Girolamo Fracastoro was the representative thinker of a very remarkable generation.¹ This was the generation of scholars and artists who, born in the years around 1480, were graduating from university or reaching artistic maturity at the turn of the sixteenth century; the generation – Michelangelo, Raphael, Ariosto, Bembo, Castiglione, and the rest – who were responsible for the cultural phenomenon we know as the High Renaissance, the moment when exquisite grace and precision of expression conspired with aesthetic idealism and disinvoltura to mask the significant tensions that racked the economic, political, and social fabric of the Italian states. Fracastoro was himself a truly Renaissance man: poet, physician, philosopher, botanist, author of some splendid carmina, verse epics on the Old Testament figure of Joseph and the new plague of syphilis, dialogues on poetics, intellection and the soul, and works on astronomy, febrile crisis, communicable diseases, the flooding of the Nile and the elemental constitution of wine.² All serious-minded works, all (with one exception) in Latin, and so all for the consumption of the learned – humanists, fellow doctors and philosophers, and ecclesiastics like the reformist bishop of Verona, Gian Matteo Giberti, the highly educated cardinal Alessandro Farnese, dedicatee of De contagione, and Alessandro’s grandfather, the Farnese pope Paul III, to whom Fracastoro dedicated his work on astronomy, Homocentricorum sive de stellis liber. But the tensions show through and give an edge to Fracastoro’s aestheticism: even his account, in the last named work, of the sublimely rational structure of his perfectly homocentric universe reads in part like a grand elegy for the cosmos, victim of its own [116] mechanisms, and for humanity, the puny miracle at its centre. Certain of Fracastoro’s surviving works are work in progress, but, finished or unfinished, they are soundly argued, always to the point, and of interest in the context of a variety of contemporary debates. ‘Tanto esistimai la Poesia per sè,’ he wrote in a letter dated 1 May 1551 to the Venetian physician and poet Girolamo Amalteo, ‘che, se fossi stato uomo che avesse possuto viver secondo il senso suo, io altro non arei voluto sapere, che la Filosofia, e la Poesia: e solo queste due cognizioni con li suoi annessi mi paiono degne dell’uomo.’³ By philosophy Fracastoro means natural philosophy. For
although that ‘ancient theology’, metaphysics, deals with truly noble and eternal things, the knowledge we can have of them is minimal and uncertain; whereas the realm of nature offers scope for a substantial increase in secure knowledge, and what can be known is practically limitless, inasmuch as nature is everywhere, all around us. It is for this reason, argues Fracastoro, that the philosophy that deals with these things is to be considered the greatest and the most worthwhile. Poetry and natural philosophy – the literary and the scientific – are the two aspects of Fracastoro’s work that the present essay seeks to examine in their mutual relationship, in order to show how, in the case of one thinker and practitioner, science and literature in the Italian Renaissance connect with, differ from and complement one another. I shall refer in particular to Fracastoro’s poetic treatment of the disease named in the poem Syphilis, to his discussions of this same disease in his medical treatise De contagione, and to the views concerning the nature of poetry put forward in the dialogue entitled Naugerius. The Syphilis, originally drafted in the second decade of the sixteenth century and dedicated to the great Venetian humanist Pietro Bembo, was first printed by the da Sabbio brothers in Verona, Fracastoro’s home town, in 1530. The De contagione, contagiosis morbis eorumque curatione libri tres was first published by the Giunta press in Venice in 1546. And the Naugerius sive de poetica dialogus, named for Fracastoro’s great friend the Venetian poet and historian Andrea Navagero and probably written between 1540 and 1543, appeared two years after the author’s death in the Opera omnia published, again by Giunta, in 1555.

Fracastoro’s De contagione

In the matter of scientific knowledge, Fracastoro’s most substantial and most significant contribution was undoubtedly his treatise on contagious diseases. Attention has been focused principally on his theory of contagion by means of seminaria, ‘seeds’ or ‘seedbeds’ of disease. These are imperceptible particles that are released as a by-product of organic putrefaction (De contagione I. 1, I. 3); they are spread by physical contact, clothing, bed linen and other absorbent materials, currents of air, and so forth (I. 4, I. 7); and, most significantly, they are capable of replicating themselves: ‘Oportet autem in hisce contagionibus non putrefactionem solum fieri, sed a primis seminariis et alia quoque gigni, et propagari, quae ipsis similia natura sint, et mistione, non aliter quam spiritus in animali e sanguine solent alios sibi consimiles generare’ [‘In these contagions there must not only be putrefaction, but the original seeds of the disease must produce and propagate others similar to themselves in both nature and composition, just as in the blood of living creatures the spirits generate other spirits like themselves’] (I. 6, p. 26; see also I. 7).
The similarities in behaviour between these *seminaria* and the germs which modern bacteriologists study have naturally excited the interest of historians of medicine. It is difficult for us now to consider Fracastoro’s opinions without reading back into his account of the seeds of disease the results of a science of which he knew nothing. However, Fracastoro’s *seminaria* are quite distinct from bacteria, for the reason they belong with a conception of disease that is entirely different from the notion of disease promoted by the laboratory-based medicine that has developed since the nineteenth century. Many of his contemporaries, for whom disease was the result of the corruption of the all-enveloping air (a view that Fracastoro shared), regarded the postulation of these seeds as superfluous; and those who did take up the suggestion found no difficulty in reconciling this un-Galenic notion with the Galenism they otherwise espoused. Nevertheless, even if Fracastoro’s ideas had little immediate impact on medical thinking and practice and do not warrant our considering him a microbiologist before his time, we have to respect the coherence of his views. For his intuition concerning the seeds of disease is no arbitrary notion, a mere echo of the atomism of Lucretius, but is entirely consistent with his general philosophical outlook. In his philosophy of nature, which is an unorthodox blend of Aristotelian, Atomist, Stoic and Platonist elements, Fracastoro seeks consistently to replace explanations that rely on the appeal to occult causes – so common, particularly in the medicine of his day – with explanations of an overtly mechanistic kind. In this respect, too, Fracastoro’s work [118] will probably strike the modern reader as ‘scientific’ in focus and direction, although, clearly, he did not understand and practise science in the sense in which science is understood and practised today.

