

## 附表六：附件粘貼表(照片、剪報等) <本表得以 A 4 格式影印後使用>

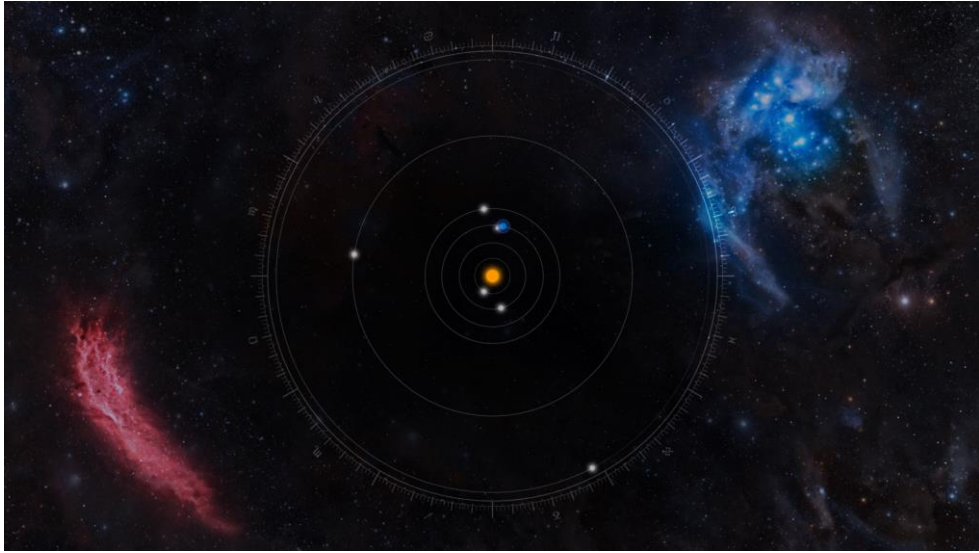
作品紀錄、照面、腳本



裝置範例。現場有雙聲道對話聲軌貫穿全場，  
對話內容摘自《關於兩大世界體系的對話》、《易經》二書



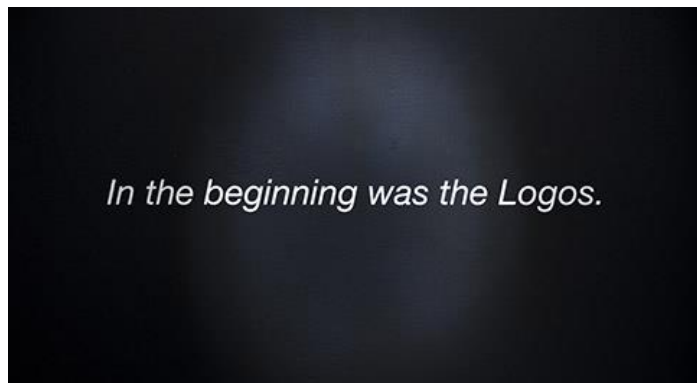
影像截取：托勒密地心論



影像截取：哥白尼日心論



兩張素描。左：生命之花 | 右：天體運動



牆上文字範例。翻譯：起初，神創造天地

*Silence is the language of the  
universe, all else is poor translation.*

Jalāl ad-Dīn Muhammad Rūmī

牆上文字範例。翻譯：「沈默是宇宙的語言，其餘皆是差勁的詮釋。」穆罕默德·魯米



牆上文字範例。四元素與其符號：風、火、水、土

*Only knowing by  
categorizing knowledge,  
but not understanding  
how it fits together, one  
does not know the “way.”*

牆上文字範例。翻譯：只知分，不知合，不知「道」。

# 對話腳本，共九十句

(四個不同人聲錄音，總長四十分鐘，英語發音、中文翻譯，立體聲)

01 SAGR: I decided to appear openly in the theater of the world as a witness of the sober truth.

01 沙：我決定於世界舞台公開現身，見證莊嚴的真相。

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02 The Vast is the great and originating. All things owe to their beginning. The various things appear in their developed forms.

「大哉乾元。」「萬物資始。」「品物流形。」

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03 SAL: It is necessary to introduce into nature, two substances which differ essentially. These are the celestial and the elemental, the former being invariant and eternal, and the latter temporary and destructible.

03 薩：大自然中，必須有兩種迥異的物質：「天體」和「自然元素」。前者恆久不變，後者短暫易摧。

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04 SIMP: Pythagoreans said that all things are determined by three: beginning, middle, and end. Which is the number of the Whole?

04 辛：畢達哥拉斯學派稱，萬物皆由數字「三」所定：起始、中間、終結。那「整體」之數為何數？

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05 SIMP: Is it not dictated by nature that we attribute the title of ALL to those things that are three? For two are called BOTH, and one does not say ALL unless there are three.

05 辛：成三者，稱之為「所有」，不是自然定律嗎？二者，雙也；三或以上者，方可稱為「所有」。

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06 SIMP: All, and Whole, and Perfect are formally one and the same; and that therefore among figures only the solid is complete. For it alone is determined by three, which is All; and, being divisible in three ways, it is divisible in every possible way.

06 辛普利邱：「所有」、「整體」與「完全」本為一體；固此形體中，唯有立體為完整，因其為「三」所定，亦即「所有」。可除之以三者，可用任何方法分割。

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07 SAL: I feel no compulsion to grant that the number three is a perfect number, nor that it has a faculty of conferring perfection upon its possessors.

07 薩：我並不認為「三」為完全之數，亦不認為含有「三」便代表「完全」。

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08 SAGR: If he had known it or if it had occurred to him.

