

*Medicina* opens with a long quotation of the section from the ninth book of the *Natural History*, where Pliny famously summed up the history of medicine as a long inconclusive succession of medical sects, all purporting to be right but all unable to reach true knowledge of the causes of disease. Echoing Pliny's arguments, Sabuco says that the Saracens and the Chinese, who have no professional physicians, have a larger population than the Spaniards (in other words, they have a lower mortality rate). "Only in this art [i.e., medicine] may anybody declare himself a physician without being such; no other falsehood implies more danger and damage [than the medical falsehood], and less punishment at the same time: only the doctor is allowed to kill with impunity."<sup>16</sup>

This dialogue *On the True Medicine* is the text that is translated and presented here, as part of the "Other Voice in Early Modern Europe" series.<sup>17</sup> It is, as we shall see, a text that bears a significant relation to the Renaissance *Querelle des femmes*, beyond the remarkable circumstance of being emphatically presented as the work of a woman author. But before we examine in detail the content of the *Dialogue on the True Medicine* and locate it in the context of the medical and cultural world of the late Renaissance, as I shall try to do in this Introduction, we have to address a preliminary question. Who was this daring woman who attacked so uncompromisingly the medical establishment of her times?

### *The Precarious Fame of Doña Oliva: The Issue of Authorship*

We know that she became immediately famous. At the beginning of the seventeenth century Lope de Vega called her "the tenth Muse," listing her with other women prodigies of Europe.<sup>18</sup> The *picara* Justina,

16. *Vera medicina*, in Sabuco, *Obras*, 239.

17. For an English translation of the whole Sabuco oeuvre see Sabuco, *New Philosophy of Human Nature* (cit. in n1 above); the translation of *Vera Medicina* is at 177–252. For differences between that translation and mine, see below, Note on the Translation, 85–89.

18. "Dona Isabel Esforcia fue ilustrisima / en letras y virtud, y en Milan fenix: \ dona Oliva de Nantes, Musa decima,) y dona Valentina de Pinelo / Que hermosura ha nacido en nuestros siglos, / como dona Maria Enriquez tuvo, / que hoy llora Tormes, y la envidia misma?" (*El hijo prodigo*, in book 4 of the novel *El peregrino en su patria*, published in Seville in 1604, but

the roguish heroine of a popular novel of this period (1605), sang her own praise by bragging to be “more famous even than doña Oliva” and other very celebrated personages indeed:

I am the queen of Picardy  
 More universally known than the herb rue,  
 More famous even than Doña Oliva,  
 Don Quixote and Lazarillo,  
 Alfarach and Celestina.<sup>19</sup>

As these verses seem to indicate, the learned Oliva soon became a protagonist of popular imagination, as famed as fictional characters such as Don Quixote, Lazarillo de Tormes, and Celestina.

Oliva Sabuco's name was included for centuries in the repertories of Spain's “illustrious women”<sup>20</sup> but in point of fact very little

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written much earlier according to M. Menendez y Pelayo, introduction to *Obras de Lope de Vega*, vol. 6 [Madrid: Atlas, 1963], XIX, BAE vol. 157). The Italian Isabella Sforza was the author of *Della vera tranquillità dell'animo* (1544). Valentina de Pinelo defended women's right to interpret Holy Scripture in a book in praise of St. Anne (1601), for which Lope wrote two introductory sonnets: see Lola Luna, “Sor Valentina Pinelo, intérprete de las Sagradas Escrituras,” *Cuadernos hispanoamericanos* 464 (Feb. 1989), 91–103. On Lope's *filoginia erudita* and his views on learned women see Simon A. Vosters, “Lope de Vega y las damas doctas,” in *Actas del Tercer Congreso Internacional de Hispanistas*, ed. Carlos H. Magis (México, Por la Asociación Internacional de Hispanistas: El Colegio de México, 1970), 909–21.

19. “Soy la rein-de Picardí, / Más que la rud-conoci-/ Más famo-que Doña Oli-, / Que Don Quijo-y Lazari, / Que Alfarach-y Celesti” See *La pícara Justina*, ed. Bruno M. Damiani (Madrid: José Porrúa Turanzas, 1982), 376.

20. A few examples: Pedro Pablo de Ribera, *Le Glorie immortali de' trionfi et heroiche imprese d'ottocento quarantacinque donne illustri antiche, e moderne...*, (Venice: Evangelista Deuchino, 1609), 331 (Oliva is no. 482 on this list of 485 illustrious women); Nicolás Antonio, *Bibliotheca Hispana sive Hispanorum...* (Rome: Nicolò Angelo Tinassi, 1672), 2.347ff; Fr. Benito Feijóo Montenegro, *Teatro crítico universal* (Madrid: Lorenzo Francisco Mojados, 1726), vol. 1, *discurso XVI*: “Defensa de las Mugerés,” 357–58; Damião de Froes Perym, *Theatro heroico...e catalogo de las mulieres illustres em armas, letras aççoens heroicas, e artes liberales*, 2 vols. (Lisbon: Theotom Antunez Lima, 1736–40), 2. 298–99; Juan Bautista Cubié, *Las mugeres vindicadas de las calumnias de los hombres. Con un Catalogo de las Españolas que más se han distinguido en Ciencias y Armas* (Madrid: Antonio Perez de Soto, 1768), 131–33.

For a bibliography of commentators on Sabuco's work, see F. Rodriguez de la Torre, “Bibliografía de comentaristas y referencias sobre Miguel Sabuco (antes D.a Oliva ) y su obra,” *Al-Basit* 13 (Dec. 1987), 233–65.

was—and still is—known about her. We know that she was born in Alcaraz, in the archdiocese of Toledo, in 1562, as stated in her baptism certificate, which was published in 1853.<sup>21</sup> This document calls her daughter of the *bachiller* Miguel Sabuco. She was twenty-five years old when her book was published. The surnames Barrera and de Nantes used on the title page of *Nueva Filosofía* are actually, as we learn from the baptism register, the maiden names of her two godmothers, Barbara Barrera and Bernardina de Nantes. From the same document we also gather that one of her godfathers was a doctor, Alonso de Heredia. Strong documentary evidence indicates that her father, Miguel Sabuco, was an apothecary in Alcaraz.<sup>22</sup> We also know that by 1588, the year in which a second edition of *Nueva Filosofía* was published in Madrid, Oliva was already married to a certain Acacio de Buedo. We know this from her father's will, written in the same year, which mentions conflicts with his son-in-law about Oliva's dowry.<sup>23</sup> Finally, it was thought that she died before 1622, the year in which another edition of *Nueva Filosofía* came out in Braga, Portugal, because in the preface to this new edition we are told that the "authoress" is no longer living, and that her book had hitherto met hostility and "calumny."<sup>24</sup> But this *terminus ante quem* of Oliva's death has been disputed recently on the basis of new evidence, as we shall see.

Besides these three editions, the book was reprinted in 1728 by the physician Martín Martínez, an enthusiastic supporter

21. J. M. Muñoz y Ferron, "Noticias acerca de doña Oliva Sabuco," *Gaceta Médica* IX:10–11 (1853), 73–76, 81–86; E. Pérez de Pareja, *Historia de la primera fundacion de Alcaraz* (Valencia: Joseph Thomás Lucas, 1740), 208, had already mentioned Oliva's birth date.

22. This was first indicated by José Marco Hidalgo (*Biografía de Doña Oliva Sabuco* [Madrid: Librería de Antonio Romero, 1900], 30), based on an entry he found in one of the *libros de libramientos* of the city council of Alcaraz: "4 de febrero de 1572 = Así mesmo se mandó librar en el dicho mayordomo al Bachiller Sabuco, boticario, 17.200 maravedís de medicinas que se tomaron para los pobres como consta por una tasación del doctor Heredia, Médico."