The curative prescriptions Fracastoro offers in the *De contagione*, on the other hand, will almost certainly strike the modern reader rather differently. The most famous of these was *diascordium*, the renowned *confectio Fracastorii*, a preparation which Fracastoro devised for use both as prophylactic and remedy in the case of pestilential fevers, and which remained in regular pharmacological use for over two and a half centuries after its inventor’s death. Robert James’s *Medicinal Dictionary* of 1745 accurately transcribes the recipe – which, the author comments, ‘Every one knows, how much this is in Use, and for what Purposes’ – as follows:

Take of Cinnamon, and Cassia-wood, of each half an Ounce; of true Scordium, one ounce; of Cretan Dittany, Tormentil, Bistort, Galbanum, and Gum *Arabic*, of each half an Ounce; of Storax, four Drams and a half; of Opium, and Seeds of Sorrel, of each one Dram and a half; of Gentian, half an Ounce; of *Armenian* Bole, one Ounce and a half; of *Lemnian* seal’d Earth, half an Ounce; of long Pepper, and Ginger, of each two Drams; of clarify’d honey, two Pounds and a half, of Sugar of Roses, one Pound; of generous *Canary*, eight Ounces: Make into an Electuary. S.A.
In an age in which proprietary names often conceal the precise chemical make-up of the medicines we use, such a recipe may appear extravagant; but comparison with what else, besides hypericum perforatum, finds its way into the St John’s Wort capsules you can buy from the pharmacy (or even with the list of ingredients on the average bottle of shampoo) should suffice to put the apparently esoteric nature of Fracastoro’s concoction into perspective. The recipe for diascordium appears along with Fracastoro’s other medical prescriptions in Book III of De contagione, which is devoted to the treatment of the various contagious diseases whose nature, symptoms and progress are discussed in Book II. Book I contains the theory of the mechanisms of infection and of the seminaria to which I have already referred. The prescriptions and some of the other medical and philosophical lore may now seem quaint, but the general tenor of the work is reassuring. The writer appears, in De contagione, as someone to be trusted, someone who recognizes the limitations of the current state of knowledge, but who speaks with authority and knows what he is talking about. His Latin, perhaps, could have been improved, given Fracastoro’s reputation as a poet in that language: as Leonardo Olschki pointed out, there are too many Greek terms and traditional medical barbarisms, too many echoes of the medieval cursus and too few resonant Ciceronian periods. However, with the exception of one or two instances in which botanical nomenclature raises a difficulty, there is virtually nothing in what he says that is at all obscure, and – unusual in a sixteenth-century writer – there are no digressions. He writes clearly and to the point. On occasion he has cause to invoke the battery of authorities available in the early sixteenth century to the humanist physician – Hippocrates, Pliny, Archigenes, Galen, Celsus, Paul of Aegina, Aetius, Dioscorides, Avicenna, Leoniceno – but it is clear that he speaks from his own carefully observed experience of disease and clinical practice.

Syphilis is only one of a number of diseases discussed in the work. Pestilential fevers are treated most extensively, but the morbus Gallicus is dealt with in somewhat more detail than diseases such as rabies, elephantiasis, and leprosy. This is understandable, since the disease was new to Europe, had caused a great deal of alarm, and, on its first arrival, appears to have been particularly virulent. In De contagione Book II, chapter 11, Fracastoro discusses the symptoms, progress, and changing nature of the disease. In the following chapter he considers the controversy syphilis provoked within the medical profession when it first appeared, its probable origin, and its materia or ‘matter’; that is to say, the bodily substance with which the infection has an affinity and in which it inheres; and he notes the decline in virulence of the disease with the passage of time. His discussion of the treatment of syphilis in Book III, chapter 10, is characterized by his customary good sense. To begin with, he
emphasizes the importance of fresh air and vigorous exercise, regular evacuation, good sleeping habits, freedom from stress and an appropriate diet. He then describes the medical procedures to be followed and recommends that the physician administer the mildest treatment appropriate to the perceived malignancy of the infection and the patient’s general condition: ‘sed certe satius ego existimo illa prius experiri, quae et minus acerba sunt, et nullius periculi, quod quidam felici satis successu saepe fecere’ [‘but in my view it is certainly preferable to try first the treatments that are less drastic and in no way endanger the patient – an approach that has often been adopted by certain practitioners with happy enough results’] (III. 10, p. 276). He discusses in turn purgatives and sudorifics, and devotes considerable space to the preparation, use and properties of guaiacum, which, after its discovery by Europeans in the New World, became one of the most widely used remedies in the fight against syphilis. He then considers the more drastic treatments, fumigation with cinnabar (crystalline mercuric sulphide) and the application of mercury ointment, which is effective but must be carefully controlled, with due regard for the patient’s particular constitution. Happily, for Fracastoro’s own patients, he condemns as extremely rash the practice, to which certain practitioners resorted, of administering mercury by mouth, ‘quasi eadem vis sit Argenti vivi extra appositi, et devorati’ [‘as if mercury has the same effect, whether applied externally or taken internally’] (III. 10, p. 288).

In each of the three chapters he devotes to syphilis in De contagione, Fracastoro alludes to his previous work on the subject, the poem Syphilis, to which he refers most often as a lusus or ‘entertainment’. In Book II, chapter 12, he intimates that in De contagione he is offering the first comprehensive account of the disease, and indicates the omissions that characterize the work of previous syphilographers. ‘Nos vero,’ he goes on, ‘in iis lusibus, quos ad Petrum Bembum nunc Cardinalem scripsimus, quo forte tempore a pestilentia rus pulsi multum otii nacti essemus, de his omnibus quaedam certe attigimus, verum quantum Poetica concedere potuit: quae quum non admittat omnia, multa quidem praetermitti a nobis necesse fuit’ [‘As for myself, in the verses I wrote for Pietro, now Cardinal, Bembo, at a time when, driven out to my country seat by the plague, I happened to find myself with time on my hands, I did indeed touch on something of all this, but only to the extent that the art of poetry allowed; for, since it does not admit everything, there were many things I was obliged to leave out’] (II. 12, p. 142). The poem – begun when plague broke out in Verona in 1510 and Fracastoro was obliged to retire to his villa at Incaffi overlooking Lake Garda – could not possibly have dealt comprehensively with the subject, whose treatment was necessarily restricted to what the poetic art allows. But what does this mean? What is it that poetry admits or excludes? Before turning for an answer to the
poem itself, it will be instructive briefly to consider Fracastoro’s views on the nature and purposes of poetry, as these find expression in the *Naugerius*.