08 沙：到底是他一直知道它，還是想到它。

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09 SAL: The celestial is ingenerable, incorruptible, inalterable, impenetrable.

09 薩：天體不生、不滅、不變、不可測知。

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10 SAL: All simple motions are confined to these three kinds; toward the center, away from the center, and around the center.

10 薩爾：所有簡單運動，離不開三類：移向中心、移離中心、環繞中心。

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11 SAL: Those bodies have a natural principle of motion, such as fire and earth.

11 薩：火、土等個體運動，有其自然法則。

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12 SAGR: Motion in a straight line can have no place in nature, as long as we suppose the parts of the universe to be disposed in the best arrangement and perfectly ordered.

12 沙：只要假設宇宙各部分井然有序，直線運動於自然界便毫無意義。

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13 The sages grandly understand the connection between the end and the beginning. The method is to change and to transform, so that everything obtains its correct nature as appointed by the mind of Heaven; and thereafter the conditions of great harmony are preserved in union.

「大明始終。」「乾道變化，各正性命，保合大和，乃利貞。」

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14 SAL: There is no doubt that to maintain the optimum placement and perfect order of the parts of the universe as to local situation, nothing will do but circular motion or rest.

14 薩：毫無疑問，只有環迴運動或靜止，方能維持宇宙各部分布置適當。

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15 SAL: As to motion by a straight line, let it be granted to us that nature makes use of this to restore particles of earth, water, air, fire, and every other integral mundane body to their whole, when any of them find themselves separated and transported into some improper place, unless this restoration can also be made by finding some more appropriate circular motion.

15 薩：至於直線運動，我們不妨假設：當土、水、空氣、火的粒子，或任何屬於更大整體的事物，遭分離而不得其所時，大自然會以直線運動令它們歸位，除非歸位能以更合適的環迴運動達成。

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16 SAL: The terrestrial globe is not so, but corruptible and mortal, so that there will come a time when, the sun and moon and other stars continuing their existence and their operations, the earth will not be found in the universe but will be annihilated along with the rest of the elements.

16 薩：地球並非如此；它會消耗、殆盡。故終有一日，若日、月，或其他星體繼續存在、運作，地球將消失於宇宙，與其他原素一併灰飛煙滅。

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17 SAL: They assign an upward motion to air and fire, which is a motion that never belongs to the said elements, but only to some of their particles, and even then only to restore them to perfect arrangement when they are out of their natural places. On the other hand, they call circular motion preternatural to them, forgetting what Aristotle has said many times, that nothing violent can last very long.

17 薩：他們推斷空氣和火向上流動，但上升從來不是兩者的特性，僅屬於其部分粒子而已。何況，粒子上升只為回復原有排列。另一方面，他們稱循環流動並非空氣和火的本質，卻忘記亞里士多德講過多次：任何猛烈的事物，均無法長久。

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18 SAGR: First there is that of Aristotle, who would persuade us that sublunar bodies are by nature generable and corruptible, and are therefore very different in essence from celestial bodies, these being invariant, ingenerable, incorruptible. This argument is deduced from differences of simple motions.

18 沙：首先，亞里士多德的追隨者說服我們，附屬月球的星體本身可誕生、消亡，所以本質上與不變、不生、不滅的其他星體大為不同。此理論由簡單運動之間的差異推論所得。

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19 SAGR: Is there perhaps someone who has seen one terrestrial globe decay and another regenerated in its place? Is it not accepted by all philosophers that very few stars in the heavens are smaller than the earth, while a great many are much bigger? So the decay of a star in heaven would be no less momentous than for the whole terrestrial globe to be destroyed! Now if, in order to be able to introduce generation and corruption into the universe with certainty, it is necessary that as vast a body as a star must be corrupted and regenerated, then you had better give up the whole matter.

19 沙：可有人見證過一個星球殆盡，另一星球生於原位？所有哲學家，不是都接受這說法嗎：天上比地球般小的星體甚少，而比地球大得多的星體眾多？那麼，天上任何一個星體的衰敗，其後果之巨，與整個地球毀滅相比，豈非不相伯仲！若要確實將誕生、消亡套於宇宙中，那巨如星體者必須可消耗、再生，否則不如放棄整個討論。

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20 The result is what is advantageous, and correct and firm. The sage appears aloft, high above all things, and the myriad states all enjoy repose.

「首出庶物，萬國咸寧。」

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21 SAL: If Aristotle were now alive, I have no doubt he would change his opinion.

21 薩：倘若亞里士多德在生，我肯定他會改變其立場。

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22 SAL: He first obtained it by means of the senses, experiments, and observations, to assure himself as much as possible of his conclusions. Afterward he sought means to make them demonstrable. That is what is done for the most part in the demonstrative sciences; this comes about because when the conclusion is true, one may by making use of analytical methods hit upon some proposition which is already demonstrated, or arrive at some axiomatic principle; but

if the conclusion is false, one can go on forever without ever finding any known truth -- if indeed one does not encounter some impossibility or manifest absurdity. And you may be sure that Pythagoras, long before he discovered the proof for which he sacrificed a hecatomb, was sure that the square on the side opposite the right angle in a right triangle was equal to the squares on the other two sides. The certainty of a conclusion assists not a little in the discovery of its proof -- meaning always in the demonstrative sciences. But however Aristotle may have proceeded, whether the reason a priori came before the sense perception a posteriori or the other way round, it is enough that Aristotle, as he said many times, preferred sensible experience to any argument. Besides, the strength of the arguments a priori has already been examined.