23. On Miguel Sabuco's will, see below, 12–13.

24. *Nueva Filosofía de la Naturaleza del hombre, no conocida ni alcançada de los grandes filosofos antiguos: la qual mejora la vida, y salud humana.... Composta por Doña Oliva Sabuco* (Braga: Fructuoso Lourenço de Basto, 1622). Oliva's death is mentioned in the dedication to Dom Joam Lobo Baram D'Albito ("Pello que o Liuro, et sua autora [aiudapois de morta] parece me estão pedindo o nao tire outravez a luz sem protector que com seu valor o anime, et defenda das calumnias de que o favor de hu Monarcha o nao pode defender...").

of Oliva Sabuco's medical theories. In 1734 it was translated into Portuguese and published in Lisbon. In the nineteenth century it was reprinted several times (1847, 1873, and 1888).<sup>25</sup> Thus the book kept being read for centuries. It is mentioned in seventeenth-century medical bibliographies such as Lindenius's *De scriptis medicis*, and Lipenius's *Bibliotheca realis medica*, which listed it under the heading *anthropologia*.<sup>26</sup> In the eighteenth century, Albrecht von Haller included it in his *Bibliotheca anatomica*, citing the editions of 1588, 1622, and 1728, and summarizing the content with these words: "Man is a tree upside down, the juice of the nerves nourishes the whole body"<sup>27</sup>—an apt summary of Sabuco's medical theory. As we shall see, the bold new ideas advanced in *Nueva Filosofía* circulated in the European medical culture of the seventeenth century, and they gained special prominence in the Enlightenment, when the Spanish literati revived and praised the work of Oliva Sabuco, making her into a heroine of national medical progress. Even in the nineteenth century Oliva was still part of the catalogues of Spanish female "worthies." She was remembered as a pioneer in the study of the nervous system and of the psychosomatic nature of disease. For centuries, nobody questioned her authorship of the texts collected in *Nueva Filosofía*, though doubts were entertained occasionally. A nineteenth-century historian of medicine, for instance, while commenting upon the book,

25. On the editions of *Nueva Filosofía* see José Fernández Sánchez, "Ediciones de la obra de Miguel Sabuco (antes Doña Oliva)," *Al-Basit* 13 (Dec. 1987), 87–103; and Mercedes Caridad García Gómez, *La concepción de la naturaleza humana en la obra de Miguel Sabuco* (Albacete: Instituto de Estudios Albacetenses de la Excma Diputación de Albacete, Serie I, *Estudios* 62 [1992], 16–17). The editions of 1847 and 1873 were partial: they included only the first and the third dialogues, namely, the *Dialogue on Self-Knowledge* and that *On the Things that Will Improve the State of the World, and Its Commonwealths*.

26. See Lindenius [Jan Antonides van der Linden], *De scriptis medicis*, (Amsterdam: Blaeu, 1651), 502; see also *Lindenius Renovatus, sive Johannis Antonidae van der Linden, De Scriptis medicis...*, ed. Georg Abraham Mercklinus (Nuremberg: Johannes Georgius Endterius, 1686), 856 (that quotes the Madrid edition of 1588 as Oliva Sabuco, *Nova Philosophia de Hominis Natura. In qua Medicorum quaedam Paradoxa refelluntur*). Martinus Lipenius [Martin Lipen], *Bibliotheca realis medica* (Frankfurt: Johannes Fridericus, 1679).

27. A. von Haller, *Bibliotheca anatomica* (Zürich: Orell, Gessner, Fuessli, 1774), 1.265: "Oliva Sabuga [sic] de Nantes Barrera": "Hominem esse inversam arborem, succum nervorum totum corpus alere." On the history of the notion of *arbor inversa*, see Carl-Martin Edsman, "Arbor inversa," in *Festschrift Walter Baetke* (Weimar: Böhlhaus, 1966), 85–109.

expressed some skepticism at the possibility that a woman could have authored a work of such significance.<sup>28</sup>

At the beginning of the twentieth century, however, the fame of doña Oliva ran up against a formidable challenge. In 1903 a scholar from Alcaraz, José Marco Hidalgo, who had already written a short biography of Oliva Sabuco<sup>29</sup> and was looking for more documentary evidence in the local archives, found and published three notarial records, which seemed to him conclusive proof that the true author of *Nueva Filosofía* had been Oliva's father, the *bachiller* Miguel Sabuco.<sup>30</sup> What were these documents and what did they say? The first was an *escritura de obligación*, dated 10 September 1587, whereby Alonso Sabuco—Miguel Sabuco's son and Oliva's brother—pledged himself together with his wife to return a sum of 120 ducats to Miguel Sabuco. This sum had been entrusted to Alonso to cover his expenses for a trip to Portugal, undertaken with the goal of having *Nueva Filosofía* printed there, so that it could be sold in Portugal and in the Portuguese Indies. Another document was a *carta de poder*, dated 11 September 1587, by which Miguel Sabuco entrusted power of attorney to his son Alonso for the purpose of going to Portugal to take care of this new edition of *Nueva Filosofía*. At the beginning of this document, Miguel Sabuco declared himself to be “the author of the book titled *Nueva Filosofía*, and father of doña Oliva, my own daughter, whom I set up as author only to grant her the honor but not the profit and interest [from the book].”<sup>31</sup> A third document is the last will and testament of

28. Anastasio Chinchilla, *Anales Historicos de la medicina en general y biografico-bibliograficos de la española en particular*, Vol. I, repr. (New York and London, 1967), 303–4, 311. But even in the early eighteenth century, at the heyday of Oliva's fame during the Spanish medical Enlightenment, Doctor Martínez, a fervent supporter of Sabuco's ideas, had defended Oliva's authorship against the charges of those who argued “que esta obra no fue de mujer” (quoted in Luis Sánchez Granjel, *Humanismo y medicina* [Salamanca: Universidad de Salamanca 1968], 22, n12).

29. Marco Hidalgo, *Biografía de Doña Oliva Sabuco*.

30. José Marco Hidalgo, “Doña Oliva de Sabuco no fué escritora,” in *Revista de Archivos, Bibliotecas y Museos*, 9:7 (July 1903), 1–13.

31. “autor del libro intitulado Nueva Filosofía, padre que soy de doña Oliva, mi hija, a quien puse por autor solo para darle la honrra y no el provecho ni interes”: Marco Hidalgo, “Doña Oliva de Sabuco no fué escritora,” 4. The two documents are transcribed in Marco Hidalgo's article: see p. 3 for the *carta de obligación*, and p. 4 for the *carta de poder*.

*Echoes of the Querelle des Femmes in Early Modern  
Medicine*

Sabuco's reversal of the traditional hierarchy of heat over moisture, and sun over moon, appears even more startling if we consider the deeply entrenched gender connotation of sun/moon symbolism in the Renaissance—the sun being consistently represented as male and the moon just as consistently being characterized as female.<sup>142</sup> At first sight, also Sabuco seems to follow this conventional gender symbolism.

The father Sun, with his rays, impregnates the mother earth, and he excites and vivifies every seed for the generation of plants and animals. The Moon feeds all beings generated by the Sun, either born of the earth or of animal, with her milk, chyle of the world, which is water, dense and rare.<sup>143</sup>

“The sun and the moon—Antonio states—share the labor: the sun generates, the moon nourishes.”

In generation, the Moon provides matter, the Sun form, and together [they create] life (...) The Sun is the formal cause, the Moon is the material cause, and both perform generation, which is the conjunction of matter and form with life.<sup>144</sup>

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*circa medicinae theoriam et praxim, ante duo secula, in Scholis medicinae Parisiensis agitatae sunt et discussae, serie cronologica* (Paris: Hérisant, 1752).

142. See Heide Wunder, “*Er ist die Sonn’, sie is der Mond’*”: *Frauen in der Frühen Neuzeit* (Munich: Beck, 1992), 261–68; on sun symbolism more generally see *Le Soleil à la Renaissance. Sciences et mythes* (Bruxelles: Presses Universitaires de Bruxelles, 1965).

143. *Vera philosophia de natura mistorum*, in Sabuco, *Obras*, 387.