**Poetic Theory in Fracastoro’s *Naugerius***

The *Naugerius* is, fittingly enough, the most artistically accomplished of Fracastoro’s philosophical dialogues. If I start at the end, with the [121] definition of the poet’s purpose at which the discussion eventually arrives, I can proceed to unpack the ideas that have a bearing on my argument here. ‘Dicemus,’ Fracastoro’s spokesman Navagero concludes, ‘poetae finem esse delectare, et prodesse imitando in unoquoque maxima et pulcherrima per genus dicendi simpliciter pulchrum ex convenientibus’ ['We shall say, then, that the poet’s aim is to provide pleasure and profit by imitating what is best and most beautiful in any given subject in a kind of discourse that, chosen from among those that are appropriate, is beautiful absolutely and without qualification'] (*Opera*, 164'D). This definition succeeds in combining Horace’s goals of instruction and delight, Aristotle’s notions of imitation and universality, the Platonic ideal of aesthetic beauty, and the insistence of the rhetorical tradition on appropriate and effective means of expression. However, part of the interest and merit of Fracastoro’s discussion of poetry is that it responds in unusually direct fashion to the poetry of his time. What it provides is a justification of his own poetic practice and that of those among his contemporaries who, writing in Latin, were concerned above all with beauty of expression and the aesthetic pleasure to be derived from consummate craftsmanship in the handling of their chosen medium, whatever the subject on which they wrote. Behind the eclectic embrace of this definition lies an essentially rhetorical conception of poetry, and Cicero’s *De oratore* rather than Aristotle’s *Poetics* is the most significant source of the views expressed in the dialogue.12

Navagero’s argument opens with a rejection of pleasure, pure and simple, as an aim unworthy of the art of poetry. And as for profit, the poet’s usefulness as a source of instruction is not, of course, his exclusive prerogative. For it is clear that in such fields as history, geography, husbandry, medicine, navigation, and so on, the poet borrows his learning from the prose disciplines that deal with these subjects. The claim that the manner in which the poet delivers instruction – through representation – is what is distinctive about poetry encounters difficulties too. The accepted Aristotelian notion, that representation involves imitation of some significant human action, imposes too severe a limitation on the subject matter of poetry. To discount the poetry of Empedocles and Lucretius, or to maintain that Virgil is a poet in the *Aeneid* but not in the *Georgics* (which, along with Lucretius’s *De rerum natura*, is one
of the chief points of reference for the poet of the *Syphilis), is to adopt an inadequately narrow view of the possibilities of poetry. Navagero demands for the poet the freedom to represent the ‘perfectiones, et excellentias rerum’ [‘what is perfect and excellent in things’] (*Opera, 157°C): human character and action, certainly, but the whole realm of nature too. The poet may turn his attention to any subject whatever, provided only that it is suitable for poetic treatment. It is clear, then, that poetry cannot be defined in terms of any particular subject matter.

For Fracastoro, what distinguishes poetry is the manner in which subject matter is treated and, in particular, the poet’s manner of expression. Whereas writers of other kinds are concerned with particulars, the poet is interested in the universal; and by the universal Fracastoro understands the beauty with which things, in their ideal manifestations, are, or would be, endowed. Other writers are like painters who depict things as they are. The poet is like the painter who desires to represent not this or that particular object just as it is, with all its possible defects, but strives to represent things as they should be (or rather, as what they ideally are), on the basis of a consideration of what he calls the ‘universal and most beautiful idea’ of the object, such as it might exist in the mind of its creator. The poet is the Raphael of language. And the notion that the poet is concerned with the ideal forms of things passes over almost imperceptibly into the notion that the poet has to do with an ideal form of language. Practitioners of other kinds of discourse necessarily subordinate beauty of expression to their practical aims of teaching, persuading, etc. Only the poet is motivated by no other aim than to give an absolutely beautiful form of expression to whatever he chooses to make the subject of his poem. From the Ciceronian master of eloquence the advocate, the historian, the philosopher and others will take those particular forms and felicities of expression that are appropriate to their particular purposes. The philosopher, for example, will be advised to express himself soberly and with care: ‘quod si et philosophus ad eundem oratorem accesserit sua scripturus, et huius quoque res et finem nosse orator ille volet: cui dicet castiori adhuc orationi utendum, propria autem, et non multis transumptis, non multa epithetis referta’ [‘so too, if a philosopher preparing to write on a subject of his own approaches our master orator, the orator will want to know what his subject and purpose are; and he will tell him that he must employ language that is strictly correct, that is appropriately philosophical, and that avoids too many metaphors and adjectives’] (*Opera, 160’A). By contrast, the poet will enrich the literal statement with evocative description and metaphor. Most writers who wish to convey the idea that the shepherd or goatherd will move his flock in the noonday heat to ‘wherever there’s a grove’, need say no more than ‘sicubi nemus est’. In *Georgics* III. 333-4, however, Virgil writes: ‘aut sicubi nigrum / ilicibus crebris sacra
nemus accubat umbra’ [‘or wherever a grove dark with close-planted ilex trees lies with sacred shadow’]. The density of the ilex-grove and of the shade it provides is conveyed in the adjectival phrase nigrum ilicibus crebris; the epithet sacra reminds readers that groves are the haunts of deities; while accubat may be used figuratively of the grove because its shadow ‘lies’ upon the ground. To the poet, and to the poet alone, are conceded all the beauties and refinements of language and style.\footnote{16}