22 薩：他以感官、實驗、觀察推論，以盡量確立其結論，再而找辦法引證。這為證明科學的方法：當結論正確時，可以用分析方法，發現理論，達至定理；但若然結論錯誤，又假設中途沒發生不可能的解釋或產生謬論的話，那就可能是沒完沒了的找尋，而沒有任何發現。你或會肯定，畢達哥拉斯在發現畢氏定理，並為此獻祭之前，深信直角三角形兩條直角邊長度的平方，等於斜邊長的平方。肯定結論，卻無助於發現相關論證 — 這便是論證科學。無論亞里士多德如何推論，不論先驗推理先於後驗感官抑或相反，亞里士多德說過多次，他崇尚可感受的經驗多於任何理論。此外，先驗理論之紮實，早已被細驗。

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23 SAL: Excellent astronomers have observed many comets generated and dissipated in places above the lunar orbit, besides the two new stars of 1572 and 1604, which were indisputably beyond all the planets. And on the face of the sun itself, with the aid of the telescope, they have seen produced and dissolved dense and dark matter, appearing much like the clouds upon the earth: and many of these are so vast as to exceed not only the Mediterranean Sea, but all of Africa, with Asia thrown in.

23 薩：優秀的天文學家發現，除了兩顆公認高度高於所有行星的超新星1572和1604之外，很多彗星生滅於月球軌跡。人們借助望遠鏡，看見它們位於太陽表面，產生、消解密集黑暗的物質，有如地球上空的雲。其範圍之廣，不只覆蓋地中海，更超出整個非洲，觸及亞洲。

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24 SIMP: They are stars, which like Venus and Mercury, go about the sun in their proper orbits, and in passing under it present themselves to us as dark; and because there are many of them, they frequently happen to collect together, and then again to separate.

24 辛：它們是有如金星、水星的星體，依各自軌跡，環繞太陽運轉，轉至太陽下時顯得深黯。又因其數量眾，它們就像經常聚集一起，然後再分開。

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25 SIMP: They change places with each other, now separating and now congregating, but mostly right under the sun, about which, as their center, they move. But it is not therefore necessary to say that they are generated or decay. Rather, they are sometimes hidden behind the body of the sun; at other times, though far from it, they cannot be seen because of their proximity to its immeasurable light.

25 辛：它們互換位置，既分且合，但都於太陽底下發生，並以太陽為中心活動。可是，這並不代表它們的生滅；它們不時隱於太陽背面，其他遠離太陽的時候，卻與太陽強光接近，以至不為人所見。

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26 SAL: In the natural sciences, whose conclusions are true and necessary and have nothing to do with human will, one

must take care not to place oneself in the defense of error; for here a thousand Demosthenes and a thousand Aristotles would be left in the lurch by every mediocre with who happened to hit upon the truth for himself.

26 薩：自然科學的結論，真確而必要，無關人類意志。在自然科學的討論中，人必須小心，不要為錯誤辯護，因為千百個狄摩西尼和亞里士多德信徒，會因偶然發現真相的三流智者，處於困頓之中。

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27 SIMP: Two truths cannot contradict one another.

27 辛：兩個真理，不能互為矛盾。

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28 SAL: It is necessary to prefer the senses over arguments.

28 薩：感官必須超越理論。

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29 SAL: One whose senses could better represent them would be able to philosophize about them with more certainty.

29 薩：若果一個人能以感官確切表達自己，則能確切地將感官理論化。

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30 SAL: The stars were called celestial things because of their being in the heavens, or because of their being made of heavenly material.

30 薩：稱星體為天體之物，是因為其身處於天上，還是因為其以上天之物所造。

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31 The Vast represents what is great and originating, penetrating, advantageous, correct and having the firmness of a mare. All things owe to it their birth. It receives obediently the influences of Heaven. The Vast, in its largeness, supports and contains all things. Its excellent capacity matches the unlimited power. Its comprehension is wide, and its brightness great. The various things obtain their full development.

31「元亨，利牝馬之貞。」「萬物資生，乃順承天。」「坤厚載物，德合无疆。」「含弘光大，品物咸亨。」

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32 SAGR: I consider the earth very noble and admirable, precisely because of the diverse alterations, changes, generations, etc. If, not being subject to any changes, it were a vast desert of sand or a mountain of jasper, or if at the time of the flood the waters which covered it had frozen, and it had remained an enormous globe of ice where nothing was ever born or ever altered or changed, I should deem it a useless lump in the universe, devoid of activity and, in a word, superfluous and essentially nonexistent. This is exactly the difference between a living animal and a dead one; and I say the same of the moon, of Jupiter, and of all otherworld globes.

32 沙：我認為地球偉大可敬，正正因為其變化繁衍之多樣。若地球不變，則其為遼寬沙漠，或赤壁高山；又若洪水氾濫之際，淹地球之水結成冰，則地球為一巨冰球，無物繁衍、轉變，那我會說地球為宇宙中無用渾沌之物，一成不變，兩字寄之曰：多餘、毋須存在。變化正是生物和死物的分別；亦同樣適用於月球、木星和地球以外所有星體。

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33 SAGR: Has nature, then, produced and directed all these enormous, perfect, and most noble celestial bodies,



invariant, eternal, and divine, for no other purpose than to serve the changeable, transitory, and mortal earth? To what purpose would the celestial bodies be made eternal in order to serve something transitory? Take away this purpose of serving the earth, and the innumerable host of celestial bodies is left useless and superfluous, since they have not and cannot have any reciprocal activities among themselves, all of them being inalterable, immutable, and invariant.