144. “Sol et Luna dividunt operam, Sol gignit, Luna nutrit” (*Vera philosophia de natura mistorum*, in Sabuco, *Obras*, 385). “Luna materiam, Sol formam, vitamque simul generatione praestat (...) Ille causa formalis, haec materialis existit: & ambo generationem perficiunt, quae materiae, & formae cum vita coniunctio est” (Ibid, 397–98). On the association of the sun with males, and of the moon with females, see also *Coloquio de las cosas que mejoran este mundo, y sus Repúblicas*, in Sabuco, *Obras*, 192: “The Sun helps the generation of males, and the moon that of females: and thus the absence of the moon and presence of the sun, which

At first sight, this view seems to echo the Aristotelian theory of reproduction, according to which the female brought passive matter to generation, while the male provided the active principle of form. But in fact Sabuco's notions of form and matter are quite different from Aristotle's. For Aristotle, matter and form were conceived as polar opposites: matter was passive while form was active, and the mediating principle between them was "privation" (formlessness, or privation of form).<sup>145</sup> For Sabuco, in contrast, form and matter are related to each other not as opposites but as cooperating partners, held together by *amicitia*, friendship.<sup>146</sup> Form and matter, sun and moon, male principle and female principle, all cooperate actively in the reproduction of life. For Sabuco, saying that the moon, as the female element, contributes the material element to generation does not mean that the female has only a passive role, as it did for Aristotle. Saying that the sun, as the male element, gives form to the new life does not mean, as it did in Aristotle, that the male role in procreation

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will be in summer and with no moon, will favor the male gender, and the absence of sun and presence of moon, which will be in winter in the full moon, will favor the female gender."

145. For Aristotle all "substances," or objects in the terrestrial realm, are composites of form and matter. Form, the active principle or agent, combines with matter, the passive recipient of the form, to produce a specific object. Matter, form and "privation" (absence of form) are the constitutive elements of change: form is what comes to be, privation is what passes away, and matter is what stays the same throughout the change (the substratum of change): see Aristotle, *Metaphysics*, 12.2, 1069b; *Physics*, I.7–8, 189b–192b.

146. Sabuco, *Obras*, 290: "Every matter has a friendship with its form, and it is barred from taking any other form except the one with which it has friendship. The philosophers would have done better had they spoken of friendship [between matter and form] rather than of 'privation,' and they certainly were wrong in affirming this category of 'privation.' The right thing to say is that *materia*, *amicitia*, and *forma* (matter, friendship, and form) coexist in the mixed substance, and that the mixed substance lasts as long as does the friendship that ties matter to a particular form. Thus I would say: *generatio est actio materiae in amicam formam*: Generation is the action of matter on a friendly form." (Cf. translation, 155–56 and n189). In *Vera philosophia de natura mistorum*, Sabuco is scathingly satirical about the Scholastic category of "privation" as the connecting link between the concepts of matter and form, saying that it led to "many controversies and sterile disputations"; "certè privatio intellectus fuit," it showed a "deprivation" of intellect in the philosophers (Sabuco, *Obras*, 402–3). The Aristotelian category of "privation" was also criticized by Francesco Patrizi in his *Discussiones Peripateticae* (1571–81): see Luc Deitz, "Falsissima est ergo haec de triplici substantia Aristotelis doctrina": A Sixteenth-Century Critic of Aristotle—Francesco Patrizi da Cherso on Privation, Form, and Matter," *Early Science and Medicine* 2:3 (1997), 227–50.

is superior to that of the female. For Sabuco, sun and moon, the male and the female principles, are not arrayed hierarchically, with the male predominating over the female, as in Aristotle. If anything, reading Sabuco's theory of generation in the context of Sabuco's cosmology, one could argue that the female element is presented as more important than the male.

As we have seen, Sabuco employs the traditional categories of hot/cold, wet/dry, but gives primacy to moisture over heat. In ancient medicine as well as in the Renaissance, the hot/cold, wet/dry dichotomies were also crucial in the definition of sexual difference and sexual hierarchy. As most Renaissance medical texts repeat,<sup>147</sup> woman is cold and humid, man is hot and dry. Each gender is characterized by a positive (hot, humid) and a negative (cold, dry) quality. Sabuco does not change the definition of the female principle: the moon (in the macrocosm) and the brain (in the microcosm) are still defined as cold and humid.<sup>148</sup> In the traditional model, however, the conceptual couple hot/cold (in which man occupies the positive pole) was more important than the couple moist/dry. The traditional argument for woman's inferiority was that she was endowed with a lower level of innate heat.<sup>149</sup> In Sabuco's theory, in contrast, preeminence is given to the couple humid/dry, in which woman occupies the positive pole. The *humidum radicale* is more important than the innate heat. The humid/cold organ, the brain—often described with feminine metaphors<sup>150</sup>—is more important than the organs which are the seats of the innate heat, such as the stomach and the heart.

While such a symbolic reversal of gender hierarchy was undoubtedly a daring novelty for the times, we should consider that in the last decades of the sixteenth century the traditional vision of

147. See Ian Maclean, *The Renaissance Notion of Woman* (Cambridge: Cambridge University Press, 1980), 30–35.

148. On the brain as “cold and moist” see translation, 100.

149. Maclean, *The Renaissance Notion of Woman*, 30–35. Huarte de San Juan's *Examen de ingenios* (1575) used the notion of the female cold and moist complexion to argue that women are intellectually inferior to men: see Elvira Arquiola, “Bases biológicas de la feminidad en la España moderna (Siglos XVI y XVII),” *Asclepio* 40:1 (1988), 297–315.

150. For instance: “la señora que está en el cerebro” (“the lady that is in the brain” [Sabuco, *Obras*, 199]).

sexual difference was seriously questioned in European medicine. As Ian Maclean showed many years ago in a book that remains fundamental, *The Renaissance Notion of Woman*, at the end of the sixteenth century one can notice a sort of medical version of the *Querelle des femmes*—a “curious combination of doctors claiming to be Galenists and feminists,” that is, believing “against Aristotle, that men and women are equally perfect in their sex.”<sup>151</sup> According to Maclean, “it is possible to argue that there is a feminist movement in medical spheres” in the late sixteenth century—which is particularly striking when compared to the strong conservatism on gender issues that we find in works of theology of the same period. We should try to assess the innovative content of Sabuco’s *Nueva Filosofia* also by comparing it with the “feminist Galenism” of the late Renaissance.

Maclean showed that in the second half of the sixteenth century the Aristotelian / Scholastic view of woman as “imperfect male” and “error of Nature” was rejected by a vast number of doctors, and replaced with the idea that both sexes are equally important in reproduction, each being seen as perfect according to its own function. The female sex was no longer thought to be the imperfect and incomplete version of the male. Thus the Spanish physician Luis Mercado—a contemporary of Sabuco—wrote in 1579: “I don’t believe that the female is more imperfect than the male. The perfection of all natural things has to be investigated in relation to Nature’s intention (...). And considering the goal for which woman has been created, I am led to believe that she is equally as perfect as man.”<sup>152</sup> In the same years Girolamo Mercuriale expressed an identical opinion in his Roman lectures on women’s diseases: “I marvel at Aristotle, who said that women and all females are monsters. But if we only consider the importance of women in the propagation of the species (...) as well as

151. Maclean, *The Renaissance notion of woman*, 28–46, cit. on 29. See also Anne-Liese Thomassen, “Historia animalium contra Gynaecia in der Literatur des Mittelalters,” *Clio Medica* 15 (1980), 5–23. This intriguing aspect of late Renaissance medical culture deserves further investigation.