It must be understood, however, that absolute beauty of language includes suitability to the subject matter of which the poet writes. Absolutely beautiful subjects are few in number and it must be conceded that not all subjects lend themselves to the noblest forms of stylistic embellishment. So, although the poet is free to range over vast fields of knowledge in search of subjects, he will consider only those subjects that lend themselves to the kind of treatment that properly belongs to poetry (\textit{Opera}, 160$^\text{B}$-160$^\text{C}$). Since his aim is to reveal the perfection and beauty of his subject and to confer on it the utmost beauty of expression of which it is capable, the poet must be able to discover for himself and communicate to others the aesthetic appeal of the subjects of which he treats. Although Fracastoro speaks only of beauty and not of the sublime, it is clear that for him the wonder and awe a phenomenon arouses may be a source of poetic inspiration as well as a stimulus to philosophical reflection. At the beginning of the \textit{Naugerius} the natural beauty of the location – the villa at Incaffi, in which Fracastoro sets this and the dialogues on intellecction and the soul that follow – inspire precisely these two varieties of response in the poet Navagero and the astronomer Giambattista Della Torre (\textit{Opera}, 153$^\text{D}$-154$^\text{C}$). And towards the end of the dialogue we are told that the natural poet is one (even though he never set pen to paper) who is capable of comprehending and being moved by the sheer beauty of things: ‘dico autem poeta nunc non solum, qui scribit, et numeros condit, sed et illum, qui natura poeta est, tametsi nihil scribat. est autem ille natura poeta, qui aptus est veris rerum pulchritudinibus capi moverique, et (siquidem loqui accidit) per illas loqui, et scribere potest’ [‘I call poet not only someone who writes and composes verses but also one who is a poet by nature, even [124] though he writes nothing; for he is a poet by nature who is seized and moved by the true beauty of things and, if he happens to speak, speaks and writes through them’] (\textit{Opera}, 163$^\text{C}$).

Finally, given the metaphysical connection, as supreme characteristics of being, between beauty and truth, Fracastoro excludes from genuine poetry any trace of falsehood. The poet must know what he is talking about. If he proposes to deal with a historical topic or a subject in astronomy, he must be learned in these matters. He will know his subject in so far as he is himself an historian or an astronomer; and in so far as he is a poet he will be able to express himself supremely well in speaking of
it: ‘scit igitur inquantum philosophus: bene scribit, inquantum poeta’ ['he is knowledgeable in so far as he is a philosopher and writes well in so far as he is a poet'] (Opera, 164°C). The fictions for which poets have been criticized, and on account of which Plato would ban poets from his ideal republic, must be understood as part of the poet’s repertoire of indispensable techniques for the communication of ideas. These fictions are ways of expressing the truth beneath a pleasing veil of metaphor, myth or allegory. Fracastoro points out that even the universal idea that the poet seeks in the particular objects of his experience may be considered a fiction. It is, after all, not to be found in reality; for it is formed by abstraction from the particularities of things as they really are. Nonetheless, it reveals the essential nature of a thing, the source of its perfection and its beauty. It thus represents a higher truth, and it is part of the poet’s task to identify this truth.

Poetry and Science in the Syphilis

We might be forgiven for thinking that, for a poet with such a view of his art, syphilis would have appeared to furnish singularly unappealing and intractable material for a poem. But, as we have seen, much depends on the depth of the poet’s insight and on the treatment to which he subjects his material. The opening lines of the Syphilis reveal that its author was inspired ‘dulci novitatis amore’, ‘by the sweet love of novitas’ (I. 12) – novitas being a Lucretian word for a strange or marvellous event. The sudden, devastating impact of the morbus Gallicus was, for many people, a mirum, something to be wondered at, something that demanded a response and an explanation. So readers of Fracastoro’s poem could be sure that his topic, however lowly, was a phenomenon of the very broadest significance, and that poetic treatment of it could satisfy the requirement that poetry provide both instruction and delight:

Et parvis quoque rebus inest sua saepe voluptas.
Scilicet hac tenui rerum sub imagine multum
Naturae, fatique subest, et grandis origo. (I. 22-4)

[Small things, also, often have within them their own particular delights. Be certain that beneath the slender appearance of this topic there lies concealed a vast work of Nature and of fate and a grand origin.]

The poem consists of three books of approximately 450 lines each, 1346 lines in all. Book I deals with the nature, origin, and symptoms of the morbus Gallicus and laments its destructive power: even amid the disasters visited upon Italy in the early
decades of the sixteenth century as a result of war and famine, the disease is a calamity of great significance. Book II considers the progress of the disease and appropriate forms of treatment, culminating in the mercury cure, for which the poet provides a myth of origin, based on the Adonis myth, involving a keeper of gardens sacred to the rural gods, a youth called Ilceus. Book III is devoted to the discovery of the other important remedy for syphilis, the Holy Tree guaiacum, and to a further myth, that of the origin of syphilis itself, named after the shepherd Syphilus, the first to fall victim to the disease and the first to benefit from the curative properties of guaiacum. All the material of Book III is set in what amounts to an epyllion or epic sketch of Columbus’s first voyage to the Indies, of which Fracastoro’s remained the most notable evocation in verse until the publication in Rome in 1581 of Lorenzo Gambara’s four books De navigatione Christophori Columbi.

In the treatise on contagious diseases Fracastoro tells us he was obliged to omit many things when discussing syphilis in his earlier poem. However, as even this brief account of the contents of the Syphilis may suggest, the poem is of greater interest for what it includes than for what it omits, when compared with the prose account of the disease. In keeping with Fracastoro’s concern for truth, the medical content of the poem is scrupulously accurate, though conveyed with greater concision, colour and intensity of expression than in De contagione. Compare, for instance, the following passages:

Nam, simulac purae fugiens lux alma diei
Cesserat, et noctis tristes induxerat umbras,
Innatusque calor noctu petere intima suetus
[126] Liquerat extremum corpus, nec membra fovebat
Obsita mole pigra humorum, tum vellier artus,
Brachiaque, scapulaeque, gravi, suraeque dolore.
(Syphilis I. 333-8)

[For as soon as the clean, kindly light of day had retreated and brought on melancholy shades of night, and the innate heat, which at night usually makes for the deep internal parts, had abandoned the surface of the body and no longer nursed the limbs now covered in a thick mass of humours, then the joints, arms, shoulder-blades and calves were tormented by intolerable pains.]