33 沙：那麼，大自然產生、驅策這些巨型、完美、偉大的星體，不變、永恆、神聖，不為其他，只為了變幻無常、終會滅亡的地球？永恆的星體為了瞬息而存在的目的是什麼？然若不是地球，那數之不盡的星體，就會無用多餘，因為它們之間沒有，亦無法有任何交流；它們全都不變。

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34 SIMP: Corruptibility, alteration, mutation, do not tested to the whole terrestrial globe, which as to its entirety is no less eternal than the sun or moon. But as to its external parts it is generable and corruptible, and it is certainly true that generations and corruptions are perpetual in those parts, and, as perpetual, that they require celestial and eternal operations. Therefore it is necessary that celestial bodies be eternal.

34 辛：消耗、改變和突變並非地球整體的特質；整體而言，地球的永恆，並不亞於日月。但地球外部可生可滅，而且肯定永無休止；正因為永無休止，所以地球外部需要太空、永恆運作。因此，天體之永恆，有其必要。

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35 SAGR: It always seems to me extreme rashness on the part of some when they want to make human abilities the measure of what nature can do. On the contrary, there is not a single effect in nature, even the least that exists, such that the most ingenious theorists can arrive at a complete understanding of it. This vain presumption of understanding everything can have no other basis than never understanding anything. For anyone who had experienced just once the perfect understanding of one single thing, and had truly tested how knowledge is accomplished, would recognize that of the infinity of other truths he understands nothing.

35 沙：由始至終，對我而言，部分人想以人類的能力，估量自然的力量，實在極為輕率鹵莽。相反，大自然全然不受影響；即使有最細微的影響，最為聰敏的理論家，亦可全盤掌握。「全知」這個自負的假想，除了建基於徹頭徹尾的一無所知之外，別無其他。若有人試過那麼一次，完全掌握一件事，真正體會到如何獲得知識，那他會認清，對於數之不盡的「真相」，他實在一無所知。

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36 Being humble indicates progress and success. It is the way of heaven to send down her beneficial influences below, where they are brilliantly displayed. It is the way of earth, lying low, to send her influences upwards and to act. It is the way of heaven to diminish the full and augment the humble. It is the way of earth to overthrow the full and replenish the humble. Spiritual Beings inflict calamity on the full and bless the humble. It is the way of human to hate the full and love the humble. Humility in a position of honor makes that still more brilliant; and in a low position human will not pass beyond it.

36「謙，亨，天道下濟而光明，地道卑而上行。天道虧盈而益謙，地道變盈而流謙，鬼神害盈而福謙，人道惡盈而好謙。謙尊而光，卑而不可踰。」

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37 SAGR: Among men there exists the power to act, but it is not equally shared by all.

37 沙：人類有力量行動，卻非人人均等。

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38 SAGR: Divine wisdom is infinitely infinite.

38 沙：無上的智慧，無限至極。

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39 SAL: The human understanding can be taken in two modes, the intensive or the extensive. Extensively, that is, with regard to the multitude of intelligibles, which are infinite, the human understanding is as nothing even if it understands a thousand propositions; for a thousand in relation to infinity is zero. But taking human's understanding intensively, in so far as this term denotes understanding some proposition perfectly, I say that the human intellect does understand some of them perfectly, and thus in these it has as much absolute certainty as Nature herself has.

39 薩：人類知性有兩種：精、廣。廣者，由於知識之淵廣，無邊無際，即使明白千個命題，亦無異於零，皆因一千相比於無限，實為零。精者，要是指徹底明瞭一命題，我認為人類智慧的確完全掌握好些命題，所以人類對這些命題的了解，無異於大自然本身。

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40 SAL: Nor is all the above entirely unknown to the human mind either, but it is clouded with deep and thick mists, which become partly dispersed and clarified when we master some conclusions and get them so firmly established and so readily in our possession that we can run over them very rapidly.

40 薩：上述命題，人亦非全然不知，只是被濃霧所蔽，以至我們在這些命題達至一些結論時，只有結論的一部分獲傳播、驗證；我們又以為經已全盤掌握，以至我們草草略過它們。

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41 SAL: The human mind is a work of God's, and one of the most excellent.

41 薩：人類心智為上帝的杰作，最為精妙的創造之一。

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42 SAGR: This manner of containing everything that can be known is similar to the sense in which a block of marble contains a beautiful statue, or rather thousands of them; but the whole point lies in being able to reveal them. Even better we might say that it is like the prophecies of Joachim or the answers of the heathen oracles, which are understood only after the events they forecast have occurred.

42 沙：此涵蓋所有可知之事的方式，類似一塊大理石藏有一絕美雕塑 — 又或是千尊雕塑 — 但重點是有能力雕鑿它們。更佳的比喻是，這就像約阿希姆的預言，又或是異教的啟示：只有在他們預知的事情發生後，預言方能解開。

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43 SAL: When I see them being obstinate about sustaining propositions, which I personally know to be obviously false, and wanting to persuade me that what they are doing is truly philosophical and would be done by Aristotle himself, it much weakens my opinion that he philosophized correctly about other matters more recondite to me.

43 薩：他們頑固地堅持我認為顯然錯誤的主張，想說服我他們在做真正的學問，在做亞里士多德會做的事，令我懷疑在我不諳之事上，亞里士多德所言有多正確。

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44 SAGR: To make themselves slaves willingly; to accept decrees as inviolable; to place themselves under obligation and

to call themselves persuaded and convinced by arguments that are so powerful and clearly conclusive, that they themselves cannot tell the purpose for which they were written, or what conclusion they serve to prove not just texts and bare authorities, because our discourses must relate to the sensible world and not to one on paper.