152. Ludovicus Mercatus (= Luis Mercado), *De mulierum Affectionibus* (Venice: Felice Valgrisi, 1587), 2nd ed., 7: “Non existimo foeminam esse viro imperfectiorem. Nam omnis naturalium rerum perfectio (...) ex fine naturae intento quaerenda proculdubio est... Quibus sane rationibus moveor, ut credam, habito respectu ad finem foeminam esse aequae perfectam viro.”

the usefulness of women for a good and happy life (...), we clearly see that the female is certainly not a monster, as argued by Aristotle, but on the contrary a primary goal of Nature's intention."<sup>153</sup> Some years later, in his *Historia anatomica humani corporis*, the Montpellier physician André Du Laurens would condemn the Scholastic definition in even stronger terms: "Saying that woman is an error, or false step, of Nature, is unworthy of a true philosopher—it is a barbarous opinion."<sup>154</sup>

Similar statements are surprisingly frequent in medical and anatomical texts of the late sixteenth and early seventeenth century, particularly in the treatises on female diseases, a Hippocratic genre that went through a revival in this period.<sup>155</sup> Some late Renaissance anatomists abandoned the Galenic homology of the male and female genitalia (uterus = inverted penis, ovaries = testes), which had

153. Hieronymus Mercurialis (= Girolamo Mercuriale), *De Morbis Muliebribus Praelectioniones* (Venice: Giunta, 1591), 3rd ed., 1–2 (1st ed. 1582). Mercuriale had Mercado's *De mulierum affectionibus* reprinted in Venice in 1587. For similar views see Martinus Aka-kia, *De morbis muliebribus*, in *Gyneciorum sive de mulierum tum communibus, tum gravidarum, parientium, et puerperarum affectionibus & morbis* (Strasbourg: Zetzner, 1587), 745; Rodericus a Castro (= Rodrigo de Castro), *De universa muliebrium morborum medicina* (Hamburg: Froben, 1603), 126–31; Johannes Varandaeus (= Jean de Varanda), *De morbis et affectibus mulierum* (Lyons: Bartholomeus Vincentius, 1619), 2 (see Maclean, *Renaissance Notion of Woman*, 103 n9).

154. André Du Laurens, *Opera anatomica in quibus historia singularum partium accurate describitur* (Frankfurt: Peter Fischer, 1595), 2nd ed. (first ed. 1593), 280–81: "Verum haec Aristotelis & Galeni opinio nobis non probatur. Naturam enim in foeminae, non minus quam maris generationem intendere existimamus, & foeminam Naturae erratum ac prolapsionem dicere, indignum est Philosopho." An English anatomy manual of this period, which borrowed extensively from Du Laurens, repeated this opinion word for word: "But this opinion of Galen and Aristotle we cannot approve. For we think that Nature as well intendeth the Generation of a Female as of a Male: and therefore it is unworthily said that she is an Error or Monster in Nature" (Helkiah Crooke, *Microcosmographia: A Description of the Body of Man* [London: W. Jaggard, 1615]; I quote from the 2<sup>nd</sup> ed., London: Thomas & Richard Cotes, 1631, 271).

155. See the texts collected in the *Gynaeciorum libri*, ed. Hans Kaspar Wolf (Basle: Thomas Guarin, 1566). This collection was republished with additions in 1586 and 1597: see Helen King, *Midwifery, Obstetrics and the Rise of Gynaecology: The Use of a Sixteenth-Century Compendium* (Aldershot: Ashgate, 2007), 1–8, 29–64. On the deep difference between the Hippocratic and the Aristotelian view of the female body see Helen King, *Hippocrates' Woman: Reading the Female Body in Ancient Greece* (London: Routledge, 1998).

## *Dialogue on the True Medicine*

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**The people who speak in this dialogue on the true medicine are the Doctor, a physician, and Antonio, a shepherd.**

*Doctor:* God save you, Mr. Antonio. I have been looking forward to this chance of meeting you, since yesterday in town your friends Veronio and Rodonio told me that you have been speaking of new things, in opposition to the written medicine. But surely, Mr. Antonio, you must be crazy to dare say and assert new things, and establish a new medical sect at odds with the common opinion we received and held from such great men of antiquity as Galen, Hippocrates, and Avicenna.

*Antonio:* Not I, Mr. Doctor, but truth itself dares to do such a thing—truth, that was born in Heaven, and has great strength and boldness. As I examined the nature of man, the true medicine clearly derived and sprang therefrom—the true medicine, born from the true nature of man. The ancient philosophers not having understood the nature of man, the ancient physicians mistook medicine in its main principles. You cannot deny, Mr. Doctor, that the written medicine, which you use, is uncertain, inconstant, and fallacious, and that its end and effects turn out to be unpredictable, wrong, and doubtful, whereas we see clearly that the other arts have reliable and true effects and results, with no variation or fraud. Such is the case with Arithmetic, Geometry, Music, Astrology, and the other arts, that deliver what they promise, and whose results always turn out to be certain and true. Such is not the case with medicine, as you can plainly see: medicine is deceptive, uncertain, and unstable. It is clear, therefore, that the medical art is flawed in its very roots and foundations, because it does not bring forth the promised results. All too often we hope for nice apples, so to speak, and what we get from it instead are wild roses, galls,<sup>4</sup> and medlars. All of which will make a

4. *Agallas*: oak-galls or oak-apples, an excrescence produced on trees, especially the oak, by the action of insects, but believed in early modern times to be the fruit of the oak: OED refers to Turner, *Herbal*, II, 1562, 109b: “a gall is the fruite of a oke and especially of the lefe.”

reasonable person doubt and even say, perhaps, that this man, though a shepherd, is right and that the ancients were but men like him.

*Doctor:* I won't say that, because I'm certain that the ancients wrote very well, and they are my teachers. Does not the whole world follow them? This novelty of yours must be delusion or folly.

*Antonio:* You cannot deny, Mr. Doctor, that medicine has been inconstant, and that it has changed very often;<sup>5</sup> that it was long banned in Rome, where many wise men put no faith in it, nor did they seek for a cure from a physician, for the reasons that I have said, which are of great weight. The Saracens and the people of the Kingdom of China do not allow physicians, and there is more population in those countries than in Spain. Indeed, those very same ancient and serious authors considered medicine a very difficult art, declaring that life is short, art is long, judgment difficult, experience deceptive, etc. Hippocrates said that full and complete certainty cannot be reached in medicine. Nor can you deny, Mr. Doctor, that the ancients were men as we are, and that their sayings could not force the nature of man to be such as they said it to be. Human nature remained what it was and their sayings did not change it. And being men they could be wrong. Indeed many times medicine was mistaken and changed, as you can see in Pliny,<sup>6</sup> where he says that no art was ever more unstable and mutable than medicine, and that it varies every day. Pliny<sup>7</sup> reports the many changes that medicine went through since the times of Aesculapius. He says that all the cures and remedies that were found useful were written down in the Temple of Aesculapius, and that Hippocrates put them together, giving birth to the medicine that is called Clinical. Afterwards his disciple Prodicus founded the medicine named Iatralipticen,<sup>8</sup> whose tenets and rules were reformed subsequently by the physician Chrysippus. Then Chrysippus's disciple Erasistratus, grandson of Aristotle, changed

5. Marginal note: *The changes that medicine went through.*

6. Marginal note: *Lib. 29. c. 1.*

7. The references to Pliny in Sabuco's marginal notes do not always correspond to our standard edition of the *Historia naturalis*. I always give the correct reference in the note immediately following Sabuco's marginal note. The following history of medical sects is closely based on Pliny, *NH*, XXIX. ii.4–ix.29 (Loeb, 8.183–201).

8. *Iatralipticen*: "ointment cure."

much of this medicine. This same Erasistratus received a hundred talents from King Ptolemy for curing the king's father Antiochus. Next came Acron, the physician who started another sect, which was called Empirical, from experience. Then came Herophilus, who condemned and put an end to the medical schools, rules, and sects mentioned so far. Subsequently Herophilus's sect was forsaken in its turn; and such was also the fate of Asclepiades's sect, which was reformed by his disciple Themison. In turn Themison's sect was reformed by Antonius Musa, who saved the divine Augustus from a dangerous illness by reversing the treatment.<sup>9</sup>

It would be endless to mention the changes and variations that the art of medicine has undergone and still undergoes today. The physician Vettius established another sect. Next came Thessalus, who swept away all the former sects, and called himself *Iatronicen*<sup>10</sup> in his monument. His sect in turn lost credit and authority because of new rules established by the physician Crinas. These rules were presiding over the fate of the Romans when the physician Charmis came from Marseilles and criticized the received opinions, and gave new rules. In this time a Roman knight had this epitaph carved on his tombstone: *Turba medicorum perij*, which means: a crowd of physicians killed me. Because of these vagaries, changes, and uncertain results of medicine, when its inconstancy was known, seen, and experienced, the physicians were thrown out and banished from Rome, and the Romans lived for more than six hundred years without doctors, though not without medicine. And people would have done right had they persevered in this view till the present day, because of all the medical sects and reforms mentioned so far, the one that you currently use and follow is the most wrong, vain, and devoid of the substance that we hope for.

