Naturae legi repugnat.

English 68. Coldness loves dryness and assumes it wherever it rules vigorously, by constricting and drying moist things, as snow, ice and hail teach us. For it is nature's work to constrict and dry water, than which nothing is moister, using cold as its own instrument. Indeed, moisture is the chief subject common to heat and cold, vigorously assaulted by both until it is conquered. Hence so many leaves fall dry at autumn's first cold, and, as winter presses on, the stems of weak plants are deprived of moisture and wither into utter dryness. Thus penetrating cold burns and invades things' vital moistures like an enemy. Hence comes slack and withering old age, and finally death, which with its sharpest cold, like a steel scythe, reaps all dried things and gathers them into its granaries. How, then, can anyone declare that cold favours the moist element and inheres in it as its most proper quality? Nature does not allow elements to act against themselves, lest they destroy or suppress their own powers. Yet intense coldness would undoubtedly conquer weak, defenceless moistness at once and, drying it forcefully through constriction, would exhaust it entirely or lay it low in its weakness. Thus, with one element brought to ruin and the work of the others left unfinished, the complete failure of the generation of things would necessarily follow. To attribute the greatest coldness to water therefore contradicts nature's law.⁵⁰

PR-C069 1653, pp. 49, 50

Latin LXIX. Ex duabus illis densioribus naturis Terra & Aquâ nempe, Elementa sua haurit Natura: quibus vasa sua & organa corporea fingit; ex utriusque enim mixtione fit limus; limus autem est proxima materia generatorum: ille enim est veluti chaos, cui omnia confusè & virtute insunt Elementa. Ex limo creatus fuit primus humani generis parens; omnis deinceps generatio ex limo prodiit. In generatione animalium ex spermate & menstruo fit limus, inde animal. In vegetabilium productione semina per putrefactionem in limum subtilem primò transeunt, deinde in corpus vegetabile firmantur. In generatione metallorum ex sulfure & mercurio perfectè mixtis, & in aquâ pinguem resolutis exit limus, ex quo corpora metallica per longam decoctionem indurantur. In philosophicâ metallorum solutione, & arcani Philosophorum creatione primò educitur limus, expurgato & mixto utriusque parentis semine.

English 69. From those two denser natures, namely earth and water, nature draws her elements, from which she fashions her vessels and bodily organs. For their mixture produces mud, and mud is the immediate matter of generated things: it is like a chaos in which all the elements are present confusedly and potentially. The first parent of humankind was created from mud, and all generation thereafter proceeded from mud. In the generation of animals, mud is formed from seed and menstrual matter, and from it the animal. In the production of

⁵⁰ The argument distinguishes the author's proposed elemental qualities from effects such as freezing, drying and withering. Its claim that intense cold would destroy an inherently moist element belongs to that historical system.

plants, seeds first pass through putrefaction into subtle mud and are then made firm into a plant's body. In the generation of metals, mud arises from sulphur and mercury perfectly mixed and dissolved into a fatty water; from it metallic bodies are hardened through long cooking. In the philosophical dissolution of metals and the creation of the philosophers' secret, mud is first brought forth when the seed of each parent has been purified and mixed.⁵¹

PR-C070 1653, pp. 50, 51

Latin LXX. Aqua est basis & radix omnis humidi, imò humor ipse, à quo omne humidum denominatur: Rectè itaque Elementi humidi, vel humoris fons & principium Aqua definiri potest, cuius proprium est liquore suo madefacere. Humida autem dicuntur quae humorem sive liquorem aqueum, secundum plus vel minus in se continent. Humor omnium qualitaturn susceptibilis est: sic sanguis & flava bilis humores sunt calido suo imbuti, licèt in Elemento aquae basim suam habeant: Aqua fortis & similes causticà & igneà virtute pollent; Aqua ardens & plurimae rerum essentiae quae sub olei aut aquae corpore extrahuntur, calido abundant, licèt Aqua earum radix sit frigida: quia Natura in Elemento humido varias virtutum suarum signaturas primùm imprimit, illique principes qualitates radicitus infundit. Humor est primum Naturae subiectum, in quo prima eius cura, primus labor impenditur: cuius liquore multiplices suos colores & tincturas indelebiles diluit ac miscet: illi spiritualia dona primò se communicant, in illo primùm hospitantur & agere incipiunt.

English 70. Water is the basis and root of everything moist, indeed moisture itself, from which every moist thing takes its name. Water may therefore rightly be defined as the source and principle of the moist element, or of moisture; its proper work is to wet things with its liquid. Things are called moist when they contain moisture or watery liquid in greater or lesser measure. Moisture can receive every quality. Thus blood and yellow bile are humours imbued with their own heat, although they have their basis in the element of water. Strong water and similar substances possess a caustic, fiery power; burning water and many essences of things extracted in the body of oil or water abound in heat, although water, their root, is cold. For nature first imprints the varied signatures of her powers upon the moist element and infuses her principal qualities into its very root. Moisture is nature's first subject, upon which her first care and labour are spent. In its liquid she dilutes and mixes her many colours and indelible tinctures. Spiritual gifts first communicate themselves to it; in it they first dwell and begin to act.⁵²

⁵¹. Limus is rendered "mud" throughout this canon: the same word links Genesis, animal and plant generation, metals and the philosophical work. "Seed", "menstrual matter", "sulphur" and "mercury" retain their historical senses. The printed phrase in aqua pinguem is grammatically irregular; its contextual sense is fatty water.

⁵². "Strong water" and "burning water" translate aqua fortis and aqua ardens. The names are preserved within the author's argument about moisture and heat, without assigning a single modern chemical composition to either. "Humour" in the example of blood and yellow bile names a bodily fluid in the historical theory.

PR-C071 1653, p. 51

Latin LXXI. Aquae inferiores bifariam divisae distinctas regiones occupant, pars enim earum Terrae contigua ei tanquam basi propriae insidet, & cum eâ unicum globum constituit; altera pars sursum evolans per aëris vicini plagam vago motu peregrinatur, ibique larvatas corporum imagines, multiplicesque phantasmatum figuras sibi fingens pendula huc illuc errat.

English 71. The lower waters, divided into two, occupy distinct regions. One part, adjoining earth, rests upon it as its proper base and forms a single globe with it. The other flies upwards and travels with wandering motion through the neighbouring tract of air. There, fashioning for itself masked images of bodies and manifold phantom shapes, it hangs suspended and roams here and there.

PR-C072 1653, p. 52

Latin LXXII. Omni tempore magna pars aquarum desuper habitat, & varios aëris tractus huc illuc ventorum flatu impulsa percurrit: quod ita divinae Sapientiae decreto à die creationis constitutum est, ut patens ac libera Terrae facies rebus generandis exurgeret: Neque enim maris & fluminum alvei aquae universae suscipiendae sufficerent, quin si tota laxatis caeli repagulis rueret superatâ Terrae planitie altissimos forsan montes adaequaret. Tale profluvium cataclysmo causam olim dedisse licet coniicere.

English 72. At all times a great part of the waters dwells above and, driven here and there by the blowing winds, traverses the various tracts of air. This was established by divine wisdom's decree from the day of creation so that earth's face might emerge open and free for things to be generated. For the beds of seas and rivers would not suffice to receive all the water. Indeed, if it all rushed down when heaven's barriers were released, it would overtop earth's level ground and perhaps reach the highest mountains. We may conjecture that such an outpouring once caused the deluge.

PR-C073 1653, pp. 52, 53

Latin LXXIII. Non solo calore Aqua in vaporem sublimatur, nec solo frigore in nubem concrevit, ad utrumque Solis & syderum virtutes plurimum conferunt, non solum vires Elementorum multiplicando, sed etiam vi quadam Magneticâ humorem plus aut minus attrahendo ac retinendo pro diversâ eorum positione caelique figurâ; unde dissimilis spectatur annorum ac temporum constitutio: moles siquidem Aquarum illa non solo frigore aut aëris soliditate, sed potenti superiorum corporum imperio librata cohibetur.

English 73. Water is not raised into vapour by heat alone, nor does it gather into cloud by cold alone. The powers of the sun and stars contribute greatly to both, not only by multiplying the elements' powers but also by attracting and retaining moisture to a greater or lesser degree through a certain magnetic force, according to their different positions and the configuration of heaven. Hence we observe differences in the constitution of years and seasons. For that mass of

waters is held poised aloft not by cold or the air's solidity alone, but by the powerful command of the higher bodies.⁵³

PR-C074 1653, p. 53

Latin LXXIV. Divinae iustitiae ne sua supplicia in vindictam deessent, Oceanum, qui capiti nostro immineret, & ignita fulminis tela superinduxit; ut quae amore flecti non posset hominum audacia terrore sisteretur.

English 74. Lest divine justice lack its punishments for vengeance, it made an ocean that could fly and hang threateningly over our heads, and placed the fiery darts of lightning above us, so that human audacity, which could not be bent by love, might be checked by terror.

PR-C075 1653, pp. 53, 54

Latin LXXV. Aëri qui summam humiditatem tribuunt, eo quod difficilè suo termino continetur, facilè autem alieno, plurimum errant, hoc enim tenuium & liquidorum corporum, non humidorum proprium est, atque ita igni & caelo, quorum naturae rariores sunt magis convenit quàm aquae aut aëri: nam corpora rara, quia undique sponte fluunt, proprio termino consistere non possunt, propterea alieno egent: Sola corpora densa & firma suo ambitu & suâ superficie cohibentur, quod subtilia non possunt, quia prae tenuitate liquescunt & se effundunt; & quae rariores sunt, magis effluunt, ac minùs consistunt: Inde sequitur aërem esse corpus rarius, sed non humidius.

English 75. Those who attribute the greatest moistness to air because it is difficult to contain within a boundary of its own but easy to contain within another's are greatly mistaken. This is proper to thin and fluid bodies, not to moist ones, and therefore applies more to fire and heaven, whose natures are rarer, than to water or air. For rare bodies, because they flow of themselves in every direction, cannot remain within their own boundary and therefore need another's. Only dense and firm bodies are confined by their own outline and surface. Subtle bodies cannot do this, because through their thinness they flow and pour themselves out; the rarer they are, the more they flow out and the less they hold together. It follows that air is a rarer body, but not a moister one.⁵⁴

Original marginal note PR-M-C075-01 1653, p. 53

Latin AER.

English AIR.

PR-C076 1653, p. 54

Latin LXXVI. Aër nullam intensam ex se qualitatem habet, aliunde quandoque mutuatur. Eius natura media est inter superiora & inferiora corpora, ideò viciniorum qualitates & affectiones facilè induit; unde fit, ut regio eius inferior pro temporum varietate diversimodè temperata sentiatur; cuius inconstantia à

⁵³. The "magnetic force" here is the author's proposed celestial attraction and retention of moisture. It should not be silently identified with the specific forces measured in modern atmospheric or electromagnetic physics.

⁵⁴. The distinction is between fluidity and the elemental quality of moistness in the author's system. "Rare" means thin or lacking density in this discussion.

propinquiorum & crassiorum corporum, aquae scilicet & terrae, mutatione procuratur, quorum statum calor & frigus faciliè immutant.

English 76. Air has no intense quality of itself, but sometimes borrows one from elsewhere. Its nature is intermediate between higher and lower bodies, so it readily assumes the qualities and affections of its neighbours. Hence its lower region is felt to have different temperaments as the seasons vary. This inconstancy is brought about by changes in the nearer, thicker bodies, namely water and earth, whose condition heat and cold readily alter.

PR-C077 1653, p. 55

Latin LXXVII. Aër universus Caelum est, area Universi, Naturae cribrum, per quod virtutes & influentiae aliorum corporum transmittuntur: media natura sparsas omnes Universi naturas coniungens: fumus subtilissimus ab igne caelesti in lumen, quasi flammam immortalem, accensus: lucis & umbrae, diei noctisque subiectum; vacui impatiens; diaphanorum primum, qualitatum ferè omnium & affectionum facillimus susceptor, nullius tenacissimus custos, spirituali naturae vicinus, propterea in arcanis philosophorum tractandis spiritus nomine designatur.

English 77. Air in its entirety is heaven, the field of the universe, nature's sieve, through which the powers and influences of other bodies are transmitted. It is an intermediate nature joining all the scattered natures of the universe; the subtlest smoke, kindled by celestial fire into light like an immortal flame; the subject of light and shadow, day and night. It cannot tolerate a vacuum. Foremost among transparent things, it most readily receives almost every quality and affection, yet retains none with great tenacity. It is close to spiritual nature and is therefore designated by the name spirit when the philosophers' secrets are discussed.⁵⁵

PR-C078 1653, pp. 55, 56

Latin LXXVIII. Regio aëris inferior collo & superiori parti alembici similis est, per eam enim vapores scandentes ad cacumen delati à frigore condensantur, mox in aquam resoluti pondere suo relabuntur. Sic natura per sedulas distillationes aquam sublimando, cohobando eam rectificat, & exuberat. In huiusmodi Naturae operationibus terra est cucurbita, & vas recipiens. Vicinior itaque nobis haec aëris plaga, nubium regione, tanquam concamerato suo tecto terminata densior & impurior est caeteris sublimioribus.

English 78. The lower region of air resembles the neck and upper part of an alembic. Vapours rising through it and carried to the top are condensed by cold; soon, resolved into water, they fall back under their own weight. Thus nature rectifies and enriches water through diligent distillations, raising it and repeatedly returning it. In such operations of nature, earth is the cucurbit and receiving vessel. This tract of air nearer

⁵⁵ "Air" here extends to the author's heaven and mediating cosmic nature. Restricting it to the modern terrestrial atmosphere would narrow the claim. The canon itself supplies the reason for calling it "spirit" in philosophical discourse.

to us, bounded by the region of clouds as by its vaulted roof, is therefore denser and less pure than the other, higher regions.⁵⁶

PR-C079 1653, pp. 56, 57

Latin LXXIX. Media aëris regio ea non est, in qua coguntur nubes, fiunt coruscationes, & tonitrua, quae inferioris pars superior est, & terminus, sed quae supra nubes est, ad quam aquea natura pondere attolli prohibetur, ea media dicenda est, quam tamen sulfureae exhalationes vaporum gravitate liberatae scandunt, & pererrant, & illic motu sive proprio, sive etiam alieno incalcescentes ignescunt. Talia sunt ignita diversi generis meteora, quae media in regione conspiciuntur, unde calido & humido, non aqueo, sed pingui, quale est ignis pabulum, illam abundare, conicere licet. In illâ temperies & tranquillitas multa, quia tumultuosus non urgetur flatibus, & leviora tantum inferioris naturae excrementa in eam evehuntur.

English 79. The middle region of air is not the one in which clouds gather and flashes of lightning and thunder occur; that is the upper part and boundary of the lower region. Rather, the region above the clouds, to which watery nature is prevented by its weight from rising, should be called the middle one. Sulphurous exhalations, however, freed from the weight of vapours, ascend to it and wander through it; there they grow hot through their own motion or another's and catch fire. Such are the fiery meteors of various kinds seen in the middle region. Hence we may conjecture that it abounds in heat and moisture, not watery but fatty moisture of the kind that feeds fire. There is much temperateness and tranquillity in it, because it is not pressed by turbulent winds, and only the lighter excretions of lower nature are carried up into it.

PR-C080 1653, p. 57

Latin LXXX. Superior regio, Lunae vicina tota aërea est, non ignea, ut falsò in scholis dudum invaluit: Illic tranquillum purissimi aëris domicilium, & ut aethereae plagae situ, ita naturâ propinquum; nullâ enim inferioris Abyssi fuligine inquinatur. Temperies illic summa; puritas à caeli vicini puritate parum remota. Eo loci sphaeram ignis comminisci philosophum pudeat, qui violatis Naturae legibus, Universi fabricam iamdiu vastasset.

English 80. The upper region, near the moon, is wholly airy, not fiery, as has long been falsely accepted in the schools. There lies the tranquil dwelling of the purest air, close to the ethereal tract in nature as well as position, for no soot from the lower abyss pollutes it. Temperateness there is supreme, and its purity differs little from that of the neighbouring heaven. A philosopher should be ashamed to invent a sphere of fire in that place, for such a fire, violating nature's laws, would long ago have laid waste the fabric of the universe.⁵⁷

⁵⁶ The alembic and cucurbit are vessels used in the author's analogy between distillation and the movement of water in nature. Cohobando refers to returning the liquid for repeated distillation; the English renders the action within the analogy, without adding an apparatus or procedure.

⁵⁷ The author is arguing against the placement of an elemental sphere of fire above the air. His own three-region account remains a historical cosmology; rejecting one inherited scheme does not make the alternative a modern atmospheric model.

PR-C081 1653, pp. 57, 58

Latin LXXXI. Ignem tanquam quartum Naturae Elementum in supremâ aëris regione, velut in sphaerâ propriâ, principes antiquae philosophiae statuerunt, quod ita illis ordinis causâ & suspicione, magis quàm veritatis lumine visum est; Ignem enim Naturae alium à luce caelesti nemo sibi fingat; propterea sacer philosophus in suâ genesi ignis mentionem non facit, quia lucem, quae verus naturae ignis est, primo die creatam dixerat; neque ignem Naturae principium omisisset, cùm Terrae, Aquae, & Caeli volatilium meminerit.

English 81. The leading figures of ancient philosophy placed fire, as nature's fourth element, in the highest region of air as in a sphere of its own. This seemed right to them for the sake of order and through conjecture rather than through the light of truth. For no one should imagine a fire of nature other than celestial light. The sacred philosopher therefore makes no mention of fire in his Genesis, because he had said that light, which is nature's true fire, was created on the first day. Nor would he have omitted fire as a principle of nature when he mentioned earth, water and the birds of heaven.⁵⁸

Original marginal note PR-M-C081-01 1653, p. 57

Latin IGNIS.

English FIRE.

PR-C082 1653, p. 58

Latin LXXXII. Ignis ardentis regionem Lunari contiguam nemo sibi, nisi per somnium, fingat; tantae enim ignis intensissimi copiae sustinendae totus aër non sufficeret, quin universam Orbis molem dudum depraedatus fuisset; quicquid enim attingit praedo ille, statim depascitur, Mundi & Naturae exitio destinatus.

English 82. Let no one imagine a region of burning fire adjoining the lunar region, except in a dream. For all the air would not suffice to sustain so great an abundance of the most intense fire without its having long ago plundered the entire mass of the world. Whatever that robber touches, it immediately devours, destined for the destruction of the world and nature.

Original marginal note PR-M-C083-01 1653, p. 59

Latin * cap. 11. prior. teste.

English * Chapter 11 of the earlier Testament.

PR-C083 1653, pp. 58, 59

Latin LXXXIII. Talem Naturae vastorem pro Naturae elemento neque sublimis aër, neque ima tellus hospitio recipit; Verùm tyrannidem exercet ille plerumque in regno Naturae, siue in aëris sublimitate, siue in terrae profundo, siue etiam in eius superficie accendatur. Iure itaque illum inter gigantes & Mundi tyrannos excelsi ingenij * Lullius numerat. Contra Naturam etiam dicitur, quia quicquid Naturam destruit, Naturae aduersatur.

⁵⁸ The "sacred philosopher" is the author of Genesis as understood in this argument. The canon identifies nature's true fire with celestial light and uses the creation narrative in support of that distinction.

English 83. Neither the upper air nor the lowest earth receives such a ravager of Nature as a guest among Nature's elements. Yet it frequently exercises tyranny in Nature's kingdom, whether kindled in the height of the air, in the depths of the earth or even on its surface. Lull, a man of lofty intelligence,* therefore rightly numbers it among the giants and tyrants of the World. It is also called contrary to Nature, because whatever destroys Nature opposes her.⁵⁹

PR-C084 1653, p. 59

Latin LXXXIV. Ignis noster communis partim naturalis est, partim etiam artificialis: Illum à caelesti ad vitae commodum & necessitatem forsā mutuatus est homo, eius radios vniendo, ac vires multiplicando; vel etiam per attritionem, aut duorum corporum collisionem, Spiritu diuino ingenium ad id suggerente.

English 84. Our common fire is partly natural and partly artificial. Perhaps human beings borrowed it from heavenly fire for the convenience and necessities of life, by uniting its rays and multiplying its powers, or else through friction or the collision of two bodies, the divine Spirit suggesting the ingenuity needed for this.

Original marginal note PR-M-C085-01 1653, p. 59

Latin IGNIS NATVRAE EST IN SOLE.

English NATURE'S FIRE IS IN THE SUN.

PR-C085 1653, pp. 59, 60

Latin LXXXV. Summus rerum creator igneum benigni caloris spiritum in globo Solis posuit, vt lumen & calorem viuificum caeteris Vniuersi corporibus inspiret, vnde cor totius fabricae mundanae illum plures crediderunt, ab eo siquidem omnis generationis & vitae principium defluit: Qui aliud ignis Elementum in rerum natura quaerit, caecutit, quia Solem ignorat.

English 85. The supreme creator of things placed a fiery spirit of gentle heat in the globe of the Sun, so that it might breathe light and life-giving heat into the other bodies of the Universe. Many have therefore believed the Sun to be the heart of the whole fabric of the world, since the principle of all generation and life flows from it. Whoever seeks some other Element of fire in the nature of things is blind, because he does not know the Sun.⁶⁰

PR-C086 1653, p. 60

Latin LXXXVI. Ignis itaque Naturae scaturigo in Sole residet, cuius calor semper aequalis & temperatissimus in se est, licet nobis intensior aut remissior pro accessu & recessu, eiusque radorum directione aut obliquitate, vel etiam locorum situ & naturâ sentiatur. Illum tanquam animam Mundi Naturae motum generandique facultatem inspirantem plerique philosophorum admirati sunt.

⁵⁹. The fire under discussion is the destructive burning fire of the preceding canon. The original citation sign and abbreviated marginal reference to Lull are retained; they do not identify a particular printed edition.

⁶⁰. The Sun's position as the source of the elemental fire belongs to the author's cosmology. The translation preserves the argument without substituting a modern physical explanation.

English 86. The wellspring of Nature's fire therefore resides in the Sun. Its heat is always equal and most temperate in itself, although we feel it as stronger or weaker according to its approach and retreat, the directness or obliquity of its rays, or even the position and nature of places. Many philosophers have admired it as the soul of the World, breathing motion and the power of generation into Nature.

PR-C087 1653, pp. 60, 61

Latin LXXXVII. Sol non est vniuersi oculus; vt veterum non nullis placuit, sed creatoris Vniuersi est oculus, quo sensibiles suas creaturas sensibiliter intuetur; quo blandientes amoris sui radios in eas effundit; quo se conspicuum illis exhibet: Vix enim insensibilem authorem Natura sensibilis agnouisset: propterea corpus tam nobile gloriâ suâ indutum sibi nobisque fingere voluit, cuius radij diuinitati proximi sunt spiritus & vita.

English 87. The Sun is not the eye of the universe, as some of the ancients thought, but the eye of the Universe's creator. Through it he looks perceptibly upon his perceptible creatures, pours the caressing rays of his love into them, and presents himself visibly to them. For perceptible Nature would scarcely have recognised an imperceptible author. He therefore wished to fashion for himself and for us so noble a body, clothed in his glory, whose rays, nearest to divinity, are spirit and life.⁶¹

PR-C088 1653, p. 61

Latin LXXXVIII. Ab illo vniuersali Naturae principio calor omnis insitus tam in Elementa, quam mixta defluit, qui Ignis nomen meruit; vbicunque enim calor spontaneus, motus naturalis, aut vita hospitatur, ibi suum Ignem tanquam eorum principium, & primum Elementorum motorem occultauit Natura; à quo elementa etiam sensibilia, seu Mundi nostri prouinciae elementantur, & velut animantur, arctius tamen terrae vtero constrictus propter eius densitatem & frigiditatem antiperistasim excitantem inhaeret.

English 88. From that universal principle of Nature flows all the heat implanted both in the Elements and in compounds, which has earned the name Fire. For wherever spontaneous heat, natural motion or life dwells, Nature has hidden her Fire as their principle and the first mover of the Elements. From it even the perceptible elements, or provinces of our World, are constituted as elements and, as it were, given life. Yet this fire remains more closely confined in the womb of the earth because of its density and its coldness, which arouses antiperistasis.⁶²

PR-C089 1653, pp. 61, 62

Latin LXXXIX. Ignis ille Naturae mixtis insitus humidum radicale, tanquam sedem propriam elegit, huius autem domicilium praecipuum est in corde (licet per omnes corporis partes diffundatur) tanquam primo vitae organo & centro Microcosmi, vnde Princeps ille Naturae, velut ab arce sua imperans, omnes facultates, caeteraque

⁶¹. The repeated *sensibilis* and *sensibiliter* concern perception by the senses. The author's theological figure is retained without turning it into an account of optical measurement.

⁶². Antiperistasis is the historical principle by which a quality is strengthened when surrounded by its opposite; the surrounding cold is invoked here to explain concentrated heat. This is the author's natural-philosophical explanation, not a modern thermal law.

organa harmonicè mouet; mixti humoribus, spiritibus, toti denique massae Elementari motum, calorem & vitam inspirat: & quia Solis filius & vicarius est, omnia agit in quolibet Mundo minori, quae Sol in maiori.

English 89. That fire of Nature implanted in compounds has chosen radical moisture as its own seat. Its chief dwelling, however, is in the heart—although it is diffused through every part of the body—as the first organ of life and the centre of the Microcosm. From there, ruling as though from his citadel, that Prince of Nature moves all the faculties and other organs in harmony, breathing motion, heat and life into the compound’s humours and spirits and finally into the entire elemental mass. Because he is the Sun’s son and deputy, he performs in each lesser World everything that the Sun performs in the greater.⁶³

PR-C090 1653, p. 62

Latin XC. Quemadmodum Sol medius inter reliquos Planetas lumine suo illos irradiat, virtute implet, spiritu viuifico in vitae concentum conciliat: Ita spiritus Solaris in medio Naturae Elementaris illi lumen influit, ac in opere generationis Elementa congregat, vnit, ac viuificat.

English 90. Just as the Sun, standing midway among the other Planets, irradiates them with its light, fills them with power and brings them into life’s harmony through its life-giving spirit, so the Solar spirit in the midst of elemental Nature pours light into her and, in the work of generation, gathers, unites and quickens the Elements.⁶⁴

PR-C091 1653, p. 63

Latin XCI. Primum Agens in mundo est Ignis Naturae, qui in globo Solari sedem habens calorem viuificum per eius radios in vniuersum Naturae imperium diffundit, secum actus potentiam seminibus insinuans, principiumque motus & actionis in illis statuens, quo remoto cessat omnis motus, actionis & vitae facultas.

English 91. The first Agent in the world is Nature’s Fire. Having its seat in the Solar globe, it diffuses life-giving heat through the Sun’s rays into Nature’s entire dominion, conveying with itself the capacity for activity into seeds and establishing in them the principle of motion and action. When this is removed, every capacity for motion, action and life ceases.

PR-C092 1653, pp. 63, 64

Latin XCII. Calor Naturae & lumen Naturae reipsâ idem sunt, ab eodem enim fonte, Sole videlicet, iugiter ac vniformiter fluunt, sed officio distinguuntur; caloris quippe munus est ad interiora naturae penetrare, luminis verò exteriora patefacere: caloris est occultas rerum naturas mouere; luminis, accidentia sensibilia tantum oculis subiicere; vtrumque Solis radij operantur: Sol itaque est primum naturae organum, cuius accessu, & recessu omnes naturae operationes per lumen & calorem variè reguntur, intenduntur ac remittuntur.

⁶³. “Radical” moisture means a moisture understood as fundamental to the compound’s life and generation. The heart and microcosm belong to the author’s historical physiological and cosmic analogy.

⁶⁴. The Sun’s place “midway” belongs to the traditional ordering of the planets used by the work. It should not be silently recast as a modern arrangement of the solar system.

English 92. Nature's heat and Nature's light are in reality the same, for they flow continually and uniformly from the same source, namely the Sun; but they are distinguished by their office. The task of heat is to penetrate nature's inward parts, while light makes her outward parts manifest. Heat moves the hidden natures of things; light merely presents their perceptible accidents to the eyes. The Sun's rays perform both. The Sun is therefore nature's first instrument, by whose approach and retreat all nature's operations are variously governed, intensified and abated through light and heat.⁶⁵

PR-C093 1653, p. 64

Latin XCIII. Secundum Agens vniuersale est illud ipsum lumen, non tamen immediatè à fonte suo fluens, sed à corporibus densis ab ipso illuminatis, qualia sunt caelestia, imo & ipsa Terra reflexum; lumen enim Solare corpora illa percutiendo eorum dispositiones & facultates mouet, contactúque illorum alteratur, ac dissimiles eorum virtutes per reflectionem radiorum in vniuersam Coeli Aërisque nostri aream diffundit, radijs enim illis tanquam vehiculis variae tam multiplicium corporum affectiones in vniuersae Naturae salutem & concordiam vndeque sparguntur, quae à nobis influentiae dictae sunt. Haec vera sunt primáque Naturae Elementa, quae spiritualia cùm sint, se nobis sub Aërea Naturâ, vel etiam aquea communicant, quorum beneficio omnis foetus ac vitae munus tanquam Elementorum radicibus debetur.

English 93. The second universal Agent is that same light, yet not flowing immediately from its source, but reflected from dense bodies illuminated by it, such as the heavenly bodies and indeed the Earth itself. For Solar light, striking those bodies, moves their dispositions and faculties and is altered by contact with them. Through the reflection of its rays it diffuses their differing powers throughout the whole expanse of Heaven and our Air. Carried in those rays as in vehicles, the varied conditions of so many bodies are scattered everywhere for the preservation and harmony of universal Nature; we have called these influences. These are Nature's true and first Elements. Since they are spiritual, they communicate themselves to us under an airy or even a watery nature. To their beneficence, as to the roots of the Elements, every offspring and gift of life is owed.⁶⁶

Original marginal note PR-M-C094-01 1653, p. 65

Latin AMOR NATVRAE GENIVS.

English LOVE, NATURE'S GENIUS.

PR-C094 1653, p. 65

Latin XCIV. Amor Deorum antiquissimus à Platone dictus, à diuino Spiritu nascenti Naturae inspiratus fuit, eiúsque ingenio, tanquam Genius praepositus. In primâ

⁶⁵. "Accidents" means perceptible qualities or accompaniments rather than mishaps. The identity of light and heat is the author's philosophical proposition; no modern equivalence has been supplied.

⁶⁶. *Influentiae* denotes the communicated powers described by the passage, including celestial effects. The word is not restricted here to a measurable modern physical influence.

Vniuersi diuisione inter fratres primaeuos familiae erciscundae iudicium tulit; deinceps in rerum generatione Praefecturam exercuit.

English 94. Love, called by Plato the oldest of the Gods, was breathed by the divine Spirit into newborn Nature and set over her character as her Genius. In the first division of the Universe he delivered the judgement for partitioning the inheritance among the first-born brothers; afterwards he exercised command over the generation of things.⁶⁷

PR-C095 1653, pp. 65, 66

Latin XCV. Primum Amoris in rebus Naturae vinculum posuit Naturae Author inter materiam primam & formam vniuersalem, coelum & terram, lucem & tenebras, Porum & Peniam, copiam nempe & inopiam; pulchrum ac deforme. Secundus amoris gradus ex prima illa copulâ, quasi parentum amplexu, in Elementa fluxit, quae fraterno inter se animo deuincta vniuersum Naturae ius optimâ ratione diuiserunt. Tertius & postremus gradus in mixtis absoluitur, quae insitis & à Naturâ ingentis amoris igniculis in sui similium propagationem & multiplicationem feruntur. Triplicem hunc amoris nexum, tanquam nodum magicum, in rebus creatis diuinus Amor constituit, vt se, quasi per traduces, in vniuersas & singulas opificij sui partes extenderet: Amor siquidem basis est Vniuersi, Naturae cubus, & firmissimum superiorum & inferiorum vinculum.

English 95. Nature's Author established the first bond of Love in natural things between first matter and universal form, heaven and earth, light and darkness, Poros and Penia—that is, abundance and want—and the beautiful and the deformed. The second degree of love flowed from that first coupling, as though from the embrace of parents, into the Elements. Bound to one another in a brotherly spirit, they divided Nature's entire domain in the best order. The third and last degree is completed in compounds, which are carried towards the propagation and multiplication of their like by little fires of love implanted and engendered within them by Nature. Divine Love established this threefold bond of love in created things as a magical knot, so that he might extend himself, as though through propagating shoots, into every part of his workmanship, together and individually. For Love is the basis of the Universe, the cube of Nature, and the firmest bond between things above and below.⁶⁸

Original marginal note PR-M-C096-01 1653, p. 66

Latin CONTRARIETAS ABEST AB ELEMENTIS.

English CONTRARIETY IS ABSENT FROM THE ELEMENTS.

PR-C096 1653, p. 66

Latin XCVI. Latebras quaerant qui concordēs Naturae motus discordiae mancipant; tota enim in agendo pacifica & beneuola Natura operatur, imo in generando est

⁶⁷. Genius is the presiding or attendant power personified by the author. Familiae erciscundae evokes a legal division of a family inheritance; the legal language is used as a cosmic metaphor.

⁶⁸. The Latin itself explains Poros and Penia as abundance and want. Cubus is literally "cube"; the striking expression is retained without supplying an unprinted geometrical diagram or a universal symbolic key.

pruriens: Ipsa rerum Elementa, dum coeunt, tota in libidinem soluuntur, vt mutuis amplexibus coalescant, & ex pluribus vnum fiant.

English 96. Let those who enslave Nature's harmonious movements to discord seek cover. For in acting, Nature works wholly in peace and goodwill; indeed, in generating she is aroused with desire. The very Elements of things, when they come together, melt wholly into lust, so that they may grow together through mutual embraces and become one from many.⁶⁹

Original marginal note PR-M-C097-01 1653, p. 67

Latin * cap. 9. lib. 1. de Nat.

English * Chapter 9, book 1, On Nature.

PR-C097 1653, pp. 66, 67

Latin XCVII. Resurgat Academia, vt nobis insinuet, quomodo prima materia primum contrariorum subiectum esse possit, & qui inter aduersariorum lites & pugnas quiescat amor, seu vehemens ille appetitus, quem in corde eiusdem materiae situm agnouit Academiae * Princeps, vt non minus illa formam, quam foemina virum concupiscat? Annon hostes illi rerum semina & mixtorum corpora constituentes aeternum pugnando amorem & concordiam expugnabunt?