44 沙：為令自己甘心受控，視規定為不可侵犯，負自行加諸之任，稱自己受強大、顯然具決定性的理論所臣服，他們不能講這些文章為何而寫，不能講這些結論，只為彰顯文字本身和空洞權威。理論必須和可以感受的世界有所關連，而非紙上談兵。

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45 SAL: Then let the beginning Of OUT reflections be the consideration that whatever motion comes to be attributed to the earth must necessarily remain imperceptible to us and as if nonexistent, so long as we look only at terrestrial objects; for as inhabitants of the earth, we consequently participate in the same motion. But on the other hand, it is indeed just as necessary that it display itself very generally in all other visible bodies, and objects which, being separated from the earth, do not take part in this movement. So the true method of investigating whether any motion can be attributed to the earth, and if so what it may be, is to observe and consider whether bodies separated from the earth exhibit some appearance of motion which belongs equally to all. For a motion which is perceived only, for example, in the moon, and which does not affect Venus or Jupiter or the other stars, cannot in any way be the earth's or anything but the moon's.

45 薩：那麼，我們的反思該由此起：只要我們只談論地球上的物體，那任何為地球而生的運動，必然難以察覺，跡近隱形；地球上的生物，自然置身於同樣的運動。可是，另一方面，運動同樣須現於其他可見的星體，以及遠離地球、不牽涉此運動的物體。因此，要探究運動會否影響地球，最佳的方法，是觀察遠離地球的星體，可有如所有星體般活動。例如，一個只影響月球的運動，沒有影響金星、木星或其他行星，那就不可能是地球或其他星體的運動，而只能屬於月球。

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46 SAGR: Copernicus attributed to the earth another motion than the diurnal. By the rule just affirmed, this ought to remain imperceptible to all observations on the earth, but be visible in the rest of the universe. It seems to me that one may deduce as a necessary consequence either that he was grossly mistaken in assigning to the earth a motion corresponding to no appearance in the heavens generally, or that if the correspondent motion does exist, then Ptolemy was equally at fault in not explaining it away, as he explained away the other.

46 沙：哥白尼認為，地球有一種日間以外的運動。依照剛才成立的理論，這運動必須在地球上難以察覺，但可從宇宙其他地方望見。於我而言，由此推斷下去，結果只會是人以為地球受一種位於天空，但看不見的運動所影響，而被大為誤導；即使這樣的運動存在，那托勒密沒有像為其他問題解釋般為此辯解，一樣難辭其咎。

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47 SAGR: Anyone who considered it more reasonable for the whole universe to move in order to let the earth remain Fixed would be more irrational than one who should climb to the top of your cupola just to get a view of the city and its environs, and then demand that the whole countryside should revolve around him so that he would not have to take the trouble to turn his head.

47 沙：任何認為全宇宙移動，以令地球固定原位較為合理的人，比起一個攀至穹頂，欲俯瞰全城，卻不

願擰頭，妄想景色環繞他轉動的人，更為不合邏輯。

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48 Under heaven, there will be good order. There will be advantage in crossing the great stream.

48「元亨，而天下治也。利涉大川，往有事也。」

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49 SAL: Motion, in so far as it is and acts as motion, to that extent exists relatively to things that lack it; and among things which all share equally in any motion, it does not act, and is as if it did not exist.

49 薩：運動本身及其作用，其存在相對於不動之物；至於在所有運動相等的事物之間，運動並無作用，就像不存在一樣。

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50 SAL: It is obvious, then, that motion which is common to many moving things is idle and inconsequential to the relation of these movables among themselves, nothing being changed among them, and that it is operative only in the relation that they have with other bodies lacking that motion, among which their location is changed. Now, having divided the universe into two parts, one of which is necessarily movable and the other motionless, it is the same thing to make the earth alone move, and to move all the rest of the universe, so far as concerns any result which may depend upon such movement. For the action of such a movement is only in the relation between the celestial bodies and the earth, which relation alone is changed?

50 薩：那麼，顯然，會移動之物皆有的運動，對這些移動之物之間的關係，近乎無影響，毫無改變；運動只能影響一移動之物，與另一欠此運動之物的關係，令它們之間的位置改變。宇宙分為兩部分，一動一靜；同樣道理，若然要講此運動有何作用，令地球獨自移動，和移動宇宙所有其他部分，其實別無二致。運動的作用，只能出現於眾多星體和地球之間的關係，那有何關係有變？

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51 SAL: Nothing remains in the universe of rising and setting of the sun and moon, nor of horizons and meridians, nor day and night and in a word from this movement there will never originate any changes in the moon or sun or any stars you please, fixed or moving. All these changes are in relation to the earth, all of them meaning nothing except that the sun shows itself now over China, then to Persia, afterward to Egypt, to Greece, to France, to Spain, to America, etc.

51 薩：宇宙中，不再有日出月沉，月升日落，或地平線、子午線，或晝夜 — 總之，這樣的移動，不會令日月星辰，不論行星或恆星，有任何你想有的改變。這些改變和地球有關，但除了太陽順序現身於中國、波斯、埃及、希臘、法國、西班牙至美國等地之外，其實毫無意義。

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52 SAL: This order is such that the greater orbits complete their revolutions in longer times, and the lesser in shorter; thus Saturn, describing a greater circle than the other planets, completes it in thirty years; Jupiter revolves in its smaller one in twelve years, Mars in two; the moon covers its much smaller circle in a single month.

52 薩：宇宙法則為，運行軌道越大，公轉時間越長；軌道越小，則時間越短。是以軌道較大的土星，公轉需卅年；木星軌道稍小，需廿年，火星則需兩年；月球軌道小得多，公轉只需一月。

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53 The great Manifester occupies an upper place, which consists of docility and flexibility. She is in the central position

and her correct place, and thus exhibits to all under heaven.