Praeter praedicta omnia quasi parva illa forent, ingentes lacertorum dolores accedebant,
saepe cum ipsis pustulis, interdum ante, nonnunquam post, et ipsi quidem diuturni, quibus nihil crudelius aderat, affligerant praecipue noctu, dolor autem non proprie in juncturis inerat, sed circa lacertos ipsos et nervos. (De contagione II. 11, p. 138.)
[In addition to the symptoms just mentioned, as if they were not bad enough, violent pains racked the muscles, often coinciding with the appearance of the pustules, sometimes preceding them, occasionally following them. These pains, the most cruel of all the symptoms, were persistent, tormented the patient chiefly at night, and affected, not the joints precisely, but the muscles themselves and the sinews.]

Symptoms, as may be seen here, are dealt with in less detail in the Syphilis, and the same is true of treatment; and discussion of what might be called the ‘scientific background’ is confined to De contagione and finds no place in the poem. So the medical controversy occasioned by the appearance of the morbus Gallicus, the changing character of the disease and the humoral pathology of the infection are covered in the prose treatise alone.

An important fact about syphilis is that it is a sexually transmitted disease. This is clearly acknowledged in De contagione II. 11, but is not mentioned at all in the poem. However, it was recognized that in certain cases syphilis was transmitted in ways other than by sexual contact, and the lack of any reference to the venereal character of the disease in the Syphilis may have less to do with decorum than with a desire to restrict discussion of the aetiology of the morbus Gallicus to its most general aspects. Considerations of decorum do not in any event deter the poet from providing graphic descriptions of the chancres and lesions that accompany the disease, in a manner that conveys an appropriately epic sense of horror:

[127] Protinus informes totum per corpus achores
Rumpebant, faciemque horrendam, et pectora foede
Turpabant: species morbi nova: pustula summae
Glandis ad effigiem, et pituita marcida pingui:
Tempore quae multo non post adaperta dehiscens,
Mucosa multum sanie, taboque fluebat. (I. 349-54)

[Immediately unsightly sores broke out all over the body and made the face horrifyingly ugly, and disfigured the breast by their foul presence: the disease took on a new aspect: pustules with the shape of an acorn-cup and rotten with thick slime, which soon afterwards gaped wide open and flowed with a discharge like mucous and putrid blood.]

Whether expressed in verse or in prose, Fracastoro’s sympathy for the victims of syphilis is no different from the sympathy he expresses for sufferers from other contagions, and nowhere does he raise the issue of sexual morality in connection with the origin or transmission of the disease.

In his own Libellus on the subject of syphilis, Nicolò Leoniceno, lecturer in the faculties of arts and medicine at Ferrara and Bologna and, for Fracastoro, ‘vir
doctissimus et gravis’ ['a most learned and serious man'] (De contagione II. 12), neatly summarized the prevalent varieties of opinion concerning the origin of epidemics such as the morbus Gallicus: ‘hae vero [epidemiae] aut divina ira, ut theologi sentiunt, aut vi astrorum, ut astrologi opinantur, vel ex certa aeris intemperie quemadmodum medici arbitrantur eveniunt’ ['these epidemics arise either by the wrath of God, as theologians believe, or by the power of the stars, as astrologers believe, or due to a certain malignancy of the air, as physicians maintain’]. 23 The theological, astrological and medical perspectives on the origin of the disease were not mutually exclusive in contemporary constructions of the morbus Gallicus, and Fracastoro’s grand cosmological account of the causes of the affliction in Syphilis I. 80-318 has elements of all three. However, it is essentially as a medical man that he writes, and his view of the matter concurs with the conclusions expressed by Leoniceno in the Libellus. For Fracastoro inclined to the view that syphilis was not an absolutely new disease, nor one that had been imported from the New World. He considered it rather to be one of those diseases that may remain dormant for so long in a given region of the world that it fades from human memory, only to re-emerge in an epidemic prompted by some notable physical disturbance in the earth or its atmosphere (Syphilis I. 24-108; De contagione II. 12). The most likely [128] cause of the atmospheric changes Fracastoro thought responsible for the outbreak in Europe at the end of the fifteenth century was a great planetary conjunction such as the one involving Jupiter, Saturn, and Mars that took place on 25 November 1484. 24 In the poem, of course, he takes the opportunity to personify the planets as the eponymous gods, but their action in triggering the syphilis epidemic is described as a matter of fate against which prayer is ineffective, and not a punishment inflicted on humankind for dissolute or irreligious behaviour (I. 219-46, 379-81). In the myths of origin in Books II and III, Ilceus and Syphilus are indeed punished for impiety, Ilceus for having killed a stag sacred to Diana (II. 312-23), and the disgruntled Syphilus, more seriously, for having replaced worship of the Sun-god with rites in honour of his king (III. 288-320). However, it is noteworthy that in both cases, while disease results when certain gods are angered, certain other divinities then intervene to supply a remedy.

The dedicatee of the Syphilis, Pietro Bembo, criticized the inclusion in the poem of two myths or favole. He considered one sufficient, just as the one myth of Aristaeus had sufficed Virgil at the conclusion of his four books of Georgics. Bembo thought that in Fracastoro’s poem the concluding story of Syphilus ‘in ogni parte di se quadra a tutta l’opera e stauui benissimo’ and that consequently the tale of Ilceus should be removed in its entirety from Book II. 25 Fracastoro resisted his friend’s advice: the two favole evidently had a certain importance for him, and they are certainly one of the features of the poem that most clearly distinguish it from the prose treatise De
contagione. If we bear in mind what the poet has to say in the *Naugierius*, we shall want to know what truth lies concealed beneath the veil of these myths. To begin with, I do not believe Fracastoro’s inventions are amenable to any detailed allegorical interpretation. No one, to my knowledge, has proposed such an interpretation in the case of the tale of Ilceus; and, in that of the more substantial Syphilus myth, identifications of Syphilus with Martin Luther and his king Alcithous with the emperor Charles V, or even the English king Henry VIII, are not to my mind convincing.