English 97. Let the Academy rise again to explain to us how first matter can be the primary subject of contraries, and how love can rest amid the quarrels and battles of adversaries—that love, or vehement appetite, which the Academy's chief* acknowledged to be situated in the heart of that same matter, so that she desires form no less than a woman desires a man. Will not those enemies, constituting the seeds of things and the bodies of compounds, overthrow love and harmony by fighting forever?⁷⁰

PR-C098 1653, pp. 67, 68

Latin XCVIII. Qui cupidinem inter materiam & formam; odium verò & repugnantiam in ipsâ materiâ & elementis constituunt, in hâc contrariorum positione sibi ipsis summè contrarij sunt; quippè in omnibus generatis, homine solo excepto, forma è potentiâ seu secretâ materiae vi, ex eiusdem Academiae dogmate, educitur; at quomodo id nisi per amorem? Si materia contrariorum dissidia radicitus patiatur, annon etiam forma, quae ex altâ ipsius radice emergit, eandem vim sentiet? imo in ipsis cunabulis opprimetur? Quis itaque sanus in ipso puncto mixturae Elementorum, & informationis materiae, Amoris & Naturae matrimonio gladiatores istos praeficiet? Quis prolem vniformem, annon potius monstrosam ex huiusmodi heterogeneo reluctantium parentum semine expectet?

English 98. Those who establish desire between matter and form, but hatred and opposition within matter itself and the elements, contradict themselves most completely in this positing of contraries. For in all generated beings, the human being alone excepted, form is drawn from the potentiality or hidden power of matter, according to the doctrine of

⁶⁹. The reproductive and erotic force of pruriens and libido is explicit in the Latin. The author uses it to argue against an account of generation founded upon elemental hostility.

⁷⁰. The Academy and its chief are the author's polemical designations. The marginal citation is reproduced in its abbreviated form; no particular edition is inferred from it.

that same Academy. Yet how can this happen except through love? If matter suffers the divisions of contraries at its root, will not form too, emerging from its deep root, feel the same force—indeed, be crushed in its very cradle? What sane person, then, at the very point when the Elements are mingled and matter is formed, would set those gladiators over the marriage of Love and Nature? Who would expect uniform offspring, rather than monstrous offspring, from such heterogeneous seed of resisting parents?

PR-C099 1653, pp. 68, 69

Latin XCIX. Desinat philosophus alterationis Elementorum, corruptionis & caducitatis mixtorum causam in repugnantia Elementorum quaerere, sed culpam in materiae primae penuriam & imbecillitatem rejiciat; neque enim in antiquo Chao Frigida pugnabant calidis, humentia siccis, vt vulgò creditur, cum duae tantum quatuor illarum qualitatuum minimè aduersae, frigiditas nempe & humiditas foeminae & materiae conuenientes, illi inessent; duae verò reliquae, caliditas & siccitas, quae masculae sunt & formales, ex parte lucis informantis processerint: Nec nisi post aquarum recessum & lucis aduentum terra Arida dicta est, quae prius humida & aquis mancipata erat.

English 99. Let the philosopher cease seeking the cause of the alteration of the Elements and the corruption and frailty of compounds in the opposition of the Elements. Let him instead lay the blame on the poverty and weakness of first matter. For in ancient Chaos it was not the case that

Cold things fought with hot, moist things with dry, as is commonly believed. Only two of those four qualities were within it, and they were by no means opposed: coldness and moisture, fitting the female and matter. The other two, heat and dryness, which are masculine and formal, proceeded from the forming light. Only after the retreat of the waters and the arrival of light was the earth called Dry Land; before that it had been moist and subject to the waters.⁷¹

PR-C100 1653, p. 69

Latin C. Quatuor itaque illas qualitates, quas repugnantes vulgus credit, in materia primâ, nisi post eius informationem non extitisse recta ratio docet: Nec contrarietatem patiebatur illa in solitudine suâ; alij fuerunt eius morbi, nempe opacitas, confusio, deformitas, frigiditas, humiditas indigesta, & impotentia; quae omnia morborum & languentis corporis indicia fuere: Corruptionis itaque labe à creatione suâ infecta fuit, quam illa ad natos & nepotes traduxit in hanc infirmâ & infirmâ Elementorum plagâ hospitantes: Propterea de Abyssu illâ tenebrosâ non enunciatur in Genesi, quod esset valdè bona, sed luci, caeterisque postea creatis, elogium illud meritò reseruatum fuit.

English 100. Right reason therefore teaches that those four qualities, which the common view regards as opposed, did not exist in first matter until after it received form. Nor did it suffer contrariety in its solitude. Its diseases were different: opacity, confusion, deformity,

⁷¹ The quoted verse is placed under the author's denial: he rejects it as an account of the original Chaos. The qualities are presented in the source's gendered philosophical scheme, not as a modern classification.

coldness, undigested moisture and powerlessness—all signs of a diseased and languishing body. It was therefore infected from its creation with a taint of corruption, which it transmitted to its children and grandchildren dwelling in this lowest and weakest region of the Elements. For this reason Genesis does not declare that dark Abyss to be very good; that praise was rightly reserved for light and the other things created afterwards.⁷²

PR-C101 1653, p. 70

Latin CI. Rixam & litigium à formâ in materiam effluxisse post vnionem quatuor illarum qualitatum in materia informata quis sanus suspicabitur? cùm sit ex essentia & intentione formae materiam perficere, eamque in harmoniam, concentum & temperamentum pro viribus perfectum componere.

English 101. What sane person would suspect that quarrelling and strife flowed from form into matter after those four qualities were united in formed matter? For it belongs to the essence and purpose of form to perfect matter and compose it into harmony, concord and a temperament as perfect as its powers allow.

PR-C102 1653, pp. 70, 71

Latin CII. Prima per inimicas qualitates contraria fuerunt lux & tenebrae; luci binae qualitates, caliditas & siccitas, tenebris totidem, frigiditas & humiditas, penitus inter se oppositae, quia intensae, inerant: At postquam duo antiquissima illa Naturae principia coierunt, tenebrosûmque, materiale ac foemineum à lucido, formali & masculo principio informatum ac lumine impraegnatum fuit, tota Vniuersi materia, omnesque eius plagae gratiam luminis, suis tamen gradibus & differentiis distinctam, susceperunt, ignea enim illa Spiritus luminosi tinctura nihil impenetratum reliquit: qualitates etiam quatuor prius intensae, in materiâ informatâ per mixtionem remissae, & sic optimè coalescentes amicitiam contraxerunt, ac in temperamentum consenserunt: concordēs itaque iam factae in homogeneam Elementorum familiam transierunt, vt deinceps in mixtorum generatione nihil inimicum aut reluctans subesset, quo tranquillus Naturae motus perturbaretur.

English 102. The first things opposed through hostile qualities were light and darkness. Two qualities were present in light, heat and dryness, and as many in darkness, coldness and moisture; they were wholly opposed to one another because they were intense. But after those two most ancient principles of Nature came together, and the dark, material and feminine principle was formed and impregnated with light by the bright, formal and masculine principle, all the matter of the Universe and all its regions received the grace of light, distinguished, however, by their own degrees and differences. For that fiery tincture of the luminous Spirit left nothing unpenetrated. The four qualities too, previously intense but abated through mixture in formed matter, grew together most aptly, entered into friendship and agreed upon a temperament. Thus, now harmonious, they passed into the homogeneous family of the Elements, so that thereafter nothing hostile

⁷². The attribution of an original taint to matter and the reading of Genesis are the author's theological and natural-philosophical argument. The sequence of his claims is retained.

or resistant might remain in the generation of compounds to disturb Nature's tranquil motion.⁷³

Original marginal note PR-M-C103-01 1653, p. 71

Latin CONTRARIETAS AB INTENSIONE QVALITATVM PROCEDIT.

English CONTRARIETY PROCEEDS FROM THE INTENSITY OF QUALITIES.

PR-C103 1653, pp. 71, 72

Latin CIII. Nec in Naturâ contrariae sunt inter se quatuor illae principes qualitates, sed tantum dissimiles ac diuersae, neque mutuò se expugnant, sed vniuntur & stricto foedere coeunt: sic in remisso gradu calor & frigus amicè conueniunt & commiscuntur in subiecto, vt mediam & temperatam qualitatem, teporem nempe, producant: Quod si in gradu intenso non sine luctâ & pugnâ concurrunt, hoc ab intensionis excessu & tyrannide procedit, quae duas qualitates pariter intensas & aduersas eiusdem dominij consortes & participes ferre sine tumultu non potest, qualitates autem intensas tanquam spurias & extraneas respuit Natura.

English 103. Nor are those four chief qualities opposed to one another in Nature: they are merely dissimilar and different. They do not overthrow one another, but unite and come together in a close alliance. Thus, at an abated degree, heat and cold meet amicably and mingle in a subject to produce an intermediate, temperate quality, namely warmth. If at an intense degree they encounter one another with struggle and combat, this proceeds from the excess and tyranny of intensity, which cannot endure two equally intense and opposing qualities as partners and sharers in the same dominion without turmoil. Nature, however, rejects intense qualities as spurious and foreign.

Original marginal note PR-M-C104-01 1653, p. 72

Latin ELEMENTORVM QVALITATES SVNT REMISSAE.

English THE QUALITIES OF THE ELEMENTS ARE ABATED.

PR-C104 1653, p. 72

Latin CIV. Nemo itaque sibi fingat Naturam ignem intensum in Elementorum suorum familiam admittere, talis enim destruens esset, non generans, non secundum, sed contra Naturam, quae violenta refugit, & temperatis gaudet, à quibus abest omnis pugna, omnis contrarietas: Non caloris vrentis, aut frigoris vastantis rabiem, non humidi aut sicci intemperiem Naturae imperium patitur, in temperie benignè quiescit. Intensas igitur qualitates in rerum Elementis nemo quaerat, remissas secundum plus aut minus inueniet.

English 104. Let no one imagine, then, that Nature admits intense fire into the family of her Elements. Such fire would destroy rather than generate and would act against Nature, who shuns violence and delights in temperate things, from which all battle and contrariety are absent. Nature's dominion does not endure the fury of scorching heat or devastating cold, nor the excess of wet or dry; it rests gently in temperateness. Therefore let no one seek intense qualities in the Elements of things: he will find them abated in greater or lesser degree.

⁷³. Intense and abated qualities are the author's degrees of elemental power, not specified modern temperatures or concentrations. The gendered principles remain explicit.

PR-C105 1653, pp. 72, 73

Latin CV. Calidum itaque & frigidum, humidum & siccum contraria simpliciter qui dixerit, errat; Terra enim, quae maximè sicca ab Aristotele statuitur, Aëri, qui maximè humidus ab eodem habetur, repugnaret: Aqua pariter intensè frigida Igni intensè calido, ex eiusdem sententia, aduersaretur; haec repugnantia quodlibet Elementorum vulgarium, seu quamlibet Mundi regionem intra sphaerae suae fines cohiberet, & à contrarij hospitio & ditone arceret propter antipathiam; aliter tamen rem se habere ratio & experientia nos docent; nam scrobes & concaua subterranea, imò ipsa Terrae viscera & pori aëre replentur, & intrinsecus Terrae humor quo omnia vegetabilia, tanquam proprio matris suae lacte nutriuntur, nihil aliud est quàm aër calidus & humidus Terrae strictissimè adhaerens, ei vim altricem & nutritium propinans: terrae pori sunt ipsius vbera, & humor aëreus ipsorum lac, quo ipsa rerum parens & alumna foetus suos alit, eisque dat incrementum.

English 105. Whoever calls hot and cold, wet and dry, simply contraries is therefore mistaken. For Earth, which Aristotle establishes as supremely dry, would oppose Air, which he regards as supremely moist. Water, likewise intensely cold, would oppose intensely hot Fire in his account. This opposition would confine each of the common Elements, or each region of the World, within the boundaries of its own sphere and exclude it from the dwelling and dominion of its contrary through antipathy. Reason and experience, however, teach us that things are otherwise. Pits and underground hollows, indeed the Earth's very entrails and pores, are filled with air. The Earth's inward moisture, by which all plants are nourished as by their mother's own milk, is nothing other than warm and moist air clinging most closely to the Earth and imparting a fostering and nourishing power to her. The earth's pores are her breasts and the airy moisture their milk, with which she, the parent and nurse of things, feeds her offspring and gives them growth.⁷⁴

PR-C106 1653, p. 74

Latin CVI. Qui quatuor Elementa in totidem humoribus constituunt, naturam humidam quatuor qualitatuum Elementarium susceptibilem, imò subiectum esse agnoscunt; quomodo ergo contrarias illas quas in eodem subiecto collocant, profitentur? quamvis enim quatuor illi humores suis differentijs distinguuntur, vnicam tamen basim omnibus communem, eandémque radicem habent, humorem videlicet, neque enim flaua bilis ignem referens minùs humor est quàm flegma, quod Aquae adscribunt: idémque de atra bile & sanguine sit iudicium, licèt comparatiuè non absolutè quatuor Elementa in humido confundant.

English 106. Those who establish the four Elements in as many humours acknowledge that moist nature can receive the four elemental qualities—indeed, is their subject. How, then, do they profess those qualities to be contraries when they place them in the same subject? Although the four humours are distinguished by their differences, they have a single basis common to all and the same root, namely moisture. Yellow bile, which represents fire, is no less a humour than phlegm, which they assign to Water; and let the same judgement apply to black bile and

⁷⁴ The author explicitly disputes an Aristotelian elemental scheme. His account of warm, moist air nourishing the earth is retained as his explanation, without conversion into modern botany or soil science.

blood, even though they mingle the four Elements in moisture comparatively rather than absolutely.⁷⁵

Original marginal note PR-M-C107-01 1653, p. 75

Latin Aeneid. 6.

English Aeneid 6.

PR-C107 1653, pp. 74, 75

Latin CVII. Si vlla esset in Naturae qualitatibus & Elementis repugnantia, inter calidum & frigidum maxima intercederet, deinde inter Aquam & Ignem; at ignis & aquae naturas sibi non aduersari multiplex, quae sub aquis fit generatio, satis conuincit; vbicunque enim sunt generatio & vita, ibi ignem esse necesse est, tanquam causam proximam, intrinsecam, efficientem, mouentem & alterantem materiam ad generationem,
Inde hominum pecudumque genus, vitaeque volantum,
Et quae marmoreo fert monstra sub aequore Pontus;
Igneus est illis vigor & caelestis origo
Seminibus.

English 107. If there were any opposition among Nature's qualities and Elements, the greatest would occur between hot and cold, and next between Water and Fire. But the manifold generation that takes place beneath the waters sufficiently proves that the natures of fire and water do not oppose one another. For wherever there are generation and life, fire must be present as their proximate, inward, efficient cause, moving and altering matter towards generation:
From it come the race of men and herds, and the life of winged creatures,
and the monsters the Sea bears beneath its marble surface;
fiery is their vigour, and heavenly the origin
of those seeds.⁷⁶

PR-C108 1653, p. 75

Latin CVIII. Quatuor illas primaeuas qualitates rebus ipsis, & rerum Elementis innatas & essentiales, ad Naturae nutum permiscibiles, & ideo non aduersas qui posuerit, non hallucinabitur; sunt enim velut quatuor organa, seu instrumenta, quibus Natura in alterationibus & generationibus suis peragendis vtitur.

English 108. Whoever holds those four primordial qualities to be innate and essential to things themselves and to their Elements, minglable at Nature's will and therefore not opposed, will not be mistaken. For they are like four organs or instruments which Nature uses in carrying out her alterations and generations.

⁷⁵. The four humours named are yellow bile, phlegm, black bile and blood. Their elemental relations belong to the historical physiology being examined, not to modern clinical categories.

⁷⁶. The margin cites Aeneid 6. The verse is translated as excerpted here, within the author's argument that generation under water requires an inward fire.

PR-C109 1653, p. 76

Latin CIX. Natura figulinam artem exercet, tota enim in materia suâ circulariter fingendâ occupatur: quatuor illae qualitates sunt quasi rotulae, quarum ope illa circulari, & lento motu opera sua gradatim, & sapienter informat.

English 109. Nature practises the potter's art, for her whole occupation is to shape her matter in a circle. Those four qualities are like little wheels, by whose aid she gradually and wisely gives form to her works through a slow, circular motion.

PR-C110 1653, p. 76

Latin CX. Ex illis quatuor rotis duae, humidi scilicet & sicci, materiae magis conueniunt, quia inter hos duos terminos Natura materiam versat, & vices suas peragit: binae illae qualitates materiae proximiores sunt, quia passioni, & mutationi magis subiacent; caeterae autem duae, calidi & frigidi scilicet, magis sunt actiuae, quia per vices suas priores illas alterant, & immutant; patiuntur illae, istae magis agunt; & sunt velut actiua Naturae instrumenta passibilem materiam tractantis.

English 110. Of those four wheels, two—moisture and dryness—belong more closely to matter, because Nature turns matter between these two limits and accomplishes her successive changes. These two qualities are closer to matter because they are more subject to being acted upon and changed. The other two, heat and cold, are more active, because in their turns they alter and transform the former pair. The former undergo action; the latter act more, and are like the active instruments with which Nature handles matter capable of being acted upon.

PR-C111 1653, p. 77

Latin CXI. Explodamus igitur illam contrariorum doctrinam, tanquam concordi naturae contrariam, eamque à corrupto philosophiae albo, cum bonâ Academiae veniâ, stilo ferreo expungere; & in ipsius locum symbolum Concordiae ascribere nobis liceat, quam natura consortem, & sibi coaeuam agnoscit, cuius ope actiuorum cum passiuus blanda copulatio in omni generatione procuratur.

English 111. Let us therefore reject that doctrine of contraries as contrary to Nature's concord. With the Academy's kind permission, may we erase it with an iron stylus from philosophy's corrupted register and inscribe in its place the emblem of Concord. Nature acknowledges Concord as her companion and contemporary; through her aid, the gentle union of active with passive things is brought about in every generation.

Original marginal note PR-M-C112-01 1653, p. 77

Latin QVINTVM ELEMENTVM.

English THE FIFTH ELEMENT.

PR-C112 1653, pp. 77, 78

Latin CXII. Qui quatuor rerum Elementa sibi mutuò aduersantia ex receptâ sententiâ, statuunt, quantum admittant necesse est, tanquam nodum & concordiae vinculum, caduceatorem & pacis conciliatorem, secus perfectae mixtionis, nec vllius temperamenti in opere generationis susceptibilia forent, sed errabunda sine clauo &

rectore per vastum Naturae pelagus neque portum neque partum inuentura vagarentur; & ita proletarium Naturae genium fine suo fraudarent.

English 112. Those who, following the received opinion, maintain that the four elements of things oppose one another must admit a fifth as a knot and bond of concord, a herald and maker of peace. Otherwise, the elements could admit neither perfect mixture nor any tempering in the work of generation. Instead, they would wander aimlessly, without rudder or pilot, across Nature's vast sea, finding neither harbour nor birth, and would thus deprive Nature's procreative genius of its end.⁷⁷

PR-C113 1653, p. 78

Latin CXIII. Quatuor enim illa cū propter repugnantes qualitates aeterna inter se odia exercere credantur, in mixtorum generatione adunari, nec placari possent, quin potiùs mutuo conflictu irruentia Naturae abortum, magis quàm partum procurarent, nisi aduersa ipsorum studia cuiusdam naturae quintae caelestis & temperantis beneficio in pacem & amorem flecterentur, quae calidi & frigidi, sicci & humidi expers temperamentum inducat.

English 113. For if those four are believed to wage an everlasting mutual hatred because of their conflicting qualities, they could neither be united nor reconciled in the generation of mixed bodies. Rather, rushing into mutual conflict, they would bring Nature a miscarriage instead of a birth, unless their opposed endeavours were turned towards peace and love through the benefit of a certain fifth nature, heavenly and tempering, which, itself free of heat and cold, dryness and moisture, would introduce a tempered balance.

PR-C114 1653, pp. 78, 79

Latin CXIV. Quintum illud quod vocant Elementum, est spiritus aethereus, incorruptibilis, à lumine, motu & virtute caelestium corporum in haec inferiora defluens, Elementa ad mixtionem & vitam praeparans; indiuidua Naturae, quantum patitur ipsorum constantia, à ruina prohibens, vnde sal Naturae, nexus Elementorum, & Spiritus Vniuersi ab occultae philosophiae mystis nuncupari meruit.

English 114. What they call the fifth element is an incorruptible ethereal spirit flowing down into these lower things from the light, motion, and power of the heavenly bodies. It prepares the elements for mixture and life, and keeps Nature's individual beings from destruction as far as their own stability allows. Hence the initiates of hidden philosophy have deservedly named it the salt of Nature, the bond of the elements, and the spirit of the universe.⁷⁸

⁷⁷. The Latin pairs portum, "harbour," with partum, "birth" or "offspring": a verbal link between navigation and generation. The fifth element here mediates the supposedly opposed four; the argument does not establish a modern chemical element.

⁷⁸. "Salt of Nature," "bond of the elements," and "spirit of the universe" are the author's names for this cosmological agency. They are not identifications of a single modern chemical substance.

Original marginal note PR-M-C115-01 1653, p. 79

Latin PRIMA CONTRARIETAS INTER LVCEM ET TENEBRAS FVIT.

English THE FIRST CONTRARIETY WAS BETWEEN LIGHT AND DARKNESS.

PR-C115 1653, p. 79

Latin CXV. Si quae inter rerum principia contrarietas fuit, ea certè inter lucem & tenebras extitit, propter qualitates hinc inde oppositas; verùm qualitates illae vtriusque principij coitu temperamentum receperunt, & ab extremis mediae & temperatae prodierunt, talésque à primis in secunda principia nempe Elementa transierunt.

English 115. If there was any contrariety among the principles of things, it certainly existed between light and darkness, because their respective qualities were opposed. Yet those qualities received a tempered balance through the union of the two principles; from extremes they emerged intermediate and tempered, and in that condition passed from the first principles into the second principles, namely the elements.

PR-C116 1653, pp. 79, 80

Latin CXVI. Extrema tantùm inter se contraria sunt propter qualitatum oppositarum intensionem; quae autem ab extremorum mixtione orta sunt, nequaquam inter se aduersantur, quia media sunt: propterea elementa Naturae minimè contraria habenda, quia sunt media, & à duorum extremorum, lucis nempe & tenebrarum vnione & temperamento effluxa.

English 116. Only extremes are contrary to one another, because of the intensity of their opposed qualities. Things arising from the mixture of extremes do not oppose one another at all, because they are intermediate. Therefore, Nature's elements should by no means be regarded as contraries: they are intermediate and have flowed from the union and tempering of the two extremes, light and darkness.

Original marginal note PR-M-C117-01 1653, p. 80

Latin * Psalme. 18.

English * Psalm 18.

PR-C117 1653, pp. 80, 81

Latin CXVII. Ex contrariorum, lucis & tenebrarum scilicet mixtione, non contraria, sed temperata produci Regis prophetae carmen satis annuit, de aeterno lumine in haec verba erumpens: * Inclinauit coelos & descendit; & caligo erat sub pedibus eius &c. Posuit tenebras latibulum suum, in circuitu eius tabernaculum eius, &c. Ipse lucis increatae fons, vt gloriae suae infinitae splendorem hominum oculis exhiberet, illum nebula & tenebrosa caligine, quasi indumento, velauit, & luci tenebras admouit, vt ex vtroque extremo temperatam lucem produceret, ac immensi luminis supra vires humanas coruscationem temperaret. Iridem etiam à Deo datam in signum & tesseram foederis cum hominibus initi, ac gratiae diuinae, ex tenebrarum & lucis mixtione productam affirmant philosophi; vt scilicet ipsum temperatae vindictae diuinae symbolum à contrarijs resultans ex varijs maximè cohaerentibus & amicis coloribus temperatum esset.

English 117. That the mixture of contraries—light and darkness—produces tempered things rather than contraries is sufficiently indicated by the song of the prophet king, breaking forth in these words about

eternal light: * “He bowed the heavens and came down, and darkness was beneath his feet,” and so forth. “He made darkness his hiding place; his tabernacle was round about him,” and so forth. The very fountain of uncreated light, in order to show human eyes the splendour of his infinite glory, veiled it in cloud and dark mist as in a garment, and brought darkness beside light, so that from both extremes he might produce a tempered light and moderate the flashing of immeasurable light beyond human powers. Philosophers also affirm that the rainbow, given by God as a sign and token of the covenant made with human beings and of divine grace, is produced from a mixture of darkness and light. Thus this very symbol of tempered divine vengeance, resulting from contraries, was to be blended from varied colours in the greatest harmony and friendship.⁷⁹

Original marginal note PR-M-C118-01 1653, p. 81

Latin MVNDI PARTES NEQVE ELEMENTA SVNT NEQVE INTER SE CONVERTVNTVR.

English THE PARTS OF THE WORLD ARE NEITHER ELEMENTS NOR CHANGED INTO ONE ANOTHER.

PR-C118 1653, p. 81

Latin CXVIII. Qui Terram, aquam, aërem, ignem sphaeris suis distincta Mundi Elementa esse, eaque mutua inter se reciprocatione conuerti tradiderunt, malè Naturae arcana perscrutati sunt, partes siquidem Mundi integrantes, aut elementorum officinas dicere tutius erit: neque enim Mundi Elementa per proprias regiones separata sensibus se exhibent, sed in matricibus suis occulta latent, donec in mixtorum generatione coëant, & corpus constituent. Conuerti autem inter se partes illae Mundi non possunt, quia nimium differunt; nec communis vna qualitas quâ illae naturae inter se deuinciuntur, tantam mutationem operari potest, vt ex heterogeneis substantijs, homogeneae, imò eadem penitus fiant.

English 118. Those who have taught that earth, water, air, and fire are the world’s elements, distinct in their respective spheres, and that they change into one another by mutual interchange, have investigated Nature’s secrets badly. It will be safer to call them integral parts of the world, or workshops of the elements. For the world’s elements do not display themselves to the senses separated into their own regions; they lie concealed in their matrices until they come together in the generation of mixed bodies and constitute a body. Those parts of the world cannot change into one another, because they differ too greatly. Nor can the single common quality by which those natures are bound together accomplish so great a change that heterogeneous substances become homogeneous—indeed, become entirely the same.

⁷⁹. The marginal psalm reference is retained as printed. The biblical wording is freshly translated from the author’s Latin quotation rather than substituted from a later English Bible. The account of the rainbow serves his argument about contraries, tempering, and divine grace; it is a historical natural-philosophical claim.

PR-C119 1653, p. 82

Latin CXIX. Si quatuor illa quae creduntur elementa, proprias naturas & domicilia per vices, quasi per nundinationes commutent, tota huius Mundi moles casui motuique fortuito mancipata perpetua fluctuatione versabitur, quae tamen certa constantique lege & sede, partibusque distinctis à Deo firmata est; Terra enim mox aqua fiet; ex aqua aër; ex aëre ignis; & è conuerso; hoc pacto centrum in circumferentiam, & circumferentia in centrum migrabit; extremae & mediae Mundi partes locis suis vltrò se submouebunt, ita vt post longam saeculorum seriem ordo Naturae penitus inuertatur, dum summa imis & ima summis perpetua confusione permiscentur. Qui sic ordinatam Mundi fabricam sibi fingit, opus tam egregium non Mundum, sed chaos & abyssum dici iubet, quod ordinis amica abhorret Natura.

English 119. If those four things believed to be elements exchanged their own natures and dwellings in turn, as though by trading at fairs, the entire mass of this world would be enslaved to chance and random motion and would move in perpetual fluctuation. Yet God has established it with a certain and constant law and station, and with distinct parts. For earth would soon become water; from water would come air, from air fire, and conversely. In this way the centre would migrate to the circumference and the circumference to the centre; the outermost and middle parts of the world would of their own accord withdraw from their stations. After a long succession of ages, Nature's order would be wholly reversed, the highest mingling with the lowest and the lowest with the highest in perpetual confusion. Whoever imagines the world's fabric ordered in this way bids us call so excellent a work chaos and abyss rather than a world—something Nature, the friend of order, abhors.

Original marginal note PR-M-C120-01 1653, p. 83

Latin TERRA ET IGNIS NON CONVERTVNTVR.

English EARTH AND FIRE ARE NOT CHANGED INTO ONE ANOTHER.

PR-C120 1653, pp. 83, 84

Latin CXX. Extrema illa Mundi inferioris corpora terram & ignem (positâ & non concessâ ignis sphaerâ) qui vices inter se obire tradunt, sibi veritatieque illudunt, nimium enim dissitae repugnantesque eorum naturae ab huiusmodi vicissitudine dissentiunt; summa quippe terrae frigiditas, crassities & grauitas, summae Ignis caliditati, subtilitati, & leuitati ita aduersantur, vt mutuam inter se conuersionem non patiantur. Praeterea Terra, quae fixa est, igni non cedit, eiusque vires despicit, si chemicorum placitis & vulgari experientiae fides habeatur, nec aliud ex eâ euolat, praeterquam humor pinguis aut aqueus, vterque terrae extraneus. Si quid autem in ignem Elementarem conuerti posset, id leue & volatile fieri necesse esset, vt in eius sphaeram & naturam transferretur. Terra itaque cùm sit omnium grauissima, & ideò centrum: cùm sit omnium fixissima, & ideò minimè volatilis, quomodo in ignem conuerti, & ad ignis sphaeram euehi; aut Ignis omnium supremus & leuissimus, quomodo in terram, contra Naturae leges, detrudi, eique essentialiter vniri potest? Aquae & Ignis facilius esset commutatio, quia vno gradu proximiores sunt, quam Terra & Ignis.

English 120. Those who teach that earth and fire, the extreme bodies of this lower world, take one another's places—assuming, without conceding, a sphere of fire—deceive themselves and mock the truth.

Their natures are too far apart and too opposed to permit such interchange. Earth's extreme coldness, grossness, and heaviness so oppose fire's extreme heat, subtlety, and lightness that they do not allow a mutual conversion. Moreover, earth, being fixed, does not yield to fire and scorns its powers, if the opinions of chymists and common experience are to be trusted. Nothing flies off from it except an oily or watery moisture, both foreign to earth itself. If anything could change into elemental fire, it would have to become light and volatile so as to pass into fire's sphere and nature. Since earth is the heaviest of all, and therefore the centre, and the most fixed of all, and therefore the least volatile, how can it change into fire and be raised into fire's sphere? Or how can fire, the highest and lightest of all, be thrust down into earth against Nature's laws and be essentially united with it? Water and fire would exchange more easily, because they are one degree closer than earth and fire.

PR-C121 1653, pp. 84, 85

Latin CXXI. Qui exhalationes ex terrestri plagâ in aërem sublimatas, quia illic ignescunt, ideo terreae & in elementum Ignis conuersas credidere, longè in vtroque falluntur; neque enim terreae naturae illae sunt, sed potius aëreae; Aër enim noster propter aquae contagionem humidus in sicco terrae sinu diu torpens pinguedinem contrahit, & Terrae consortio humidum sicco temperat; vbi autem per Terrae poros & rimulas, calore vrgente, exhalat; aut etiam materiae copiâ vires multiplicante, non sine strepitu & fragore, concusso & effracto carcere erumpit, vnde Terrae motus & hiatus plurimi saepe cum strage sentiuntur; Exhalatio illa libertatem consequuta in corporum leuium regionem euolat, & illic vago motu ac calore in sulfuream materiam plenius digesta accenditur. Materia itaque illa verè terrea non est, quia à pondere & frigidity abhorret; sed quia ex calidi, sicci & humidi concursu pinguis facta est & combustibilis, Ignis accidentalis fomes, citius quam Ignis Naturae & elementaris censi debet: Spuria quaedam illa generatio est, quae inter Elementa referri, nec eo nomine indigitari meruit: propterea rectè ab Aristotele huiusmodi ignitiones imperfectè mixta dicuntur. Idem de fumo combustorum iudicandum; fumus enim, quia pinguis est, facilè flammam concipit, quae nihil aliud est, quàm fumus accensus.

English 121. Those who have believed that exhalations raised from the terrestrial region into the air are therefore earthy and converted into the element of fire because they catch fire there are greatly mistaken on both points. They are not of an earthy nature, but rather an airy one. For our air, moist through contact with water, acquires oiliness while lying long inactive in earth's dry bosom, and through association with earth tempers moisture with dryness. When heat presses it to exhale through earth's pores and fissures—or when an abundance of matter multiplies its strength—it bursts out of its shaken and broken prison with noise and crashing. Hence many earthquakes and chasms are experienced, often with devastation. Having gained its freedom, that exhalation flies into the region of light bodies and there, more fully digested into sulphurous matter by wandering motion and heat, catches fire. This matter is therefore not truly earthy, since it is averse to heaviness and coldness. Because the conjunction of heat, dryness, and moisture has

made it oily and combustible, it should be regarded as fuel for accidental fire rather than as Nature's elemental fire. It is a kind of spurious generation, which has not deserved to be numbered among the elements or designated by that name. Aristotle therefore rightly calls such ignitions imperfect mixtures. The same judgment applies to the smoke of burnt things: because smoke is oily, it readily takes flame, which is nothing other than smoke set alight.⁸⁰

PR-C122 1653, pp. 85, 86

Latin CXXII. Ignis pingui vescitur, eius pabulum est pinguedo: pingue autem humidum aëreum est sicco contemperatum; vnde licet materiam sulphuream extrinsecus siccā frequentius intueri & sicco terminatam, qualia sunt sulfur vulgare, pulvis tormentarius, & similia, quae licet exterius sicca videantur, interiūs tamen pingue humidum occultant, & in illud igne admoto resoluuntur.

English 122. Fire feeds on what is oily; oiliness is its food. What is oily is airy moisture tempered with dryness. Hence sulphurous matter may often be observed to be dry externally and bounded by dryness, as ordinary sulphur, gunpowder, and similar things are. Although these appear dry outside, they conceal an oily moisture within and are resolved into it when fire is applied.⁸¹

PR-C123 1653, pp. 86, 87

Latin CXXIII. Supino etiam errore labuntur, qui lapides & corpora quaedam grauia nonnunquam in Aëre generata, ac inde per fulgurationes, fulmina & nubium eruptiones deiecta conspicati Ignem lapidescere, & in terram conuerti, aut terram eò deferri sibi persuaserunt; quod longè aliter se habet; materia enim illa indurata nunquam Ignis aut terra fuit, nec à sphaerâ igneâ, si quae talis est, aut terrae corpore egressa; Verum pinguis & viscosus humor, quasi luteus, in nube, tanquam in fornace inclusus, velut opus fictile, per ardorem ignescentium exhalationum ita perstringitur ac decoquitur, vt lapidescat; inde vibrata fulminis iacula conspecta sunt: Huiusmodi meteora sunt tumores, grauedines, morbi denique Naturae, non Elementa. Simili modo, sed lentiore, calculus ex flegmate in renibus aut vesicâ, quandoque in stomacho generatur: sua enim meteora etiam microcosmus habet.

English 123. Those also fall into a careless error who, seeing stones and certain heavy bodies sometimes generated in the air and cast down from it amid flashes, thunderbolts, and bursting clouds, have persuaded themselves that fire turns to stone and changes into earth, or that earth is carried up there. The matter stands quite otherwise. That hardened matter was never fire or earth, nor did it emerge from a sphere of fire, if such a sphere exists, or from the body of earth. Rather, an oily and viscous moisture, as though muddy, is enclosed in a cloud as in a furnace. Like a work of pottery, it is so seared and baked by the heat of burning exhalations that it becomes stone. Hence the hurled darts of the thunderbolt have been seen. Such meteors are swellings, congestions—in short, diseases of Nature, not elements. In a similar but

⁸⁰. This is the author's historical account of exhalations, earthquakes, and combustion.