53「大觀在上，順而巽，中正以觀天下。」

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54 SIMP: Aristotle tells you that just as there is only one motion for one movable body, so there is but one movable body for that motion. Consequently no motion can either exist or even be imagined except as inhering in its subject.

54 辛：亞里士多德說，所有移動之物只能有一種運動，所以每種運動只能見於一移動之物。由此推斷，要是一運動沒有主體可依附，則無法存在，甚至無法想像。

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55 SAL: The arguments produced on this matter are of two kinds. Some pertain to terrestrial events without relation to the stars, and others are drawn from the appearances and observations of celestial things.

55 薩：此主題的論調有二。一為無視星體，只觀察地球上的事；另一觀察星體，以推敲地球上的事。

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56 SAL: Behold how nature, favoring our needs and wishes, presents us with two striking conditions no less different than motion and rest; they are lightness and darkness--that is, being brilliant by nature or being obscure and totally lacking in light.

56 薩：為滿足人類所需所願，我們見大自然中，有兩個差異不亞於動與靜，懾人的相反狀態：光與暗。光者亮，暗者神秘無光。

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57 SIMP: How much superior a distribution, and how much more suitable it is to nature--indeed, to God the Architect Herself--to separate the pure from the impure, the mortal from the immortal, as all other schools teach, showing us that impure and infirm materials are confined within the narrow arc of the moon's orbit, above which the celestial objects rise in an unbroken series!

57 辛：所有其他學派推崇，將純淨隔於不純，永恆隔於有限的秩序，有多高等，有多符合大自然 — 亦即神，造物者；他們展示不純微弱之物，限於狹窄的月球軌道，而月軌之上，星辰高升，永恆不息！

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58 When we contemplate the spirit -- like way of Heaven, we see how the four seasons proceed without error. The sages, in accordance with this spirit-like way, laid down their instructions, and all under heaven yield submission to them.

58「觀天之神道，而四時不忒，聖人以神道設教，而天下服矣。」

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59 SAL: It is true that the Copernican system creates disturbances in the Aristotelian universe, but we are dealing with our own real and actual universe.

59 薩：的而且確，哥白尼的系統，擾亂亞里士多德的宇宙。可是，我們要了解的是真正擺在眼前的宇宙。

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60 SIMP: it is natural to the earth and not constrained, works contrary effects to those of forced motions; and that things which are given impetus are destined to disintegrate and cannot long subsist, whereas those made by nature

maintain themselves in their optimum arrangement.

60 辛：不受限制的地球，和受運動所限的星體相反；有動力之物，終將分解，無法持久；大自然創造之物，保持最適宜的秩序，得以長久，皆自然不過。

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61 SIMP: For the animal is a natural body too, not an artificial one; and its movement is natural, deriving from the soul; that is, from an intrinsic principle, while that motion is constrained, whose principle is outside and to which the thing moved contributes nothing.

61 辛：動物同為自然而非人工，其動態同為自然，由心而發。就本質的原理而言，雖然動態受限，但原理並不在限，所以動態向何移動，不會帶來改變。

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62 SIMP: It is harder to stretch the property beyond the model of the thing than to augment the thing without the property. Copernicus therefore has more probability on his side, increasing the orb of the stars as fixed without motion, than does Ptolemy who augments the motion of the fixed stars by an immense velocity.

62 辛：將事物的特質伸延至超出事物之外，比強化無該特質的事物來得更難。所以，哥白尼的理論增加固定星體，比起托勒密的理論，將固定星體的移動速度大幅提升，更為有可能。

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63 SAL: In the long run my observations have convinced me that some men, reasoning preposterously, first establish some conclusion. In their minds which, either because of its being their own or because of their having received it from some person who has their entire confidence, impresses them so deeply that one finds it impossible ever to get it out of their heads.

63 薩：根據長期觀察，我確信好些論據荒謬的人，會先定下結論。莫論因為結論來自自己，抑或聽別些自信滿滿的人所言，這些結論之深刻，其他人根本無從由他們腦海中消除。

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64 SAGR: such men do not deduce their conclusion from its premises or establish it by reason, but they accommodate the premises and reasons to a conclusion, which for them is already established and nailed down.

64 沙：此等人並非由假設和邏輯得出結論，而為迎合他們以為確鑿的結論，扭曲假設和邏輯。

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65 SAGR: I do not want to have us wander into any more abysses.

65 沙：我不想我們再在無底深淵中糾纏。

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66 SAL: Silence would indeed be the most appropriate reprimand for their worthlessness, were there no other reasons, which practically force one to repudiate them.

66 薩：沈默正是譴責他們一無是處的最佳方法，除非有其他實質理由，逼使人駁斥他們。

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67 We must by the exercise of our thoughts seek the proper aliment. We must look to our own nourishing of ourselves. Heaven and earth nourish all things. The sages nourish humans of talents and virtue, by them to reach to the myriads

of the people. The Great is nourishing in its time.

「自求口實，觀其自養也。天地養萬物，聖人養賢，以及萬民；頤之時大矣哉！」

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68 SIMP: The first and greatest difficulty is the repugnance and incompatibility between being at the center and being distant from it.

68 辛：第一大難題，是對居於中心和遠離中心的矛盾與水火不容。

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69 SAL: It is necessary that we declare ourselves as to whether or not you and I have the same concept of this center.

69 薩：我們有必要釐清，你我對「中心」的定義，是否一致。

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70 SIMP: By "center," that of the universe; that of the world; that of the stellar sphere; that of the heavens.

70 辛：我所說的「中心」，為宇宙的中心，世界的中心，恆星的中心，天空的中心。

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71 SIMP: It would be much more reasonable to say that the container and the things it contained all moved around one common center rather than different ones.