*Doctor:* Surely your judgment must be wrong, vain, and idle, since you have taken to this fallacy and delusion.

9. *Con contraria medicina*. Sabuco closely follows Pliny's text, which has *contraria medicina*. I follow Rackham's translation (Pliny, *NH*, Loeb, 8.186).

10. *Iatronicen*: a Greek expression meaning "the conqueror of physicians" (see Pliny, *NH*, Loeb, 8.186). Waithe, Vintró, and Zorita arbitrarily translate it as "iatrogenic" (a modern term meaning physician-caused illness: see *New Philosophy of Human Nature*, 180 and 245, n12), which is certainly an error.

*Antonio:* It was no fallacy or delusion, but the opinion of Marcus Cato, that wise and excellent man, of whom Pliny reports that he spoke these very words: Marcus, my son, I'll tell you in due course what I think of these Greeks, and how it is good to maintain a distance from their literature and not make a close study of it. I will prove it. Keep this in mind as the saying of a prophet: when the Greeks pass on their literature to us they will corrupt all our culture, and all the more so when they send us their physicians. They all joined in a conspiracy to murder foreigners with their medicine, which they do for a fee, so that their slaughter may be more creditable and legitimate. They also gave authority to their texts by writing in Greek, because had they been in the Roman tongue, and therefore understandable, not even shepherds would give them credit. They make experiments<sup>11</sup> at the cost of our lives. Only in this art is anyone allowed to profess himself a physician without being one, and in no other is fraud more dangerous and harmful, and less subject to punishment: only the physician is allowed to kill with impunity (all of which is said by Pliny in the cited place,<sup>12</sup> not by me). Pliny concludes that no art is more unsteady and changeable, just as no art is more profitable.<sup>13</sup>

*Doctor:* Truly, Mr. Antonio, what you say shows an unsteady and changeable mind. However, since you wish to make this argument, come to the point: tell me these novelties of yours, whereby you say you are going to improve and rectify medicine, making it valid and true.

*Antonio:* I don't ignore that the beginning of a new thing is doubtful and difficult to admit in the minds of men, as was the case with Columbus's opinion at the time of the Catholic King Don Fernando,<sup>14</sup> when he claimed that there was another world beyond the sea, which seemed to everybody so new and unheard-of that for a long time they did not believe him, until after much pressing they

11. *Experiencia*: meaning here "experiment" not in the modern sense, but purely empirical, non philosophical knowledge as in the medieval Scholastic notion of *experimentum* (on which see below, n158).

12. Marginal note: Pliny, *ibid*.

13. Pliny, *NH*, XXIX, vii. 14–viii.18 (Loeb, 8.191–95).

14. The 1587 text had "en tiempo del Emperador Carlos V" (204v), a mistake that was corrected in the 1588 edition.

decided to try and find out through experience whether perchance the man was right. And thus his view was proved true and found to be right, as everybody knows. I ask the same trial and experience for my novelty. I don't want people to believe me but to believe the experience and truth of the thing itself. Thus, giving glory to God (whence comes all good) I will begin to declare what I think.

*Doctor:* First tell me, Mr. Antonio, the general principles of your medicine, so that we can see the end and cause of your intent, and we can speak thereof.

*Antonio:* First I'd like to know the general principles of your ancient medicine: tell me how they define health and sickness, life and death.

*Doctor:* They define health as symmetry, that is, the proportion and balance of the humors. They define sickness as ametry,<sup>15</sup> that is, the imbalance and disproportion of the four humors. They say: *Morbus est constitutio quaedam praeter naturam à qua actio primo viciatur.*<sup>16</sup> "Disease is a condition outside the ordinary course of nature, which condition first damages the action of the affected body part."

*Antonio:* Let's leave aside Latin and Greek, and speak our language. Too many evils in the world are due to the sciences (and especially the laws) being in Latin.

*Doctor:* In plain speech then: disease, or sickness, is a condition out of nature, which in the first place vitiates and damages the action of the affected body part.

*Antonio:* To say that, Mr. Doctor, is like saying "it is a certain I don't know what," and to say "out of nature" means just as little. Such a definition is like something unknown and uncertain. It is as if I said: I don't know what it is, I don't know how it is. It is a rambling way of

15. *Ametria*: I have translated "ametry," which was used in early modern medical English to indicate the imbalance of the humors (see OED, s.v.) in Galenic terminology.

16. See Galen, *De sanitate tuenda*, lib.1, cap. 5 (*Opera*, 6.21): "ut si nimirum sanitas affectus secundum naturam actionem perficiens, contra morbus affectio praeter naturam actionem laedens" ("If evidently health is a condition according to the ordinary course of nature, which performs correctly the action [of the body parts], disease, on the contrary, is a condition outside the ordinary course of nature, which damages their action.")

speaking. Don't tell me more, Mr. Doctor, because I believe that what you say is indeed written on paper, but it is not so in the nature of man.

*Doctor:* Then tell me your propositions and general principles, do not keep me waiting for them.

*Antonio:* I am pleased to tell you my opinion in some short propositions, which are the following, and one day we shall prove them.

First, the stomach is hot and dry in the inflow;<sup>17</sup> the brain is cold and moist.

Second, every disease or sickness in man is caused primarily by this contrast of coldness and heat: I mean, the coldness in the brain and the heat in the stomach. Diseases derive from this contrast; but the action is only of the coldness and of the heat, and this is the conjunct cause<sup>18</sup> of disease.

17. *En la influente*: it is not clear what Sabuco means here. The adjective *influens* was used in late medieval medicine to indicate the kind of heat and moisture peculiar to the organs and alimeted and preserved in them by nutrition, as distinct from the innate heat and moisture that intrinsically belonged to each being from the first moment of life. So Peter of Abano, for instance, spoke of two kinds of heat, *calidum innatum* and *calidum influens*, as well as of two kinds of moisture, *humidum radicale* and *humidum influens* (or *nutribile*): see *Conciliator differentiarum philosophorum et medicorum* (Venice: Giunta, 1520), fols. 160ra–161ra. So Sabuco may mean here that the stomach is hot and dry, and the brain is cold and moist, with respect to the inflow of nutrition they receive; or in other words, that the stomach is kept hot and dry by the process of nutrition, while the brain is kept cold and moist by the same. Later in the text Sabuco speaks of *calor influente* of the stomach, and of *nutricion influente*, in the sense of nutrition absorbed from a surrounding medium (or ambient nutrition). So the meaning here seems to be that the ambient nutrition of the brain is cold and moist, while that of the heart is hot and dry.

18. *Causa conjunta*: in the language of Scholastic medicine it indicated the proximate and necessary cause of disease (as in the Aristotelian notion of “most proximate cause”: see Aristotle, *Metaphysics*, VIII. iv. 5–6, trans. H. Tredennick [Cambridge, MA: Harvard University Press, 1980], Loeb Aristotle 17.417), namely, the factor closest to the disease in the chain of causes, and the one that must necessarily be there for the disease to occur. On the concept and definition of *causa coniuncta*, as the one “inter quam et morbus non est causa media” (“between which and the disease there is no intermediate cause”) see Francisco Valles, *Controversiae medicarum et philosophicarum libri X* (Alcalá: J. Brocarius, 1556) IV 4, 83r. Francisco Valles (1524–96), who taught medicine at Alcalá, where Miguel Sabuco, Oliva's father, was a student, was one of the most significant representatives of what medical historians have called the “Hippocratic Galenism” of the late Renaissance. See José María López Piñero and Francisco Calero, *Los temas polémicos de la medicina renacentista: las Controversias (1556) de Francisco Valles* (Madrid: Consejo Superior de Investigaciones

Third, the feelings of the soul—wherein is the humanity of man—are the primary cause of man's life, death, and sickness.