"Sulphurous" and "oily" belong to that account and are not modern compositional analyses.

⁸¹. The examples support a general historical theory of combustible matter. This canon gives no formulation or proportions for gunpowder.

slower way, a stone is generated from phlegm in the kidneys or bladder, sometimes in the stomach. For the microcosm too has its own meteors.⁸²

PR-C124 1653, pp. 87, 88

Latin CXXIV. Ignis Naturae ab igne nostro artificiali aut accidentali longè alius est, plurimumque inter se dissentiunt. Ignis naturae duplex est, vniuersalis, & particularis siue indiuiduus: Vniuersalis per omnes vniuersi partes vndique diffunditur; corporum caelestium propensiones ac virtutes suauiter excitat & mouet; globum hunc nostrum rerum generationi destinatum pullifico semine impraegnat ac fouet, seminibus vires infundit, implicatas Naturae vires explicat, Elementa miscet, materiam informat, arcanum denique Naturae aperit; fons autem eius est in Sole, qui tanquam cor Vniuersi calorem viuificum, quasi amorem suum, in omnes plagas effundit. Particularis autem ignis Naturae est cuilibet mixto ac indiuiduo insitus & innatus, qui ab illo vniuersali tanquam riuiulus emanat, omniaque in suo Microcosmo analogicè, quae Sol pater eius in Macrocosmo operatur. Ignem autem nostrum communem omni generationi aduersantem, non nisi ex praeda viuentem, ex aliena ruina subsistentem, vitae destructorem, cineri omnia destinantem, quis non potius Naturae hostem, quàm hospitem, excidium, quàm vitae columnen dixerit? Qui autem in aërea plaga generantur ignes, casui magis, quam consilio Naturae debentur.

English 124. Nature's fire is very different from our artificial or accidental fire, and the two disagree greatly. Nature's fire is twofold: universal, and particular or individual. The universal fire is diffused everywhere through all parts of the universe. It gently rouses and moves the inclinations and powers of heavenly bodies; it impregnates and cherishes this globe of ours, destined for the generation of things, with a seed productive of offspring; it pours powers into seeds, unfolds Nature's folded powers, mixes the elements, gives form to matter, and finally opens Nature's secret. Its fountain is in the sun, which, like the heart of the universe, pours life-giving heat into every region as though pouring out its love. The particular fire of Nature is implanted and innate in every mixed body and individual being. It flows like a little stream from the universal fire and performs by analogy in its own microcosm everything that its father, the sun, performs in the macrocosm. But who would not call our common fire—which opposes all generation, lives only on plunder, subsists on another's ruin, destroys life, and destines everything for ashes—Nature's enemy rather than her guest, destruction rather than life's support? Fires generated in the airy region are due more to chance than to Nature's design.

⁸² "Meteors" here embraces phenomena generated in the region above the earth, within the author's natural philosophy. The comparison with bodily stones and phlegm is historical medical doctrine, not a diagnosis or explanation adopted by this edition.

Original marginal note PR-M-C125-01 1653, p. 88

Latin TERRA ET AQUA NON CONVERTVNTVR.

English EARTH AND WATER ARE NOT CHANGED INTO ONE ANOTHER.

PR-C125 1653, pp. 88, 89

Latin CXXV. Neque proxima situ terrae & aquae corpora inter se conuertuntur, sed propter vicinitatem commiscetur tantum, ita vt aqua terram diluat, & terra aquam inspisset, inde fit limus, neutrum corpus, sed medium inter vtrumque, cuius si vi caloris fiat resolutio, fiet & integra vtriusque naturae separatio: Aqua euolante, Terra subsidet, neque mutua fiet earum conuersio, sola enim vtrique communis qualitas frigiditatis id non operabitur, cum siccitatis, & humiditatis auersio non minùs valeat ad resistendum, quàm mutuus frigiditatis vtrunque consensus ad coëundum: Tum etiam quia terrae siccitas & fixatio humiditati, & volatilitati aquae aduersantur; sic vnica tantum qualitas alterationi consentiens datur, plures autem dissentientes, quae in resistendo praeualebunt. Occurret etiam Natura, quae ad sui conseruationem semper parata, ad ruinam, & immutationem nunquam nisi coacta, aut victa inclinatur.

English 125. Nor do the bodies of earth and water, though neighbours in place, change into one another. Their proximity only causes them to mingle: water dilutes earth, and earth thickens water. Mud results, a body that is neither, but intermediate between the two. If heat resolves it, each nature is completely separated: water flies off and earth settles, without any mutual conversion. The single quality they share, coldness, cannot accomplish that conversion, since the opposition of dryness and moisture is no less powerful in resisting than their common agreement in coldness is in uniting. Moreover, earth's dryness and fixation oppose water's moisture and volatility. Thus only one quality favours alteration, while several oppose it and will prevail in resistance. Nature too will intervene: always ready to preserve herself, she never inclines towards destruction and transformation unless compelled or overcome.

PR-C126 1653, pp. 89, 90

Latin CXXVI. Vniuersum terrae globum non minùs constantis naturae esse, quàm caelum, lunam ac stellas licet suspicari; si enim centrum Mundi sit vt creditur, non minùs necessaria est eius constantia, quàm caeterorum corporum Vniuersi: Quin etiam terra eadem nunc est, absque vlla essentiali immutatione, quae ab initio fuit, quae ad finem vsque saeculorum futura est. Quod si detrimentum quoddam vniuersale cataclysmo passa sit; aut particulare per accidens, veluti chasmate, aut maris fluminumue impetu; id supremo rectore totius imperij sui aut prouinciarum leges ad nutum immutante, aut Mundi concentus discordia, Naturaeque laborantis morbo, magis quàm terrae propensione aut vitio contigit: Labores enim & morbos suos omnia Vniuersi corpora patiuntur, licet diuersimodè pro Naturae discrepantiâ & perfectionis differentiâ, eorum tamen naturam & constantiam, ratione totius, accidentia non mutant. Soli Deo aeterno absoluta constantia & impassibilitas conuenit; at caelum, aqua, terra, & caetera vniuersi corpora secundum essentiam suam perstabunt vsque ad constitutam aetatis suae periodum.

English 126. We may suppose the entire terrestrial globe to possess a nature no less constant than heaven, the moon, and the stars. If it is the world's centre, as is believed, its constancy is no less necessary than that of the universe's other bodies. Indeed, earth is now the same, without

any essential transformation, as it was at the beginning and will be until the end of the ages. If it has suffered some universal damage through a flood, or particular accidental damage through a chasm or the onrush of sea or rivers, this has happened because the supreme ruler changed at will the laws of his whole empire or its provinces, or because of discord in the world's harmony and disease in afflicted Nature, rather than through earth's own inclination or fault. All bodies of the universe suffer their labours and diseases, although in different ways according to their diverse natures and degrees of perfection. Yet accidents do not alter their nature and constancy considered as a whole. Absolute constancy and freedom from suffering belong only to the eternal God; but heaven, water, earth, and the other bodies of the universe will persist in their essence until the appointed term of their age.

Original marginal note PR-M-C127-01 1653, p. 91

Latin AQVA ET AER NON CONVERTVNTVR.

English WATER AND AIR ARE NOT CHANGED INTO ONE ANOTHER.

PR-C127 1653, pp. 91, 92

Latin CXXVII. Si quae quatuor illarum naturarum ad mutuam conuersionem propensio, mediarum longè validior est; Aqua enim & aër maiori inter se affinitate, quàm cum caeteris, aut etiam quàm caeterae inter se coniunguntur, siquidem non tam qualitatibus, quam qualitatum intensione & remissione, neque tam secundùm naturam, quàm secundùm accidentia discrepare videntur; nam cùm aqua frigiditatem & humiditatem iure Naturae sibi vindicet, vtramque inferiori Aëris plagae ratione commercij communicat; (Aër autem nullam pene propriam qualitatem, praeter summam tenuitatem, obtinet, ceteris tamen imbui capax, propterea naturae caelestis est, quae ex se temperatissima, & nulli propriae qualitati addicta cùm sit, alienas, nempe corporum caelestium dispositiones, influxus & virtutes facilè suscipit & communicat) Densitas & raritas, quae remissae confines sunt, praecipuam inter Aquam & Aërem nostrum differentiam statuere videntur; eâ de causâ in sacrâ Genesi Deum aquas ab aquis separasse legitur, quasi vnus naturae ratione situs diuisio veriùs quàm ratione essentiae mutatio facta fuerit.

English 127. If any of those four natures inclines towards mutual conversion, the inclination is much stronger in the intermediate pair. Water and air are bound by a greater affinity with each other than with the others, or than the others have with one another. They appear to differ less in qualities than in the intensity and relaxation of qualities, and less in nature than in accidents. For water claims coldness and moisture by Nature's right and communicates both to the lower region of air through their intercourse. Air possesses scarcely any quality of its own except extreme tenuity, but is capable of being imbued with the rest. For that reason it is of a heavenly nature, which, being in itself most temperate and committed to no particular quality, readily receives and communicates others' dispositions, influences, and powers—namely those of the heavenly bodies. Density and rarity, which border upon one another when relaxed, seem to establish the chief difference between water and our air. Hence in sacred Genesis we read that God separated waters from waters, as though a division of one nature

according to place had occurred, rather than a change according to essence.

PR-C128 1653, pp. 92, 93

Latin CXXVIII. Vicinae tamen duae illae naturae veram & essentialem reciprocationem non patiuntur; verum secundum quid, nec omnino, sed quodammodo conuertuntur, eaque in inferiori solummodo aëris regione commutatio exercetur; quae nubium conuexitate terminatur, nec mediam, multò minùs superiorem offendit. Aqua, quia ope rarefactionis fit vapor, euolat, & in aërem magis attollitur, quàm conuertitur, vapor autem ille condensatus & in aquam resolutus relabitur. Hanc vnus tantum naturae circulationem & in se reuersionem, duarum conuersionem antiquitas professa est, sensus fallaciâ, magis quàm mentis lumine ducta; linceis enim oculis vniuersae Naturae arcana perquirenti res aliter se habere inuenitur. Vaporem etiam tenuissimum qui simpliciter Aërem dixerit, fallitur, cùm vapor sit corpus quoddam medium & imperfectum inter duplices aquas superiores & inferiores, aquam nostram & aërem, neutrum tamen, quod quantumuis rarefiat, nunquam ad sublimem aëreae nobilitatis gradum exaltabitur; spurius aër fiet, sed non naturalis & legitimus: neque limpida aëris natura tantum deprimitur, & à puritate sua recedet, vt in vaporem, nubem aut aquam crassescat: primaeuam siquidem illam aquarum separationem, quam re verâ actûque fecit Spiritus Architectonicus, statutosque partium Mundi terminos, quos indelebili suo sigillo signauit Dominus, nouâ confusione delendi aut amouendi ius Natura non obtinuit.

English 128. Yet those two neighbouring natures do not undergo a true and essential interchange. They change only in a certain respect, not wholly but in a qualified way, and that exchange occurs only in the lowest region of air, bounded by the vault of the clouds. It does not reach the middle region, much less the upper one. Water, becoming vapour through rarefaction, flies up and is raised into air rather than converted into it; that vapour, condensed and resolved into water, falls back. Antiquity called this circulation and return into itself of a single nature the conversion of two, guided more by the deception of sense than by the light of understanding. To one searching all Nature's secrets with lynx-like eyes, things are found to stand otherwise. Whoever simply calls even the thinnest vapour air is also mistaken, for vapour is a certain intermediate and imperfect body between the twofold waters, upper and lower—our water and air—yet is neither. However much it is rarefied, it will never be exalted to the lofty rank of airy nobility: it will become spurious air, not natural and legitimate air. Nor will the clear nature of air sink so low and depart so far from its purity as to thicken into vapour, cloud, or water. Nature has received no right to erase or displace through a new confusion that primeval separation of the waters, which the Architectonic Spirit made truly and actually, or the established boundaries of the world's parts, which the Lord marked with his indelible seal.⁸³

⁸³ "Architectonic Spirit" names the ordering or designing agency in the author's creation account. His distinction between true air and vapour belongs to this cosmology and should not be equated with a modern account of gases.

Original marginal note PR-M-C129-01 1653, p. 93

Latin AQVA SOLA CIRCVLATVR.

English WATER ALONE CIRCULATES.

PR-C129 1653, pp. 93, 94, 95

Latin CXXIX. Altiori rem indagine penetrantes terram tanquam Mundi huius vterum, vas generationis, multiplicis & penè innumerae prolis matrem agnoscent, quae in principio creationis à supernatantium aquarum dominio liberata, suique iuris facta arida & sicca remansit, eiusque corpus densius factum in operis centrum & tanquam fundamentum cessit, ac patentem vegetabilibus animantibusque aream exhibuit; quo tamen frequentissimae generationi apta fieret, humore indigebat; eius indigentiae à diuinâ sapientiâ prouisum est; eam ob rem aqua ab initio volatilis facta est, vt in vapores eueheretur, qui frigore in nubem concreti tepore iterum in aquam soluerentur. Hoc diuinae mentis artificio terrae vbertati consultum fuit; siccitas, quae sterilitatem minabatur, largo humore temperata est, matris vterus foecundatus. Sola itaque aqua ad irrigandum Terrae gremium circulator, aut veriùs in inferiori aëris regione, tanquam in alembico distillatur, vt per cohobationes & reiteratas distillationes exuberata superiorum & inferiorum vires consequatur, coelestique imbuta Nectare Terrae sinum efficacius emolliat, ac prolificâ virtute impraegnet. Summus rerum opifex, qui Naturâ pro arte vtitur, opificio suo nihil superfluum addidit, nihil desiderandum reliquit.

English 129. Those who penetrate the matter through a deeper investigation will acknowledge earth as this world's womb, the vessel of generation, the mother of a manifold and almost innumerable offspring. At the beginning of creation, freed from the dominion of waters floating above her and made her own mistress, she remained arid and dry. Her body grew denser and took its place at the work's centre as its foundation, providing an open field for plants and animals. Yet to become fit for generation in such abundance, she needed moisture. Divine wisdom provided for this need: water was made volatile from the beginning so that it might be raised into vapours, which, condensed into a cloud by cold, would again be dissolved into water by warmth. Through this artifice of the divine mind, earth's fertility was provided for; dryness, which threatened barrenness, was tempered with abundant moisture, and the mother's womb made fertile. Water alone, therefore, circulates to irrigate earth's bosom—or, more precisely, is distilled in the lower region of air as in an alembic. Enriched through cohobations and repeated distillations, it acquires the powers of higher and lower things; imbued with heavenly nectar, it more effectively softens earth's bosom and impregnates it with a power productive of offspring. The supreme maker of things, who uses Nature as his art, added nothing superfluous to his work and left nothing wanting.⁸⁴

⁸⁴ "Cohobation" ordinarily names repeated distillation with the distillate returned to the material. Here the term describes the author's cosmic analogy between atmospheric circulation and the apparatus of distillation.

PR-C130 1653, pp. 95, 96

Latin CXXX. Quoniam autem Aqua est Mundi menstruum, rerum semina & Elementa in se continet ac fouet; dum itaque illa circulatur, vera etiam Naturae Elementa, quae Terrae tanquam matrici & vasi generationis, Aquae verò tanquam menstruo insunt, etiam rotantur: vaporum itaque terrae aquae & aëris elementa insunt, cum ipso sublimantur & exuberantur: Non quidem Terrae, Aquae & Aëris corpora, quae sphaeras suas habent, & Mundi plagas constituunt, sed ipsa Naturae Elementa spiritualia, quae in illis habitant & delitescunt, ex quibus lapides & alia corpora in aëre, igne excoquente, generari possunt; ubi enim omnia Elementa optimè mixta, qualia sunt in vapore, concurrunt, corpora generari possunt; verum quando extra matricem conuenientem fit huiusmodi generatio, velut in Aëre, mixta producuntur imperfecta, non tam ex defectu mixtionis, quam matricis.

English 130. Since water is the world's menstruum, it contains and cherishes the seeds and elements of things. While it circulates, the true elements of Nature also revolve: they are present in earth as in a matrix and vessel of generation, and in water as in a menstruum. Thus the elements of earth, water, and air are present in vapour and are sublimed and enriched with it. These are not the bodies of earth, water, and air, which have their own spheres and constitute the world's regions, but Nature's spiritual elements themselves, which dwell concealed within those bodies. From them, stones and other bodies can be generated in the air through the cooking action of fire. For wherever all the elements meet, excellently mixed as they are in vapour, bodies can be generated. Yet when such generation occurs outside a suitable matrix, as in the air, imperfect mixed bodies are produced, less through a defect of mixture than through a defect of matrix.⁸⁵

PR-C131 1653, pp. 96, 97

Latin CXXXI. Aqua mediam inter Terram & Aërem naturam & sedem obtinens vtrumque suâ mobilitate & inconstantia perturbat: Aërem atrâ fuligine infestisque vaporibus inquinans: Terram profluuiis plerumque immergens: aëri turbines, terrae ruinas, in vtroque corruptionem procurat: superioris hospitium leuitate, inferioris domicilium grauitate hostilitate inuadit: sui copia aut inopia anni tempora Naturaeque ordinem inuertit: Omnem vtrinque viciniam fragore & tumultu imperiosa mouet & concutit. Tota eius natura cum sit foeminea, illam quasi foeminam ac malum necessarium Mundo dedisse videtur summus creator: sic illa omnia pro imperio sibi arrogat, & quae in Naturae commodum sunt ei concessae vires, in perniciem plerumque vertit. Denique diuinae iustitiae flagellum est, vltrix Nemesis, quae sceleribus generis humani vindicandis destinata in poenam irruit, spem opesque superbiae radices varijs induta figuris coeli ludibrium facit.

English 131. Water, occupying an intermediate nature and station between earth and air, disturbs both through its mobility and inconstancy. It pollutes air with black soot and noxious vapours and often submerges earth in floods. It brings whirlwinds to air, ruin to earth, and corruption to both. Through lightness it invades the lodging above, through heaviness the dwelling below, as an enemy. By its

⁸⁵ Menstruum is retained as a historical term for a fluid medium that receives and carries generative or dissolving powers. The maternal language surrounding it remains part of the author's argument.

abundance or scarcity it overturns the seasons and Nature's order. Imperious, it moves and shakes every neighbouring region on either side with crashing and tumult. Since its whole nature is female, the supreme creator seems to have given it to the world as a woman and a necessary evil. Thus it arrogates everything to itself as its dominion and often turns to destruction the powers granted it for Nature's benefit. Finally, it is the scourge of divine justice, an avenging Nemesis, appointed to punish the crimes of humankind. It rushes in to inflict punishment and, clothed in various forms, makes hope and wealth—the roots of pride—the sport of heaven.⁸⁶

PR-C132 1653, p. 97

Latin CXXXII. Vniuersales Naturae quò crassiores, eò etiam impuriores; quò tenuiores, eò mundiores: Terra quia densior est Aquà, eò ignobilior; sic aqua aère, aër coelo; Regionum autem caeli sublimior, quia subtilior, ideo nobilior sanè habenda est. Indubitatae enim veritatis est naturas spirituales corporeis longè praestantiores, & spiritualibus viciniore perfectioni proximiores esse.

English 132. The grosser the universal natures are, the more impure they are; the finer, the purer. Because earth is denser than water, it is less noble; so too is water less noble than air, and air than heaven. Of heaven's regions, the higher, being subtler, must certainly be regarded as nobler. For it is an undoubted truth that spiritual natures are far superior to corporeal ones, and that those nearer to spiritual natures are nearer perfection.

PR-C133 1653, pp. 97, 98

Latin CXXXIII. Generationis & corruptionis fundamentum est in humido, in vtroque enim Naturae labore, humor ex elementis primum est patiens, primum formae sigillum suscipiens: Illi facile spiritus naturales vniuntur, quia ex eo manant; facile in illud redeunt, quia ipsorum radix est: in illo & per illud caetera elementa miscentur. Nec minùs in mixtis & indiuiduis, quàm in Mundo humidum Elementum tam in opere generationis, quàm nutritionis circulatur; opus enim vtrumque iisdem rarefactionis & condensationis instrumentis, iisdem medijs, spiritibus nempe, fieri Naturae placuit.

English 133. The foundation of generation and corruption lies in moisture. In both of Nature's labours, moisture is the first of the elements to undergo action and the first to receive form's seal. Natural spirits readily unite with it because they flow from it, and readily return into it because it is their root. In it and through it the other elements are mixed. The moist element circulates no less in mixed bodies and individuals than in the world, in the work of nutrition as well as generation. For Nature has chosen that both works be performed through the same instruments of rarefaction and condensation, and through the same intermediaries, namely spirits.

⁸⁶ The disparagement of women is explicit in the Latin analogy, not introduced by the translation. This canon turns the earlier maternal account of water into a punitive and gendered personification.

Original marginal note PR-M-C134-01 1653, p. 98

Latin * lib. 1. de Diaeta.

English * Book 1, On Regimen.

PR-C134 1653, pp. 98, 99

Latin CXXXIII. Terra est vas generationis, Aqua est menstruum Naturae virtutes seminales etiam formales in se complectens, quas à Sole tanquam masculo, & formali vniuersalique principio mutuatur; ab eo enim ignis Naturae formalésque spiritus rerum seminibus influunt, quibus omnia generationi necessaria insunt, calido innato in humido latente. Optimè * Hippocrates haec duo elementa ignem & aquam omnia posse, omnia illis inesse affirmavit: à primo siquidem binae qualitates masculinae calidi & sicci: ab altero totidem foemininae frigidi & humidi effluentes in mixtorum generatione concurrunt & commiscentur: duobus illis tanquam praecipuis Elementis duo maiora luminaria praesunt, Sol ignis Naturae author, & Luna humorum domina.

English 134. Earth is the vessel of generation; water is Nature's menstruum, embracing within itself seminal and also formal powers, which it borrows from the sun as the male and the formal and universal principle. From the sun, Nature's fire and formal spirits flow into the seeds of things. These contain everything necessary for generation, innate heat lying hidden in moisture. Hippocrates * excellently affirmed that these two elements, fire and water, can do all things and contain all things. For from the first flow the two male qualities, heat and dryness, and from the second the two female qualities, cold and moisture; these meet and mingle in the generation of mixed bodies. The two greater luminaries preside over these two as the chief elements: the sun, author of Nature's fire, and the moon, mistress of moistures.⁸⁷

Original marginal note PR-M-C135-01 1653, p. 99

Latin TRES CIRCVLATIONIS ROTAE SIVE CIRCVLII.

English THREE WHEELS OR CIRCLES OF CIRCULATION.

PR-C135 1653, p. 99

Latin CXXXV. Circulationem volatilis Elementi triplici actione & veluti instrumento adimplet Natura, nempe Sublimatione, Demissione, siue Refusione & Decoctione, quae diuerso indigent temperamento. Sic benè ordinata Naturae intentio per varios errans motus opera sua interrupta ad finem propositum dirigit, & per vias oppositas ad eundem scopum tendit.

English 135. Nature completes the circulation of the volatile element through a threefold action, as though through three instruments: sublimation, descent or pouring back, and decoction, which require different temperings. Thus Nature's well-ordered intention, ranging through varied motions, directs her interrupted works towards their proposed end and tends towards the same goal by opposite paths.

⁸⁷. The heading uses the additive Roman form CXXXIII for 134. The original marginal citation identifies book 1 of *De diaeta*, the work transmitted in the Hippocratic corpus; the attribution is the historical author's. "Formal" concerns the giving of form, rather than outward ceremony.

Original marginal note PR-M-C136-01 1653, p. 99

Latin PRIMVS CIRCVLVS.

English THE FIRST CIRCLE.

PR-C136 1653, pp. 99, 100

Latin CXXXVI. Sublimatio est humidæ grauisque naturæ in leuem conuersio, siue in vaporem exhalatio: cuius finis & vtilitas triplex est: primò vt per attenuationem corpus crassum & impurum mundetur, & fecibus suis sensim exuatur: Deinde vt per sublimationem superiorum virtutes, quæ continuò defluunt, largiùs assequatur. Denique vt per huiusmodi euacuationem Terra superfluo & prægauanti humore exoneretur, qui eius meatus occupans caloris actionem & spirituum naturalium transitum impedit, imò violenter ipsos suffocat: Haec humidi superuacui substractio obstructionum causam amouet, & fastidientem Terræ sthomaçum subleuat, eúmque digestionem aptiorem reddit.

English 136. Sublimation is the conversion of a moist and heavy nature into a light one, or its exhalation into vapour. Its purpose and benefit are threefold. First, through attenuation, a gross and impure body is cleansed and gradually stripped of its dregs. Next, through sublimation, it more abundantly acquires the powers of higher things, which flow down continually. Finally, through such evacuation earth is relieved of superfluous and oppressive moisture, which fills her passages, impedes the action of heat and the passage of natural spirits, and indeed violently suffocates them. This removal of excess moisture takes away the cause of obstructions, relieves earth's nauseated stomach, and makes it fitter for digestion.⁸⁸

PR-C137 1653, pp. 100, 101

Latin CXXXVII. Caloris autem impulsu humor sublimatur: Igne suo quippe tanquam proprio instrumento vtitur Natura, vt corpora humida rarefaciat: Ideò vapores, ex quibus nubes & pluuiae generantur, brumali & verno tempore frequentiores attolluntur, quia Terræ vterus tunc calido & humido magis abundat, humor autem est causa materialis, calor efficiens vaporum & exhalationum. Calorem quodammodo intensum in sublimando exhibet Natura, inter fines & latitudinem temperamenti dum cohibeatur.

English 137. Moisture is sublimed by the impulse of heat. Nature uses her own fire as her proper instrument to rarefy moist bodies. Hence vapours, from which clouds and rains are generated, rise more frequently in winter and spring, because earth's womb then abounds more in heat and moisture. Moisture is the material cause, and heat the efficient cause, of vapours and exhalations. In subliming, Nature applies a somewhat intensified heat, provided it is kept within the limits and range of tempering.

⁸⁸ The source prints sthomaçum. The bodily language treats earth as a living, digesting whole; sublimation here includes the atmospheric rising of moisture, rather than only a modern laboratory change from solid to gas.

Original marginal note PR-M-C138-01 1653, p. 101

Latin SECVNDVS CIRCVLVS.

English THE SECOND CIRCLE.

PR-C138 1653, p. 101

Latin CXXXVIII. Demissio secunda Naturae rota in opere circulari est spirituosi vaporis in corpus densum & aqueum reductio: siue rarefacti & sublimati humoris iterumque condensati refusio: ac in terram descensio vt eam exuberato liquore diluat, & quasi nectareo caelestique potu imbibat.

English 138. Descent, Nature's second wheel in the circular work, is the reduction of spirituous vapour to a dense and watery body: the pouring back of moisture that has been rarefied and sublimed and then condensed again, and its descent into earth to moisten her with enriched liquor and imbue her as though with a heavenly drink of nectar.

PR-C139 1653, pp. 101, 102

Latin CXXXIX. Tria intendit Natura irrigando: primò vt non effundat, sed sensim humorem suum exuberatum distillet, ne gurgis fiat, & aquae copia spiritui viuifico in Terrae visceribus permeanti aditus praecludat, ac intrinsecum Terrae calorem extinguat: omnia enim sua beneficia prudens ac iusta illa gubernatrix in pondere, numero & mensurâ largitur. Secundò vt per diuersa stillicidia & varia sub specie humorem distribuat, pluuiam scilicet modò densiorem, modò rariorem; modò rorem, modò pruina; modò largius, modò parcius effundens, vt Terrae plus minusue sitienti pro appetitu vel necessitate potum exhibeat. Tertio, vt non continuò, sed per vices, & intermixtis alijs operationibus irrigationes fiant; Soles enim imbribus, & imbres Solibus, dies noctibus, & noctes diebus alternatim succedunt.

English 139. Nature intends three things in irrigating. First, she means to distil her enriched moisture gradually rather than pour it out, lest a flood arise and an abundance of water close the ways through which the life-giving spirit passes in earth's entrails, and extinguish earth's inward heat. For that wise and just governor bestows all her benefits by weight, number, and measure. Second, she means to distribute moisture through different droppings and under varied forms: rain now denser, now thinner; now dew, now frost; pouring it out now more generously, now more sparingly, so as to offer drink according to the appetite or necessity of earth in her greater or lesser thirst. Third, irrigations are to occur in turns, with other operations interspersed, rather than continuously. Sunshine succeeds rain and rain sunshine, day succeeds night and night day, alternately.

PR-C140 1653, p. 102

Latin CXL. Frigus tenuissimum siue potiùs calor deficiens & expirans elatos in mediam regionem, ibique concretos vapores laxat & caducos facit: calor siquidem immoderatus dissipat eorùmq; condensationem impedit: frigus etiam intensum eos ita perstringit & congelat, vt humorem deciduum exhibere non possint.

English 140. A very slight cold—or rather, failing and expiring heat—loosens the vapours raised into the middle region and condensed there,

and makes them fall. Excessive heat disperses them and prevents their condensation; intense cold, too, so binds and freezes them that they cannot yield falling moisture.

Original marginal note PR-M-C141-01 1653, p. 103

Latin TERTIVS CIRCVLVS.

English THE THIRD CIRCLE.

PR-C141 1653, p. 103

Latin CXLI. Postrema circuli Naturae rota siue actio est Decoctio, quae nihil aliud est, quàm humoris crudi in terrae gremium instillati digestio, maturatio, & in alimentum conuersio. Haec aliarum scopus & finis videtur, quia est laboris remissio, & cibi per antecedentes labores quaesiti perceptio: susceptum enim humorem crudum vi caloris interni conterit, coquit, ac digerit ferè immota & somno correpta, Ignem secretum, veluti proprium Naturae instrumentum in summo silentio & quiete mouens, vt crudum illum liquorem cum sicco temperatum in pabulum conuertat. Integer hic est Naturae circulus, quem per diuersos laboris & caloris gradus illa reuoluit.

English 141. The last wheel or action of Nature's circle is decoction: nothing other than the digestion, maturation, and conversion into nourishment of raw moisture instilled into earth's bosom. This seems to be the goal and end of the others, because it is the relaxation of labour and the reception of food obtained through preceding labours. For, almost motionless and seized by sleep, she crushes, cooks, and digests the raw moisture she has received through the power of inward heat, setting secret fire—Nature's proper instrument—in motion in profound silence and rest, so that it may convert that raw liquor, tempered with dryness, into nourishment. This is Nature's whole circle, which she turns through different degrees of labour and heat.

PR-C142 1653, pp. 103, 104

Latin CXLII. Connexae & ita correlatae inter se sunt tres istae Naturae operationes, vt finis vnus sit alterius initium, & ex ordine necessario per vices succedant secundum Naturae intentionem. Sic intertextae & concatenatae sunt vicissitudinis leges, vt in Vniuersi commodum conspirantes mutuas sibi praestent operas.

English 142. These three operations of Nature are so connected and related to one another that the end of one is the beginning of another; in a necessary order they succeed in turn according to Nature's intention. Thus the laws of alternation are interwoven and linked together, working in concert for the universe's benefit and lending one another mutual service.

PR-C143 1653, pp. 104, 105

Latin CXLIII. Extra suos cancellos tamen inuita plerumque trahitur Natura, nec certis insistit vestigijs, maximè in directione elementi humidi, cuius leges interruptae fallunt, & facilè vim faciunt, & patiuntur, tum propter volatilis naturae inconstantiam: cùm etiam propter variam superiorum corporum dispositionem, quae haec inferiora, humorem praesertim inclinant, & à suis legibus deflectunt ad nutum aeterni moderatoris, qui illis tanquam instrumentis & organis vtitur ad mouendam Vniuersi machinam: inde fallax & inconstans mansionis huius nostrae

temperies, & immutata anni tempora deprehenduntur: Sic terrae vterus variè affectus copiosius, aut parcius generosos aut effetos foetus nobis parit: Sic aër vicinus purior aut impurior sanitatem aut morbos inducit: humidâ naturâ omnia apud nos reuolvente.

English 143. Yet Nature is often dragged unwillingly beyond her own bounds and does not follow a certain track, especially in directing the moist element. Its interrupted laws fail; it readily inflicts and suffers violence, both because of the inconstancy of a volatile nature and because of the varying disposition of higher bodies. These incline the lower things, especially moisture, and turn them from their laws at the command of the eternal governor, who uses those bodies as instruments and organs to move the machinery of the universe. Hence we perceive the deceptive and inconstant climate of this dwelling of ours and the altered seasons. Thus earth's womb, variously affected, bears us noble or exhausted offspring, more or less abundantly; thus the surrounding air, purer or more impure, brings health or disease, while moist nature turns all things about us.⁸⁹

PR-C144 1653, p. 105

Latin CXLIV. Quoniam inferiora à superioribus legem accipiunt, quorum naturae & affectiones homini maximè incognitae sunt, ideò fallax & incerta nobis est Coeli nostri regula; Naturae tamen intentionem, magis quàm actionem; ordinem magis quàm ordinis turbationem ob oculos sibi proponat philosophus.

English 144. Since lower things receive their law from higher things, whose natures and dispositions are largely unknown to humankind, the rule of our sky is deceptive and uncertain to us. Yet let the philosopher set before his eyes Nature's intention more than her action, and order more than the disturbance of order.

Original marginal note PR-M-C145-01 1653, p. 105

Latin CIRCVLATIO HVMORIS IN MIXTIS.

English THE CIRCULATION OF MOISTURE IN MIXED BODIES.

PR-C145 1653, p. 105

Latin CXLV. Humidae Naturae volubilitatem non solum in generali Mundi, verum etiam in particulari, mixtorum harmoniâ licet obseruare: Per reuolutionem enim humidi illa generantur, nutriuntur & augentur: desiccando, humectando, & digerendo, quapropter tres illae Naturae operationes cibo, potui & somno comparantur, quia cibus sicco respondet, potus humido, somnus verò decoctioni.

English 145. The revolving movement of moist nature may be observed not only in the general harmony of the world, but also in the particular harmony of mixed bodies. Through the revolution of moisture they are generated, nourished, and increased: by drying, moistening, and digesting. Therefore those three operations of Nature are compared to

⁸⁹ The Latin moves from interrupted "laws" to the conduct of the moist element in a compressed construction. The translation makes that transition explicit. "Higher bodies" refers to the heavenly bodies within the author's cosmology.

food, drink, and sleep, because food corresponds to dryness, drink to moisture, and sleep to decoction.

PR-C146 1653, p. 106

Latin CXLVI. Homo ne somnia sibi fingat, dum varijs gloriatur titulis, dum sibi soli quasi proprium Microcosmi nomen vendicat, quod in materiali eius opificio naturales Macrocosmi motus analogicè percipiuntur: quodlibet enim animal, etiam vermiculus: quaelibet planta, etiam Alga, Mundus est exiguus maioris imaginem referens: Extra se ergo Mundum quaerat homo & vbique inueniet: creaturarum siquidem omnium idem Archetypus est, à quo infiniti Mundi ex eadem materiâ, formâ tamen dissimiles procreati sunt: Homini itaque deiectio & humilitas, soli Deo gloria tribuatur.