71 辛：容器和容器內的事物，均圍繞一個共同的中心移動，比各自圍繞不同中心合理得多。

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72 SAL: Now if it is true that the center of the universe is that point around, which all the orbs and world bodies move, it is quite certain that not the earth, but the sun, is to be found at the center of the universe. Hence, as for this first general conception, the central place is the sun, and the earth is to be found as far away from the center as it is from the sun.

72 薩：現在假設宇宙中心，就是眾星圍繞活動的點；那麼，頗為肯定的是，宇宙中心是太陽，而非地球。固此，首個構想為，宇宙中央為太陽，而地球離太陽的距離，就是離宇宙中心的距離。

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73 SAL: This is reasoned out from finding the three outer planets -- Mars, Jupiter, and Saturn -- always quite close to the earth when they are in opposition to the sun, and very distant when they are in conjunction with it. This approach and recession is of such moment that Mars when close looks sixty times as large as when it is most distant. Next, it is certain that Venus and Mercury must revolve around the sun, because of their never moving far away from it, and because of their being seen now beyond it and now on this side of it, as Venus's changes of shape conclusively prove. As to the moon, it is true that this can never separate from the earth in any way, for reasons that will be set forth more specifically as we proceed.

73 薩：這推論由觀察外行星所得：三個外行星 — 火星、木星、土星 — 在太陽對面時，離地球近；和太陽相會時，則離地球遠。此遠近可令火星離地球近時，比離最遠時大六十倍。此外，無庸置疑，金星水星環繞太陽公轉，因為它們從未遠離太陽，亦因為它們有時於太陽背後，有時在我們這邊；金星形狀的改變，證實這一點。至於月亮，它的確無法和地球分離，原因將於及後討論浮現。

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74 SIMP: The opening of the well being not more than three yards, out of so many millions of yards in the balance of the terrestrial surface which are hindering my view, how can the time of my seeing be a perceptible fraction of that of my not seeing?

74 辛：井口不大於三碼，地球表面之廣千萬碼，使我的理解甚為片面：我又何以知我窺探之時所得，為我不所見的一撮？

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75 SAL: the measure of this time must be obtained from that fraction of the motionless heavens which remains visible through the opening of the well.

75 薩：量度此時此刻，必須以可見於井口，一小撮定格的天空所得。

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76 SIMP: Is not that part of the sky, which I perceive the same fraction of the entire heavenly sphere as the mouth of the well is of the terrestrial sphere?

76 辛：以一小部分的天空，窺探整個宇宙，跟由井口窺探地球不是一樣嗎？

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77 Movement in any direction whatever will be advantageous. This implies that when the moving power is spent, it will begin again. The sun and moon, realizing in themselves, can perpetuate their shining. The four seasons, by their changing and transforming, can perpetuate their production. The sages persevere long in their course, and all under the sky are transformed and perfect. When we look at what they continue doing long, the natural tendencies of heaven, earth, and all things can be seen.

「利有攸往，終則有始也。日月得天，而能久照，四時變化，而能久成，聖人久於其道，而天下化成；觀其所恆，而天地萬物之情可見矣！」

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78 SAL: They could not have helped noticing them, without having been able to resolve them; nevertheless they were confident of that which reason told them must be so in the light of many other remarkable observations. Thus they confidently affirmed that the structure of the universe could have no other form than that which they had described. Then there are other very serious but beautiful problems which are not easy for ordinary minds to resolve, but which were seen through and explained by Copernicus; these we shall put off until we have answered the objections of people who show themselves hostile to this position.

78 薩：縱然未能解釋，他們無法忽視它們；不過，鑑於眾多注目的發現，他們確信所得理論真確。所以，他們自信地肯定，宇宙的構造和他們描述的一模一樣，不可能有其他結構。其他非常重要但迷人，一般人難以解決的問題，獲哥白尼發現，並予以解釋。可是，一日未回應懷敵意的反對前，我們須將之擱置。

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79 SIMP: These events are so large and so conspicuous that it is impossible for Ptolemy and his followers not to have had knowledge of them. And having had, they must also have found a way to give reasons sufficient to account for such sensible appearances; congruous and probable reasons, since they have been accepted for so long by so many people.

79 辛：這些事件之大、之神聖，托勒密和其追隨者不可能毫無認識。若有所認識，那他們也一定有方法，解釋此等明顯的現象。而且，這些解釋必定合理、可能性高，因為托勒密的理論為人所接納已久。

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80 SAL: Ptolemy's structure is composed of such uneven movements, while in the Copernican system each movement is equable around its own center. With Ptolemy it is necessary to assign to the celestial bodies contrary movements, and make everything move from east to west and at the same time from west to east, whereas with Copernicus all celestial revolutions are in one direction, from west to east.

80 薩：托勒密的系統由不均的移動組成，而哥白尼的系統中，所有移動圍繞中心，相當穩定。托勒密加諸相反方向的移動予星體，令星辰由東移向西，再由西移向東；哥白尼則加諸一方向的移動予所有星體，即由西向東。

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81 SAL: Does your imagination first comprehend some magnitude for the universe, which you then judge, to be too vast? If it does, do you like imagining that your comprehension extends beyond the Divine power? Would you like to imagine to yourself things greater than God can accomplish? And if it does not comprehend this, then why do you pass judgment upon things you do not understand?