Neither story is intended to be allegorical in this way. That of Ilceus has more of the character of an ecphrasis or hypotyposis; that is to say, it provides a way of introducing a vivid description of certain natural wonders, streams, rocks, caverns, mines and the mineral wealth of the earth, enlivened by the quest of Ilceus and the assistance afforded him by the nymphs of the subterranean world in obtaining the mercury that will cure him. The story of Ilceus thus relates to and offers a variation on the substance of Book II, with its lists of the herbs, spices, earths, and resins used in the pharmacological treatment of the *morbus Gallicus*.

In the context Fracastoro provides for it, the story of Syphilus is a myth in the strict sense, in that it accounts for the existence and nature of a religious rite. This story includes an account of the origin of the disease to which Syphilus lent his name and of the source of the wood that, in his case, constituted the cure for his affliction. It is told by Guacanagarí, the cacique or tribal leader of the Taino people whom Columbus encountered on his first voyage to Hispaniola, the large Caribbean island shared by the modern Haiti and Dominican Republic. The new arrivals from the Old World have just witnessed rites in honour of Sun the Avenger; Guacanagarí explains to Columbus and his companions the origin of these rites, and the explanation takes the form of the myth of Syphilus. Although his own invention, the myth thus constitutes part of the poet’s evocation of the New World that Columbus discovered. In the structure of the poem, this evocation has two purposes. It situates syphilis as a *mirum*, as a source of wonder, against a background of truly astonishing events, the cause of far greater wonderment; and it situates the discovery of guaiacum, of one remedy for the disease, as part of a pattern of human endeavour and discovery of much wider and more momentous significance. There can be no doubt that Fracastoro was fascinated by the reports of the voyages of exploration that began with Columbus’s transatlantic crossing when he was about sixteen years old and continued with increasing momentum throughout his life. He eagerly collected any new piece of information that came his way, or that he could extract from knowledgeable correspondents like Giovambattista Rannusio and Gonzalo Fernández de Oviedo y Valdés. In a letter to Rannusio dated 22 January 1533, Fracastoro requests his help in obtaining a metal globe on which to record the
geographical location of discoveries as they come to his notice. Fracastoro’s consciousness of living in an age of discovery is reflected in his poem (II. 16-37, etc.), as is the curiosity and sense of wonder aroused in him by all aspects of the natural world.

More could be said about the Syphilis. For instance, there is in the poem a note of regret for the destructiveness of Europeans, not only on their own territories and towards one another (I. 421-69), but in the newly discovered lands too, where they subject a pristine nature [130] to assault and subdue by violence ‘longa populos in libertate quietos’ ['a people which has enjoyed long liberty and peace'] (III. 180). However, more arresting even than this hint of the tragedy of life in the poem are the dithyramb of nature and the epic of discovery. And it is here, in the astonishing processes and effects of natural causation and in humankind’s attempts to map and to understand nature in her extent and depths, that Fracastoro would, I think, locate the ‘universal and most beautiful idea’ of syphilis. Such an expression sounds utterly incongruous; but it may serve as a reminder that Fracastoro had a conception of disease quite different from ours and a conception of poetry that was much less subjective. These conceptions, despite the tensions that divided poetry and science as the sixteenth century proceeded, allowed for a closer connexion in his mind and cultural practice between ‘science’ and ‘poetry’ than we currently entertain – although the ideal to which Fracastoro aspires is one we may nevertheless recognize. In revealing the connection between a horrifying and disfiguring disease and the wider world of natural beauty and human discovery by which all are touched and to which all may be expected to respond, the poet reveals his community of interest with the physician and natural philosopher, the scientist. What poet and scientist are seen to share are an attitude of openness to the world, a careful avoidance of prejudice and complacency, and a willingness to acknowledge the complexity of experience and the uncertainty of our human grasp of its detailed significance.

Notes to chapter 5

1 For Fracastoro’s place as the earliest of the ‘philosophers of nature’ of the Italian Renaissance, see John Herman Randall, The Career of Philosophy, 2 vols (New York: Columbia University Press, 1962), i. 197-220; and, among more recent treatments of the Renaissance philosophy of nature, see the relevant sections of Charles B. Schmitt, Quentin Skinner, Eckhard Kessler, and Jill Kraye (eds.), The Cambridge History of Renaissance Philosophy (Cambridge: Cambridge University Press, 1988) and Brian Copenhaver and Charles Schmitt, Renaissance Philosophy (Oxford: Oxford University Press, 1992). Accounts of Fracastoro’s thought are to be found in the earlier histories by Ernst Cassirer, Das Erkenntnisproblem in der Philosophie und Wissenschaft der neueren Zeit, 2 vols, 2nd edn. (Berlin: Bruno Cassirer, 1911), i. 225-32; and Giuseppe Saitta, Il pensiero italiano nell’Umanesimo e nel Rinascimento, 3 vols (Bologna: Zuffi, 1949-1951), ii. 168-202. There are monographs by Giuseppe Rossi, Girolamo Fracastoro in relazione all’aristotelismo e alle scienze nel Rinascimento (Pisa: Spoerri, 1893); Emilio Barbarani, Girolamo Fracastoro e le sue opere (Verona: Zannoni, 1897); Emilio Di Leo, Scienza e umanesimo in Girolamo Fracastoro (Salerno: Spadafora, 1937); Francesco Pellegrini, [131]
the late eighteenth century. Italian physicians contemporary with Fracastoro knew the disease interchangeably, although the latter did not gain general acceptance as a medical term until

2 Hieronymi Fracastorii Veronensis opera omnia (Venice: Giunta, 1555), contains all these works, except for the one work in Italian, Del crescimento del Nilo, which is to be found in Hieronymi Fracastorii Veronensis, Adami Fumani Canonici Veronensis, et Nicolai Archii comitis carminum Edito II, 2 tomes in one volume (Padua: Comino, 1739), i. 121-47 (2nd pagination). These two collections will be referred to in what follows as Opera and ‘Comino’, respectively. For a discussion of the questionable attribution to Fracastoro of a Latin poem on hunting dogs, see Klaus-Dietrich Fischer, ‘Alcon sive de cura canum venaticorum: kritische Textausgabe und Bemerkungen zur Urheberschaft’, Humanistica Lovaniensia 32 (1983), 266-88.