English 146. Let the human being not fashion dreams for himself while boasting of varied titles and claiming the name of microcosm for himself alone as though it were his particular property, because the natural motions of the macrocosm are perceived by analogy in his material structure. For every animal, even a little worm, and every plant, even seaweed, is a small world bearing the image of the greater one. Let the human being therefore seek the world outside himself, and he will find it everywhere. All creatures have the same archetype, from which innumerable worlds have been brought forth from the same matter, though dissimilar in form. Let lowliness and humility therefore be assigned to humankind, and glory to God alone.

Original marginal note PR-M-C147-01 1653, p. 106

Latin AQVAE FERMENTATIO.

English THE FERMENTATION OF WATER.

PR-C147 1653, pp. 106, 107

Latin CLXVII. Inferiores naturae à superioribus fermentantur: aqua autem morae impatiens caelestium muneribus occurrit: aër quippe vaporu aduolanti peruius eum hospitio in nubium regione, quasi in aulâ excipit: quò priusquam perueniat, corpore quodammodo in spiritum verso, humida natura pondere suo exiit, vt additâ celeritate votum citius expleat, & ambiguae naturae priuilegio fruatur.

English 147. Lower natures are fermented by higher ones. Water, impatient of delay, hastens to meet the gifts of heavenly things. Air opens a passage to the vapour flying towards it and receives it hospitably in the region of clouds as in a hall. Before it reaches that place, moist nature is stripped of its weight, its body in some measure turned into spirit, so that with added speed it may fulfil its wish sooner and enjoy the privilege of a twofold nature.⁹⁰

⁹⁰ The printed heading is CLXVII., or 167. Its place between CXLVI. and CXLVIII. establishes logical canon 147, used in the English numbering. Fermentation here describes the reception of life-giving heavenly powers, not exclusively the modern process of microbial fermentation.

Original marginal note PR-M-C148-01 1653, p. 107

Latin ELEMENTORVM PER AQVAM FERMENTATIO.

English THE FERMENTATION OF THE ELEMENTS THROUGH WATER.

PR-C148 1653, pp. 107, 108

Latin CXLVIII. Sol interim caelestis chori Princeps & superiores naturae inferiorum satagentes iugi afflatu spiritus viuificos, tanquam riuulos à purissimis suis fontibus scaturientes instillant: vapores autem aut rari nantes in aëre, aut in nubem, quasi in spongiam naturae concreti nectar illud spirituale audissimè sugunt, & vi quâdam magneticâ ad se trahunt, quo suscepto intumescunt, & pullifico illo semine impraegnati, quasi reddito pondere, in rorem, pruina, pluuiam, aut aliam naturam humidam soluti in terrae gremium relabuntur; illa autem elementorum mater reducem humorem vtero excipit, & caelesti semine grauida innumeros suo tempore emittit foetus, plus minúsue generosos, pro seminis virtute, tum etiam matricis dispositione. Aquae etiam inferiores huius caelestium beneficentiae participes fiunt; quoniam vnum cum Terrâ globum constituunt, communia fiunt ipsis superiorum beneficia: Per aquae autem Naturam caetera elementa fermentantur.

English 148. Meanwhile the sun, prince of the heavenly choir, and the higher natures, taking care of lower things, instil life-giving spirits through a constant breathing, like little streams springing from their purest fountains. Vapours, either floating thinly in the air or condensed into a cloud as into Nature's sponge, eagerly drink that spiritual nectar and draw it to themselves by a certain magnetic power. Having received it, they swell; impregnated with that seed productive of offspring, and as though their weight had been restored, they dissolve into dew, frost, rain, or some other moist nature and fall back into earth's bosom. That mother of the elements receives the returning moisture into her womb and, pregnant with heavenly seed, brings forth innumerable offspring in their season, more or less noble according to the seed's power and the matrix's disposition. The lower waters also share in this beneficence of heavenly things. Since they constitute one globe with earth, the benefits of higher things are common to them. Through water's nature, the other elements are fermented.

PR-C149 1653, p. 108

Latin CXLIX. Fermentum autem illud est spiritus viuificus à superioribus naturis in has inferiores defluens, sine quo terra iterum inanis & vacua fieret; est enim vitae semen, sine quo neque homo, neque vllum animal, neque vegetabile aliquod generationis aut vitae beneficio potiretur: neque enim solo pane viuunt homo, sed maximè cibo illo caelesti, aëre scilicet spiritu huiusmodi afflato & fermentato.

English 149. That ferment is a life-giving spirit flowing down from higher natures into these lower ones, without which earth would again become empty and void. It is the seed of life, without which neither the human being, nor any animal, nor any plant would enjoy the benefit of generation or life. For the human being does not live by bread alone, but chiefly by that heavenly food: air breathed upon and fermented by a spirit of this kind.

Original marginal note PR-M-C150-01 1653, p. 108

Latin TRIA ELEMENTA SECVNDA.

English THREE SECONDARY ELEMENTS.

PR-C150 1653, pp. 108, 109

Latin CL. Tria elementa materialia quia in rerum compositione remota sunt, soli Deo & Naturae obediunt, nec artis aut ingenij humani leges patiuntur: Tria autem alia ex priorum illorum copulâ nascuntur; quae per viam resolutionis extracta in mixtorum compositione proxima esse satis arguunt, Sal nempe, sulfur & Mercurius. Et ita trinitatem Elementorum & vniuersae Naturae sigillum esse fit manifestum.

English 150. The three material elements, being remote in the composition of things, obey God and Nature alone and do not submit to the laws of art or human ingenuity. Three others are born from the union of the former three. Extracted by way of resolution, they sufficiently show themselves to be proximate in the composition of mixed bodies: salt, sulphur, and mercury. Thus it becomes manifest that a trinity is the seal of the elements and of all Nature.⁹¹

PR-C151 1653, p. 109

Latin CLI. Horum trium posteriorum Elementorum species ex triplici trium priorum matrimonio generantur; Mercurius siquidem ex Terrae & Aquae mixtione; Sulfur ex Terrae & Aëris amplexu: Sal verò ex aëris & aquae condensatione producitur; nec plures dari possunt eorum combinationes. Ignis Naturae omnibus, tanquam formale principium inest, caelestium virtute influente & cooperante.

English 151. The kinds of these three later elements are generated from the threefold marriage of the first three. Mercury is produced from the mixture of earth and water; sulphur from the embrace of earth and air; salt from the condensation of air and water. No further combinations of them are possible. Nature's fire is present in all as a formal principle, through the inflowing and cooperating power of heavenly things.

PR-C152 1653, pp. 109, 110

Latin CLII. Neque ex quolibet priorum corporum concursu posteriora generantur; ex terrâ enim pingui & aquâ limpidâ optimè dilutis & mixtis exit Mercurius: Ex terrae autem subtilissimae & siccissimae, & aëris humidi consortio sulfur generatur: Sal denique ex aquâ crassâ ponticâ & salsâ & aëre crudo intercepto conrescit.

English 152. Nor are the later bodies generated from just any conjunction of the earlier ones. Mercury comes forth from oily earth and clear water, thoroughly diluted and mixed. Sulphur is generated from the association of exceedingly subtle and dry earth with moist air. Finally, salt coagulates from gross, briny, saline water and raw air caught within it.

PR-C153 1653, pp. 110, 111

Latin CLIII. Democriti sententiam, omnia corpora ex Atomis fieri, à Naturâ alienam non esse licet affirmare; eum enim ratio & experientia à calumniâ vindicant:

⁹¹ "Remote" and "proximate" distinguish levels of constitutive principles. The following canon supplies the relations between the first three material elements and the three later ones; their names should not be reduced to modern chemical elements.

elementorum quippe mixtionem obscuro sermone velare, nec reticere omninò voluit ingeniosus Philosophus, quae vt Naturae intentioni congruat, per minima & actu indiuisibilia corpuscula fieri necesse est, secus in corpus continuum & naturale non coalescerent elementa. Docet nos experientia in artificiali mixtorum resolutione & compositione, quae per distillationes exercentur, perfectam duorum aut plurium corporum mixtionem non fieri, nisi in subtili vapore: At longè subtiliores mixtiones suas & quodammodo spirituales facit Natura, quas Democritum intellexisse sanius credendum est, corporum enim crassities mixtioni obstat, propterea quantò magis res attenuantur, tantò mixtioni aptiores fiunt.

English 153. We may affirm that Democritus's opinion, that all bodies are made from atoms, is not foreign to Nature, for reason and experience defend him against slander. That ingenious philosopher wished to veil the mixture of elements in obscure language without concealing it altogether. To agree with Nature's intention, this mixture must take place through the smallest corpuscles, actually indivisible; otherwise the elements would not coalesce into a continuous natural body. Experience in the artificial resolution and composition of mixed bodies, practised through distillations, teaches us that a perfect mixture of two or more bodies occurs only in a subtle vapour. But Nature makes her own mixtures far subtler and in some measure spiritual, and it is sounder to believe that Democritus understood these. For the grossness of bodies obstructs mixture; therefore, the more things are attenuated, the fitter they become for mixture.⁹²

Original marginal note PR-M-C154-01 1653, p. 111

Latin TRIA SVMMA MIXTORVM GENERA.

English THE THREE HIGHEST KINDS OF MIXED BODIES.

PR-C154 1653, p. 111

Latin CLIV. Triplex in mixtis existentiae gradus tria summa mixtorum genera exhibet, nempe Mineralium, Vegetabilium & Animalium. Mineralibus in Terra generari: Vegetabilibus in terrâ & aquâ radices agere: Animalibus in terrâ, aquâ & aëre nasci & vesci Naturae lege concessum est; omnibus tamen Aër praecipuus est vitae fomes & pabulum.

English 154. A threefold degree of existence in mixed bodies presents their three highest kinds: minerals, plants, and animals. Nature's law has granted minerals generation in earth; plants the striking of roots in earth and water; animals birth and feeding in earth, water, and air. Yet for all, air is the chief fuel and nourishment of life.

⁹² This is the author's conciliatory interpretation of Democritus within his own theory of mixture. His "atoms" and "actually indivisible" corpuscles should not be treated as a statement of modern atomic chemistry.

Original marginal note PR-M-C155-01 1653, p. 111

Latin MINERALIA.

English MINERALS.

PR-C155 1653, pp. 111, 112

Latin CLV. Mineralia simpliciter existere, nec vivere creduntur; licet Metalla ex mineralibus praecipua vitâ quodammodo praedita dici possint, tum quia in ipsorum generatione fit quasi coitus, & duplicis seminis, masculi & foeminei, sulfuris scilicet & mercurij commixtio, quae duo per longam & multiplicem circulationem rotata, purgata, sale Naturae condita & fermentata, ac in vapore subtilissimo perfectè mixta in limum & mollem massam, spiritu sulfuris mercurium paulatim congelante, formantur; moles autem illa tandem concrevit, & in corpus metallicum roboratur.

English 155. Minerals are believed simply to exist rather than to live, although metals, the foremost among minerals, may in some measure be called endowed with life. One reason is that in their generation there occurs a kind of intercourse and mingling of two seeds, male and female—sulphur and mercury. Revolved through long and manifold circulation, purified, seasoned and fermented with Nature's salt, and perfectly mixed in the subtlest vapour, those two are formed into mud and a soft mass, while the spirit of sulphur gradually congeals mercury. That mass at last solidifies and is strengthened into a metallic body.

PR-C156 1653, p. 112

Latin CLVI. Tum etiam quia metalla perfecta potissimum, vitae principium in se recondunt, Ignem videlicet insitum coelitus infusum, qui sub duro metalli cortice hebes factus, motus expers, & velut thesaurus incantatus latet, donec solutione philosophicâ & subtili artificis ingenio libertatem consequutus spiritum subtilem & caelestem animam per vegetationis motum potenter explicet, tandemque in summam artis & Naturae perfectionem exaltetur.

English 156. Another reason is that metals, especially perfect ones, conceal within themselves a principle of life: an implanted fire poured in from heaven. Dulled beneath the metal's hard rind, deprived of motion, it lies hidden like an enchanted treasure, until, gaining freedom through philosophical dissolution and the artist's subtle ingenuity, it powerfully unfolds a subtle spirit and a heavenly soul through the motion of growth, and is finally exalted to the highest perfection of art and Nature.⁹³

PR-C157 1653, p. 113

Latin CLVII. Vegetabilia autem animâ etiam seu spiritu vegetante potiuntur; motu vegetationis crescunt, & multiplicantur; sensu verò & motu animali carent. Eorum semina hermaphroditae sunt naturae, quodlibet enim granum singulare continet semen prolificum absque copulâ, aut duplicis seminis mixtione: licet in omni ferè Vegetabilium specie vtrumque sexum reperiri experientia doceat.

⁹³. This continues the reasons begun in canon 155 for attributing a kind of life to metals. "Growth" translates vegetatio, an activity later distinguished from animal sensation and movement.

English 157. Plants, however, also possess a soul or spirit of growth. Through the motion of growth they increase and multiply, but they lack sensation and animal movement. Their seeds are of a hermaphroditic nature, for each individual grain contains a fertile seed without intercourse or the mixture of two seeds, although experience teaches that both sexes are found in almost every kind of plant.⁹⁴

PR-C158 1653, pp. 113, 114

Latin CLVIII. Etiam in vegetabilium seminibus spiritum secretum Deus occultauit, generationis autorem specifico caractere insignitum, qui penitus caelestis est, ac aetheri luminis radius, corruptionis expers, in quo specifica forma conseruatur sub corpore cuiuslibet indiuidui, quo per corruptionem emollito & resolutio spiritus ille immortalis à viuifico & homogeneo Solis calore euocatus in stirpem nouam consurgit, ac in eam antiquae formam traducit.

English 158. In the seeds of plants, too, God has hidden a secret spirit, the author of generation, marked with a character proper to the species. It is wholly heavenly, a ray of ethereal light free from corruption, in which the specific form is preserved beneath the body of each individual. When that body has been softened and resolved through corruption, the immortal spirit, called forth by the sun's life-giving and homogeneous heat, rises into a new plant and transfers into it the form of the old.

Original marginal note PR-M-C159-01 1653, p. 114

Latin ANIMALIA.

English ANIMALS.

PR-C159 1653, p. 114

Latin CLIX. Animalia praeter existentiam & vegetandi facultatem animâ sensitiuâ praecellunt, quae in ipsis est principium motus & vitae. Animal itaque in summo rerum inferiorum gradu situm opus Naturae in regno Elementari complet, propriè uiuit, propriè gignit, in eo sexum vtrumque verè distinxit Natura, vt ex duobus tertium producatur, proles videlicet: Sic in perfectioribus perfectiùs elucescit Trinitatis symbolum.

English 159. Animals, beyond existence and the faculty of growth, excel through a sensitive soul, which is in them the principle of motion and life. Thus the animal, placed at the highest degree of lower things, completes Nature's work in the elemental kingdom: it lives in the proper sense and begets in the proper sense. In it Nature has truly distinguished the two sexes so that from two a third may be produced, namely offspring. Thus in more perfect things the symbol of the Trinity shines more perfectly.

⁹⁴. The source prints hermaphroditae. Its account of plant sexuality is historical and employs the author's own analogy between growth, seed, and sexual generation.

Original marginal note PR-M-C160-01 1653, p. 114

Latin HOMO MICROCOSMVS.

English THE HUMAN BEING AS MICROCOSM.

PR-C160 1653, pp. 114, 115

Latin CLX. Homo animalium & inferioris Mundi Princeps, vniuersae Naturae compendium habetur, anima quippe ipsius diuini luminis radius est immortalis: corpus est elegans Elementorum congeries: Interiores & imperceptibiles sensuum facultates, quibus quaecunque obuia deprehendit homo, penitus sunt caelestes, & velut astra rerum cognitiones influentia. Motus & animi perturbationes sunt veluti venti turbines, fulgurationes, tonitrua, & meteora, quae in aërea spirituum regione ebulliunt, cor & sanguinem commouent: Meritò itaque Microcosmus homo dictus est, & absoluta Vniuersi imaguncula.

English 160. The human being, prince of animals and of the lower world, is held to be a compendium of all Nature. His soul is an immortal ray of divine light; his body is an elegant assemblage of elements. The inward and imperceptible faculties of sense, through which he apprehends whatever meets him, are wholly heavenly, like stars pouring down knowledge of things. Movements and disturbances of the mind are like winds, whirlwinds, flashes, thunder, and meteors that boil up in the airy region of spirits and stir the heart and blood. The human being has therefore deservedly been called a microcosm and a complete little image of the universe.

Original marginal note PR-M-C161-01 1653, p. 115

Latin QVODLIBET MIXTVM EST MICROCOSMVS.

English EVERY MIXED BODY IS A MICROCOSM.

PR-C161 1653, p. 115

Latin CLXI. Non solum homo, verum etiam quodlibet animal, quaelibet planta Microcosmus est: Sic vnumquodque granum aut semen est Chaos, cui totius Mundi semina compendiosè insunt, ex quo exiguus suo tempore Mundus proditurus est.

English 161. Not only the human being, but every animal and every plant is a microcosm. Thus each grain or seed is a chaos containing, in compendium, the seeds of the whole world, from which a little world will come forth in its own time.

Original marginal note PR-M-C162-01 1653, p. 115

Latin MIXTA VIVENTIA CORPORE SPIRITV, ET ANIMA CONSTANT. CORPVS.

English LIVING MIXED BODIES CONSIST OF BODY, SPIRIT, AND SOUL. BODY.

PR-C162 1653, pp. 115, 116

Latin CLXII. Quaecunque perfectè Naturae mixta vitâ praedita corpore, spiritu & animâ constant: corpus ex limo fit cui omnia materialia ad generationem necessaria insunt; ex duobus enim maximè corporeis elementis, Terrâ scilicet & Aquâ corpora fieri rationi congruit.

English 162. All Nature's perfectly mixed bodies endowed with life consist of body, spirit, and soul. The body is made from mud, which contains all material things necessary for generation; for it accords with

reason that bodies should be made from the two most corporeal elements, earth and water.

Original marginal note PR-M-C163-01 1653, p. 116

Latin SPIRITVS.

English SPIRIT.

PR-C163 1653, p. 116

Latin CLXIII. Spiritus est purissimi aëris vel etiam aetheris portiuncula; inter animam & corpus media natura, vtriusque nodus & vinculum, Animae capsula & vehiculum subtilioribus & spiritualibus corporis partibus adhaerens.

English 163. Spirit is a small portion of the purest air, or even of aether: a nature intermediate between soul and body, the knot and bond of both, the soul's little case and vehicle, adhering to the subtler and spiritual parts of the body.

Original marginal note PR-M-C164-01 1653, p. 116

Latin ANIMA.

English SOUL.

PR-C164 1653, p. 116

Latin CLXIV. Anima siue forma mixti est Ignis naturae scintilla, lucisue caelestis radius imperceptibilis è potentiâ seminis seu materiae per motum generationis in actum productus, corpori elementari mediante spiritu alligatus, mixto dans esse suum speciale, proximum vitae principium & causa efficiens: Agit autem secundum materiae dispositionem & organorum vires.

English 164. The soul or form of a mixed body is a spark of Nature's fire, or an imperceptible ray of heavenly light, brought from the potentiality of seed or matter into actuality through the motion of generation. Bound to the elemental body through the mediation of spirit, it gives the mixed body its specific being and is the proximate principle and efficient cause of life. It acts, however, according to the disposition of matter and the powers of the organs.⁹⁵

PR-C165 1653, pp. 116, 117

Latin CLXV. Animæ siue formæ natura, quia tota lucida est, in animalibus præsertim, tantum ab opaca & terrestri corporum materia distat, vt ei penitus sit irrationalis, & citra omnem proportionem eâ nobilior, ac ideo strictissimo nexu, quali in operibus suis vtitur Natura, corpori alligari nequaquam posset propter disconuenientiam ac distantiam, nisi proprij & potentis cuiusdam medij virtute & lenocinio coniunctio & quasi ferruminatio fieret, propterea subtile medium inter vtrumque statuit prouidus rerum creator, spiritum scilicet æthereum, qui nascentis formæ susceptor ac retinaculum est, eiusque cum suo corpore vinculum vtriusque naturam participans. Hæc de cælesti rerum naturalium, non de supercælesti ac diuina hominis anima dicta censeantur, quam tamen etiam per media naturalia cum corpore humano consortium inire conditori eius placuit.

⁹⁵ "Soul or form" reflects the author's pairing of anima and forma. "Potentiality," "actuality," and "efficient cause" preserve the philosophical terms of his account; they are not supplied modern biological mechanisms.

English 165. The nature of the soul, or form, is wholly luminous, especially in animals. It therefore differs so greatly from the opaque, earthly matter of bodies that it has no common measure with that matter and is nobler beyond all proportion. Because of this disparity and distance, it could never be bound to the body by the closest bond, such as Nature uses in her works, unless their union, and as it were their soldering together, were achieved through the power and attraction of an appropriate and potent intermediary. The provident Creator of things therefore placed a subtle intermediary between them: the ethereal spirit, which receives and retains the form as it comes into being and binds it to its body, sharing in the nature of both. Understand these words as referring to the heavenly soul of natural things, rather than to the superheavenly and divine human soul. Nevertheless, it pleased its Creator that even this soul should enter into fellowship with the human body through natural intermediaries.⁹⁶

Original marginal note PR-M-C166-01 1653, p. 117

Latin FORMÆ.

English FORMS.

PR-C166 1653, pp. 117, 118

Latin CLXVI. Formæ specificæ Idealis Archetypi caractere à die antiquæ creationis in primis indiuiduis signatæ sunt, diuinumque illud & indelebile signaculum ad posteros ope generationis traduci iussit creator, vt per successiuam indiuiduorum surrogationem immortalitatis beneficium speciebus largiretur.

English 166. The forms belonging to each species were marked in the first individuals with the character of the ideal Archetype from the day of the ancient Creation. The Creator ordained that this divine and indelible seal should be conveyed to their descendants through generation, so that, through the successive replacement of individuals, he might bestow the gift of immortality upon species.

PR-C167 1653, p. 118

Latin CLXVII. Formas in materia alias sibi similes generare non est existimandum; generare enim corporum proprium est, sed organa sua harmonicè mouendo per ipsa materiam seminalem ad generationem disponere, eique lucis radium, siue arcanam vitæ scintillam, quasi thesaurum includere formæ ius & officium est, characteremque suum specificum spiritui illi viuifico in semine occultato imprimere, qui in opere generationis calore pullifico & stato tempore in animam se explicat, siue vegetabilem siue animale, ita vt, qui spiritus secretus & formalis fuerat in semine, forma fiat in mixto. Sic occultum in Naturæ sinu fit manifestum, & de potentia in actum educitur.

English 167. We should not suppose that forms generate other forms like themselves in matter, for generation belongs properly to bodies. The right and office of form is rather to move its organs harmoniously, and

⁹⁶ Irrationalis here describes a lack of common ratio or proportion, rather than a soul without reason. The canon explicitly distinguishes the natural soul or form from the divine human soul; it should not be made to assert that these are identical.

through them dispose the seminal matter for generation; to enclose in it a ray of light, or hidden spark of life, as though enclosing a treasure; and to impress its own specific character upon the life-giving spirit concealed in the seed. In the work of generation, through brooding heat and at the appointed time, this spirit unfolds into a soul, whether plant or animal. Thus what was a hidden, formative spirit in the seed becomes form in the mixed body. In this way what is hidden in Nature's bosom becomes manifest and is brought from potentiality into actuality.⁹⁷

PR-C168 1653, p. 119

Latin CLXVIII. Forma à sola seminis aut materiæ potentia & virtute non exit, quia rerum genesi cælestes virtutes influunt, quæ materiæ vires augent, multiplicant, & Naturæ quasi parturienti opem ferunt: Spiritui quoque formali & seminali materiæ insito, cuius etiam cælestis est origo, se insinuant, admiscent, & vires auxiliares conferunt.

English 168. Form does not emerge from the potentiality and power of the seed or matter alone. Heavenly powers flow into the coming-to-be of things, increasing and multiplying matter's strength and bringing aid to Nature as though she were in labour. They also enter and mingle with the formative and seminal spirit implanted in matter, whose origin is likewise heavenly, and lend it their assisting powers.

PR-C169 1653, p. 119

Latin CLXIX. Non solum corporea elementa, verum etiam omnes vniuersæ Naturæ virtutes & potestates in cuiuslibet mixti generatione concurrunt, & de suo nonnihil largiuntur. Ita partes Vniuersi deuinciuntur, vt in vitam vnanimis conspirent; & mutuo coëant amore.

English 169. Not only the bodily elements but also all the powers and capacities of universal Nature come together in the generation of every mixed body, each bestowing something of its own. Thus the parts of the Universe are bound together, so that they breathe together with one purpose towards life and unite in mutual love.

PR-C170 1653, pp. 119, 120

Latin CLXX. Naturales rerum formæ licet potentiâ seminibus insint, de inferiorum elementorum substantiâ neque sunt, neque ab illis generatæ; à nobiliori enim fonte deriuant; origo ipsarum cælestis est, pater quippe earum est Sol, natura ætherea est vinculum quo illæ materiæ alligantur.

English 170. Although the natural forms of things are present potentially in seeds, they neither consist of the substance of the lower elements nor are generated by them. They derive from a nobler source: their origin is heavenly, for the Sun is their father, and ethereal nature is the bond by which they are bound to matter.

⁹⁷. Formalis is rendered 'formative' where it names the spirit's power to become the form of a living body. Vegetabilis denotes the life of plants, not a modern taxonomic division. Pullificus evokes the heat that hatches or brings forth offspring.

PR-C171 1653, pp. 120, 121

Latin CLXXI. Specificæ mixtorum formæ obscuram quandam originis suæ notitiam in se recondunt, propriâque vi & occulto motu ad suæ scaturiginis altitudinem, aquarum more, euehuntur; Sic anima humana quia à diuino luminis increati fonte deriuata est, in eundem mentis acumine & contemplatione reflectitur. Cæterorum animalium formæ, quia ex arcanis Cœli Solisque thesauris egressæ sunt, eò vsque naturæ instinctu & veluti reminiscentiâ quadam imperfectâ regrediuntur; Vnde frequentia animantium circa Solis motum & cœli mutationes vaticinia obseruare licet. Vegetabilium autem formæ quia aëreæ plurimum sunt, & ab infimâ aëris nostri regione inspiratæ, ideò vltra eam vires facultatésque suas eliminare & extendere eis non licet; caput sursum & in aërem, quasi in patriam reuersuræ, pro viribus attollunt; sed angustos corporum suorum fines præterire prohibentur, sensu motûque animali carentes, quia virtutis Solaris tantillum illis inest, vt supra vegetationis motum non sufficiat; ordine enim creationis vegetabilia Solem præcesserunt, propterea ei sua natalia & antiqua vitæ primordia ex æquo ac animalia non debent, sed aëri luminoso tanquam proximiori agenti accepta referunt: illorum quippe materiæ dispositio sublimiori formæ sustinendæ impar Naturæ decreto iudicata fuit.

English 171. The specific forms of mixed bodies conceal within themselves a dim knowledge of their origin. By their own power and a hidden movement, they rise like waters to the height of their source. Thus the human soul, because it derives from the divine source of uncreated light, turns back towards that source through the mind's penetration and contemplation. The forms of other animals, because they came forth from the hidden treasures of Heaven and the Sun, return that far through natural instinct and a kind of imperfect recollection. Hence we may observe the frequent predictions made by living creatures concerning the Sun's movement and changes in the heavens. The forms of plants, however, are mostly airy and breathed into them from the lowest region of our air. They therefore cannot carry or extend their powers and faculties beyond it. They raise their heads upwards into the air as far as they can, as though about to return to their homeland, but are prevented from passing beyond the narrow bounds of their bodies. They lack animal sensation and movement, because so little solar power is present in them that it suffices only for the movement of growth. In the order of Creation, plants preceded the Sun. They therefore do not owe their birth and the ancient beginnings of their life to it in the same measure as animals, but acknowledge luminous air as their more immediate agent. For Nature's decree judged the disposition of their matter unequal to sustaining a higher form.⁹⁸

PR-C172 1653, pp. 121, 122

Latin CLXXII. Saxa verò & lapides, quia non tam ex verâ elementorum mixtione generantur, quàm ex Terræ & Aquæ concursu per exteriorem caloris & frigoris vim, quasi opus terreum & fictile, decoquantur, propterea omninò stupescunt, à tenebosâ frigentique terræ & aquæ naturâ formam inualidam mutuati.

⁹⁸ The contrast between plants created before the Sun and animals created afterwards follows the author's reading of the Genesis creation sequence. The claims about animal prediction and degrees of form belong to his natural philosophy.

English 172. Rocks and stones are not so much generated by a true mixing of the elements as cooked, like an earthen object or piece of pottery, from the coming together of Earth and Water through the external force of heat and cold. They are therefore wholly insensible, having borrowed a feeble form from the dark, cold nature of earth and water.

PR-C173 1653, p. 122

Latin CLXXIII. De pretiosis lapillis & gemmis aliter sentiendum est; formas enim suas à limpidissimis Cœli & Solis fontibus hauriunt; ipsorumque corpora sunt purissimæ roris exuberati guttulæ cælestibus influentijs imprægnatæ, ac veluti concretæ Cœli lacrymæ; vnde plurimas sublimesque in se virtutes possident.

English 173. We must think differently about precious stones and gems. They draw their forms from the clearest sources of Heaven and the Sun. Their bodies are the purest droplets of enriched dew, impregnated with heavenly influences, like congealed tears of Heaven. Hence they possess within themselves many exalted powers.

PR-C174 1653, pp. 122, 123

Latin CLXXIV. At metallorum materia, quia aquea & terrestris est, omniumque maximè compacta, propter optimam & subtilissimam grauium elementorum mixtionem, ideò stupida & summè ponderosa, nulliusque motus ex se capax: verùm quoniam in terreis aut saxeis matricibus, quasi alembicis miro Naturæ artificio sublimatur & mundatur, eiusque mixtio in vapore tenuissimo per reiteratas distillationes ita completur, vt illi, propter immensam subtilitatem & exuberationem, Solis corporumque cælestium opes se insinuent & admisceant, maximè in perfectorum metallorum generatione; eâ de causâ metalla licet sua corpora ex aqua & terra traxerint, Natura tamen figuli vice fingendo corpora metallorum præsertim perfectorum tam ingeniosè elaborat, vt præstantissimâ formâ digna, ea cælestibus Numinibus informanda exhibeat. Longissimi laboris opus est, sed absolutum, & ad supremas Naturæ vires excultum; in quo cœlum & terra magis coire, quàm consentire videntur. At formales metallorum spiritus, quia præduro libro quasi carcere constringuntur, immoti hærent, donec igne philosophorum vinculis soluti cœlesti suo semine in materia sua haud degenerem Solis filium, ac tandem quintam mirabilis virtutis essentiam, cœlo apud nos peregrinante, producant.

English 174. The matter of metals, being watery and earthly and the most closely compacted of all through the excellent and extremely subtle mixing of the heavy elements, is insensible, exceedingly weighty and incapable of any movement of its own. Yet within earthen or stony wombs, as though in alembics, Nature's wonderful art sublimes and purifies it. Through repeated distillations its mixing is so perfected in an exceedingly fine vapour that, because of its immense subtlety and enrichment, the resources of the Sun and heavenly bodies enter and mingle with it, especially in the generation of perfect metals. For this reason, although metals have drawn their bodies from water and earth, Nature works so skilfully as a potter in shaping the bodies of metals, especially the perfect ones, that she presents them to the heavenly powers as worthy of the most excellent form, to be informed by them. This is a work of very long labour, yet finished and cultivated to the

utmost of Nature's powers. In it Heaven and Earth seem to unite rather than merely agree. The formative spirits of metals, however, are confined as though in a prison within an exceedingly hard rind and remain motionless until the philosophers' fire frees them from their bonds. Then, through their heavenly seed in their own matter, they bring forth a worthy son of the Sun and at last a fifth essence of wonderful power, with Heaven dwelling among us as a stranger.⁹⁹

PR-C175 1653, pp. 123, 124

Latin CLXXV. *Supremi conditoris decreto cautum est, ne nobilior natura in ignobiliorem, aut præstantior in deteriore degeneret, & quasi abiurato natalium gentiliumque iure, in seruilem mancipij sortem transeat. Copulantur quidem superiora cum inferioribus, & potentiora imbecillioribus se communicant, vt ea informent ac perficiant per spiritus suos emissarios, qui generi suo & natalibus nihil propterea derogant; nec dum rerum seminibus aut etiam mixtis se insinuant, iugo seruili submittuntur, sed nouam dignitatem ac imperij ius assequuntur; quodlibet enim mixtum cuiuscunque generis sit, Imperium est, imò Mundus integer; cui spiritualis sua forma præficitur; cuius munus est Naturæ organis & facultatibus, toti denique Mundo suo dominari: Sic quæ in vasto Naturæ vniuersæ pelago indistincta & inanis antè fluctuabat, ad Imperium nunc vocata mittitur.*

English 175. The supreme Creator's decree provides that a nobler nature should not degenerate into a baser one, nor a more excellent into a worse, as though renouncing its birthright and lineage to pass into the servile condition of a slave. Higher things do indeed unite with lower, and more powerful things communicate themselves to weaker ones, so as to inform and perfect them through spirits sent out from themselves. These spirits thereby lose nothing of their kind or birth. Nor, when they enter the seeds of things or even mixed bodies, do they submit to a servile yoke. Instead they acquire a new dignity and right of rule. Every mixed body, of whatever kind, is an empire—indeed, an entire World—over which its spiritual form is set. The form's office is to rule Nature's organs and faculties and, in a word, its whole World. Thus what previously floated undifferentiated and without occupation in the vast sea of universal Nature is now called and dispatched to rule.

PR-C176 1653, pp. 124, 125

Latin CLXXVI. *Actus formalis materiæ primæ, tum etiam elementorum nihil aliud præter ipsa Naturæ principia informat: Forma itaque specifica mixtum perfectum constituit; neque plures formæ in eo existimandæ sunt, cum ipsa elementa sua mixtione corporis effingendi tantum, non informandi prouinciam suscipiant.*

English 176. The formal actuality of first matter, and likewise of the elements, informs nothing beyond those very principles of Nature. A specific form therefore constitutes a perfect mixed body. We should not suppose that there are several forms within it, since the elements

⁹⁹. Liber here is the enclosing rind or bark, used metaphorically for the metal's hard body. The closing 'Heaven dwelling among us as a stranger' is retained as an image, rather than converted into a laboratory identification. The fifth essence is the author's quinta essentia.

themselves, through their mixing, undertake only the task of shaping its body, not of informing it.¹⁰⁰

Original marginal note PR-M-C177-01 1653, p. 125

Latin A FORMA VIRTUS MVLTIPPLICATIVA DEFLVIT.