81 薩：你的想像力，可會使你先領會宇宙之廣大，繼而再判斷其為「過大」？若你的想像力真是如此，你是否想你的領悟超越上帝？你是否想像超出上帝創造之物？若非如此，你何以要發表對並不理解之事的判斷？

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82 SIMP: These arguments are very good, and no one denies that the size of the heavens may exceed our imaginings, since God could have created it even thousands of times larger than it is. But must we not admit that nothing has been created in vain, or is idle, in the universe? Now when we see this beautiful order among the planets, they being arranged around the earth at distances commensurate with their producing upon it their effects for our benefit, to what end would there then be interposed between the highest of their orbits, and the stellar sphere, a vast space without anything in it, superfluous, and vain? For the use and convenience of whom?

82 辛：此等理論甚好，亦無人否認宇宙之大，可超出人類想像，因為上帝創造的宇宙，可能超出我們想像的宇宙千倍萬倍。可是，我們豈能承認，宇宙之中有一無用、無意義之物？但見行星間優美的秩序，它們置於地球周圍，距離恰當，對我們有益；那麼，要是在眾多星軌的最高點和恆星之間，有一廣闊無物的空間，多餘無用，到底作用何在？為何者所用，為何者之利？

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83 SAL: We should be quite content in the knowledge that God and Nature are so occupied with the government of human affairs that they could not apply themselves more to us even if they had no other cares to attend to than those of the human race alone.

83 薩：我們應該慶幸，上帝和大自然治理人類，已無暇再管更多，縱然祂們只有人類可管。

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84 SAL: Therefore you must now deny their action upon the earth, or else admit that their appearing small does not detract from their power to act. Or else you must grant and freely admit that your judgment about their sizes and distances was folly, not to say presumption or brashness.

84 薩：所以，你現在只能否定它們對地球的影響，否則只能承認，即使它們似乎渺小，但無損其力量；又或者，你須承認對它們體積、距離的判斷愚昧，假設粗莽。

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85 SIMP: As a matter of fact, I also saw immediately, upon reading this passage, the obvious contradiction in his saying that the stars of Copernicus, so to speak, could not act upon the earth because they appeared so small, and his not noticing that he had granted action upon the earth to the stars of Ptolemy and his own, these not merely appearing small but being for the most part invisible.

85 辛：事實上，當我讀此篇論文，我已即時察覺，其論述的一明顯矛盾：哥白尼之星 — 姑且這樣稱呼 — 其體積之小，無法影響地球；他亦沒為意，他認為托勒密和他本人發現，不單細小，甚至大多時候看不見的星體，可以影響地球。

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86 SAL: Capricorn to Aries, the sun will appear to be moving along the arc from Cancer to Libra. In a word, it will run through the signs of the zodiac in their order during the space of a year. So with this first assumption, the apparent annual motion of the sun around the ecliptic is satisfied beyond any argument.

86 薩：由摩羯座到牡羊座，太陽軌跡會沿著巨蟹座移動到天秤座。簡而言之，每一年，太陽依星座順序移動。由此推論，太陽每年似乎沿黃道移動，已獲驗證，無須再以其他論據支持。

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87 SAGR: For my part, so far as my senses are concerned, there is a great difference between the simplicity and ease of effecting results by the means given in this new arrangement and the multiplicity, confusion, and difficulty found in the ancient and generally accepted one. For if the universe were ordered according to such a multiplicity, one would have to remove from philosophy many axioms commonly adopted by all philosophers. Thus it is said that Nature does not multiply things unnecessarily; that she makes use of the easiest and simplest means for producing her effects; that she does nothing in vain, and the like.

87 沙：對我而言，只要稍為理性地想，就會發現相比傳統、廣為接受的一套理論所帶來的多變、混淆、繁難，此新理論中的因果來得簡單直接。假若宇宙的排列當真如此多變，那已獲一眾哲學家採納的不少立論，必須摒除。因此，大自然不會無緣無故複製事物；它用最直接簡單的方法，以作影響，無一事無用。

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88 When the sun has reached the meridian height, it begins to decline. When the moon has become full, it begins to wane. The interaction of heaven and earth is now vigorous and abundant, now dull and scanty, growing and diminishing according to the seasons. How much more must it be so with humans! How much more also with the spiritual agency!

88「日中則昃，月盈則食，天地盈虛，與時消息，而況人於人乎？況於鬼神乎？」

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89 SIMP: If I must tell you frankly how it looks to me, these appear to me some of those geometrical subtleties which Aristotle reprehended in Plato when he accused him of departing from sound philosophy by too much study of geometry. I have known some very great Peripatetic philosophers, and heard them advise their pupils against the study of mathematics as something which makes the intellect sophisticated and inept for true philosophizing; a doctrine diametrically opposed to that of Plato, who would admit no one into philosophy who had not first mastered geometry.

89 辛：坦白說，此種論述，就像幾何的微妙；亞里士多德曾譴責柏拉圖研究幾何過多，偏離紮實的哲學。我遇過好些極為優秀的逍遙學者，他們教導其門生反對數學，因為數學令學者立論流於詭辯、粗劣。這和柏拉圖不收未掌握幾何的學生的方針完全相反。

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90 SIMP: But passing over the consequences, which stem from the basic assumptions, I feel no small difficulties to exist in these assumptions themselves, and if the assumptions fall to the ground then they bring the whole structure into ruin. Now since the whole framework of Copernicus seems to me to be built upon a weak foundation (being supported upon the mobility of the earth), then if this were removed, there would be no room for further argument. And to remove it, Aristotle's axiom that to a simple body, only one simple motion can be natural appears to be sufficient.

90 辛：暫且不提由假設引伸的結論，要是這些假設為真，我不會感到一絲麻煩；要是這些假設非真，那現有整套結構將會瓦解。對我而言，因為哥白尼整套理論，（以地球移動一說支持的）基礎甚弱；要是此假設遭除，則無法再作討論。而亞里士多德一個物體，本質上只能有一簡單運動之說，已足以否定此假設。

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