3 Comino, i. 105 (2nd pagination).

4 ‘Antiqua illa theologia, quae tum divina, tum prima philosophia vocatur, nobilia quidem ac sempiterna speculatur. verum ex iis pausa sunt, quae cognosci a nobis valeant, tum et de illis tam incerta quoque cognitio est, ut pene fateri possimus aut nullam, aut certe quam minimam ad nos de ipsis rebus cognitionem pervenisse. at vero quae natura constant, et nobilia quidem sunt, utpote substantiae et corpora, coelumque atque animalia, tum et certitudinem non parvam habent, et infinita fere sunt, quae sceri possint: siquidem ubique natura est, quo quo vertamur, quicquid videamus audiamusque: propter quae philosophia, quae de hisce est, inter alias maxima et dignissima censeri debet’ [‘That ancient theology known indifferently as divine or first philosophy examines truly noble and imperishable things. However, so few of them can be known to us, and then our knowledge of them is so uncertain, that we may as well confess that no knowledge, or next to none, has come our way in such matters. On the other hand, we can achieve no small certainty with regard to those things which belong to the realm of nature, and nevertheless have some nobility, such as substances and bodies, the heavens and living things; and what can be known is practically limitless, inasmuch as nature is everywhere, wherever we turn, whatever we see or hear. On this account, the philosophy that deals with these things is to be considered, among all others, the greatest and the most worthwhile’]: Opera, 165'B (the references are to folio and, where appropriate, recto or verso and page divisions).

5 There is a very useful modern edition, with translation and notes, to which the page references given in the text of this essay refer: Hieronymi Fracastorii de contagione et contagiosis morbis et eorumque curatione, libri III, ed. Wilmer Cave Wright (New York and London: G. P. Putnam's Sons, The Knickerbocker Press, 1930).


7 As expressed, in the present connection, most especially in the treatise De sympathia et antipathia rerum (Opera 79-104) that prefaces De contagione and clarifies the basic concepts (sympathy, antipathy, analogy, etc.) employed by Fracastoro in the medical work. Fracastoro will have read Lucretius’ De rerum [132] natura in the edition prepared by his friend Andrea Navagero for the Juntine press in 1515, and in De sympathia et antipathia rerum he acknowledges a debt to the Atomist tradition as criticised and modified by Galen and Alexander of Aphrodisias (Opera, 82).

8 Fracastoro’s seeds of disease – minute material entities that infect by means of direct physical contact – are postulated precisely because it is his view, as the chapter heading of De contagione I. 6 makes clear, ‘Quod causa contagionum quae ad distans fiunt reducenda non sit ad proprietates occultas’ [‘That the cause of contagions that take place at a distance is not to be reduced to occult properties’. In the course of occult causes Fracastoro thus parts company with such redoubtable medical authorities as his great French contemporary, Jean Fernel, who, in De abditis rerum causis libri duo (Venice, 1550), insists on the reality and significance of such causes.

9 Robert James, Medicinal Dictionary, 3 vols (London: T. Osborne, 1743-5), ii, under ‘Diascordium’: see Fracastoro, De contagione III. 7, ed. Wright, 248, where James’s ‘generous Canary’ appears as the less specific vinum aromaticum.


11 For the history of syphilis in the Renaissance see Jon Arrizabalaga, John Henderson, and Roger French, The Great Pox: The French Disease in Renaissance Europe (New Haven: Yale University Press, 1997). Like Fracastoro, I use the terms ‘morbus Gallicus’ and ‘syphilis’ interchangeably, although the latter did not gain general acceptance as a medical term until the late eighteenth century. Italian physicians contemporary with Fracastoro knew the disease
(or group of diseases) as morbus Gallicus; later in the sixteenth century the racially neutral lues venerea became the accepted designation. Venereal syphilis can now be identified by the presence of a specific bacterial agent, treponema pallidum. Prior to the development of bacteriology, however, syphilis or morbus Gallicus was a collection of symptoms that in any given case may or may not have been caused by treponema pallidum – we have little way of knowing. It is for this reason that care must be exercised in identifying what Fracastoro and his contemporaries understood by ‘morbus Gallicus’ and what we now understand by ‘syphilis’. See Arrizabalaga et al., The Great Pox, 18.


14 Aristotle, Poetica I. 8, 1447a17-20, declares that Homer and Empedocles have nothing in common but the use of metre and that the latter should be called a natural philosopher rather than a poet. This view, commonly extended to philosophical poets like Lucretius, is applied to Virgil by Sperone Speroni in his ‘Dialogo secondo sopra Virgilio’, Dialoghi del Sig. Speron Speroni nobile Padovano, di nuovo ricorretti; a’ quali sono aggiunti molti altri non più stampati (Venice: Roberto Meietti, 1596), 343-60. Speroni’s spokesman, Pietro Trapolino, argues that the Georgics is not a poem because, like the works of Empedocles and Lucretius, it does not imitate but teaches; even the Aeneid, although it has certain poetic qualities, is essentially history; it does not imitate and lacks a poetic plot. Among Virgil’s works, he concludes, only the Bucolics imitates, and is therefore more properly a poem than either the Georgics or the Aeneid (see in particular 352-4). [133] Logically enough, among the poems to which such Aristotelian strictures apply Lodovico Castelvetro, Poetica d’Aristotele vulgarizzata et sposta (Vienna: Gaspar Stainhofer, 1570), fols. 15v-16r, numbers Fracastoro’s Syphilis and biblical epic Joseph.