English THE POWER OF MULTIPLICATION FLOWS FROM FORM.

PR-C177 1653, pp. 125, 126, 127

Latin CLXXVII. Virtutem multiplicatiuam, quæ rerum seminibus inest, non à materia elementari, sed à forma cælesti, tanquam causa efficiente fluere verisimile est: multiplicatio enim est lucis actio maximè propria; ab vno quippe lucis radio penè infiniti effunduntur, ac in infinitum multiplicantur; vnde fit, vt Sol, qui fons immortalis luminis est, idem etiam sit in natura prima causa efficiens generationis & multiplicationis. Quamlibet itaque formam naturalem multiplicandi vim à luce cælesti, cuius radius est, acceptam habere validissimum argumentum est, quod ipsa gentilitijs dotibus instructa, luminosa sit, ergo multiplicans: Luminosa, quia sensituiam & imaginatiuam facultatem in animalibus splendore suo irradiat, ita vt ex duplici illa facultate duplex fiat rerum apprehensio, & cognitio, exterior per sensus, & interior per Imaginatiuam; omnis autem cognitio lumen est, sicut ignorantia tenebræ; illuminatio enim quædam & luciditas suboritur, cum rerum imagines apprehenduntur, & quæ ignota in tenebris latebant, per notitiæ lumen reuelantur; solo etenim luminis beneficio res obscuræ patefiunt. Homini tertium lumen Deus addidit, Intellectum videlicet, cuius ope rerum cognitionem per causas longè perfectius adipiscitur. Hæc omnia operatione luminis & perspicuitatis ab anima lucidâ effluentis producuntur. Postrema hæc luminis actio soli homini conuenit, duæ anteriores illi cum brutis communes sunt, quorum animæ lucis etiam cælestis sunt participes. Vim ergo multiplicatiuam in animantium, imò & vegetabilium indiuiduis ab Animâ lumen multiplicante procedere ratio conuincit, & quosdam eius radios cum spiritu æthereo semini includi, ac in eo occultari; donec tandem oriente vitæ Sole manifestentur.

English 177. It is probable that the power of multiplication present in the seeds of things flows from heavenly form as its efficient cause, rather than from elemental matter. For multiplication is an activity especially proper to light: from one ray of light almost infinitely many are poured out and multiplied without end. Hence the Sun, the immortal source of light, is also Nature's first efficient cause of generation and multiplication. A very strong argument that every natural form receives its power of multiplying from heavenly light, of which it is a ray, is that form, endowed with its ancestral gifts, is luminous and therefore multiplying. It is luminous because its brilliance illuminates the sensitive and imaginative faculties in animals. From these two faculties arises a twofold apprehension and knowledge of things: outward through the senses, inward through imagination. All knowledge is light, just as ignorance is darkness. A certain illumination and clarity arise when images of things are apprehended, and what lay unknown in darkness is revealed through the light of acquaintance. For obscure things are disclosed by the gift of light alone. To the human being God

¹⁰⁰. To inform means to give form, rather than to supply information. The canon distinguishes the elements' constitutive work from the single specific form of the completed mixed body.

added a third light, namely intellect, through whose aid a far more perfect knowledge of things through their causes is gained. All these effects are produced by the action of light and transparency flowing from the luminous soul. This last activity of light belongs to human beings alone; the preceding two are shared with the other animals, whose souls also participate in heavenly light. Reason therefore establishes that the power of multiplication in individual animals, and indeed plants, proceeds from the soul as it multiplies light. Certain rays of that soul are enclosed in the seed together with the ethereal spirit and hidden there until, with the rising of the Sun of life, they are at last made manifest.¹⁰¹

Original marginal note PR-M-C178-01 1653, p. 127

Latin LVX ET TENEBRÆ VITÆ ET MORTIS SVNT PRINCIPIA.

English LIGHT AND DARKNESS ARE THE PRINCIPLES OF LIFE AND DEATH.

PR-C178 1653, p. 127

Latin CLXXVIII. Lux & tenebræ vitæ & mortis sunt principia; mixtorum enim formæ lucis radij sunt, corpora autem tenebrarum abyssus: Per lucem omnia viuunt, imò omnis vita lux est: quæ autem viuere desinunt, lumine priuantur, in orcum & tenebras antiquas rapiuntur, in quibus latebant & occultabantur, antequam à fatali diuinæ prædestinationis rotâ in lucem traherentur.

English 178. Light and darkness are the principles of life and death. For the forms of mixed bodies are rays of light, while their bodies are an abyss of darkness. Through light all things live; indeed, all life is light. Things that cease to live are deprived of light and swept into the underworld and ancient darkness in which they lay hidden and concealed before the fated wheel of divine predestination drew them into the light.

Original marginal note PR-M-C179-01 1653, p. 127

Latin ANIMALIVM ET VEGETABILIVM FORMÆ SVNT RATIONALES.

English THE FORMS OF ANIMALS AND PLANTS ARE RATIONAL.

PR-C179 1653, pp. 127, 128

Latin CLXXIX. Specificæ animalium, tum etiam vegetabilium formæ rationales sunt, non quidem humano more, sed sibi proprio, & secundum naturæ suæ vires & characterem: Habent enim illæ sua dona vitalia, suas cognitiones & scientias & suas prædestinationes. Dotes vegetabilium vitales sunt, studium sibi simile generandi, virtutes multiplicatiuæ, nutritiuæ, augmentatiuæ, motiuæ, sensitiuæ, & cæteræ similes. Notiones autem earum scientiæ deprehenduntur in solerti temporum prænotione; strictâ mutationum tanquam Naturæ legum obseruatione; in consentaneâ motui Solis Cœlique varietate; in radicibus figendis, caule erigendo, ramis expandendis, folijs & floribus explicandis, fructibus efformandis, pingendis ac maturandis, in Elementis in alimentum transmutandis, in viuificâ virtute seminibus inspirandâ; denique in multiplici naturæ suæ partiumque discrimine secundum Cœli solique vota statuendo.

¹⁰¹. Multiplication carries the argument from the spreading of light to the reproduction of living things. The comparison belongs to the author's account of form and seed, rather than to a modern account of heredity. Sensation, imagination and intellect are expressly distinguished.

English 179. The specific forms of animals, and also of plants, are rational: not in the human manner, but in their own, according to the powers and character of their nature. For they have their own vital gifts, their own kinds of apprehension and knowledge, and their own predestined courses. The vital endowments of plants include the striving to generate their like, powers of multiplication, nourishment, growth, movement and sensation, and others of this kind. Signs of their knowledge are perceived in their skilful foreknowledge of seasons; their strict observance of changes as laws of Nature; their variation in accord with the movement of the Sun and Heaven; their fixing of roots, raising of stems, spreading of branches, unfolding of leaves and flowers, and shaping, colouring and ripening of fruits; their transformation of the Elements into nourishment; their breathing of life-giving power into seeds; and, finally, their establishment of the manifold distinctions of their nature and parts according to the wishes of Heaven and the soil.¹⁰²

PR-C180 1653, pp. 128, 129

Latin CLXXX. Brutorum autem formas scientiâ præditas satis manifestant eorum statis temporibus copulationes & generationes; iustæ in partibus indiuiduorum formandis & nutriendis distributiones; distincta partium illarum citra confusionem officia; varij animorum motus, sagaces sensuum facultates; spiritus secreti membra, velut organa, harmonicè mouentes; ad disciplinam aptitudo; erga dominos obsequium & reuerentia; instinctus futura præsagiens; in plerisque religiosus cultus; ars in victu procurando; in lustris eligendis: tutelâ parandâ, periculisque vitandis prudentia; cætera denique scientiæ & rationi accommodata, quæ illis Natura largitur: Natura autem in quolibet indiuiduo nihil aliud est, quàm ipsa forma, quæ principium est motus, quietis, actionis & vitæ eius in quo est, cui cura, directio & conseruatio corporis sui, non secus ac nautæ commissæ puppis, demandata est.

English 180. That the forms of the other animals are endowed with knowledge is sufficiently shown by their mating and generation at appointed seasons; the due distributions involved in shaping and nourishing the parts of individuals; the distinct functions of those parts without confusion; the varied movements of their affections; their keen sensory faculties; the hidden spirits moving their limbs harmoniously as instruments; their capacity for training; their obedience and respect towards their masters; their instinct foretelling what is to come; religious observance in many of them; skill in obtaining food; and prudence in choosing dens, securing protection and avoiding dangers. There are, in a word, all the things suited to knowledge and reason that Nature bestows upon them. In any individual, however, Nature is nothing other than its form, the principle of movement, rest, action and life in the thing in which it is present. To it are entrusted the care, direction and preservation of its body, just as a ship is entrusted to a sailor.¹⁰³

¹⁰². The author extends 'rational' to the ordered activity of plant and animal forms, while expressly distinguishing it from human reason. His attribution of a sensitive power to plants should be read alongside canon 171, which denies them animal sensation and movement.

PR-C181 1653, pp. 129, 130

Latin CLXXXI. Prædestinata autem rebus nascituris tempora quis inficiabitur, nisi qui naturam Vniuersi confusam & inordinatam sibi finget? illa quippe omnia è sinu suo ex ordine certo & præstituto pandit; ordinis enim lex & productionum tempora ab authore suo ei præscripta fuere; imprægnatio, partus, vita & mors sua tempora habent, & rata temporum spatia complent: quæ hoc vel altero anno in lucem orta, aut è luce sublata sunt, ita fore præordinatum erat; quæ Natura Dei vicaria in regno vniuersi, spiritu diuino monente, præsciuit, vt ministerio suo ita fieri curaret; nec illa casu contingunt, sed causam quandam necessariam, licet nobis occultam, habent: summo tamen rerum moderatore necessitatis legem non patiente, sed statuente, omniaque ad nutum immutante; qui de rebus omnibus etiam minimis decernit; cuius decretum inordinatum aut incertum nullum est: Ordo itaque, qui per rerum & temporum seriem & successionem labitur, ex diuinis decretis necessitatis legem habet.

English 181. Who will deny that times are predestined for things to be born, unless he imagines the nature of the Universe to be confused and disordered? Nature brings forth everything from her bosom in a definite, appointed order, for her Author has prescribed to her the law of order and the times of production. Conception, birth, life and death have their own times and fulfil fixed spans. Whatever came into the light or was taken out of it in this year or another had been ordained to do so. Nature, God's deputy in the kingdom of the Universe, foreknew these things at the prompting of the divine Spirit, so that she might bring them about through her ministry. They do not happen by chance, but have a necessary cause, though hidden from us. Yet the supreme Governor of things is not subject to the law of necessity: he establishes it and changes everything at his will. He decrees concerning all things, even the smallest, and none of his decrees is disordered or uncertain. Thus the order that runs through the series and succession of things and times has its law of necessity from divine decrees.¹⁰⁴

Original marginal note PR-M-C182-01 1653, p. 130

Latin RERVM ORTVS ET INTERITVS

English THE RISE AND PASSING OF THINGS

PR-C182 1653, pp. 130, 131

Latin CLXXXII. Quemadmodum chao singulæ vniuersi partes secundum materiam potentiâ inerant, quæ actu postea separatæ & productæ sunt: Ita singula rerum indiuidua vniuerso Mundo materiali potentiâ insunt, antequam in lucem exeant, indè tempore & ordine suo fluxura & aliquando actu emersura: Vbi autem deficiunt, in vniuersam molem, à quâ prodierant, tanquam flumina in mare relabuntur, quâlibet nempe naturâ regionem suam repetente, iterum atque iterum in Naturæ officinam regrediendâ, & sub eius incudem ad opus nouum remittendâ. Forsan ea fuit dudum explosa, quia non intellecta, Pythagoreorum metempsychosis.

¹⁰³. Religiosus cultus literally attributes religious observance or reverential behaviour to some animals. The translation preserves the claim without treating it as an established description of animal religion.

¹⁰⁴. The author reserves divine freedom while asserting necessity within the order of created Nature. His use of predestination here concerns the times of natural events and is not developed into a separate account of human salvation.

English 182. Just as the individual parts of the Universe were potentially present in chaos as matter, and were afterwards actually separated and brought forth, so the individual beings of things are potentially present in the whole material World before they come into the light. From it they are to flow in their own time and order and eventually emerge into actuality. When they perish, however, they fall back into the universal mass from which they came, like rivers into the sea. Each nature returns to its own region, to enter Nature's workshop again and again and be sent back beneath her anvil for new work. Perhaps this was the Pythagoreans' transmigration of souls, rejected long ago because it was not understood.¹⁰⁵

Original marginal note PR-M-C183-01 1653, p. 131

Latin CORRVPATIO.

English CORRUPTION.

PR-C183 1653, pp. 131, 132

Latin CLXXXIII. Soluta mixto, & vitio corruptibilium Elementorum in ruinam lapso, in patriam recedit Natura etherea, fitque in cadauere perturbatio & confusio Elementorum suo rectore amisso: tunc dominatur corruptio, mors & tenebræ in materiâ desolatâ, donec ipsa per corruptionem ad nouam generationem apta fiat, & secundum eius dispositionem virtus cælestis denuò influat, ac errantia colligens & miscens elementa nouæ formæ lumen debile accendat, quod tandem roboratis sensim Elementorum viribus elucescit, & recens mixtum absoluit.

English 183. When a mixed body is dissolved and falls into ruin through the fault of its corruptible Elements, ethereal Nature withdraws to her homeland. Deprived of their ruler, the Elements become disturbed and confused in the dead body. Corruption, death and darkness then rule in the deserted matter, until corruption makes it fit for a new generation. According to its disposition, heavenly power flows into it anew and, gathering and mixing the wandering elements, kindles the feeble light of a new form. As the strength of the Elements is gradually reinforced, this light finally shines forth and completes a new mixed body.

Original marginal note PR-M-C184-01 1653, p. 132

Latin GENERATIO.

English GENERATION.

PR-C184 1653, p. 132

Latin CLXXXIV. In corruptione autem generatiuâ, quæ mediocris est, fitque cum conseruatione formæ specificæ semini seu materiæ potentialiter inhærentis, non recedit sublimis ille spiritus innatus; qui cum debilis sit ac adhuc impotens calore externo excitatus moueri, simulque materiam mouere incipit, donec tandem vires potentiùs exerat, & perfectè mixtum informat.

¹⁰⁵. Metempsychosis is retained in its usual sense of transmigration of souls, but the proposal here is explicitly tentative and follows an account of materials returning to Nature's workshop. It should not be presented as a verified statement of Pythagorean teaching.

English 184. In generative corruption, however, which is moderate and occurs while preserving the specific form potentially inherent in the seed or matter, that sublime inborn spirit does not withdraw. Though weak and as yet powerless, it is awakened by external heat and begins to move and at the same time to move the matter, until at last it exercises its powers more strongly and perfectly informs the mixed body.

PR-C185 1653, pp. 132, 133

Latin CLXXXV. Naturæ elementa, tum etiam alimenta generationem & nutritionem, quarum eadem ferè ratio est, à putrefactione inchoant; vtraque enim putrefieri, & per putrefactionem in humidam quasi in primam materiam resolui necesse est: tunc fit chaos, cui omnia generationi aut nutritioni necessaria insunt. Sic cuiusvis Microcosmi generatio & reparatio Macrocosmi creationi & conseruationi analogicè respondent.

English 185. Nature's elements, and likewise food, begin generation and nourishment—which follow almost the same pattern—with putrefaction. Both must putrefy and through putrefaction be resolved into moist matter, as though into first matter. There then arises a chaos containing everything necessary for generation or nourishment. Thus the generation and restoration of every Microcosm correspond by analogy to the creation and preservation of the Macrocosm.

Original marginal note PR-M-C186-01 1653, p. 133

Latin RERVM SEMINA.

English THE SEEDS OF THINGS.

PR-C186 1653, pp. 133, 134

Latin CLXXXVI. Sensibilia rerum semina, & quæ ex illis nascuntur mixta triplici naturâ constant, cælesti, elementari & A Cælo illis radius lucis solaris inest omni æthereâ virtute indutus, actionis, motus, generationis & vitæ principium, potestate forma; cuius beneficio semina constantiam astrorum rediuiuâ suâ virtute imitantur, & veluti immortales cælestium plantarum surculi naturæ corruptibili, quasi trunco extraneo insiti æternâ quadam successione illam à morte vindicant. Portio elementaris corporea & sensibilis, quæ in animalibus sperma dicitur, est seminis custos & capsula, quæ putrescit, & corrumpitur; semen autem inuisibile generat. Humor radicalis, siue fermentum Naturæ, cui spiritus inhæret, est media substantia cælestem & elementarem copulans; ex parte materiali elementis; ex parte spirituali formæ respondens; Auroræ similis, quæ tenebricosâ luce perfusa extrema lucis & vmbraë connectit, neutra vtriusque mixturam exhibens.

English 186. The perceptible seeds of things, and the mixed bodies born from them, consist of a threefold nature: heavenly, elemental, and [an intermediary]. From Heaven they have within them a ray of sunlight clothed in every ethereal power: the principle of action, movement, generation and life, and form in potentiality. Through its benefit seeds imitate the constancy of the stars by their reviving power. Like immortal shoots of heavenly plants grafted upon corruptible nature as upon a foreign stock, they rescue it from death through a kind of everlasting succession. The elemental portion, bodily and perceptible,

which in animals is called sperm, is the seed's guardian and capsule. This portion putrefies and decays, while the invisible seed generates. Radical moisture, or Nature's ferment, to which the spirit adheres, is an intermediate substance joining the heavenly and elemental natures. On its material side it corresponds to the elements, and on its spiritual side to form. It resembles dawn, which, suffused with dusky light, joins the extremes of light and shadow and, being neither, displays a mixture of both.¹⁰⁶

Original marginal note PR-M-C187-01 1653, p. 134

Latin VITA ET MORS.

English LIFE AND DEATH.

PR-C187 1653, p. 134

Latin CLXXXVII. Vita est actus harmonicus ex copulâ materiæ & formæ procedens, esse perfectum indiuidui constituens. Mors autem est terminus siue finis illius actus, materiæ & formæ separatio, & mixti resolutio.

English 187. Life is a harmonious actuality proceeding from the union of matter and form and constituting the perfected being of an individual. Death is the limit or end of that actuality, the separation of matter and form and the dissolution of the mixed body.

Original marginal note PR-M-C188-01 1653, p. 134

Latin SPIRITVALES NATVRÆ.

English SPIRITUAL NATURES.

PR-C188 1653, pp. 134, 135

Latin CLXXXVIII. Mixta generationis & vitæ suæ radices in cælo habent, vnde effluerunt eorum causæ & principia, vnde etiam tanquam arbores inuersæ succum & alimentum trahunt. Neque meruit intellectus sensuum autoritati mancipari, qui nihil nisi sensibilia iudicant: Mens autem extra sensuum pomæria longè porrigitur, & altius naturæ fines perscrutatur. Corpora sunt veluti cortices, crassiores elementorum partes, & rerum accidentia, sub quibus meræ & efficaces essentiæ, quæ sensuum censuram non agnoscunt, occultantur; quâsque densâ quâdam nube indui necesse fuit, vt à cælesti in terrestrem hanc corporeorum prouinciam migrarent. Illud spiritualium cum corporeis matrimonium summus Naturæ Creator sanxit, quò spiritus eius increatus spiritualibus & simplicioribus naturis primò se communicans per illas, tanquam per media in corporeas descenderet, & sic gradatim ac ex ordine per omnes Mundi plagas, per vniuersa & singula se effundens integrum opus diuinitatis præsentia sustineret: tum etiam vt à sensibili creaturâ per corporeas & sensibiles imagines insensibilis creator deprehenderetur.

English 188. Mixed bodies have the roots of their generation and life in Heaven, from which their causes and principles flowed. From there too, like inverted trees, they draw sap and nourishment. The intellect does not deserve to be enslaved to the authority of the senses, which judge

¹⁰⁶. After 'heavenly, elemental and', the printed Latin leaves the third item of its list unstated and begins 'From Heaven'. The English supplies 'an intermediary' in brackets from the canon's subsequent account of radical moisture; the source text preserves the incomplete construction. Radical moisture and ferment are historical explanatory principles here, not names for an identified modern substance.

only perceptible things. The mind reaches far beyond the boundaries of the senses and searches more deeply into Nature's territories. Bodies are like rinds: the coarser parts of the elements and the accidents of things. Beneath them lie hidden pure and effective essences that do not acknowledge the senses as their judge. These essences had to be clothed in a kind of dense cloud to migrate from the heavenly realm into this earthly province of bodily things. The supreme Creator of Nature ordained this marriage of spiritual and bodily things, so that his uncreated Spirit, first communicating itself to spiritual and simpler natures, might descend through them as intermediaries into bodily natures. Thus, pouring itself out by degrees and in order through every region of the World, through all things together and each individually, it might sustain the whole work by the presence of divinity. It was also so that the imperceptible Creator might be apprehended by the perceptible creature through bodily and perceptible images.¹⁰⁷

PR-C189 1653, pp. 135, 136

Latin CLXXXIX. Quaecunque viuunt, siue vegetabilia, siue animalia, cibo suo indigent, vt naturales, qui continuò per poros effluunt, spiritus restaurentur, & Naturæ dispendium reparetur: Ex succulentiori enim cibi substantia fit succus nutriens, quo totius corporis partes humorésque resarciuntur: ex puriori autem parte humorum, sanguinis præsertim, æthereo influxu illi se per respirationem admiscente, humidum radicale renouatur & reficitur.

English 189. All living things, whether plants or animals, need their own food, so that the natural spirits continually flowing out through their pores may be restored and Nature's expenditure made good. From the more succulent substance of food comes the nourishing juice by which the parts and humours of the whole body are replenished. From the purer portion of the humours, especially the blood, radical moisture is renewed and restored as an ethereal influx mingles with it through respiration.

Original marginal note PR-M-C190-01 1653, p. 136

Latin DVPLEX ALIMENTVM, CORPOREVM ET SPIRITVALE.

English TWOFOLD NOURISHMENT, BODILY AND SPIRITUAL.

Original marginal note PR-M-C190-02 1653, p. 136

Latin * ca 33. Deuter.

English * Deuteronomy, chapter 33.

PR-C190 1653, p. 136

Latin CXC. Duplici alimento viuientia nutriuntur, corporeo nempe, ac spirituali, sine hoc autem parum illud ad vitam confert: Vegetabilia enim manifestè accrementi sui & nutritionis beneficium non minùs aëri & cælo, quàm terræ acceptum debent; imò & ipsa terra nisi æthereo lacte potaretur, eius vbera flaccescerent; quod sacer arcanorum naturæ Mystes Iosepho benedicens satis expressit; * De benedictione

¹⁰⁷. Accidents are the qualities or features that do not constitute an essence. The inverted tree image places the source of natural life above its bodily manifestation; the same canon treats the visible creation as an image through which its invisible Creator may be known.

Domini terra eius; de pomis cœli & rore atque abyssio subiacente; de pomis fructuum Solis & Lunæ; de vertice antiquorum montium; de pomis collium æternorum &c. quo sermone mystico terræ vbertatem à Solis, Lunæ & largo cœlestium influxu pollicetur Propheta.

English 190. Living things are sustained by twofold nourishment, bodily and spiritual. Without the latter, the former contributes little to life. Plants plainly owe the benefit of their growth and nourishment no less to air and Heaven than to earth. Indeed, unless earth herself drank ethereal milk, her breasts would wither. The sacred initiate into Nature's secrets expressed this sufficiently when blessing Joseph:* "May his land receive the blessing of the Lord: from the fruits of heaven, from the dew and the deep lying beneath; from the fruits brought forth by the Sun and Moon; from the summit of the ancient mountains; from the fruits of the everlasting hills", and so forth. In this mystical language the Prophet promises earth's fertility from the influence of the Sun and Moon and the abundant influx of heavenly things.¹⁰⁸

PR-C191 1653, p. 137

Latin CXCI. *Pabulum illud spirituale quantum ad animalium vitam conducatur, frequens respiratio, siue aëris externi attractio quemlibet etiam plebeium fateri compellit. Neque folles suos in cordis viciniâ ad eius refrigerium tantum affabre Natura construxit, vt vulgo medicorum placet, verum etiam vt frequenti suâ ventilatione auram ætheream inspirent, ethereosque spiritus illi propinent, quorum afflatu & receptione vitales spiritus reparantur & multiplicantur.*

English 191. How much this spiritual food contributes to animal life is shown by continual breathing, or drawing in outside air, which compels even an ordinary person to acknowledge it. Nature did not skilfully construct her bellows near the heart merely to cool it, as physicians commonly suppose. She also made them so that through their repeated fanning they might breathe in the ethereal air and offer the heart ethereal spirits to drink. By the breathing in and reception of these, the vital spirits are restored and multiplied.¹⁰⁹

PR-C192 1653, pp. 137, 138

Latin CXCI. *Spirituales naturas vocant philosophi non solùm eas quæ citra materiam creatæ solo intellectu comprehenduntur, quales creduntur Intelligentiæ, Angeli, Dæmones, verùm etiam quæ licet ex materia originem trahant tamen præ summa tenuitate & nobilitate sensuum examen fugiunt, & merè spiritualibus proximæ, magis ratione, quàm sensu percipiuntur; huiusmodi naturæ sunt aër purus siue æther, influentiæ corporum cœlestium, ignis insitus & spiritus seminales, spiritus vegetabiles, animales & vitales, & cætera similia, in quibus ipsa rerum natura verius quàm in crassis corporibus consistit: huiusmodi naturæ à Cælo stirpem trahunt, & ratione sensibilibus, nomen & ius spirituum sibi vendicant.*

¹⁰⁸. The original margin names Deuteronomy 33. The passage paraphrases the blessing of Joseph in verses 13–15; the English translates this book's wording rather than substituting a modern Bible version. The 'sacred initiate' and Prophet are Moses within the author's traditional attribution.

¹⁰⁹. Nature's bellows are the lungs. This is a historical account of breathing, ethereal influx and vital spirits; the translation does not replace its explanation with modern respiratory physiology.

English 192. Philosophers call spiritual natures not only those created apart from matter and comprehended by intellect alone, such as the Intelligences, Angels and Daemons are believed to be. They also include natures which, though deriving their origin from matter, escape the examination of the senses through their extreme fineness and nobility. Close to purely spiritual beings, they are perceived more by reason than by sense. Such natures are pure air or ether, the influences of heavenly bodies, innate fire, seminal spirits, plant, animal and vital spirits, and others of this kind. In these the very nature of things consists more truly than in gross bodies. Such natures derive their lineage from Heaven and, in comparison with perceptible things, claim the name and standing of spirits.¹¹⁰

Original marginal note PR-M-C193-01 1653, p. 138

Latin IGNIS NATVRÆ EST SPIRITVALIS

English NATURE'S FIRE IS SPIRITUAL

PR-C193 1653, p. 138

Latin CXCI. Ignem Naturæ inter spiritualia referre conuenit, nullo siquidem sensuum ex se percipi potest, sed per calorem, aliósque effectus & accidentia in corporibus se prodat, vt patet in animalibus, quibus Ignis Naturæ imperceptibilis calorem sensibilem infundit; at igne illo furtim vitæque simul recedentibus, corpus Elementare siue cadauer integrum & illæsum mixto tamen soluto, remanet. In vegetabilibus autem quia Ignis ille debilior est, sensum eludit, nec sentiri per calorem se patitur.

English 193. Nature's fire should be numbered among spiritual things, for in itself it cannot be perceived by any sense. It reveals itself in bodies through heat and other effects and accidents, as is evident in animals, into which the imperceptible fire of Nature pours perceptible heat. When that fire silently withdraws and life goes with it, the elemental body or corpse remains whole and uninjured, although the mixed body has been dissolved. In plants, however, because this fire is weaker, it eludes sense and does not allow itself to be felt through heat.

Original marginal note PR-M-C194-01 1653, p. 139

Latin IGNIS COMMVNIS EST INTER SPIRITVALIA.

English COMMON FIRE IS AMONG SPIRITUAL THINGS.

PR-C194 1653, pp. 139, 140

Latin CXCI. Ignem communem de genere spiritualium etiam esse, magis quàm corporeorum ratio conuincit: Si enim corporeus esset, proprium inseparabileque à se corpus haberet, non minùs, quàm terra, aqua, aër, cæteræ naturæ sensibiles, quæ proprijs suis corporibus consistunt & terminantur, in illis & per illa existunt, vires suas exercent, & sensui se exhibent: Ignis verò proprio corpore sensili caret, alieno tantùm insidet; carbo siquidem ignis non est, sed lignum ignitum, neque flamma

¹¹⁰ Intelligences are incorporeal intellectual beings in the philosophical vocabulary. Daemones is retained as 'Daemons' without deciding here between the term's ancient philosophical and Christian senses. The canon explicitly broadens 'spiritual' to include extremely subtle natures derived from matter.

ignis est, sed fumus accensus: denique aliena semper prædo ille depascitur; ex præda viuut, quâ deficiente extinguitur, vnde alatur ex se non habens. Præterea corpus corpori additum quantitatem auget, at ignis ligno vel fumo additus id non operatur, neque enim lignum aut fumus per ignis accessionem secundum quantitatem augetur; vnde palam fit, spiritum magis quàm corpus igneum lignum aut fumum inuadere. Gladius intactâ vaginâ colliquescens, ossa confracta carne illæsa igneo vibrati fulminis telo, spiritualement ignis etiam fulminei naturam esse satis arguunt: Ignem tamen non omninò immaterialem esse fatendum est, materiâ enim tenuissimâ constat, per quam circumstanti aëri adhæret, vnde à crassiori potest detineri spiritus itaque nomen magis quàm corporis meruit, quia sensibilis quantitatis expers est, neque deprehendi potest, nisi corpus alienum induat.

English 194. Reason establishes that common fire too belongs to the class of spiritual rather than bodily things. If it were bodily, it would have a body of its own, inseparable from itself, no less than earth, water, air and the other perceptible natures. These consist in and are bounded by their own bodies; in and through those bodies they exist, exercise their powers and present themselves to sense. Fire, however, has no perceptible body of its own and resides only in another's. A coal is not fire but burning wood, nor is flame fire but kindled smoke. In a word, this robber always feeds upon what belongs to others. It lives on plunder and is extinguished when that fails, having nothing within itself on which to feed. Moreover, a body added to a body increases quantity, but fire added to wood or smoke does not do so. Neither wood nor smoke is increased in quantity by the addition of fire. It therefore becomes clear that a spirit, rather than a fiery body, invades wood or smoke. A sword melted while its sheath remains untouched, and bones broken while the flesh remains uninjured by the fiery bolt of a hurled thunderbolt, sufficiently show that even lightning's fire has a spiritual nature. Yet we must admit that fire is not wholly immaterial. It consists of exceedingly fine matter, through which it adheres to the surrounding air, and hence can be held by coarser matter. It therefore deserves the name of spirit rather than body, because it lacks perceptible quantity and cannot be apprehended unless it puts on another body.¹¹¹

Original marginal note PR-M-C195-01 1653, p. 140

Latin LVX INTER SPIRITVALIA.

English LIGHT AMONG SPIRITUAL THINGS.

PR-C195 1653, pp. 140, 141, 142

Latin CXCIV. Lucem inter verè spiritualia recensendam esse eius origo conuincit: Ante materiæ primæ informationem & mundi ortum extra Deum nulla lux erat; nascente autem Naturâ ab igneo Diuinitatis Spiritu lux spiritualis in materiam fluere, eique quasi ellichnio inhærerere cœpit; eaque extitit lucis creatio & origo; ille fuit primus diuinitatis actus in materiâ; primum matrimonium creatoris cum creaturâ, spiritus cum corpore. Lux itaque primaria & informans merus spiritus fuit,

¹¹¹. The author distinguishes fire itself from its visible carriers, using an argument from bodily quantity. His identification of flame with kindled smoke and his treatment of fire as a spirit are retained as historical claims.

qui igneâ suâ virtute, quasi calore proximam materiam intensissimè rarefactam lumine suo spirituali accendit, & ita tenebras in lucem conuertit. Cælum primo lumine distinctum, licèt materiale sit & igneum, nihilominus omninò est inuisibile, quia ex parte materiæ summum tenuitatis gradum attigit; ex parte formæ spirituale est; In cœlo autem medio lux quæ sparsa fuerat, compendio terminata in globum solarem migravit, quem quodammodo densum, veluti fumum accensibilem, sed incombustibilem fieri necesse fuit, quo luce immortalis accensus eam sisteret, ac vniuersæ Naturæ quasi facem seu molem flammeam se exhiberet. Lux itaque solaris nihil aliud est, quàm spiritus luminosus à spiritu luminis æterni originem trahens, corpori suo tanquam forma agglutinatus & inseparabiliter inhærens, propter densitatem corporis sui factus sensibilis; lumen ac plurimam suam virtutem omnibus Vniuersi naturis communicans, iugi suo fluxu spiritum Vniuersi constituens, in commodum & salutem corporeæ Naturæ corpori addictus.

English 195. The origin of light establishes that it must be numbered among truly spiritual things. Before first matter was informed and the World arose, there was no light outside God. As Nature came into being, spiritual light began to flow from the fiery Spirit of Divinity into matter and to adhere to it as to a wick. This was the creation and origin of light, the first action of divinity in matter, the first marriage of Creator with creature and of spirit with body. Primary, informing light was therefore pure spirit. Through its fiery power, as though through heat, it kindled the neighbouring, intensely rarefied matter with its spiritual radiance, thus turning darkness into light. Heaven, distinguished by the first light, is nevertheless wholly invisible, though material and fiery, because on the side of matter it has attained the highest degree of fineness, while on the side of form it is spiritual. In the middle Heaven, however, the light that had been scattered was gathered into a bounded compass and passed into the solar globe. This had to become somewhat dense, like smoke that can be kindled but cannot be consumed, so that, lit by immortal light, it might hold that light and present itself to universal Nature as a torch or mass of flame. Solar light is therefore nothing other than a luminous spirit deriving its origin from the spirit of eternal light. It is joined to its own body as form and inheres in it inseparably, becoming perceptible through that body's density. It communicates radiance and much of its power to all the natures of the Universe. By its constant flow it constitutes the spirit of the Universe, assigned to a body for the benefit and preservation of bodily Nature.¹¹²

PR-C196 1653, p. 142

Latin CXCVI. Radij tamen solares oculis nostris obuij puri spiritus non sunt, nam iugiter à Sole exeunt circumstanti æthere illis consentaneo induti progrediuntur: nihil itaque aliud sunt, quàm fluxus continuus spirituum luminis, qui à fonte suo perenni quasi riuuli iugiter effluentes, ac æthereæ naturæ, non aliter quàm flamma tenuissimo fumo se insinuantes, vndeque per vniuersam Orbis latitudinem lumen spargunt.

¹¹². The canon develops a theological cosmogony, extending the wick and flame analogy to the creation of light and the Sun. The description of the solar globe as kindled yet incombustible is the author's comparison, not a modern account of solar energy.