Fourth, the brain is the cause and workshop of all diseases' humors. There, in the brain, reside the feelings, passions, and motions of the soul; there is the seat of sense perception; there is the root and the natural faculty or part of the soul which is the agent of growth;<sup>19</sup> there are life and breathing.<sup>20</sup> From the brain derive diseases and death. There, in the brain, is the animal faculty, with the irascible and

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Cientificas, 1988), with an introduction by López Piñero and a translation of a selection from the *Controversiae* by Francisco Calero (translation cited hereafter as *Controversias*), introduction, 8. Valles's *Controversiae* had a European readership and influence. It is quite certain that the author of *Nueva Filosofía* (whether Oliva or Miguel Sabuco) was thoroughly familiar with Valles's *Controversiae*, though she or he never quoted it directly on any specific argument. However, in the Latin text that concludes *Nueva Filosofía*, "Vera philosophia de natura mistorum, hominis, & mundi, antiquis ocula," Sabuco wrote: "Si ad haec studia ille sapientia floridus Vallis doctor medicus Regius, animum convertit, non solum controversias sed totam denuò poterit componere medicinam" ("If that man rich in wisdom, the Doctor Valles, Royal Physician, will turn his attention to these studies, he will be able to write anew not only his *Controversiae*, but all of medicine") (352r–v in the 1587 edition). As argued in the Introduction (36–37) Sabuco used the *Controversiae* as a guide to the key issues in the medical debate of the time, including the question of the causes of disease (see below, n177). She or he also ransacked the text for quotations from Hippocratic, Galenic and Aristotelian sources. As will be shown below, almost all the quotations from these authors in Sabuco's text come second hand from Valles's *Controversiae*.

19. *Vegetacion*: Sabuco uses the term to indicate the principle of growth and the action of growing. Following convention, Sabuco distinguishes three faculties or parts of the soul: the natural part, which has a vegetative force and is common to plants, animals, and man, the animal part, which gives sense and motion, and is shared by animals and men; and the intellective, which is common to men and angels. See *Coloquio del conocimiento de si mismo*, 7. Aristotle had distinguished nutritive, sensitive, and rational souls, all located in the heart. Galen had distinguished three "faculties," the natural faculty (located in the liver), the animal faculty (located in the brain), and the vital faculty (located in the heart). Unconventionally, Sabuco locates all the faculties or parts of the soul in the brain. On the theory of the soul in Renaissance philosophy see Katherine Park, "The Organic Soul," in *The Cambridge History of Renaissance Philosophy*, ed. Charles B. Schmitt (Cambridge: Cambridge University Press, 1988), 464–84.

20. *Anhelacion*: cf. *Anhelito: aire respirado de la boca* (from Laguna, *Dioscorides*, ed. 1733, t. 2, p. 11, Acad. Autorid.)

concupiscible parts,<sup>21</sup> since these cannot exist without the “species,” that is, the images of things.<sup>22</sup>

Fifth, disease is a fall, or otherwise said a catarrh, defluxion, or decrement<sup>23</sup> (all of which words mean the same thing) of the moisture (juice, or chyle<sup>24</sup>) of the brain, which damages the body part where it falls. In other words, disease happens when the root (namely, the brain) stops performing its role in consequence of the falling of the pia mater,<sup>25</sup> which sends down the juice that should instead flow upwards. Disease has nothing to do with the liver, because the natural faculty in the liver cannot make mistakes, it is learned without a doctor. In fact nature provided the liver with a receptacle (the gallbladder) wherein it drives out and sets apart, as in a gutter, the bad juice that would be harmful. In the liver, therefore, no bad

21. On the animal faculty see above, n19. The notion of irascible and concupiscible parts of the soul derives from Plato. Plato had distinguished a rational soul (located in the brain), an irascible soul (located in the heart), and a concupiscible soul (located in the liver). The irascible was the part of the soul in which courage and passion were held to reside; and which was superior to the concupiscible part, in which the appetites were located.

22. *Especies*: I have translated “species” in the sense common in Renaissance philosophical language, as indicated in OED: “meaning or image of something, as constituting the immediate object of sense perception.” On Sabuco’s view of the role of species in the functioning of the soul see below, n29.

23. *Cremento* (increment) and *decremento* (decrement) are key terms of Sabuco’s philosophy, referring to the rising and falling of the brain and its fluid, in correspondence to the waxing and waning of the moon. *Cremento* implies health and growth, while *decremento* implies disease and decay. The Greek word *catarrous* (Lat. *catarrhus*), employed in medical language, meant literally “a flowing down,” and it is in this sense that Sabuco uses it.

24. *Chilo*: chyle referred to the liquid mass of food and drink, as processed in the stomach. Sabuco uses the term in this specific sense (see for instance *Coloquio del conocimiento*, 144), or usually, more in general, to indicate the nutritive juice that the brain distributes to the whole body.

25. *Pia mater*: an anatomical term referring to the membrane that forms the innermost of the membranes enveloping the brain, the other being the dura mater. The Greek term was *meninges*. The term *pia mater* was the Latin rendering of the Arabic *umm-raqiqah* (“thin or tender mother”—the same word in Arabic signifying both a mother and a covering). The OED quotes Vicary, *Anatomy*, IV (1548–77): “It is called Pia Mater...for because it is so soft and tender over the brayne that it nourisheth the brayne and feedeth it, as does a loving mother with her tender childe.”

humors are created, only good ones, because the natural faculty there cannot err, as has already been said.

Sixth, health is the cessation of this fall, flux, or decrement of the brain's moisture. In health, the brain receives this moisture for its own nourishment and for the performance of its office, which is to feed and nourish all the body, like a root does. This office of nutrition is performed by the membrane called pia mater, which, erect and swollen with this juice, or chyle, pours it out towards the crown of the head, or the cowlick,<sup>26</sup> for the growth of the skin. This moisture is a white juice, also called chyle, which the brain, as the root of the human being, receives in three ways: first by pressing, as in a winepress, or grinding and squeezing the food, which is done in the mouth when one chews; second by evaporation, as in an alembic or distillery, the vapor rising when the aliments are still in the stomach during sleep; third by decoction, when the aliments' juice passes into the liquid humor—the drink in the stomach—in which the food is cooked by the stomach's heat. The brain, or main root, takes this juice or white chyle from the stomach by sucking and drawing it up through the esophagus, in the same way in which a piece of felt soaks up a liquid. The brain then sends and distributes it to all the branches by way of the anterior nerves, as well as the nape of the neck (i.e., the deputy of the brain), which is the trunk, or stalk, stemming from this root, as will be better explained below.

Seventh, nutrition and health are the cause and workshop of the good humors. The cause of the unwholesome humors, which bring about the sickness of this tree, lies in the tree's root, namely in the brain. The causes of unwholesome humors are threefold: the bad quality of food; the humors' own viscous and cold condition; the inversion of the humors' route, when the moisture that used to go up from the stomach to the brain and to the pia mater, falls down instead from the brain to the stomach. The latter happens when the pia mater stops performing its action and proper function of root, which is to take and send up suitable juice or chyle to the branches. The same

26. *La vertice, o remolino. Remolino*: "el retorcimiento del pelo en redondo, que se forma en alguna parte del cuerpo del animal, especialmente en lo mas alto de la cabeza, ò en la frente" (Acad. Autorid. 1737). I translate *remolino* as "cowlick." What Sabuco seems to mean is the point on the top of the head where the hair starts to grow in a circle.

juice that is beneficent when it flows upwards becomes harmful when it falls down: it then obstructs the pathways of nutrition, invading them with an unwholesome juice, similar to the gum in trees. And the ways of nutrition being blocked, the brain cannot taste or take the aliment in its first cavity, which is the mouth, nor send it to its second root, or cavity, which is the stomach, for later use. The brain cannot taste or swallow the aliment, because it does not accept it either for itself or for its second root.<sup>27</sup> Thus the brain stops performing its office of root as well as its vegetative function, which consists in receiving and giving good juice to the branches; instead it gives them bad and harmful juice. The juice's bad quality, not suitable for taking the shape of the parts of the body, is caused primarily by the passions of the soul, together with the movement of the pia mater, and the adversities mentioned in the Colloquy.<sup>28</sup> Indeed the main cause of the bad juice is the spiritual passions, which are peculiar to man, and this is why man has so many diseases that the other animals do not have. All this is done by the pia mater with the juice of nutrition: when the pia mater is raised, it sends the juice upwards for the growth of the skin, and in this case we have health. When instead the pia mater is sunken, more or less, it makes the juice fall down and turn bad—causing to fall what should go up—and in this case we have disease. So when the pia mater is raised and undisturbed it gives health, whereas when it is more or less sunken or shaken it causes diseases—which diseases take their name from the affected body parts.