English 196. The solar rays that meet our eyes are not, however, pure spirits. As they continually issue from the Sun, they proceed clothed in the surrounding ether, which is congenial to them. They are thus nothing other than a continuous flow of spirits of light. Flowing constantly like little streams from their perennial source and entering ethereal nature as flame enters exceedingly fine smoke, they scatter radiance in every direction across the whole breadth of the World.

PR-C197 1653, pp. 142, 143

Latin CXCVII. Lucis natura est, vt à fonte suo indesinenter fluat; spiritus illos emissarios æthereæ naturæ se admiscentes, radios nuncupamus, suntque primi lucis actus & luminis vehiculum: corporis enim lucidi proprium est, vt per radios agat, calorem & splendorem emittat: vt longè latèque per radiorum eiaculationem & multiplicationem in orbem lucem effundat. Per lucem simpliciter primarium corporis luminosi actum; per lumen autem secundarium, qui à primo manat liceat exprimere.

English 197. It is the nature of light to flow unceasingly from its source. We call those emissary spirits that mingle with ethereal nature rays: they are the first activity of light and the vehicle of radiance. For it belongs to a luminous body to act through rays and emit heat and brilliance, pouring light far and wide around it through the projection and multiplication of rays. Let us use *lux* simply to express the primary activity of a luminous body, and *lumen* the secondary activity that flows from the first.¹¹³

PR-C198 1653, pp. 143, 144

Latin CXCVIII. Cereo assumpto, aut vento vrgente, extincto, spiritus igneus & luminosus ellychnium & fumum accendens non perit aut extinguitur, vt vulgo videtur, sed pabulo suo destitutus, aut ab eo auulsus in aërem spargitur & euanescit, qui abyssus est, & receptaculum vniuersale luminum & spiritualium naturarum Mundi materialis; vnde docemur spiritualem luminis naturam esse, & à fonte spirituali manare; non secus ac naturales formas à matrice suâ, quæ est spiritus Vniuersi à Sole tanquam à fonte suo immortalis iugiter fluens: Quemadmodum enim nascentia mixtorum corpora à materiâ primâ & elementis fluunt, deficientia in eadem principia sensim relabuntur: sic formæ naturales indiuiduorum accedentes, à forma vniuersali, quæ tanquam forma formarum seminibus virtutem formalem inspirat, effluunt; recedentes in eam refluunt: forma autem illa spiritus est luminis Vniuersi, ad quem tanquam ad principium suum & naturam homogeneam omnes solitariae & à corporeo nexu emancipatae formæ & lucis scintillæ etiam regrediuntur. Sic omnia mixta in principia sua resoluuntur, ipsa autem principia ad perennem naturæ suæ fontem, quasi proprium centrum, aut patriam referuntur.

English 198. When a candle is consumed or blown out by a strong wind, the fiery and luminous spirit that kindles its wick and smoke does not perish or become extinguished, as people commonly suppose. Deprived of its food or torn away from it, it is dispersed into the air and vanishes. Air is the abyss and universal receptacle of lights and spiritual natures

¹¹³. The author expressly distinguishes *lux*, the primary activity of a luminous source, from *lumen*, its derived radiance. The Latin terms are retained at the point where he defines that distinction; elsewhere 'light' and 'radiance' follow the local sense.

in the material World. This teaches us that radiance has a spiritual nature and flows from a spiritual source, just as natural forms flow from their womb, which is the spirit of the Universe flowing constantly from the Sun as from its immortal source. Just as the bodies of mixed things, when coming into being, flow from first matter and the elements, and when perishing gradually fall back into those same principles, so the natural forms of individuals flow, as they arrive, from universal form. This, as the form of forms, breathes formative power into seeds; as they depart, they flow back into it. That form is the spirit of the Universe's light, to which all solitary forms and sparks of light released from bodily bonds likewise return as to their own principle and a nature of the same kind. Thus all mixed bodies are resolved into their principles, while those principles return to the perennial source of their nature as to their own centre or homeland.

Original marginal note PR-M-C199-01 1653, p. 144

Latin SPIRITVS VNIVERSI.

English THE SPIRIT OF THE UNIVERSE.

PR-C199 1653, pp. 144, 145

Latin CXCIX. Spiritus autem ille Vniuersi solaris quidem est, non tamen lux ipsa Solis nobis per corporis sui præsentiā conspicua, sed spiritus ille inuisibilis, qui à radijs solaribus per vniuersam ætheris plagam continuò spargitur, & per communicationem in cœlum nostrum, imò vsque ad terræ centrum etiam absente à nobis Sole, & nocte quâuis opacissimâ, se iugiter extendit, omnes ad generationem & vitam dotes necessarias conferens, ac per omnia vniuersi corpora se effundens.

English 199. This spirit of the Universe is indeed solar, but it is not the Sun's light itself, visible to us through the presence of its body. It is the invisible spirit continually scattered by the solar rays throughout the whole region of ether. Through communication it extends constantly into our heaven and even to the centre of the earth, when the Sun is absent from us and in the darkest night, bestowing all gifts necessary for generation and life and pouring itself through all the bodies of the Universe.

PR-C200 1653, p. 145

Latin CC. Diuinus Amor seipso contineri non potuit, quin totus extra se in creatione, quasi seipsum multiplicans migrauerit; totum se etiam in conseruatione creaturarum suarum se effundat. Lux quæ proximum diuinitatis exemplar est, diuinum etiam amorem imitatur; corpore enim suo luminoso cohiberi non valet, sed per immensam radiorum multiplicationem in commodum alienum longè latèque diffunditur, ac non tam sibi quàm alijs nata, velut diuinæ charitatis symbolum, quibus potest se communicans in loca etiam remotissima se protendit, nisi à denso corpore intercipiatur.

English 200. Divine Love could not be contained within itself, but passed wholly beyond itself in Creation, as though multiplying itself. It likewise pours itself out entirely in preserving its creatures. Light, the closest likeness of divinity, also imitates divine love. It cannot be

confined within its luminous body, but through the immense multiplication of rays spreads far and wide for the benefit of others. Born less for itself than for others, as a symbol of divine charity, it communicates itself to whatever it can and extends even to the most distant places, unless a dense body intercepts it.

PR-C201 1653, pp. 145, 146

Latin CCI. Lux infinitam Dei naturam nobis etiam exhibet; neque enim lampadis aut candelæ flammula indefesso radiorum fluxu, neque flammæ suæ in infinitum communicatione exhauriri aut minui, stante pabulo, poterit: quot radij, tot riuuli ab ipsâ manant; quantumuis largiatur, quantumuis ei detrahatur, neque exinanitur, neque dispendium patitur; quod soli spirituali naturæ conuenit, & à naturâ corporeâ alienum est. Sic dona intellectualia, quales sunt scientiæ & rerum cognitiones, quæ lumina spiritualia meritò habentur, eius generis sunt, vt frequentissimè communicata semper apud suum possessorem integra maneant. Aliquid diuini lumini inesse fatendum est.

English 201. Light also displays to us the infinite nature of God. For the little flame of a lamp or candle cannot be exhausted or diminished by the tireless flow of its rays or by communicating its flame without limit, as long as its food remains. As many rays as it has, so many little streams flow from it. However much it gives and however much is taken from it, it is neither emptied nor suffers loss. This belongs to spiritual nature alone and is foreign to bodily nature. Intellectual gifts, such as the sciences and knowledge of things, which are rightly regarded as spiritual lights, are of this kind: however often communicated, they always remain whole in their possessor. We must acknowledge that there is something divine in light.¹¹⁴

PR-C202 1653, pp. 146, 147

Latin CCII. Radij corporis lucidi licèt spiritualis naturæ sint, nihilominus à corpore denso sistuntur, quia aëre pro vehiculo vtuntur, sine quo à nobis percipi non possunt, cuius copulâ ipsi etiam corporei quodammodo fiunt, propterea nisi porosa corpora non penetrant. Sic spiritualia apud nos per medium aliquod sensibile agunt, vt agere deprehendantur. Absente autem corpore luminoso radij etiam recedunt, nec eius præsentiam deserunt, quia ab ipso immediatè fluunt.

English 202. Although the rays of a luminous body are spiritual in nature, they are nevertheless stopped by a dense body, because they use air as their vehicle. Without it we cannot perceive them, and through union with it they themselves become bodily in a certain way. They therefore penetrate only porous bodies. Thus spiritual things act among us through some perceptible intermediary, so that their action may be apprehended. When the luminous body is absent, its rays also withdraw: they do not leave its presence, because they flow immediately from it.

¹¹⁴. The qualification 'as long as its food remains' is essential to the flame comparison. The claim concerns the author's analogy between communicating light and communicating knowledge; it is not an assertion that a flame requires no fuel.

PR-C203 1653, p. 147

Latin CCIII. Non tantum per corporis lucidi & radiorum praesentiam, sed etiam absente corpore & radijs subtractis, à spiritu luminoso ab illis exeunte aër eminus lumine inficitur; vt patet in maximâ Solis eclipsi, aut cælo densissimis nubibus, vel etiam noctis tenebris obducto; necnon Sole sub horizonte immerso: neque enim actus ille luminis praesentis, corpore lucido radiisque absentibus, aliunde proficiscitur, quam à spiritualis luminis accessu & praesentiâ.

English 203. The air is imbued with radiance from afar not only through the presence of a luminous body and its rays, but also when the body is absent and the rays withdrawn, through the luminous spirit issuing from them. This is evident in a great eclipse of the Sun, when the sky is covered with very dense clouds or even the darkness of night, and when the Sun has sunk below the horizon. For that activity of present radiance, when the luminous body and its rays are absent, proceeds from nothing other than the approach and presence of spiritual radiance.¹¹⁵

Original marginal note PR-M-C204-01 1653, p. 147

Latin CORPVS DIAPHANVM.

English A TRANSPARENT BODY.

PR-C204 1653, pp. 147, 148

Latin CCIII. Corpus diaphanum, quale vitrum est, radijs solaribus percussum ipsos cogit, ac imaginem Solis in se suscipit, fitque lucidum, & quasi Solis compendium, quod radios etiam suos in partem vltiorem Soli oppositam emittit; vnde fit vt radij solares vitri concursu refracti ipsum vitrum traicere & penetrare videantur; quod tamen rê verâ non fit; nam radij propter aërem eis adhærentem circa vitrum sistuntur, solo spiritu lucis transmissio; radij autem qui in alteram partem effunduntur, radij sunt Solis vitrei, siue vitri à radijs solaribus in corpus luminosum accensi.

English 204. A transparent body such as glass, when struck by the Sun's rays, gathers them and receives the Sun's image within itself. It becomes luminous and, as it were, a Sun in miniature, emitting rays of its own towards the farther side facing away from the Sun. Thus the solar rays, refracted by their encounter with the glass, appear to pass through and penetrate the glass itself. Yet this does not really happen: because of the air adhering to them, the rays are stopped at the glass and only the spirit of light is transmitted. The rays poured out on the other side are rays of a glassy Sun, or of glass kindled into a luminous body by the solar rays.¹¹⁶

¹¹⁵. The persistence of illumination when direct rays are absent is explained here by spiritual radiance. The canon's physical explanation is retained, rather than silently replaced by an account of atmospheric scattering.

¹¹⁶. The printed heading is CCIII, an additive form of 204. The canon's account distinguishes rays carried by air from a spirit of light transmitted through glass; it is translated as the author's optical theory.

PR-C205 1653, pp. 148, 149

Latin CCV. Omne corpus diaphanum, maximè vitrum, est medium luminis, quia suscipit in se lumen, & susceptum aëri vteriori communicat: non per aëris luminosi hinc inde transmissionem, quod Naturæ repugnat, sed aliâ duplici viâ; primò quia diaphanum spiritui luminis peruium est, ipsumque in se conceptum transmittit, qui transmissus aëri se insinuat, inde lumen vberimum: Tum etiam quia ipsum medium diaphanum beneficio luminis accepti fit non modò illuminatum, sed etiam luminosum, & à spiritu lucis diaphanis amico, quasi ellychnium lumine accensum: at omne corpus luminosum luminis effundendi ius & facultatem habet, quod densis & opacis corporibus non licet, nisi per reflexionem.

English 205. Every transparent body, especially glass, is an intermediary of radiance, because it receives radiance within itself and communicates what it receives to the air beyond. It does not do this by transmitting luminous air from one side to the other, which is contrary to Nature, but by two other means. First, a transparent body is open to the passage of the spirit of radiance, receives it within itself and transmits it. Once transmitted, the spirit enters the air, whence comes abundant radiance. Second, through the benefit of the radiance it receives, the transparent intermediary becomes not merely illuminated but luminous, kindled with radiance like a wick by the spirit of light, which is friendly to transparent things. Every luminous body has the right and capacity to pour out radiance, something dense and opaque bodies cannot do except by reflection.

PR-C206 1653, p. 149

Latin CCVI. Meræ etiam mixtorum naturæ spirituales sunt, corpora sunt earum cortices & tanquam testacea vasa; quibus illæ custodiuntur; neque aliter mare istud inferum transfretare, & in hoc abyssi centro hospitari potuissent sublimes illæ naturæ, nisi corporeis elementis alligatæ eorum pondere sisterentur: Illæ per corpora sentiuntur, corpora per illas mouentur, & agunt; sic mutuas sibi præstant operas. Homericae Iunonis arcanum illud est, quam incudis pondere pedibus adiecto Iuppiter demisit.

English 206. The pure natures of mixed bodies are also spiritual. Their bodies are their rinds and, as it were, earthenware vessels in which they are kept. Those lofty natures could not otherwise have crossed this lower sea and lodged in this centre of the abyss unless, bound to bodily elements, they were held in place by their weight. They are perceived through bodies, while bodies are moved and act through them. Thus each renders service to the other. This is the secret of Homer's Juno, whom Jupiter lowered with the weight of an anvil attached to her feet.¹¹⁷

PR-C207 1653, pp. 149, 150

Latin CCVII. Cum vniuersi machina vnicum sit corpus, vnica Natura vniuersalis pluribus naturis ac corporibus, tanquam partibus, per sua media & vincula cohærentibus constans, mirum videri non debet, quod huiusmodi membra forti, licèt arcano, nexu inter se deuinciantur, & mutua sibi conferant auxilia; neque enim

¹¹⁷. The myth is read as an image of a higher nature held in the lower realm by bodily weight. The English preserves the author's singular 'anvil' and his interpretive claim rather than substituting a fuller retelling of the myth.

relationem tantum, verum etiam communicationem habent, & commercium quoddam multiplices illæ naturæ exercent; extremæ nempe per medias, mediæ verò per proximas: Per spiritus autem emissarios fit illa communicatio: omnes enim Mundi plagæ, omnes naturæ, etiam indiuiduæ spiritibus abundant, quorum plurimi iugiter effluentes adfluentibus cedunt, & ita per continuos spirituum accessus & recessus fit quædam partium Mundi & naturarum renouatio. Hæc est Naturæ vniuersi scala Iacobo patriarchæ in visione reuelata: illæ sunt Mercurij pennæ, quarum ope ipse Deorum nuncius antiquis mysticè dictus superum inferorumque limina frequenter adire credebatur.

English 207. Since the structure of the Universe is a single body, a single universal Nature composed of many natures and bodies as parts held together through their intermediaries and bonds, it should not seem strange that these members are joined to one another by a strong, though hidden, bond and lend each other mutual aid. For these manifold natures have not merely a relation but also communication and a kind of commerce: the extremes through intermediaries, and the intermediaries through their neighbours. This communication takes place through emissary spirits. Every region of the World and every nature, even an individual nature, abounds in spirits. Many continually flow out and give way to those flowing in. Through the constant arrival and departure of spirits there is thus a kind of renewal of the World's parts and natures. This is the ladder of universal Nature revealed in a vision to the patriarch Jacob. These are Mercury's wings, by whose aid he, mystically called the messenger of the Gods by the ancients, was believed frequently to visit the thresholds of the upper and lower worlds.

Original marginal note PR-M-C208-01 1653, p. 151

Latin PRINCIPIA ACTIVA SVNT SPIRITUALIA.

English ACTIVE PRINCIPLES ARE SPIRITUAL.

PR-C208 1653, p. 151

Latin CCVIII. Cuiuscunque generis siue vegetabilium siue animalium principia actiua spiritualia sunt; corpora sunt spirituum organa passiuæ, quibus illi sensuum facultates exercent, & vires suas multifariam agendo tanquam actionum autores explicant, ita vt vita in genere rectè dicatur concentus actionum, siue actus continuus actionum multiplicitate varius, à fonte spirituali emanans, organis suis corporeis explicatus.

English 208. The active principles of every kind of plant or animal are spiritual. Bodies are the passive instruments of spirits, through which the spirits exercise the faculties of sense and unfold their powers in manifold activities as the authors of those activities. Thus life in general may rightly be called a harmony of actions, or a continuous actuality, varied through the multiplicity of its actions, flowing from a spiritual source and unfolded through its bodily instruments.

PR-C209 1653, pp. 151, 152

Latin CCIX. Spiritualis naturæ proprium est agere, corporeæ verò pati: vbi ergo vtriusque fit concursus, vt in mixtis, illa tanquam nobilior agit ac dominatur, hæc

patiendi obtemperat; agendi enim vis est insigne dominij, patiendi verò onus seruitutis nota: sic ignis insitus in semine est principium generationis & vitæ, Naturæ Archæus & Oeconomus in materiâ præparandâ & effingendâ, in elementorum mixtione & distributione: Sic forma in mixto vires suas pro imperio exercet, tanquam fons omnium eius actionum: sic cælestium virtutes elementa inferiora, corporeámque materiam disponunt ac sigillant.

English 209. It belongs properly to spiritual nature to act, and to bodily nature to undergo action. Where the two meet, as in mixed bodies, the former, being nobler, acts and rules, while the latter obeys by undergoing action. For the power to act is the badge of dominion, and the burden of undergoing action the mark of servitude. Thus the fire implanted in the seed is the principle of generation and life, Nature's Archeus and steward in preparing and shaping matter and in mixing and distributing the elements. Thus form exercises its powers with authority within the mixed body as the source of all its actions. Thus the powers of heavenly things dispose and seal the lower elements and bodily matter.¹¹⁸

Original marginal note PR-M-C210-01 1653, p. 152

Latin QVALITATES SVNT INSTRVMENTA NON CAVSÆ ACTIONVM

English QUALITIES ARE INSTRUMENTS, NOT CAUSES, OF ACTIONS

PR-C210 1653, pp. 152, 153

Latin CCX. Corpora naturalia, quæ actiuam vim, occultamque agendi causam obtinent, non per solas qualitates, vt vulgò placet, sed spiritus secretos agunt; neque enim ignis per simplicem caliditatis qualitatem calefacit aut comburit, sed per continuum spirituum & radiorum fluxum: Neque terra aut aqua per solas qualitates frigiditatis & humiditatis refrigerant aut humectant, sed per tenues vapores & spiritus innatos & emissos etiam minus sensum feriunt: Neque venena per solas qualitates calidas aut frigidas, sed per spiritus maleficos tabem ac mortem seriùs ociùs inducunt. De plantis & herbis idem iudicium ferre licet, quia ipsarum virtutes actiuæ non in qualitatibus, sed in earum essentiâ latent, quam spiritibus locupletem fecit Natura, cuius basis & vires præcipuè sunt circa spiritualia: corpora enim sunt tanquam vmbræ aut rerum indumenta, sub quibus inuisibilis Natura occultatur; qualitates autem cùm sint rerum accidentia, earum essentiam constituere non valent, neque mirabiles earum virtutes agendo explicare, sed sunt tantùm instrumenta actionum & passionum materiæ insita, quibus etiam vtuntur spiritus mechanici siue actionum artifices in agendo; verum illas esse actionum principia & causas efficientes Natura non patitur.

English 210. Natural bodies possessing an active power and a hidden cause of action do not act through qualities alone, as is commonly supposed, but through hidden spirits. Fire does not heat or burn through the simple quality of heat, but through a continuous flow of spirits and rays. Neither earth nor water cools or moistens through the qualities of coldness and moisture alone: through fine vapours and inborn, emitted spirits they strike the senses even from a distance.

¹¹⁸. Archeus is retained as the author's name for an inward directing principle; Oeconomus is a steward or household manager. 'Seal' continues the account of higher powers impressing their character upon matter.

Poisons likewise bring wasting and death, sooner or later, not merely through hot or cold qualities but through harmful spirits. The same judgement may be made about plants and herbs, because their active powers lie hidden not in their qualities but in their essence. Nature, whose foundation and powers chiefly concern spiritual things, has made this essence rich in spirits. Bodies are like shadows or garments of things, beneath which invisible Nature is concealed. Qualities, being accidents of things, cannot constitute their essence or unfold their wonderful powers in action. They are merely instruments of actions and affections implanted in matter, which the working spirits, or artificers of actions, also use when acting. Nature does not permit qualities to be the principles and efficient causes of actions.

PR-C211 1653, pp. 153, 154

Latin CCXI. Naturales rerum tincturæ, odores & sapes specialia & spiritualia sunt Naturæ dona, quibus res suas conuenienter ditauit, quæque non tantum ad ornatum conferunt, aut tanquam extrinseca accidentia illis inhaerent; verum causam insitam & radicalem habent, nec tam accidentia, quam demonstratiua virtutum interiorum signa dicenda sunt, quibus occultæ & formales rerum signaturæ se produnt.

English 211. The natural tinctures, smells and tastes of things are particular and spiritual gifts with which Nature has fittingly enriched her works. They contribute more than ornament and do not adhere to things merely as external accidents. They have an implanted, radical cause and should be called not so much accidents as revealing signs of inward powers, through which the hidden and formal signatures of things disclose themselves.¹¹⁹

Original marginal note PR-M-C212-01 1653, p. 154

Latin RAREFACTIO ET CONDENSATIO SVNT NATVRÆ INSTRVMENTA.

English RAREFACTION AND CONDENSATION ARE NATURE'S INSTRUMENTS.

PR-C212 1653, pp. 154, 155

Latin CCXII. Rarefactio & condensatio duo sunt naturæ instrumenta, quibus corpora in spiritus, & spiritus rursum in corpora vertuntur; vel etiam quibus elementa corporea in spiritualia, & spiritualia iterum in corporea commutantur; has enim vices in mixtis patiuntur elementa. Sic Terra è sinu suo pabulum spirituale vegetabilium radicibus ministrat, quod depastum in caulem, corticem, ramos, frondes, flores, substantiam denique corpoream migrat. Idem Natura in animalibus exercet; nam cibus & potus, quibus illa vescuntur, melior saltem eorum pars in humores, ac tandem in spiritus terminatur, qui per poros se insinuantes carni, neruis, ossibus, & cæteris partibus corporeis agglutinati eas nutriunt & augent, ac per indefessum surrogationis opus labentem naturam reparant. Sic spiritualis & purioris substantiæ portio in spumeum seminis corpus concrescit & coagulatur. Ars naturæ æmula in suis resolutionibus & compositionibus simile experitur.

¹¹⁹. Tincturae can denote colourings or tinctures; the term here joins smell and taste as an outward sign of an inward power. Signatures are marks that reveal a thing's formative nature within the author's account.

English 212. Rarefaction and condensation are two instruments of Nature by which bodies are changed into spirits and spirits back into bodies, or bodily elements into spiritual ones and spiritual ones again into bodily ones. For the elements undergo these alternations in mixed bodies. Thus Earth supplies spiritual food from her bosom to the roots of plants. Once consumed, it passes into stem, bark, branches, leaves and flowers—in a word, into bodily substance. Nature does the same in animals. The food and drink they consume, at least their better portion, are brought into humours and finally spirits. Entering through the pores and adhering to flesh, sinews, bones and the other bodily parts, these nourish and enlarge them, restoring declining nature through the tireless work of replacement. Thus a portion of spiritual and purer substance thickens and coagulates into the foamy body of seed. Art, Nature's imitator, experiences something similar in its dissolutions and compositions.

Original marginal note PR-M-C213-01 1653, p. 155

Latin HVMIDVMD RADICALE.

English RADICAL MOISTURE.

PR-C213 1653, p. 155

Latin CCXIII. Indiuiduorum vita consistit in rationali & strictâ materiæ & formæ vnione; vtriusque autem naturæ nodus, copula & basis in forti caloris siue ignis innati & humidi radicalis amplexu latet; ignis enim ille formalis est cælestis radius, qui humido radicali vnitur; istud autem est materiæ portio purissima & maximè digesta, ac veluti oleum per organa Naturæ, quasi per alembicos maximè defæcatum, exuberatum, & in naturam spiritualem quodammodo conuersum.

English 213. The life of individuals consists in a proportionate and close union of matter and form. The knot, bond and foundation of the two natures lie hidden in the strong embrace of heat or innate fire and radical moisture. That formal fire is a heavenly ray united to radical moisture. The latter is the purest and most thoroughly digested portion of matter, like an oil most fully clarified and enriched through Nature's organs as through alembics, and in a certain way converted into a spiritual nature.

PR-C214 1653, pp. 155, 156

Latin CCXIV. Rerum seminibus plurimum humidi radicalis inest, in quo scintilla quædam ignis cælestis, tanquam in pabulo suo detinetur, quæ in matrice conuenienti omnia ad generationem necessaria peragit. Vbi autem constans caloris principium est, ibi ignis subesse creditur, quia genuinum caloris principium est eius in quo est.

English 214. The seeds of things contain much radical moisture, in which a spark of heavenly fire is held as in its own food. In a suitable womb this spark performs everything necessary for generation. Where there is a constant principle of heat, fire is believed to be present beneath it, because fire is the true principle of heat in the thing in which it exists.

Original marginal note PR-M-C215-01 1653, p. 156

Latin HVMOR RADICALIS EST IMMORTALIS.

English RADICAL MOISTURE IS IMMORTAL.

PR-C215 1653, p. 156

Latin CCXV. Aliquid immortale in humido radicali licet obseruare, quod neque morte euanescit, neque vllis ignis violentissimi viribus consumitur, verum in cadaueribus & combustorum cineribus inuictum remanet.

English 215. We may observe something immortal in radical moisture. It neither vanishes at death nor is consumed by any force of the fiercest fire, but remains unconquered in dead bodies and in the ashes of things that have been burned.

Original marginal note PR-M-C216-01 1653, p. 156

Latin HVMOR DVPLEX IN MIXTIS.

English TWOFOLD MOISTURE IN MIXED BODIES.

PR-C216 1653, pp. 156, 157

Latin CCXVI. Duplex humor in quolibet mixto latet, Elementaris & Radicalis: Elementaris, qui partim aqueæ partim aëreæ est naturæ, igni cedit, & in fenum seu vaporem euolat, quo exhausto in cineres corpus resoluitur; illo enim tanquam glutino elementa in mixtione deuinciuntur. Radicalis autem humor ignis communis tyrannidem spernit; neque enim aut martyrio deficit, aut volatu recedit, sed mixto superstes eius cineribus pertinaciter inhæret; quod perfectæ puritatis argumentum est.

English 216. Twofold moisture lies hidden in every mixed body: elemental and radical. Elemental moisture, which is partly watery and partly airy in nature, yields to fire and flies off as smoke or vapour. When it is exhausted, the body is reduced to ashes, for through it the elements are bound together in their mixture as with glue. Radical moisture, however, disdains the tyranny of common fire. It neither fails under torment nor departs in flight, but survives the mixed body and clings tenaciously to its ashes. This is evidence of perfect purity.

Original marginal note PR-M-C217-01 1653, p. 157

Latin VITRVM FIT EX HVMIDO RADICALI.

English GLASS IS MADE FROM RADICAL MOISTURE.

PR-C217 1653, p. 157

Latin CCXVII. Experientia humidi radicalis in cineribus occulti arcanum vitrarios rerum Naturæ imperitos docuit; ex cineribus enim pungentis flammæ suæ fusoriæ acumine vitrum eliciendo occultum faciunt manifestum, vltra quod neque artis, neque ignis vires materiam protendere aut eliminare possunt: cineres autem fluere necesse est, vt fiat quantitas continua & corpus solidum, quale est vitrum; fluxio autem sine humore nequaquam fieri potest. Humidum itaque illud à materiâ suâ inseparabile tandem in nobile illud corpus diaphanum quasi æthereum terminatur.

English 217. Experience has taught glassmakers unversed in Nature's affairs the secret of radical moisture hidden in ashes. By drawing glass from ashes through the keenness of their penetrating melting flame,

they make the hidden manifest. Beyond this, neither the powers of art nor those of fire can extend or drive out the matter. The ashes must flow if they are to become a continuous quantity and solid body such as glass; and flowing cannot take place without moisture. That moisture, inseparable from its matter, is therefore finally brought into that noble transparent body, which is almost ethereal.¹²⁰

Original marginal note PR-M-C218-01 1653, p. 157

Latin HVMIDVM RADICALE CINERI INHÆRET.

English RADICAL MOISTURE ADHERES TO ASH.

PR-C218 1653, pp. 157, 158

Latin CCXVIII. Salium è cineribus extractio, in quibus summa mixtorum est virtus, tum etiam agrorum vbertas stipularum incendio & incineratione aucta humorem illum ab igne illibatum radicale generationis principium & Naturæ basim esse certissimo sunt indicio, licet virtus illa solitaria & inefficax in ipsis cineribus lateat, donec à Terrâ communi principiorum Naturæ matrice suscepta occultam, generationi & multiplicationi consentaneam facultatem explicet; vt etiam in rerum seminibus moris est.

English 218. The extraction of salts from ashes, in which the chief power of mixed bodies resides, and the increased fertility of fields after the burning and reduction of stubble to ash are the surest signs that this moisture, left untouched by fire, is the radical principle of generation and the foundation of Nature. Yet that power lies solitary and ineffective in the ashes themselves until, received by Earth, the common womb of Nature's principles, it unfolds its hidden capacity suited to generation and multiplication, as also happens in the seeds of things.

PR-C219 1653, p. 158

Latin CCXIX. Balsamum illud radicale est Naturæ fermentum totam corporis massam inficiens: tinctura est indelebilis & multiplicans, siquidem penetrat & tingit etiam fœdiora excrementa, quæ frequens ex ipsis fit generatio, licet imperfecta, argumento est; tum etiam agrorum sterco ratio imperitis agricolis satis nota, vt torpentes agri ad creditum cum fœnore domino exoluendum vrgeantur.

English 219. This radical balsam is Nature's ferment, permeating the whole mass of the body. It is an indelible and multiplying tincture, for it penetrates and tinges even the foulest excrements. Evidence of this is the frequent generation arising from them, although imperfect, and also the manuring of fields, familiar even to unlearned farmers, by which sluggish fields are urged to repay their owner's loan with interest.¹²¹

¹²⁰. The inference from molten flow to a persistent moisture belongs to this book's theory of matter. It does not identify radical moisture with ordinary liquid water in glass.

¹²¹. The language of loan and interest describes the farmer's labour and the field's return. Generation from excrement is asserted within the author's historical account of spontaneous generation, not confirmed by this edition.

Original marginal note PR-M-C220-01 1653, pp. 158, 159

Latin HVMDIVM RADICALE EST RADIX MVNDI MATERIALIS.

English RADICAL MOISTURE IS THE ROOT OF THE MATERIAL WORLD.

PR-C220 1653, pp. 158, 159, 160

Latin CCXX. Radicem illam Naturæ, mixto suo in ruinam verso, superstitem, materiæ primæ informatæ ac diuino lucis caractere signatæ quoddam vestigium ac portionem purissimam & immortalem existere suspicio est: Indissolubile quippe est antiquissimum illud materiæ primæ & formæ suæ matrimonium, à quo cætera corporea elementa originem traxerunt. Quin etiam incorruptibilem corruptibilium basim & radicem quandam cubicam, semper stantem & immortalem in profundo corporum occultari necesse fuit vt sit constans & perpetuum materiale principium vitæ potentiam & aptitudinem habens, circa quod, tanquam circa axem immotam fiat elementorum & rerum vicissitudo: Et si liceat in obscuris aliquid vero propius conicere, substantia illa immortalis Mundi materialis fundamentum est, & immortalitatis eius fermentum, quod in die conflagrationis vniuersæ, purgatis per ignis examen elementis, superfore æternus rerum ponderator præordinauit, vt ex purâ & constanti materiâ opus suum à peccato originali & corruptionis labe vindicatum in gloriam æternam renouet ac restauret.

English 220. We may suspect that this root of Nature, which survives when its mixed body falls into ruin, is a vestige and a most pure and immortal portion of first matter, informed and marked with the divine character of light. For that most ancient marriage of first matter with its form, from which the other bodily elements took their origin, is indissoluble. Indeed, an incorruptible foundation of corruptible things, a kind of cubic root, ever enduring and immortal, had to lie hidden in the depths of bodies. It provides a stable and perpetual material principle possessing the potentiality and aptitude for life, around which, as around an unmoving axis, the alternation of elements and things may take place. And if we may venture a probable conjecture in obscure matters, that immortal substance is the foundation of the material World and the ferment of its immortality. The eternal Weigher of things ordained that it should survive on the day of universal conflagration, after the elements have been purified by the trial of fire, so that from pure and stable matter he might renew and restore his work, delivered from original sin and the stain of corruption, into eternal glory.¹²²

PR-C221 1653, pp. 160, 161

Latin CCXXI. Basim illam radicalem de genere formarum specialium non esse manifestum est, quia quodlibet indiuiduum singularem & indiuiduam suam formam habet, quæ soluto mixto à corpore recedit, stante nec extincto radicali illo principio, licet propter absentiam formæ admodum debilitato & parùm efficaci; illi tamen igniculi quidam vitales restant vilioribus & imperfectis foetibus producendis apti; quæ productio non tam Naturæ, quam materiæ partus est, nitentis, sed sine compari generare non valentis, propter virtutis formalis & specificæ absentiam: Sic

¹²². The author marks this identification as suspicion and probable conjecture. 'Cubic root' translates *radix cubica* and is followed by an image of a stable axis; the phrase is not supplied as a mathematical calculation. The final restoration belongs to the book's Christian account of the World's destiny.

cadauer hominis aut equi defectu seminis non hominem aut equum, sed foetidos vermes & insecta quædam generandi capax est; vnde licet suspicari imbecille illud vitæ principium ex inopia materiæ primæ proficisci, & magis ex familia elementorum inferiorum, quàm superiorum & cælestium esse; illi tamen nonnihil tincturæ lucis inesse.

English 221. It is clear that this radical foundation does not belong to the class of particular forms, because every individual has its own singular and individual form. When the mixed body is dissolved, that form withdraws from the body, while the radical principle remains unextinguished, though much weakened and of little efficacy because of form's absence. Certain little vital fires nevertheless remain in it, capable of producing baser and imperfect offspring. Such production is not so much Nature's birth as the birth of matter, which strives to generate but cannot do so without a mate because the formative and specific power is absent. Thus, through lack of seed, the corpse of a human being or horse can generate not a human being or horse but foul worms and certain insects. Hence we may suspect that this feeble principle of life proceeds from the poverty of first matter and belongs more to the family of lower elements than to the higher and heavenly ones, while nevertheless containing some tincture of light.¹²³

PR-C222 1653, pp. 161, 162

Latin CCXXII. Exigua siquidem illa prioris lucis scintilla, quæ tenebrosam inferioris abyssi materiam ab initio informavit insectorum generationi sufficere potest; confuso enim & inordinato motu materiam agitat, vt eam de potentiâ in actum debilem perducatur; verùm illa hoc igniculo tepescens ac languenti similis masculi magis imagine quàm copulâ corrupta in libidinem proruit, ac legitimo Naturæ foetui concipiendi impar immunda phantasmata & simulachra quædam animalium, quales sunt vermes, fuci, scarabæi, & similia in excrementis & putridis sibi fingit: Humor itaque ille radicalis est proximum & indeficiens generationis & vitæ subiectum, in quo primum accenditur Ignis Naturæ & actus formalis in materia bene dispositâ & ordinatâ: In materiâ autem confusâ & inordinatâ, vbi humor ille masculi vicem agit, spurios & illegitimos Naturæ foetus procurat; nam quæ sine semine specifico fit generatio, magis casu aut errore, quàm consilio Naturæ facta videtur; licet etiam in illâ quædam obscura & indiscreta actiuorum cum passiuis copulatio intercedat, quæ ad cuiusvis mixti etiam imperfecti productionem necessaria est.

English 222. That tiny spark of the earlier light which informed the dark matter of the lower abyss in the beginning can suffice for the generation of insects. It stirs matter with a confused and disordered movement, bringing it from potentiality into a feeble actuality. But matter, warmed by this little fire, resembles a languishing female, corrupted more by the image of a male than by union with one. It rushes into desire and, unequal to conceiving Nature's legitimate offspring, fashions for itself in excrements and putrid things unclean phantoms and likenesses of

¹²³. The distinction is between the individual's departing form and an underlying radical principle that is said to persist. The corpse-generated insects are part of the author's account of spontaneous generation; the English preserves both that claim and his qualified inference from it.

animals, such as worms, drones, beetles and the like. Radical moisture is therefore the immediate and unfailing subject of generation and life. In well-disposed and ordered matter, Nature's Fire and formal actuality are first kindled in it. In confused and disordered matter, however, where that moisture takes the male's place, it procures Nature's spurious and illegitimate offspring. For generation without specific seed seems to occur more by chance or error than by Nature's design, although even in it there takes place a dim and undifferentiated union of active with passive principles, necessary for producing any mixed body, however imperfect.¹²⁴

Original marginal note PR-M-C223-01 1653, p. 162

Latin HVMIDVM RADICALE EST MATERIÆ ET FORMÆ VINCVLVM.

English RADICAL MOISTURE IS THE BOND OF MATTER AND FORM.

PR-C223 1653, p. 162

Latin CCXXIII. Fermentum illud radicale, in mixtorum profundo constanter permanens videtur contracti matrimonij inter lucem & tenebras, materiam primam & formam vniuersalem, inter contraria denique vinculum, sedes & retinaculum formarum in mixtis; secus materia & forma propter aduersas ferè earum naturas non coalescerent; verùm tenebrosa illa materiæ primæ ferocitas & à lumine auersio edomita fuit, & eius odium in amorem conuersum beneficio primæ illius tincturæ lucidæ, quæ aduersa conciliat.

English 223. That radical ferment, remaining constantly in the depths of mixed bodies, seems to be the bond of the marriage contracted between light and darkness, first matter and universal form—in a word, between contraries—and the seat and receptacle of forms in mixed bodies. Otherwise matter and form could not grow together because their natures are almost opposed. Yet first matter's dark fierceness and aversion to light were tamed, and its hatred turned to love, through the benefit of that first luminous tincture which reconciles opposites.

Original marginal note PR-M-C224-01 1653, p. 163

Latin CALIDVM INNATVM ET HVMIDVM RADICALE.

English INNATE HEAT AND RADICAL MOISTURE.

PR-C224 1653, pp. 163, 164

Latin CCXXIV. Calidum innatum & humidum radicale diuersi generis sunt; illud enim totum solare & spirituale est; istud verò media natura inter spiritualement & corpoream, vtramque; Ætheream nempe & Elementarem participans: Illud ex ordine superiorum, istud magis inferiorum, in quo primum cœli & terræ coniugium celebratum est, per quod Cœlum etiam in centro terræ habitat. Falluntur itaque qui calorem innatum & humidum radicale confundunt, non minus enim inter se discrepant quam fumus & flamma; lux Solis & aër, Sulfur & Mercurius: in mixtis siquidem humor radicalis est sedes & pabulum ignis innati & cœlestis, vinculum eius cum elementari corpore: at vis illa ignea est forma & anima mixtorum. In seminibus humor ille est immediatè custos & capsula spiritus illius ignei in semine

¹²⁴. The sexual personification of matter is the author's explanatory analogy. Fuci is rendered 'drones'; alongside worms and beetles these belong to the historical category of supposedly imperfect generation.

incarcerati, donec calore aduentio in matrice aptâ ad generationem promoueatur. Substantia denique illa radicalis in quolibet mixto est officina Vulcani; focus in quo custoditur Ignis ille immortalis, qui primus motor est omnium indiuidui facultatum.

English 224. Innate heat and radical moisture are of different kinds. The former is wholly solar and spiritual; the latter is an intermediate nature between the spiritual and the bodily, sharing in both the Ethereal and the Elemental. The former belongs to the order of higher things, the latter more to that of lower things. In it the first marriage of Heaven and Earth was celebrated, through which Heaven dwells even at the centre of the earth. Those who confuse innate heat with radical moisture are therefore mistaken, for they differ no less than smoke and flame, the Sun's light and air, or Sulphur and Mercury. In mixed bodies radical moisture is the seat and food of innate, heavenly fire and the bond linking it to the elemental body. That fiery power, however, is the form and soul of mixed bodies. In seeds, this moisture is the immediate guardian and capsule of the fiery spirit imprisoned in the seed, until external heat advances it towards generation in a suitable womb. Finally, this radical substance is Vulcan's workshop in every mixed body: the hearth in which the immortal Fire is kept, the first mover of all the individual's faculties.¹²⁵

PR-C225 1653, p. 164

Latin CCXXV. Humidum illud radicale est balsamum catholicum, Elixir Naturæ pretiosissimum, Mercurius vitæ à Naturâ perfectè sublimatus, cuius dosim cuilibet supellectilis suæ indiuiduo ad iustam lancem trutinatam diues propinauit Natura. Qui tantum thesaurum in corde ac fœtuum Naturæ recessu abstrusum eruere, elementorumque inuolucris obumbratum aptè explicare meruerit, summum vitæ humanæ subsidium ac pretiosissimam panacæam se adeptum esse gloriatur.

English 225. This radical moisture is the universal balsam, Nature's most precious Elixir, the Mercury of life perfectly sublimed by Nature. Bountiful Nature has given every individual in her store a dose of it, weighed upon a just balance. Whoever has deserved to draw forth this great treasure, hidden in the heart and recesses of Nature's offspring, and skilfully unfold it from the elemental wrappings that obscure it, may glory in having obtained the greatest support of human life and the most precious panacea.¹²⁶

¹²⁵. The canon explicitly distinguishes radical moisture from innate heat. Sulphur and Mercury appear as an analogical pair in that distinction; the translation does not identify either principle with a modern isolated chemical substance.

¹²⁶. Catholicum means universal. The panacea is the author's promised universal remedy; the claim is preserved as part of the historical text and does not establish therapeutic efficacy.

Original marginal note PR-M-C226-01 1653, p. 164

Latin PRIMA ET SECVNDA RERVVM EXEMPLARIA.

English THE FIRST AND SECOND EXEMPLARS OF THINGS.

PR-C226 1653, pp. 164, 165

Latin CCXXVI. Prima rerum exemplaria in cælestibus Naturis primò cælata, porrò ad inferiores transmissa fuisse rationis & creationis ordo postulat; illic autem longè perfectiora existunt, tum propter maiorem materiæ tenuitatem & præstantiam, cùm etiam propter viciniores æternitati sedes: Apud nos autem multò ignobiliora, quia in crassiori & viliori materiâ sculpta, & ab æterno suo principio remotiora sunt. Nihil itaque in hoc extremo Mundi margine transcriptum est, quod priùs in cœlesti latitudine descriptum non fuerit; neque vlla inferiorum naturarum species est, quæ consentaneæ cuiusdam superioris dominium non agnoscat, occultumque eius sigillum & signaturam insitam non habeat: sic inferiora à superioribus dependent.

English 226. The order of reason and Creation requires that the first exemplars of things were first engraved in heavenly Natures and then transmitted to lower ones. There they exist far more perfectly, both because of the greater fineness and excellence of matter and because their abodes are nearer to eternity. Among us they are much baser, being carved in coarser and cheaper matter and more remote from their eternal principle. Nothing has therefore been copied in this outermost margin of the World that was not first delineated in the heavenly expanse. Nor is there any species of lower nature that does not acknowledge the dominion of some corresponding higher nature and carry within it that nature's hidden seal and signature. Thus lower things depend upon higher ones.

Original marginal note PR-M-C227-01 1653, p. 165

Latin VNIVERSI HARMONIA.

English THE HARMONY OF THE UNIVERSE.

PR-C227 1653, pp. 165, 166

Latin CCXXVII. Mundus ambiguae naturæ quasi animal est, vtroque sexu enim pollet; pars superior, cælestis nempe, actiua & masculina; hæc inferior elementaris passiuæ & fœminina est: Terræ globus vterus est, quo prolificum Cœli semen excipitur & fouetur: à parte masculi vita & robur effluunt, à parte fœminæ corruptio & mors in generata prorumpunt.

English 227. The World is like an animal of double nature, for it possesses both sexes. Its upper, heavenly part is active and masculine; this lower, elemental part is passive and feminine. The globe of the Earth is the womb in which Heaven's fruitful seed is received and fostered. From the male side flow life and strength; from the female side corruption and death break forth into generated things.¹²⁷

¹²⁷. The masculine and feminine assignments are the author's cosmological personifications, continuing his account of heavenly activity and elemental receptivity. They are not editorial judgements about human sexes.

PR-C228 1653, p. 166

Latin CCXXVIII. Cum superiora & inferiora corpora ex iisdem principijs, tanquam parentibus originem traxerint, nec tamen æqualem sortem nacta sint, æquum est illa, quæ in nobiliores substantias & digniora munera exaltata gloriantur, fratribus inferioris sortis, egenis & penuriâ laborantibus opum suarum aliquid largiri, ac ipsorum vitæ & conseruationi consulere: Mundum enim quum ex inæqualibus naturis conflari necesse fuerit, imbecilioribus potentiores opem sponte ferre, virésque languentibus suggerere à diuinâ prouidentiâ cautum est. Sic Amor partium Vniuersi vinculum est indissolubile.

English 228. Since higher and lower bodies drew their origin from the same principles as from parents, yet did not receive an equal lot, it is just that those which glory in being exalted to nobler substances and worthier offices should bestow some of their resources upon brothers of a lower station, needy and suffering want, and provide for their life and preservation. For since the World had to be composed of unequal natures, divine providence arranged that the more powerful should willingly aid the weaker and supply strength to the languishing. Thus Love is the indissoluble bond of the parts of the Universe.

PR-C229 1653, pp. 166, 167

Latin CCXXIX. In hac regione sublunari ex defectu proportionis aut temperamenti Elementorum, siue ratione quantitatis, siue qualitatum, ex nimia scilicet intensione aut remissione, morbida laborat Natura, & fit cacophonia in musica naturali, & discrasia in corporibus: Sublatâ itaque illâ Elementorum consonantiâ, quæ ex proportionem resultat, & temperamentum constituit, materia & forma totius mixti malè cohærent: perturbatur Natura & confusione perplexa titubatur; vnde morbi & tandem mors inordinatam & labantem Naturam inuadunt.

English 229. In this sublunary region, Nature suffers sickness through a defect of proportion or balance among the Elements, whether in quantity or in qualities—that is, through excessive intensity or relaxation. Discord arises in natural music, and an ill mixture in bodies. When that consonance of the Elements which results from proportion and constitutes balance is removed, the matter and form of the whole mixed body adhere poorly. Nature is disturbed and stumbles, entangled in confusion. Hence diseases, and finally death, invade disordered and faltering Nature.¹²⁸

PR-C230 1653, p. 167

Latin CCXXX. Discordia illa principiorum aut intrinsecam & radicalem causam habet, veluti à semine vitioso, prauâ generatione aut senio: vel extrinsecam & accidentalem vt à nimia repletionem vel inanitionem; vnde manat excessus vel defectus in humoribus & spiritibus: aut etiam à putrefactione, lethali veneno, tabe, mœrore, læsione, vel impedimento aliquo vitæ organis illato, cum similibus, quæ Naturæ vim inferunt.

English 230. This discord of the principles has either an inward, radical cause, such as defective seed, faulty generation or old age, or an

¹²⁸ Temperamentum is the balanced blending of constituent qualities, and discrasia its disordered counterpart. The canon makes musical consonance an explanatory image of bodily health.

external, accidental cause, such as excessive fullness or depletion, from which arise excess or deficiency in the humours and spirits. It may also arise from putrefaction, deadly poison, wasting, grief, injury or some obstruction inflicted upon the organs of life, and similar things that do violence to Nature.

Original marginal note PR-M-C231-01 1653, p. 168

Latin QVATVOR QVALITATES SVNT HARMONICI NATVRÆ TONI.

English THE FOUR QUALITIES ARE NATURE'S HARMONIC TONES.

PR-C231 1653, p. 168

Latin CCXXXI. Quatuor radicales Elementorum qualitates sunt veluti harmonici Naturæ toni, non sibi inuicem contrarij, sed diuersi, & certis interuallis inter se distantes, ex quorum rationali differentiâ, intensione & remissione fit perfectus Naturæ concentus intellectu perceptibilis, vocali Musicæ, quæ sensu deprehenditur, analogus. Tonus grauis & acutus, licet extremi sint in Musicâ, contrarij non sunt, sed termini mediorum, qui interiarent, & diuersâ ratione à duobus illis extremis componuntur & temperantur: Sic caliditas & frigiditas, siccitas & humiditas extremæ qualitates sunt in Naturâ, non propterea contrariæ, sed mediarum & interiarentium qualitatum termini, ex quorum mixtione & temperamento mediæ procedunt.

English 231. The four radical qualities of the Elements are like Nature's harmonic tones. They are not mutually contrary but different, standing apart at definite intervals. From their proportionate difference, intensity and relaxation arises Nature's perfect harmony, perceptible to the intellect and analogous to vocal Music, which is apprehended by sense. Although low and high tones are the extremes in Music, they are not contraries but the boundaries of the intervening tones, which are composed and tempered in different proportions from those two extremes. Thus heat and cold, dryness and moisture are extreme qualities in Nature. They are not therefore contraries, but boundaries of the middle, intervening qualities, which arise from the mixing and tempering of the extremes.

Original marginal note PR-M-C232-01 1653, p. 168

Latin NATVRÆ MOTVS.

English NATURE'S MOVEMENT.

PR-C232 1653, pp. 168, 169

Latin CCXXXII. Naturæ motus continuus ac indefessus est, non minùs in partibus quàm in toto; agit enim illa semper, ocij impatiens, adeo vt si momento quiesceret, rueret fabrica vniuersi, quæ legi motus perpetui mancipata est, neque etenim terra stans, mare pacatum, aër tranquillus, quia moueri non percipiuntur, propterea omninò vellescunt; non secus ac homo dormiens, quies illa actionis remissio est, non amissio vel cessatio: Natura introrsum agit, quocunque tempore organa sua mouet, nec ab actione vnquam desistit: ipsa etiam cadauera motum corruptionis patiuntur; viuientia autem, licet non locali, organico tamen motu aguntur.

English 232. Nature's movement is continuous and tireless, no less in the parts than in the whole. She always acts, unable to endure idleness, so

that if she rested for a moment the fabric of the Universe, bound to the law of perpetual movement, would collapse. The standing earth, peaceful sea and tranquil air are not wholly at rest merely because we do not perceive them moving. As with a sleeping person, this rest is a relaxation of activity, not its loss or cessation. Nature acts inwardly, moves her instruments at every moment and never ceases from action. Even dead bodies undergo the movement of corruption; living things, though they may lack movement from place to place, are nevertheless moved by the activity of their organs.¹²⁹

PR-C233 1653, pp. 169, 170

Latin CCXXXIII. Natura vniformiter & ordinatè machinam vniuersi mouet, ita tamen vt inæqualia & dissimilia inæquali & dissimili motu verset: hanc inæqualitatis legem æquitas Geometrica postulat: Ita omnium corporum cælestium motus æquales dici possunt ratione Geometricâ, habitâ nempe ratione differentię magnitudinis, distantię & naturę eorum.

English 233. Nature moves the structure of the Universe uniformly and in order, yet moves unequal and dissimilar things with unequal and dissimilar movement. Geometrical equity requires this law of inequality. Thus the movements of all heavenly bodies may be called equal in a geometrical proportion, taking account of their differences in size, distance and nature.¹³⁰

PR-C234 1653, p. 170

Latin CCXXXIII. Natura in operibus suis informandis & regendis non minùs ingeniosa quàm potens per vias versatiles & operationes erraticas certum suum finem consequitur, quod in terrę fœtibus producendis maximè patet; inæquali enim temperie elementa tractans fœcundo semine Terrę vterum, hiemali potissimùm tempore replet, Vere partum facilem procurat, Æstate fructus maturat, Autumno verò caducos facit.

English 234. Nature, no less ingenious than powerful in forming and governing her works, attains her certain end through changing paths and wandering operations. This is especially evident in producing Earth's offspring. Working the elements through an unequal blending of conditions, she fills Earth's womb with fruitful seed chiefly in winter, procures an easy birth in Spring, ripens the fruits in Summer and makes them fall in Autumn.¹³¹

PR-C235 1653, pp. 170, 171

Latin CCXXXV. Diuersitas autem illa præsertim ex solis accessu & recessu ab Vniuersi creatore ad eum finem instituto procedit; Solem enim elementorum moderatorem idem constituit, vt ex variâ & inæquali eius distantia, inflexione &

¹²⁹. The distinction between local and organic movement allows the author to call apparently stationary living things active. Perpetual movement here describes Nature's continuing activity, rather than a proposed machine.

¹³⁰. Geometrical equity is equality according to proportion, not identical numerical speeds. The canon gives no mathematical formula for the heavenly movements.

¹³¹. The printed heading uses the additive numeral CCXXXIII for 234. The changing seasons are presented as a purposeful order whose individual operations are variable.

reflexione diuersum & inæquale temperamentum experirentur; & ita per diuersa tempora Naturæ dissimilia agenti succurreretur, ac per temporum vices ipsa vicissitudines suas adimpleret. Hæc naturæ varietas sagaci philosophi serium opus tractantis consideratione digna est.

English 235. This diversity proceeds chiefly from the Sun's approach and withdrawal, established for that purpose by the Creator of the Universe. He appointed the Sun as governor of the elements, so that through its varied and unequal distance, inclination and reflection they might experience a varied and unequal balance of conditions. Thus aid is supplied to Nature as she performs different works through different seasons, and through the succession of times she fulfils her own alternations. This variety of Nature deserves the discerning consideration of a philosopher engaged in serious work.

PR-C236 1653, p. 171

Latin CCXXXVI. Cælestia corpora licet alterationis labem non patiantur: dissimilis tamen eorum propensio, & varij errantium motus, qui eorum situm & distantiam inter se & cœli figuram mutant multiplices in hanc elementarem plagam mutationes inducunt, & affectiones inspirant; ita vt cereas elementorum naturas variè fingant & inclinent, ac continuo suo influxu fermentare non desinant.

English 236. Although heavenly bodies do not suffer the stain of alteration, their different inclinations and the varied movements of the wandering stars, which change their relative positions and distances and the configuration of Heaven, introduce manifold changes into this elemental region and breathe dispositions into it. Thus they variously shape and incline the wax-like natures of the elements and never cease to ferment them through their continuous influx.¹³²

Original marginal note PR-M-C237-01 1653, p. 171

Latin COELVM VNIVERSVM CONTINVVM EST.

English THE WHOLE HEAVEN IS CONTINUOUS.

PR-C237 1653, pp. 171, 172

Latin CCXXXVII. Vniuersa cœlorum substantia partes continuas habet, non contiguas. Nemo itaque sibi fingat Mundum opus artis esse, quod Naturæ est, quæ in sphæras & circulos sectionem non patitur: qui primi enim in orbium & circulorum pluralitatem ætheream regionem diuiserunt, magis docendi facilitatem, quam doctrinæ veritatem sibi proposuerunt; vnitatis siquidem studiosa diuina Natura, quæ vnitas est multipliciter refugit, nec plures cœlos materiâ separatos & superficie distinctos illam condidisse existimandum est, cùm vnicum materiæ continuitate corpus, partium tamen dignitate & virtute diuersum, ei sufficere potuerit. Neque obstant leges motuum siderum, quas quia ignoramus, laruatam Astrologiam nobis fingimus diuinamque potentiam mentis nostræ imbecillitati audacter submittimus; quamuis cœli continuitas astrorum motui non aduersetur, legesque suas humanæ rationi congruas suppeditare possit.

¹³². The wandering stars are the planets. 'Wax-like' preserves the image of elemental natures receiving impressions from above; 'ferment' remains part of the author's vocabulary of celestial action.

English 237. The entire substance of the heavens has continuous, rather than merely touching, parts. No one should therefore imagine the World to be a work of artifice when it is Nature's work; she does not permit division into spheres and circles. Those who first divided the ethereal region into a plurality of orbs and circles aimed more at ease of teaching than at the truth of their teaching. Divine Nature, devoted to unity and herself unity, shuns multiplicity. We should not suppose that she established several heavens separated in matter and distinguished by surfaces, when a single body, continuous in matter though differing in the dignity and power of its parts, could have sufficed. Nor do the laws of the stars' movements oppose this. Because we do not know those laws, we fashion a masked Astrology for ourselves and boldly subject divine power to the weakness of our own mind. Yet the continuity of Heaven does not oppose the movement of the stars and can supply laws suited to human reason.¹³³

PR-C238 1653, pp. 172, 173

Latin CCXXXVIII. Primum aliquod mobile supra cœlos esse, cuius motu rapidissimo cœli inferiores quotidie rotentur, non tam diuinæ sapientiæ inuentum, quàm humanæ ignorantiae subsidium est: si enim primo illi motori principium motus assignamus, cur idem globo cœlesti denegamus? quare cœlo externam motus causam frustrâ fingimus, quæ intrinseca esse potest?

English 238. The claim that there is some first movable sphere above the heavens, by whose exceedingly rapid movement the lower heavens rotate each day, is less an invention of divine wisdom than a prop for human ignorance. For if we assign a principle of movement to that first mover, why deny the same to the heavenly globe? Why needlessly invent an external cause of Heaven's movement when it can be internal?¹³⁴

PR-C239 1653, p. 173

Latin CCXXXIX. Quemadmodum infirma hæc vniuersi prouincia mediæ imperio subiecta est, sic media, ætherea nempe, à supremâ & supercœlesti iura & vicarium munus accepit: Cœlum quippe Empyreum & chorus intelligibilium cœlesti ordini susceptas successiuè ab Archetypo virtutes inspirant, naturasque illas sibi proximè subiacentes, tanquam prima Mundi materialis organa non sine concentu mouent; quo motu inferiora etiam commota vices suas, quasi choreas ad numerum exercent, & quicquid optimi habent, à surioribus mutantur.

English 239. Just as this weak province of the Universe is subject to the rule of the middle one, so the middle, ethereal province has received its authority and delegated office from the highest, superheavenly one. For the Empyrean Heaven and the choir of intelligible beings breathe into

¹³³. The argument rejects physically separated celestial shells while retaining differences of rank and power within a continuous heaven. Astrologia here includes the account of heavenly motions; the translation does not force the later separation between astronomy and astrology upon it.

¹³⁴. Primum mobile names the proposed first moved sphere. The following primus motor refers back to it as the mover of lower heavens, rather than introducing a separate translation of God as an unmoved mover.

the heavenly order powers received successively from the Archetype. They move the natures immediately beneath them, as the first instruments of the material World, in harmony. Through this movement the lower things are also stirred and perform their alternations like dances in measured time, borrowing whatever excellence they possess from the higher things.¹³⁵

Original marginal note PR-M-C240-01 1653, p. 173

Latin INTELLIGENTIÆ.

English INTELLIGENCES.

PR-C240 1653, pp. 173, 174

Latin CCXL. Intelligentiæ autem à diuinâ mente, tanquam à fonte luminis æterni proximè secundùm ordines suos illuminantur, quo lumine, velut pabulo immortali vescuntur, ac in eo, quasi in speculo diuinæ Maiestatis nutus & mandata legunt, suscipiunt, ac in obsequij gloriam accenduntur. Hæc est triplicis naturæ Vniuersi ratio ac vnio, cuius vinculum & nodus Herculeus est amor diuinus. Sic ternario absoluitur vniuersa hæc Respublica mundana, cuius creator nequaquam pars est; non secus ac vnitas neque numerus est, neque pars numeri, licet omnem numerum constituat, sed numeri principium est ac mensura; neque Musicus aut citharædus concentus pars est, sed author.

English 240. The Intelligences are illuminated directly, according to their orders, by the divine mind as by the source of eternal light. They feed upon that light as upon immortal food and in it, as in a mirror, read and receive the signs and commands of divine Majesty and are kindled towards the glory of obedience. This is the order and union of the Universe's threefold nature, whose bond and Herculean knot is divine love. Thus this entire commonwealth of the World is completed in a triad, of which the Creator is in no way a part. Likewise unity is neither a number nor part of a number, although it constitutes every number: it is the principle and measure of number. Nor is the musician or lyre-player a part of the harmony, but its author.¹³⁶

Original marginal note PR-M-C241-01 1653, p. 174

Latin MVNDI PLVRES IN VNIVERSO.

English MANY WORLDS IN THE UNIVERSE.

PR-C241 1653, pp. 174, 175

Latin CCXLI. Qui innumeram penè cælestium corporum multitudinem ad globi terrestres, eíusque ciuium vtilitatem, tanquam ad finem suum creatam fuisse existimant, hallucinantur; longè enim nobiliores augustiorésque naturas vilioribus, & deterioribus mancipari naturalis ratio prohibet. Annò verisimilius est quemlibet globum Mundum singularem constituere, totque mundos, velut diuini æternique

¹³⁵ The print reads *infirma*, 'weak', rather than *infima*, 'lowest'; the surrounding three-level hierarchy places this province below the ethereal middle. Intelligible beings are apprehended by intellect rather than sense; the next canon calls them Intelligences. The last sentence prints *surioribus*, apparently for *superioribus*; the English reads "higher things" from the context.

¹³⁶ The canon expressly distinguishes the Creator from the created commonwealth. The comparison with unity follows an account in which number is a plurality measured by one; it should not be silently rewritten according to modern arithmetic conventions.

imperij feudos in vasto Ætheris spatio diffusos, eoque medio tanquam communi vinculo inter se colligatos suspendi, multiplicibusque illis naturis totius vniuersi amplitudinem constare? quæ licet inter se plurimum naturâ & loco dissitæ sint mutuo tamen amore ita consentiunt, vt perfectam in vniuerso harmoniam efficiant: cælum autem communis est omnium area, circa perfectiora tamen corpora longè purius, ideoque spirabile tenuissimum, & corpus vtcunque spirituale interiacet, ac interiecta spatia implet, vt varias tot naturarum affectiones, arcanasque virtutes ab illis iugiter emanantes facile suscipiat, susceptasque aliis, licet remotissimis, celerrimè communicet; est enim cælum vehiculum Naturæ, quo mediante omnes vniuersi ciuitates inter se commercium exercent, participesque facultatum suarum inuicem fiunt: ita potentissimo amoris necessitudinisque vinculo, quasi virtute quadam magneticâ, inter se deuinciuntur.

English 241. Those who think that the almost innumerable multitude of heavenly bodies was created for the benefit of the earthly globe and its inhabitants as their ultimate purpose are mistaken. Natural reason forbids the enslavement of far nobler and more majestic natures to baser and worse ones. Is it not more probable that each globe constitutes a distinct World, and that so many worlds, like fiefs of the divine and eternal empire, are spread and suspended throughout the vast space of Ether, bound to one another by that medium as a common bond, and that the immensity of the whole Universe consists of these manifold natures? Although they are very distant from one another in nature and place, they agree through mutual love so as to produce a perfect harmony in the Universe. Heaven is the common field of all of them, though much purer around the more perfect bodies. An exceedingly fine, breath-like and in some measure spiritual body therefore lies between them and fills the intervening spaces. It readily receives the varied dispositions of so many natures and the hidden powers continually flowing from them, and communicates what it receives with the greatest speed to others, however distant. For Heaven is Nature's vehicle, through whose mediation all the cities of the Universe conduct commerce with one another and share in each other's faculties. Thus they are bound together by the strongest bond of love and kinship, as though by a kind of magnetic power.¹³⁷

Original marginal note PR-M-C242-01 1653, p. 176

Latin TERRÆ GLOBVS INTER ASTRA.

English THE EARTH'S GLOBE AMONG THE STARS.

PR-C242 1653, pp. 176, 177

Latin CCXLII. Terræ globum non minùs inter astra, quàm Lunam, numerari quid prohibet? vtrumque enim corpus naturâ suâ opacum est; vtrumque lumen à sole mutuatur: vtrumque est corpus solidum & radios solares reflectit; vtrumque spiritus & virtutes emittit; vtrumque in cœlo siue aëre suo pendulum est: de motu dubitatur; verum ad quid motus Terræ necessarius? quidni etiam ipsa inter tot fixa corpora

¹³⁷. The plurality of worlds is proposed as more probable, not reported as an observed discovery. The 'cities' and 'fiefs' extend the political metaphor of a universal commonwealth; they do not by themselves specify human-like inhabitants on other globes. The printed interrogative Annô is read as annon, 'is it not?'.

stabit? Et suos forsan habet incolas Luna, supra fidem enim est tam immensas Orbium moles ociosas & steriles degere, quas nullæ creaturæ incolant, quarum motus actiones & labores in solius globi huius infimi vilissimique commodum vergant; cum Deus ipse solitudinis impatiens per creationem extra se migrans totum se in creaturas effuderit, eisque multiplicationis legem dixerit. Annon diuinæ bonitati & gloriæ proximus est, vnicam totius vniuersi fabricam, velut imperium variis plurium Mundorum naturis, quasi prouincijs aut ciuitatibus decoratum profiteri? mundos autem ipsos tot innumerorum diuersi generis ciuium domicilia esse; eaque omnia ad summam æterni sui conditoris gloriam creata?

English 242. What prevents the earthly globe from being numbered among the stars no less than the Moon? Each body is opaque by its own nature; each borrows light from the Sun; each is solid and reflects the solar rays; each emits spirits and powers; and each hangs suspended in its own heaven or air. There is doubt about movement, but why is the Earth's movement necessary? Why should it not also stand among so many fixed bodies? Perhaps the Moon too has its own inhabitants. It is beyond belief that such immense masses of globes should remain idle and barren, inhabited by no creatures, and that their movements, actions and labours should serve only the benefit of this lowest and basest globe. For God himself, unable to endure solitude, passed beyond himself through Creation, poured himself wholly into creatures and prescribed to them the law of multiplication. Is it not more consonant with divine goodness and glory to profess a single structure of the whole Universe, like an empire adorned with the varied natures of many Worlds as with provinces or cities? And to profess that those worlds are so many dwellings for innumerable inhabitants of different kinds, all created for the supreme glory of their eternal Maker?¹³⁸

PR-C243 1653, p. 177

Latin CCXLIII. Solem autem quasi lampadem immortalem in medio aulæ summi Principis suspensam, omnes eius angulos & recessus irradientem; aut tanquam diuinæ Maiestatis vicarium omnibus vniuersi creaturis lucem, spiritum ac vitam infundentem quis non venerabitur? Æquum enim erat Deum à materia remotissimum materialia sua opera per organum quasi medium aliquod materiale præstantissimum, ac spiritu viuifico refertissimum tractare & regere, sensibilibusque creaturis & populis sensibilem etiam Monarcham præficere.

English 243. Who would not revere the Sun as an immortal lamp suspended in the middle of the supreme Prince's hall, illuminating all its corners and recesses? Or as the deputy of divine Majesty, pouring light, spirit and life into every creature of the Universe? For it was fitting that God, most remote from matter, should handle and govern his material works through an instrument, a most excellent material intermediary filled with life-giving spirit, and set a perceptible Monarch over perceptible creatures and peoples.

¹³⁸. The argument includes Earth among celestial bodies and entertains inhabitants of the Moon, yet expressly questions whether Earth's movement is necessary. These propositions should not be merged into a claim that the author here endorses a moving Earth. Lunar inhabitants remain a possibility: forsan, 'perhaps'.

PR-C244 1653, pp. 177, 178

Latin CCXLIV. Neque hæc plurium orbium siue Mundorum doctrina sacræ paginæ repugnat, quæ nobis Mundi huius nostri tantum genesim exhibet, omnia ferè de illâ mystico magis quàm aperto sermone referens; cæteras vniuersi naturas solummodo delibans, vt imbecillibus hominum animis curiositatis vitio & scientiæ cupidine dudum lapsis plus admirari, quàm cognoscere liceret. Illa veritatis obnubilatio, illæ mentis humanæ tenebræ pars pœnæ peccati fuerunt, cuius causâ paradisi voluptate, scientiarum deliciis, Naturæ cœlestiumque cognitione excidit homo; vt qui ad prauum prohibitæ scientiæ desiderium se extulerat, per iustam etiam concessæ priuationem deprimeretur; sicque inductâ scientiarum multiplicitate ac confusione, veræ scientiæ, quæ vna omnium rerum erat, amissione plecteretur: Cherubin ille est Paradisi custodiæ præfectus, igneo gladio imminens, luminis sui fulgore conscias hominum mentes obcæcans, & ab arcanis Naturæ Vniuersique veritate arcens.