Eighth, the passions of the soul—such as wrath, anger, fear—shake up and throw away the brain moisture together with the “species,”

27. The second root is the stomach, the brain being the first root.

28. Allusion to the first dialogue in *Nueva Filosofía*, the *Coloquio del conocimiento de sí mismo* (for a summary of which see Introduction, 3–4) 58–90. The adversities (*contrarios*), or things that harm health, mentioned in the *Coloquio* are: first of all, the bad passions of the soul, such as fear, despair, hatred, shame, anger, sloth, jealousy, but also good feelings in immoderate degree, such as excessive love, joy, and pleasure. Also: the plague, the evil eye, poisons, sudden change of place involving change of air and water, weather changes and the phases of the moon, greed and overeating, overwork and fatigue, excessively loud sounds, bad smells, seeing gory or dirty things, bad quality of food or too great a variety of flavors in it, lack of food, intellectual work after meals, any too intense action either of the soul or of the body, a wound or a blow, excessive cold and heat, excessive exposure to heat, etc.

or image, of the loathed object, which settled in the moisture,<sup>29</sup> as in the example we mentioned above, of the animal wounded in the foot by a knife,<sup>30</sup> and others that will be given below. This is done by the soul with the greater or lesser movement of the pia mater.

Ninth, false fever is a movement, flight, or dispersal of the innate heat of the stomach, and of its principal members, the heat dispersing in the whole body while running away from its opposite, the cold humor and spirit<sup>31</sup> fallen from the brain. The cold humor arrives and operates by contact.

29. Sabuco believes that the species, or images of things, imprint themselves on the brain's moisture. See *Coloquio del conocimiento de si mismo*, 124–25: Rodonio asks Antonio what the “species” are. Antonio replies: “Have you seen a mirror, which represents to you all the things that are in front of it? Those figures and incorporeal appearances, which occupy no space, are called species. They enter by the sense of sight in the following way: the incorporeal image (*figura*) of the thing seen reaches the transparent glazed door (*vidriera*) of the eye and passes through it, going through a *cañito* (small channel) (which is a hollow nerve) to the common sense, the first cell of the brain located in the forehead. As soon as the species gets there, it is seen, understood, and evaluated by the intellect, which tells the will what it is, since the will is there in the brain, and not in the heart. The heart, being a fleshy member, is unsuited for the reception of the species.”

30. Allusion to *Coloquio del conocimiento de si mismo*, 49–50: an animal wounded in the paw “kicks around a lot (*dà muchas coces à menudo*) with the hurting paw, trying to shake off the pain, and it would shake off the paw itself if it were made of soft and easily separable matter.” Similarly, the pia mater tries to shake off the repulsive species and in so doing it shakes off the brain's juice, causing the juice's fall.

31. *Espiritu*. The notion of “spirit” (most often, “spirits” in the plural) was very important in Renaissance medicine. Originally based on the Galenic notion of *pneuma*, the doctrine of “vital” and “animal” spirits was central to the explanation of important physiological processes. Briefly and roughly stated, in Galenic physiology the liver, the source of the veins, was thought to transform the aliment into blood and “natural spirits.” The heart, the source of the arteries, turned the natural spirits into “vital spirits,” which the arteries carried to energize and vivify all body parts. In the network of arteries at the base of the brain (the so called *rete mirabile*) the vital spirits were further transformed into the animal spirits, which the nerves carried from the brain to the muscles, to give them the power of motion and sensation. So the animal spirits, also nourished by the air breathed in, were considered responsible for consciousness, sensation, and voluntary movement. See Owsei Temkin, “On Galen's Pneumatology,” in Owsei Temkin, *The Double Face of Janus and Other Essays in the History of Medicine* (Baltimore: Johns Hopkins University Press, 1977), 154–61. In the sixteenth and early seventeenth century the notion of spirits was intensely debated by physicians and philosophers. See James Bono, “Medical Spirits and the Medieval Language of Life,” *Traditio*

Tenth, true fever is a flight of the heart's innate heat,<sup>32</sup> which flees from the cold and humid spirits falling from the brain, just like hot and dry vapor flees from the cloud, and in this same flight it flares up.

The false fever is analogous to throwing water over hot iron or coals inside a glass: it will leave the iron cold and the glass hot. Otherwise said, fever is withdrawal and flight of the heat from its native place, where it performed its task—a flight caused by the heat's contrary, the cold moisture falling from the brain. This happens both in the microcosm and in the macrocosm.<sup>33</sup>

Eleventh, the shivering cold sensation that precedes the rising of temperature<sup>34</sup> in a fever is a cooling of the nerve that envelops all the limbs (i.e., the skin),<sup>35</sup> due to the touch of the cold humor or spirit fallen from the brain. In health this humor springs up, surging through the skull and the seams of the cranial bones (called commissures),<sup>36</sup> starting from the crown of the head and spreading to the skin of the head, and from there to the skin of the whole body.

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40 (1984), 91–130 and the essays in *Spiritus*, ed. Marta Fattori and Massimo Bianchi, (Rome: Edizioni dell'Ateneo, 1984).

32. *Calor nativo*. On the concept of innate heat see Introduction, 46–47.

33. Namely, in man (microcosm) and in the world (macrocosm). On Sabuco's view of correspondences between micro- and macrocosm see Introduction, 49–50.

34. *La calentura*: Sabuco means by *calentura* the warming of the body which is a fundamental sign of fever. I have translated “temperature,” for lack of a better term, and because “temperature” is the term we currently use in daily life to indicate the phenomenon Sabuco is referring to. But the word should not be taken in the sense of “measurable bodily heat,” a meaning that *calentura* certainly did not have in this context. As far as I can see, Sabuco uses *calentura* and *fiebre* as basically synonyms.

35. The idea that the skin is formed by the nerves, which dilate when reaching the outward parts of the body, was advanced by the Italian anatomist Costanzo Varolio (1543–75), author of an important text on the anatomy of the brain and the optical nerves, *De nervis optictis* (1573). Sabuco never mentions him explicitly, but may have read or heard of *De nervis optictis*, as she (or he) seems to have adopted Varolio's view on the skin as an expansion of the nerves. On Varolio see *Dictionary of Scientific Biography*, ed. Charles Coulston Gillespie (New York: Charles Scribner's Sons, 1970–76), s.v.

36. *Commissures*: in Renaissance anatomy, the term referred to the seams of the cranial bones.

This happens by virtue of the three pillars of health,<sup>37</sup> which have the power of propelling and discharging the humor upwards through the skin. Thus the diseases in which one feels a chill, that is, those that go by way of the skin, are not dangerous, unless they take the internal pathway to the principal members of the stomach. This is why, at the beginning of a fever, when one feels shivery, the face changes color, turning white, and the nose turns cold. The internal fall of the juice, due to the collapse of one of the three pillars of health, causes the temperature, for nature (which aims at self-preservation) tries first to send the humor through the less damaging route, which is the external one by way of the skin, thus discharging the unwholesome and unsuitable humor through the pores and seams of the skull. This is the reason why the shivering cold sensation sometimes lasts as long as the temperature. Usually nature first tries to send the damage that way, but when she cannot do that any longer the humor falls internally. Thus the temperature always follows and the shivering comes first, since the coldness of the humor falling through the skin cannot but lead to a shivery, chilly sensation. But when the humor falls internally it is very damaging, since it causes the flight of the innate heat of the heart, liver and stomach: and this flight, more or less intense, is the temperature, which is the scattering of the innate heat all over the flesh. The temperature lasts as long as this fall, flux, or decrement of the humor goes on: so it can be ephemeral when it lasts just one day, or a tertian or quartan fever. The intermissions of the tertian, quartan, or quintan fever happen in this way: nature, which desires self-preservation, accepts, for one day or two, the nourishment that gives her increment, in order not to go into a total decay. But after this happens for one or two days, all the juice that collected in those intervals of health turns bad and unwholesome, and when enough has collected it starts falling again in the said manner, causing first the chill and then the temperature. This happens after one day in the tertian fever and after two days in the quartan.

When there is not such intermission of healthy nutrition and increment, and the cold humor falls uninterruptedly, then the

37. Of the three "pillars" or *empentas* (supports) of health two are spiritual (cheerfulness and good hope) and the third is physical (the good functioning of the stomach): see *Coloquio del conocimiento*, 44–45.

temperature is continuous. To sum up: the shivering cold sensation is humor that springs up through the skull and its seams, spreading to the skin; and *febris*, fever, is a flight of the heart's heat from its opposite, namely, the cold and humid spirits that fall internally from the brain. It is ridiculous how many sundry and contradictory things the medical authors have written on this matter.<sup>38</sup>

Twelfth, accidental death by illness<sup>39</sup> is a flux or decrement of the brain's moisture, which falls continuously while the brain refuses it, and decreases until the heat of the stomach—the second harmony—is entirely dissipated.<sup>40</sup>

Thirteenth, sudden death is a great fall of the brain's juice, due to a great sinking of the pia mater, enough to smother and extinguish the heat of both the stomach and the heart. It happens, as will be said below, to healthy, rich, and happy men at the beginning of their climacteric years.<sup>41</sup>

Fourteenth, natural death is the drying out of the brain, its nerves, membranes,<sup>42</sup> and skin, due to many small or lesser falls of the humor, which individually do not suffice to damage the minor harmony of the stomach. But after many of these, the brain becomes so dry that it can no longer humidify itself, and death comes without a temperature and almost without pain. Indeed, Plato says that in this

38. The explanation of fever was indeed one of the most hotly debated issues in Renaissance medicine, and one that was often used to criticize Galenist orthodoxy. See, for an overview, Iain M. Lonie, "Fever pathology in the sixteenth century: tradition and innovation," in W. F. Bynum and V. Nutton, eds., *Theories of Fever from Antiquity to the Enlightenment* (London: Wellcome Institute for the History of Medicine, 1981), 19–44. In underlining the variety of medical opinions on this topic, Sabuco might be alluding to the discussion on the nature of fever by Luis Mercado (1525?–1611), who in his *De februm essentia, causis, differentiis, dignotione et curatione libri* (Valladolid: B.a sancto Dominico, 1586) had listed an astonishing number of varying medical opinions on this topic. On Mercado, who taught at Valladolid and was physician to Philip II, see Juan Riera, *Vida y obra de Luiz Mercado* (Salamanca: Ediciones Universidad de Salamanca, 1968), 51–59, on his work on fevers.

39. *Muerte violenta de enfermedad*: see n1 above.

40. On the two harmonies, the major one of the brain and the minor one of the stomach, see point 15 below in the text.

41. Literally: major decrement.

42. *Telas*.

case people die with pleasure.<sup>43</sup> To sum up: accidental death by illness and sudden death are due to the extinction of the heat; natural death is due instead to the drying up of the moisture.

Fifteenth, in man there are two harmonies or concords. The major harmony is in the royal palace, where the prince of this house dwells in his royal hall, which is the brain. The other, minor harmony is in his servants' kitchen, the stomach, where his food is prepared and his servants send up to him the best and most subtle part of the chyle or juice that is decocted there by the heat of the three live coals<sup>44</sup> over which the stomach is placed as a pot on a trivet—namely, the heart, the liver, and the spleen. This minor harmony is upset only by bodily things, such as bad and harmful food, or also by the unwholesome humor falling from the major harmony, as has been said. In contrast, the harmony of the prince of this house, since it is the seat of the rational soul, is upset primarily by the spiritual “species” of things repugnant and abhorrent to the soul. When these images enter the seat of the soul, there is discord of soul and body (this is what disease is, according to Plato)<sup>45</sup> in the manner said.<sup>46</sup> But the major harmony can be upset also by the juice of bad and harmful food; and when this happens the harmony of the stomach is also spoiled. In turn, when the minor harmony is upset by causes of its own, it damages also the major harmony, causing more flux and decrement, and thus further damage to the other harmony. To sum up: these two harmonies are in accord with each other, and it is not possible for the one to be damaged without damaging the other also. Indeed, I tell you, it is all one and the same thing, because the stomach and the throat (or esophagus) originate in the skin of the mouth and tongue, which in turn originates in the pia and dura mater, which derive from the brain. Thus the stomach originates from, and depends upon, the pia

43. See Plato, *Timaeus* 81E, tr. R. G. Bury (Cambridge, MA: Harvard University Press, 1981, Loeb 9.219).

44. *Ascuas*: embers or live coals.

45. Marginal note: *In Timeo*.

46. See Plato, *Timaeus*, 87C–D (Loeb, 9.237: “For with respect to health and disease, virtue and vice, there is no symmetry or want of symmetry greater than that which exists between the soul itself and the body itself.”)

and dura mater, not from the nerves of the brain's sixth conjugation, as will be better argued below.

Already in these statements you have seen very clearly a sample of my views—the lion is recognized by its claws—and you can already see the true medicine starting to show at the horizon,<sup>47</sup> to ameliorate this world. What do you think now, Mr. Doctor, of your symmetry and ametry? Ametry is already in the healthy, not in the sick, because nobody measures oneself without reason.<sup>48</sup> The ancients thought it was an egg and it is a chestnut, and they were mistaken in the first principles and foundations of medicine.

*Doctor:* I won't stop following the ancients, who were my masters, and who understood and knew all that it is possible to know. How could a Galen, a Hippocrates, an Averroes, an Avicenna, and such great men, ever be wrong? I would be a fool to believe it; I'd rather believe that you are wrong.

*Antonio:* Yet they all admitted that future generations could know more than they themselves knew. Socrates said: I know only one thing for certain, namely, that I know nothing. Aristotle compared posterity to children on the shoulders of giants, who see what the giant sees and even farther. Themistius<sup>49</sup> said: all we know cannot counterbalance the much we do not know.<sup>50</sup> By borrowing your knowledge from the ancients, Doctor, you choose to deprive the world of what they gave to the world, namely, the possibility of improving knowledge and reaching farther, since time is the inventor of all things. They were mistaken in the principles only; but just as an error that is small at the beginning becomes great by the end, so they went wrong in almost all their medicine. Their medicine in fact is correct

47. *Por el collado*. Literally, through the mountain-pass.

48. The 1587 text had: *porque no ay trigo que medir* (because there is no wheat to measure, or, abandoning the metaphor, there is nothing to measure). This was changed in the 1588 edition to: *porque nadie se mide sin razon*: nobody measures oneself without reason. The meaning seems to be that some degree of ametry (lack of measure or of humoral balance) is already in the healthy, otherwise no one would feel the need to be moderate in eating and drinking in order to stay healthy.

49. Marginal note: *Super 2. de anima*.

50. Themistius was a fourth-century CE commentator on Aristotle's works: the reference here is to his commentary on *De anima* (see Themistius, *On Aristotle on the Soul*, trans. Richard B. Todd [Ithaca: Cornell University Press, 1996]).