English 244. This doctrine of many globes or Worlds does not conflict with Holy Scripture, which presents to us only the genesis of this World of ours. It recounts almost everything about that genesis in mystical rather than plain language, merely touching upon the other natures of the Universe, so that the weak minds of human beings, long fallen through the fault of curiosity and the desire for knowledge, might be permitted to wonder more than to know. This clouding of truth and this darkness of the human mind were part of the punishment for sin. Because of it, humanity fell from the pleasure of Paradise, the delights of the sciences and the knowledge of Nature and heavenly things. Having raised itself towards a wrongful desire for forbidden knowledge, it was to be humbled through the just deprivation even of permitted knowledge. Thus, with multiplicity and confusion introduced into the sciences, it was punished by the loss of true knowledge, which had been a single knowledge of all things. This is that Cherub appointed to guard Paradise, threatening with a fiery sword, blinding the guilty minds of human beings by the brilliance of his light and keeping them from Nature's secrets and the truth of the Universe.¹³⁹

PR-C245 1653, p. 179

Latin CCXLV. Diuinitas cùm sit vnitas perfectissima, duobus tamen quodammodo constare & absolui videtur, nempe intellectu & voluntate: Per intellectum omnia ab æterno cognoscit: Per voluntatem omnia operatur, vtrumque absolutissimè. Scientia & sapientia ad Intellectum pertinent; bonitas autem, iustitia, clementia, & cæteræ virtutes, quæ morum apud nos habentur, ad voluntatem spectant; imò & ipsa Dei omnipotentia, quæ nihil aliud est, quàm voluntas omnipotens. Intelligibiles naturæ, nempe angelica & anima humana; quæ Diuinitatis sunt imagunculæ, duabus etiam illis facultatibus ad pondus suum & mensuram præditæ sunt; intellectus enim in illis est organum scientiæ, Voluntas operationis, nec aliquid vltra possunt.

English 245. Although Divinity is the most perfect unity, it nevertheless seems in a certain way to consist and be complete in two things: intellect and will. Through intellect it knows all things from eternity;

¹³⁹. The author reconciles his plurality of worlds with Scripture by restricting the narrative of genesis to 'this World of ours'. His final account of lost unified knowledge interprets the Fall and the Cherub's sword; it remains his theological argument, not a new source claim supplied by the edition.

through will it performs all things, both in the most perfect manner. Knowledge and wisdom belong to Intellect; goodness, justice, mercy and the other virtues that among us concern conduct belong to will. So indeed does God's omnipotence itself, which is nothing other than omnipotent will. Intelligible natures, namely the angelic nature and the human soul, which are little images of Divinity, are also endowed with those two faculties according to their own weight and measure. In them intellect is the instrument of knowledge, Will of operation; beyond these they can do nothing.¹⁴⁰

PR-FINIS 1653, p. 179

Latin FINIS.

English THE END.

¹⁴⁰. The opening 'in a certain way' qualifies the distinction within divine unity. The ending contrasts the unlimited divine faculties with their measured likeness in created intellectual natures.

Keyword Essays

Restoration and the Freedom to Judge

The original preface balances reverence with a demand for judgment. Its author praises Plato and Aristotle as guardians of Philosophy in childhood, yet asks readers to set their names and authority aside while weighing a claim. His playful injunction against the evil eye makes reputation itself a possible enchantment. The issue is how respect for a teacher can coexist with freedom to examine what the teacher says.

Restoration supplies a language for that freedom. The author asks whether boundaries have been advanced rather than removed, rights restored rather than corrupted, majesty increased rather than diminished. His defence seeks continuity through revision. It does not make novelty sufficient proof; it demands a hearing for an argument that may disturb established opinion.

Read the request for fair judgment and the boundary-stone passage before returning to a difficult canon. Distinguish the force of an argument from the assurance of its style. For a reflective exercise, identify an authority whose name tends to settle a question for you, then state what evidence would still be needed. That exercise develops the preface's concern without pretending to reproduce the author's every conviction.

Light as a Principle of Knowledge and Nature

Light belongs both to the act of understanding and to what this book takes to be the constitution of things. In the preface, a dim appearance becomes a surer illumination as the author's mind warms through inquiry. In the natural philosophy, light is implicated in form, life and the communication of higher powers to lower matter. These uses support one another, but they should not be collapsed into a single modern definition.

The reader should therefore ask what light is doing in a particular sentence. Is it the object of a physical claim, a cause of formation, a figure for intelligibility, or a sign of dependence upon a divine source? Sometimes several functions are present. The text's own distinction between destructive flame and Nature's fire provides an especially useful check against making every occurrence mean combustion.

Compare the preface's illumination with canon 82 and canon 164. A contemplative reading may consider how understanding gives order to an obscure subject. It should also acknowledge that the canons are offering an account of living and material things, rather than merely describing an inward experience.

Harmony and Difference

The title promises Nature's true harmony. The late comparison with music explains what that promise entails: extremes can be different without being enemies. High and low tones do not destroy one another; their ordered intervals make a concord possible. The author applies that distinction to the qualities associated with the elements.

Harmony therefore requires proportion, not the disappearance of difference. Disease is described through disrupted concord and temperament; the changing seasons demonstrate an order that includes unequal conditions. A fixed quantity or an unchanging state is not automatically the model of health. What matters to the argument is whether a relation fits the activity, place and time in question.

Read canon 229 with canon 231 and canon 235. The analogy can prompt a careful contemporary reflection on balance: which differences are productive, and which relations are failing? This is an application of the text's pattern of thought, not a diagnosis or an instruction for treating illness. The historical account of qualities should remain identifiable on its own terms.

Soul, Spirit, Body, and the Conditions of Life

The book does not use soul, spirit and body as interchangeable names for a single hidden thing. Its account makes spirit a mediator and vehicle, while soul is the informing principle of the living compound. Body provides the organised material condition in which a power can act. The distinction allows the author to explain both union and separation.

Innate heat and radical moisture form another relationship that must be preserved. They cooperate in life, yet canon 224 explicitly warns against confusing them. One functions as an active, celestial or solar principle; the other receives, sustains and binds that activity within the compound. The claims are historical natural philosophy, including assumptions about generation that a modern reader need not accept in order to follow the argument.

Begin with canon 163 and canon 164, then read canon 224. List the actions attributed to each term before deciding how to define it. A reflective interpretation can explore the need for mediation between intention and embodied activity. Its value depends on keeping that interpretation separate from a claim that the author's physical explanation has ceased to matter.

Change, Residue, and Renewal

The late canons ask what can remain when a living compound loses its form. Their discussions of ashes, glass, salts and radical moisture offer a

model of persistence through change. A remaining power is not necessarily the whole living individual, nor does survival of a residue mean that every previous organisation continues intact.

The argument reaches beyond the individual body. The author conjectures an enduring material root and connects its persistence with a future restoration of the world. His language joins an observation about materials to a theological horizon. Readers should notice where he offers an example, where he draws an inference, and where he marks a suspicion or conjecture.

Read canon 217, canon 220 and canon 223 together. What does the example actually demonstrate, and what further claim is made from it? A symbolic reading of loss and renewal can be fruitful here, provided that 'renewal' does not become an excuse to skip the different senses of matter, form and life. The persistence of a condition of generation and the restoration of a person are not established as identical by the analogy alone.

Many Worlds and a Created Whole

The closing cosmology questions whether the innumerable heavenly bodies were created simply for the benefit of the terrestrial globe. It imagines the universe as an empire of provinces or cities, joined by communication through the heavens. The Earth can be compared with the Moon, and the Moon may have inhabitants. The proposal is stated within a theological natural philosophy, not as the result of telescopic evidence supplied in this book.

The author also resists imposing artificial separations on a continuous heaven. At the same time, he insists that the creator is not a part of the created commonwealth. The musician is not one note within the harmony. This distinction prevents the book's language of universal union from being taken as a simple identification of God with the material world.

Follow canon 237 through canon 245, paying particular attention to the questions in 241 and 242. What is presented as plausible, what is asserted as a principle, and what is defended by an interpretation of Scripture? Preserving those different levels of confidence makes the speculation more interesting and more precise.

Short Glossary

These entries orient the reader within this particular natural philosophy. They describe historical functions and relations; they do not identify timeless meanings shared by every alchemical writer or supply modern chemical and medical equivalents.

Act and Potency

Act is a power brought into operation or determination; potency is its capacity before that fulfilment. The terms help the author describe generation without making what is merely possible identical to what has already been formed.

Air

An elemental and mediating nature, also implicated in the account of spirit and the heavens. The local argument must decide whether air means a lower elemental condition, a purified medium, or a comparison; it is not automatically modern atmospheric chemistry.

Archetype

The primary exemplar from which the order and powers of created things depend. It belongs to the book's account of divine causation and transmitted form, rather than to a modern psychological classification.

Art

An ordered human practice that follows, imitates or works with Nature. The term is broader than fine art and does not make the practitioner the creator of Nature's first powers.

Body

A material and organised condition in which powers operate. Body is distinguished from soul and spirit, although the living compound depends on their union. A body's destruction does not, in this account, abolish every residual natural capacity.

Cause

That by which the author explains a thing's existence, form, activity or end. Distinguishing a divine first cause from subordinate natural causes matters more here than supplying a single modern mechanism for every term.

Chaos

The confused or undifferentiated condition associated with the beginning of material order. It belongs to a historical account of creation and formation; it need not denote random behaviour in the modern mathematical sense.

Concord

An agreement of different powers or qualities in an ordered whole. Concord does not require sameness. The musical analogy makes proportion and interval central to its meaning.

Corruption

The loss or dissolution of a compound's prior form or organised condition. Corruption is paired with generation and can prepare another formation; the word does not by itself mean moral depravity.

Creation

The dependence of the world and its principles upon a divine maker. The creator is expressly distinguished from the parts of the world, even when those parts are joined into a single commonwealth.

Earth

An element, the terrestrial globe, or a receiving and generative ground. Its sense changes with scale. The author's account of earth's fertility and its place among heavenly bodies should not be made into one undifferentiated symbol.

Elements

The foundational material natures of the author's natural philosophy. Their number, qualities and relations are contested in the work; they are not equivalent to the chemical elements of a modern periodic table.

Ether

The subtle celestial medium or nature through which higher powers communicate. It belongs to the work's cosmology and should not be equated with a later physical ether theory without argument.

Fire

A term whose range includes destructive flame, heat, a formative natural power and celestial light. The canons distinguish these functions. A definition that identifies every fire with burning would erase part of the argument.

Form

The determining and active principle by which matter is a thing of a particular kind. Form is related to soul in living compounds, but the work also discusses a universal formative principle.

Generation

The coming-to-be of an individual compound or living thing. The author explains it through prepared matter, formative activity, seed and suitable receiving conditions; some examples rely on historical assumptions about spontaneous generation.

Harmony

The proportionate cooperation of differentiated parts or powers. It supplies the title's governing promise and the musical analogy of the late canons. Harmony is a relation, not merely a pleasant sensation.

Heat, Innate

The internal, life-related heat distinguished from external warmth and from radical moisture. It is associated with a solar or celestial formative power. Its historical function exceeds what a thermometer measures.

Intellect

The faculty of understanding and knowledge. The closing canon distinguishes intellect from will while relating both to the divine exemplar and to the limited faculties of created intelligible natures.

Light

A principle connected with intelligibility, form, life and celestial influence. The term also structures the author's account of inquiry. Its several functions must be identified in context rather than reduced to a single physical or symbolic equivalent.

Love

A unifying and communicating power, used to explain the joining of differentiated natures and the mutual support of the universe's parts. The preface also makes love of knowledge and of readers a motive for writing.

Matter, First

The underlying recipient of formation in the account of Nature's beginning. It is not an identified modern chemical substance. Its relation to universal form must be distinguished from the matter of an already formed individual.

Matrix

A receiving and nourishing condition of generation, often expressed through the image of a womb. Its meaning depends on what is received, what acts upon it, and the scale of the natural process being described.

Moisture, Radical

The rooted, sustaining moisture through which life-related activity is received and bound within a compound. It is distinguished both from ordinary removable moisture and from innate heat. The word radical refers to a root, not to a modern free radical.

Motion

Natural activity or change, including processes not visible as a journey from one place to another. The author distinguishes a remission of action from its complete cessation and extends activity to apparently resting bodies.

Nature

The ordered power and administration of created things under their first cause. Nature can be personified as a governor, artisan or mother. Those images need not imply an independent deity separate from the book's creator.

Quality

A way in which elemental or compound matter is disposed to act and receive action. The author treats qualities as instruments rather than the underlying efficient causes of action. Heat, cold, moisture and dryness are understood through proportion and temperament rather than simply as mutual enemies.

Salt

Salt appears as a material residue and bearer of powers in discussions of ashes, fertility and a persistent generative root, and as a secondary constituent principle alongside sulphur and mercury (canons 150–152). In canon 114, “salt of Nature” is also a name for the heavenly spirit called the fifth element. The historical category is wider than one modern salt; extraction or presence alone does not prove a universal medical claim.

Seed

A concentrated generative principle that carries the capacity for a particular kind of offspring. Seed is linked with a suitable matrix and formative power, rather than with matter considered in complete isolation.

Soul

The informing and life-giving principle of an individual compound. The text distinguishes this function from spirit as mediator. A claim about the soul of a compound should not automatically be transferred to every theological claim about the human soul.

Spirit

A subtle nature whose function depends on context. In the account of individual life it mediates between soul and body as a vehicle and bond; elsewhere the word extends to fine material natures, fire, light and transmitted powers. It is not a synonym for soul, a ghost, or a modern chemical spirit in every occurrence.

Sun

A celestial source of light and life-related influence within the author’s system. The Sun’s varying relation to lower things also explains seasonal difference and changes of temperament.

Temperament

A proportionate disposition of the elements and their qualities in a compound. It belongs to the account of concord, disorder and disease; a modern reader should not confuse it with personality alone.

Water

A receiving, flowing and connecting material nature, also used in the speculative reading of the waters of Genesis. The author distinguishes familiar water from primordial moisture and from the enigmatic dry water; one definition cannot settle all three uses.

Will

The faculty of operation or willing, distinguished from intellect in the last canon. The author relates goodness, justice and mercy to divine will and gives created intelligible beings limited analogous faculties.

Contextual Lexicon

Each entry begins with one exact complete sentence from the new translation. The Latin forms occur in the paired source passage. Context explains their local work; the reflective possibility is a modern interpretive proposal, not an additional historical definition.

God and the Root Principle

“God is eternal being, infinite unity, the root principle of all things.” — canon 1.

Latin forms: Deus, unitas.

The opening gathers being, unity, light, power, will and accomplishment into a compact theological statement. Its closing wonder and silence set a limit to what further language can claim. The root is the cause upon which the created order depends; it is not a material ingredient extracted from a body.

Reflective possibility: A reflective reading can attend to the relation between an explanation and what it treats as its ultimate ground. The entry does not turn a historical theological affirmation into a modern proof.

Read with canon 4, canon 240, canon 245.

Archetype and the Unfolding Book

“Many of the wise have held that the world was delineated from eternity in its archetype.” — canon 2.

Latin forms: Archetypus, liber.

The archetype is imagined as a luminous book folded within itself and then opened. Birth and the manifestation of a hidden work extend the same account of creation. The image helps explain how a pattern can precede its material expression without being another visible object alongside it.

Reflective possibility: One may compare an intended work with its embodied expression, while remembering that the canon’s first subject is the world’s relation to its divine exemplar. A human plan is an analogy, not the measure of that cause.

Read with canon 3, canon 226, canon 240.

Nature as a Secondary Cause

"Yet whoever recognises nature as a universal secondary cause, serving the first and, like an instrument moved by it, directly moving individual things in the material world in their proper order, will not depart from the understanding of philosophers and theologians." — canon 6.

Latin forms: Naturam, causam.

The qualification 'secondary' preserves a causal hierarchy. Nature serves a first cause while directly ordering material things. The distinction between nature creating and nature created must be read within this immediate argument, rather than imported wholesale from a later philosophical system.

Reflective possibility: For reflection, ask how an activity can exercise real agency while depending upon conditions it did not create. The canon's instrument is active as an instrument; service does not make it a merely empty name.

Read with canon 4, canon 7, canon 9.

Order and the Pages of Law

"Nature's order is nothing other than an unfolded sequence of eternal laws, ordained by the supreme prince and written out across many pages for his countless peoples of varied nature." — canon 8.

Latin forms: Ordo, legum.

Order appears as an unfolded series of laws addressed to peoples of varied natures. The book image gives those differences an intelligible sequence. Its final margins of life and death describe the alternation of the lowest region, rather than cancelling every distinction among the higher orders.

Reflective possibility: A reflective reader can ask what pattern makes a changing sequence intelligible. That question should preserve the author's distinction between an enduring law and the many activities performed under it.

Read with canon 10, canon 11, canon 232.

The Chain and Its Living Repair

“The world is like a craftsman's work turned into a circle; its parts are like the links of a chain, clasping one another in mutual embraces.” — canon 9.

Latin forms: *cathenae*, *annuli*.

Links clasp one another while Nature acts as deputy and the maker repairs what is worn. The image combines mutual connection with continuing maintenance. It does not present the world as a finished mechanism whose parts no longer depend upon the work of preservation.

Reflective possibility: The analogy invites attention to the conditions that sustain a relation over time. A chain's unity depends upon the integrity of its links as well as their embrace; the symbolic application is strongest when both features remain visible.

Read with canon 3, canon 8, canon 228.

Probability and the Limits of Understanding

“It is not easy to decide anything certain about that ancient principle of things, since, created in darkness, it has not yet emerged into the light of human understanding.” — canon 17.

Latin forms: *principio*, *verisimilius*.

The author admits difficulty in deciding what the first principle of things was like. He distinguishes the judgments of philosophers and theologians from the knowledge of Nature's author. Probability and indulgence belong to this acknowledgement of obscurity, even within a book often written in an assured tone.

Reflective possibility: Use this passage to test an interpretation's degree of confidence. A claim can be offered as more plausible without being announced as certain. The qualification is part of the historical wording, not an editorial weakening of it.

Read with canon 18, canon 30, canon 241.

Light as Universal Form

“First matter and the elements therefore received their formation from light.” — canon 32.

Latin forms: Lux, forma.

The canon relates the formation of matter and the elements to shared light. It opposes a bond of affinity to the assumption of inherent elemental warfare, then calls solar light the form of forms. The individual spark carries the generative function into the account of seeds.

Reflective possibility: A reflective reading can consider what makes scattered capacities cooperate. It should retain the canon’s natural-philosophical claim about formation instead of treating the word light as a free symbol detached from its predicates.

Read with canon 23, canon 33, canon 164.

The Sun and the Heart of the World

“From the sun’s position and effective power we may infer that it performs the heart’s office in the universe, for life flows from it into every part.” — canon 34.

Latin forms: Solis, cordis.

The heart comparison describes a source from which life flows into parts. The canon connects that function with light and distinguishes the human soul from the souls of other living things. Its different levels of light should not be compressed into a single undifferentiated solar substance.

Reflective possibility: The image can prompt a question about a whole’s sustaining centre. Follow the movement from source to parts before applying the image to a community or an individual practice.

Read with canon 30, canon 35, canon 243.

The Human Being as Compendium

“As the maker’s final labour, like the work’s centre or crowning addition, the human being at last appeared: a compendium of the world’s fabric and a little image of divine nature.” — canon 37.

Latin forms: homo, compendium.

The human being is presented as a late arrival for whom higher and lower gifts have been prepared. Pandora signifies an accumulation of gifts; the earthen vessel joins bodily formation to a divine image. The canon also asserts a hierarchy of rule that belongs to its historical account of creation.

Reflective possibility: An inward reading may explore how capacities from different orders are brought together in a life. Such an application need not endorse every historical claim about human dominion in order to understand its place in the argument.

Read with canon 34, canon 38, canon 245.

Matter and Form

“There were therefore only two simple principles of nature in the beginning, with everything else later than them and nothing earlier: first matter and its universal form.” — canon 44.

Latin forms: *materia*, *forma*.

The canon distinguishes first matter and universal form from the elements that arise through their joining, and from the second matter of compounds. These are levels in an explanation, not a list of interchangeable substances. The sequence gives generation and corruption a place within an already created order.

Reflective possibility: For interpretation, distinguish a recipient of determination from the determining activity. The distinction can clarify a symbolic relation only if neither term is allowed to do all the explanatory work alone.

Read with canon 22, canon 45, canon 176.

Corruption as Preparation

“Corruption is far closer to being a principle of generation than privation, since it is a motion disposing matter for generation through successive degrees of alteration.” — canon 46.

Latin forms: *Corruptio*, *generationis*.

Corruption actively disposes matter through successive alterations, whereas privation is an absence that performs no work. The author’s sexual image makes corruption a mediator in a further joining with form. It is the difference between a process of preparation and the mere lack of an achieved condition.

Reflective possibility: A reflective application may ask when the dissolution of a settled condition actually prepares a new one. The canon does not imply that every loss is beneficial, or that damage by itself guarantees a higher result.

Read with canon 43, canon 45, canon 69.

Harmony and Graduated Formation

"The universe's harmony consists in the varied and graduated formation of matter." — canon 47.

Latin forms: harmonia, informatione.

Higher and lower things are said to share principles while differing in mixture, position and perfection. Harmony arises through differentiated formation. The appeal to Hermes joins likeness with a hierarchy of degrees; likeness does not erase location or quality.

Reflective possibility: An application to study or conduct can ask how common principles are expressed differently in different circumstances. It should retain the differences through which this canon explains an ordered whole.

Read with canon 3, canon 103, canon 231.

Dry Water and the Hidden Specimen

"Nature has left us a certain specimen of that ancient confused mass, or first matter, in a dry water that does not wet." — canon 49.

Latin forms: aquâ, siccâ.

The phrase combines a water that does not wet, volatility, hidden elements and a generative union. These predicates constrain interpretation even when they do not securely identify a modern substance. The source itself presents a specimen through which the larger account of first matter might be approached.

Reflective possibility: A symbolic reading can explore how something hidden becomes available through separation and reunion. It should acknowledge that the canon speaks of a material and operative secret, and should not substitute an unsupported substance identification for an explanation.

Read with canon 48, canon 50, canon 65.

Fire as a Ravager

"Let no one imagine a region of burning fire adjoining the lunar region, except in a dream." — canon 82.

Latin forms: Ignis, praedo.

Here the subject is burning fire imagined as an immense neighbouring region. The author rejects it because its consuming activity would destroy the world it is supposed to help constitute. This passage must be read alongside the preceding identification of Nature's true fire with celestial light.

Reflective possibility: For reflection, distinguish a power that sustains formation from one that consumes its conditions. That distinction develops the argument's relation of activity to an end; it does not make all historical uses of fire purely inward.

Read with canon 80, canon 81, canon 85.

Love as a Natural Bond

"Love, called by Plato the oldest of the Gods, was breathed by the divine Spirit into newborn Nature and set over her character as her Genius." — canon 94.

Latin forms: Amor, Naturae.

Love is assigned a place in newborn Nature and in the union of her differentiated parts. The invocation of Plato gives the figure a philosophical ancestry, while the surrounding canons make the question causal: how can generation occur if the elements are naturally at war?

Reflective possibility: A reflective reader can consider cooperation that preserves difference. The text's love is not merely a pleasant feeling; it is invoked to explain joining, attraction and the activity through which a world holds together.

Read with canon 26, canon 95, canon 228.

Qualities without Warfare

"Nor are those four chief qualities opposed to one another in Nature: they are merely dissimilar and different." — canon 103.

Latin forms: qualitates, diuersae.

The author contests the assumption that the chief qualities must destroy one another. Difference can be moderated and joined. The argument depends on their role in natural generation and prepares the later musical account of intervals and concord.

Reflective possibility: A useful application asks whether a perceived opposition is absolute or a matter of degree, disposition and relation. The historical theory of qualities remains a theory to examine; the analogy does not establish every modern claim made in its name.

Read with canon 15, canon 108, canon 231.

Spirit as Bond and Vehicle

“Spirit is a small portion of the purest air, or even of aether: a nature intermediate between soul and body, the knot and bond of both, the soul’s little case and vehicle, adhering to the subtler and spiritual parts of the body.” — canon 163.

Latin forms: Spiritus, vinculum.

Spirit stands between soul and body and is described through binding, containment and conveyance. Its mediating function is the point of the definition. Calling it subtle does not make it identical with the informing soul or with the whole organised body.

Reflective possibility: A reflective reading may explore the means by which an intention becomes embodied in action. That application preserves the need for mediation while leaving the historical account of a subtle natural substance visible.

Read with canon 77, canon 164, canon 165.

Soul as an Informing Spark

“The soul or form of a mixed body is a spark of Nature’s fire, or an imperceptible ray of heavenly light, brought from the potentiality of seed or matter into actuality through the motion of generation.” — canon 164.

Latin forms: Anima, scintilla.

The soul or form of a compound is linked with Nature’s fire and a celestial ray. It becomes active in prepared matter through generation and is bound to an elemental body through spirit. The definition gives the compound a specific activity rather than merely naming an atmosphere of mystery.

Reflective possibility: For reflection, ask what gives a living whole its characteristic activity and what conditions permit it to act. The phrase can support such a question without being treated as a complete modern account of biology or of every doctrine of the human soul.

Read with canon 34, canon 163, canon 166.

Radical Moisture and Living Union

“The life of individuals consists in a proportionate and close union of matter and form.” — canon 213.

Latin forms: *humidi, radicalis*.

The life of an individual is explained through a fitted union of matter and form. The close embrace of innate heat and radical moisture supplies a basis and bond. Later canons distinguish those two conditions and discuss what remains when the compound is dissolved.

Reflective possibility: An application can consider why an active capacity requires a sustaining condition. Do not infer that heat and moisture are interchangeable simply because they cooperate, or that a familiar modern fluid is thereby identified.

Read with canon 214, canon 216, canon 224.

Glass and the Manifestation of What Was Hidden

“Experience has taught glassmakers unversed in Nature’s affairs the secret of radical moisture hidden in ashes.” — canon 217.

Latin forms: *vitrum, cineribus*.

Glassmaking from ashes serves as an example in the argument about radical moisture. The author reasons from continuity and fusion to a hidden sustaining condition. The example, the inference and the more general doctrine should be read as successive steps rather than as one observation that proves everything at once.

Reflective possibility: A reflective reading may consider how a changed form makes a previously concealed capacity visible. Its force comes from the relation of hidden and manifest, not from a claim that the historical explanation of glass has become modern materials science.

Read with canon 215, canon 218, canon 220.

The Enduring Root

“We may suspect that this root of Nature, which survives when its mixed body falls into ruin, is a vestige and a most pure and immortal portion of first matter, informed and marked with the divine character of light.” — canon 220.

Latin forms: *Radicem, immortalem*.

The author conjectures that a remaining radical basis may be a vestige of formed first matter marked by light. He then connects that persistence with a future restoration of the world. The passage moves from a material inference to an explicitly theological horizon.

Reflective possibility: A symbolic application can ask what supports renewal after an organisation has failed. It must still distinguish an enduring capacity from the unchanged survival of the entire former individual. The conjectural phrasing limits what can responsibly be claimed.

Read with canon 219, canon 221, canon 223.

The Continuity of Heaven

“The entire substance of the heavens has continuous, rather than merely touching, parts.” — canon 237.

Latin forms: *continuas*, *contiguas*.

The distinction is between parts of a continuous body and separate bodies that merely touch. The author warns that the divisions useful in teaching can be mistaken for the structure of Nature itself. His proposed continuity must be understood within his own cosmology rather than equated with a modern physical model.

Reflective possibility: For reflection, ask when a diagram’s boundaries help an inquiry and when they begin to dictate its result. A useful conceptual division need not establish a literal separation in its subject.

Read with canon 77, canon 238, canon 241.

Many Worlds and Shared Communication

“Those who think that the almost innumerable multitude of heavenly bodies was created for the benefit of the earthly globe and its inhabitants as their ultimate purpose are mistaken.” — canon 241.

Latin forms: *Mundum*, *harmoniam*.

The canon questions whether the heavens’ many bodies exist simply for the Earth’s benefit. It proposes worlds related like holdings within a larger empire, communicating through a common medium. Its political and musical images explain union among widely separated natures.

Reflective possibility: A reflective application can challenge the assumption that the rest of a whole exists only for one privileged part. The passage’s questions and probabilities should remain distinct from a claim that the book has demonstrated inhabited planets by observation.

Read with canon 228, canon 242, canon 244.

Intellect and Will

“Although Divinity is the most perfect unity, it nevertheless seems in a certain way to consist and be complete in two things: intellect and will.”
— canon 245.

Latin forms: intellectu, voluntate.

The final canon distinguishes knowledge from operation while placing both within divine unity. Created intelligible natures possess analogous faculties according to their own measure. The conclusion therefore joins likeness with limitation rather than granting creatures the unlimited powers of their exemplar.

Reflective possibility: For reflection, distinguish understanding an end from willing and carrying out an action. The analogy can illuminate responsibility without erasing the author’s distinction between the creator and created beings.

Read with canon 1, canon 37, canon 240.

Relations within the Work

Distinctions That Organise the Argument

Relation	Question to follow	Passages
Authority / judgment	How can respect for predecessors leave room for a new argument?	Preface, Preface
Light / matter	How does an active principle give order to a receiving nature?	164, 223
Soul / spirit / body	Which term gives form, which mediates, and which receives?	163–165
Innate heat / radical moisture	How are cooperating powers distinguished?	213, 224
Difference / harmony	When do unequal qualities make concord or disorder?	229, 231
Creator / created whole	How is unity maintained without making the maker a part?	240–245

A proposed symbolic application should preserve the work performed by each distinction. The relation can illuminate another subject without making the historical objects disappear.

Reading Routes

A First Reading

Begin with the original address, then read the canons in sequence. Mark a term when its function changes. Consult the glossary after a first attempt to understand the local sentence, then use the notes to check a quotation or historical reference. Return to the epigram after the last canon and consider what kind of restoration its praise has promised.

Following the Account of Life

Read 163–165 on spirit and soul; 213–225 on the conditions and persistence of life; and 229–231 on disorder and concord. Keep a list of the verbs attached to body, soul, spirit, heat and moisture. The resulting distinctions are more useful than a single interchangeable definition.

Following the World's Order

Read 226–228 on higher and lower natures, then 232–245 on motion, the heavens and the divine cause. Separate questions and conjectures from assertions. Compare the political image of the universe with the preface's commonwealth of the world.

A Reflective Reading

Choose one contextual lexicon entry. Read its exact quotation, inspect the Latin forms, and follow every related passage before applying it to an inward or ethical question. Write two short accounts: what the author is explaining, and what a contemporary reader might learn from the relation. Leave any difference between those accounts visible.

Questions for Study and Discussion

1. What does the preface mean by restoring Philosophy? How does that claim differ from simply praising what is ancient?
2. Which passages distinguish an active cause from a receiving condition? What would be lost if both were called by the same name?
3. How does the book use light differently in a description of inquiry, a definition of soul, and a cosmological argument?
4. What does the musical comparison explain about difference? Where are the limits of the analogy?
5. How does the author distinguish innate heat from radical moisture? Which examples are offered to support his account?
6. What is preserved when a compound is corrupted? Does the same sense of persistence apply to an individual, a generative capacity, and the whole world?
7. How does the speculation about other worlds challenge the assumption that the heavens exist only for Earth? What evidence does the book actually offer?
8. Why does the creator remain outside the parts of the commonwealth? How does the musician analogy clarify that distinction?
9. Select a historical medical or generative claim. How can its role in the argument be explained without presenting it as a modern finding?
10. Which symbolic application has the strongest local support? What words or relations would make you revise it?

Bibliography and Source Credits

Governing Latin Witness: Geneva, 1653

Anonymous [attributed to Jean d’Espagnet]. *Enchiridion physicae restitutae*. Geneva: Jean-Antoine and Samuel de Tournes, 1653. ETH-Bibliothek Zürich, Rar 4790. Digitised by e-rara. Persistent identifier: doi:10.3931/e-rara-21407: <https://doi.org/10.3931/e-rara-21407>.

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<https://www.e-rara.ch/zut/content/titleinfo/6626647>.

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English Transmission: London, 1651

Anonymous [catalogued under Jean d’Espagnet]. *Enchyridion physicae restitutae*; or, *The Summary of Physicks Recovered*. London: printed by W. Bentley and sold by W. Sheares and R. Tutchein, 1651. Wellcome Collection catalogue, ESTC R36574; Wing (CD-ROM, 1996), E3276A.

Wellcome bibliographical record:

<https://wellcomecollection.org/works/zz8fkgky>.

This record documents an English printing earlier than the selected 1653 Latin witness and the established English title. It is cited for transmission, not treated as the source of the present wording or as a full collation proving every variant. No personal translator attribution is inferred from the anonymous title alone.

The Companion Arcanum

Arcanum hermeticae philosophiae opus is named as a second treatise on the combined historical title. The e-rara collection provides the separately digitized companion under its own record. Companion catalogue record: <https://www.e-rara.ch/zut/content/titleinfo/6640445>.

The present edition’s scope is the complete *Enchiridion*, rather than a composite of two independent canon sequences.

Scriptural and Classical References

Scriptural and classical citations are retained where they occur in the historical text and identified in annotations where secure. The English translates the words printed in the governing witness. A marginal reference and a modern identification remain distinct, especially when a historical quotation is abbreviated, adapted or uncertain.

Editorial Credits

Prepared for Diotimos Editions in 2026. The edition combines a readable Latin transcription, a fresh English translation, source-based annotations and newly composed study features. The historical witness governs the sequence and wording; modern explanations and reflective applications remain editorial material. Typography and page architecture follow the established Diotimos edition design.

Subject Index

Entries link to stable passages and study features. Numbers identify canons, not pages of the modern edition.

Act and Potency

glossary.

Air

glossary.

Arcanum, companion work

historical title, source note.

Archetype

glossary.

Aristotle

original preface, 14, 15.

Art

glossary.

Authority

original preface, essay.

Body

glossary.

Boundaries of philosophy

original preface.

Cause

glossary.

Chain of the world

9, contextual entry.

Chaos
glossary.

Concord
glossary.

Corruption
glossary.

Creation
glossary.

D’Espagnet, attribution
edition statement, source record.

Dry water
49, contextual entry.

Earth
glossary.

Elements
glossary.

English printing, 1651
bibliography.

Epigram
original poem.

Ether
glossary.

Fire
glossary.

Form
glossary.

Generation

glossary.

Genesis

20, 22, 39.

Glass

217, contextual entry.

God

1, 240, 245.

Harmony

glossary.

Heat, Innate

glossary.

Heaven, continuous

237, contextual entry.

Hermes and Trismegistus

2, 3, 12.

Human being as compendium

37, contextual entry.

Intellect

glossary.

Judgment

original preface, essay.

Jupiter and Pallas

2, epigram.

Light

glossary.

Love

glossary.

Magnetic love

62.

Matrix

glossary.

Matter, First

glossary.

Mercury

65.

Moisture, Radical

glossary.

Moon and its inhabitants

242, essay.

Motion

glossary.

Music

231, 240.

Natural philosophy, meaning of

edition statement.

Nature

glossary.

Plato

original preface, 94.

Printing irregularities

translation policy, 22, 27, 43.

Privation

45, 46.

Public domain

source and rights.

Quality

glossary.

Restoration

original preface, essay.

Salt

glossary.

Salt and ashes

218, 220.

Seasons

234, 235.

Seed

glossary.

Soul

glossary.

Spirit

glossary.

Spontaneous generation

221, 222.

Sun

glossary.

Symbolic reading

introduction, reading route.

Temperament
glossary.

Trinity
35.

Uncertainty and probability
17, contextual entry.

Universe as commonwealth
original preface, 240.

Venus, birth of
epigram.

Water
glossary.

Will
glossary.

Worlds, plurality of
241, 242, contextual entry.