15 ‘Ali si quidem singulare ipsum considerant, poeta vero universale, quasi ali similes sint illi pictori, qui et vultus et reliqua membra imitatur, qualia prorsus in re sunt, poeta vero illi assimiletur qui non hunc, non illum vult imitari, non uti forte sunt, et defectus multos sustinet, sed universalem, et pulcherrimam ideam artificis sui contemplatus res facit, quales esse decret’ [‘While others consider the particular, the poet considers the universal. The others, we might say, are like painters who represent features and other parts of the body exactly as they are in reality, whereas the poet resembles the painter who does not wish to represent this and that individual man as they are, with their manifold defects, but, having contemplated the universal and supremely beautiful idea of their creator, makes things as they ought to be’] (Opera, 158°B). Fracastoro’s universal is that of Aristotle: ‘ii enim [qui apposite loqui student] singulare imitatur, hoc est rem nudam uti est, poeta vero non hoc sed semplicem ideam pulchritudinibus suis vestitam, quod universale Aristoteles vocat’ [‘others who endeavour to express themselves appositely represent the particular, that is, the unadorned object exactly as it is; the poet, on the other hand, imitates not the particular but the simple idea clothed with its own beauties, which Aristotle calls the universal’] (Opera, 158°C). For Aristotle, Analytica posteriora I. 6, 74°5-12, the universal comprehends the essential, abiding, and necessary features of a thing (or, Poetica IX. 1-6, 1451°37-219, an action or event considered in its permanent possibility). Now, the essential features of a thing are contained in its blueprint, its idea, or form; and this, although immanent for Aristotle, inevitably calls to mind the transcendent realm of Plato’s idea Forms.

16 Raphaël, without speculating on its origin or its precise relationship to experience, acknowledges possession of such an ‘idea’ in his famous letter to Castiglione of 1514: ‘le dico, che per dipingere una bella, mi bisognerà uedere più belle, con questa conditione, che V. S. si trouasse meco a far scelta del meglio. Ma che per dipingere una bella, mi bisogneria ueder più belle, con questa conditione, che V. S. si trouasse meco a far scelta del meglio. Ma che per dipingere una bella, mi bisogneria ueder più belle, con questa conditione, che V. S. si trouasse meco a far scelta del meglio. Ma che per dipingere una bella, mi bisogneria ueder più belle, con questa conditione, che V. S. si trouasse meco a far scelta del meglio.

17 Raphael, without speculating on its origin or its precise relationship to experience, acknowledges possession of such an ‘idea’ in his famous letter to Castiglione of 1514: ‘le dico, che per dipingere una bella, mi bisognerà ueder più belle, con questa conditione, che V. S. si trouasse meco a far scelta del meglio. Ma essendo carità e di buoni giudici, e di belle donne, io mi seruo di certa Idea, che mi uiene nella mente. Se questa ha in sé alcuna eccellenza d’arte, io non so; ben m’affatico di hauerla’. Vincenzo Golzio, Raffaello nei documenti, nelle testimonianze de i contemporanei, e nella letteratura del suo secolo (Vatican City: Pontificia Insigne Accademia Artistica dei Virtuosi al Pantheon, 1936), 31. See Erwin Panofsky, Idea: A Concept in Art Theory (New York: Harper and Row Icon Editions, 1968), ch. 4, especially 59-60, 63-8.

18 Quipple omnes quibus bene dicendi facultas tributa est, bene quidem atque apposite dicunt, quantum cuique convenit: sed inter illos hoc interest, quod praeter poetae nullus simpliciter bene atque apposite dicit, sed in genere suo tantum, et quantum attinet ad constitutum sibi finem, hic quidem docendi, ille persuadendi, et siquis alius eiusmodi finis est, poeta vero per se nullo alio movetur fine nisi simpliciter bene dicendi circa unummodoque propositionem sibi. vult quidem et ipsè et docere et persuadere et de aliiis loqui, sed non quantum expedat, et satis est ad explicantam rem: tanquam astrictus eo fine. verum ideam sibi aliam faciens liberam et in universum pulchram, dicendi omnes omnus, omnes pulchritudines quaeret, quae illi rei attribui possunt’ [‘Certainly all who [134] are endowed
with eloquence express themselves well and appositely to the degree that suits their purpose; but they are differentiated from the poet by the fact that none of them expresses himself well and appositely in the absolute sense, but only relatively, as the kind of discourse and the goal he sets himself demand, whether that be teaching, persuading, or some other purpose of this kind. The poet, however, as poet, is motivated by no other aim than to express himself absolutely well on any subject that offers itself to him. He too desires to teach and persuade and speak of various things, but not simply to the extent that is necessary and sufficient to explain some matter, as if he were restricted to that purpose. He fashions for himself a different idea, one that is independent and absolutely beautiful, and seeks out all the felicities and all the beauty of expression with which it may be clothed’ (Opera, 158B-158C). There follows the example from Virgil, which I reproduce in Fracastoro’s version (with accubat for accubet).

17 ‘Hac de causa solis poetis effingere concessum est. si enim rebus pulchra defuerunt, et magna, aut eaedem res maiores, et venustiores sint evasurae adiectis quibusdam, addicienda certe ea sunt, ut tandem pro poetae fine dicatur’ [‘For this reason poets alone are allowed to invent. For if subjects lack beauty and grandeur, or if they will turn out greater and more charming with the addition of certain things, then those things should certainly be added, since after all that is the purpose of the poet’] (Opera, 161A; see also 162D-163B).

18 In Fracastoro’s view, as expressed in the Turrivus, sive de intellectione dialogus, universals are arrived at empirically, on the basis of a number of different percepts that allow comparisons to be instituted and individual elements to be isolated conceptually. Thus separated out, the ‘whiteness of snow, milk, summer clouds, etc., comes to represent to the mind a feature that can be considered independently of the many individual things in which it is discovered to inhere (Opera, 176D-177B).

19 See Lucretius, De rerum natura libri sex, ed. Cyril Bailey, 2nd edn. (Oxford: Clarendon Press, 1922), I. 139; II. 1040; V. 173; also V. 97 (‘res nova miraque’), 1404 (omnia nova et mira’); VI. 646 (‘res novae’). Fracastoro’s poem is quoted according to the modern edition by Geoffrey Eatough, Fracastoro’s Syphilis: Introduction, Text, Translation, and Notes (Liverpool: Francis Cairns, 1984); English translations in the text are by Eatough, to whose informative introduction and notes I am also indebted.

20 The Word Index in Eatough’s edition of the Syphilis lists 27 occurrences of forms of admiror, miror and mirus in the poem.


22 In both De contagione II. 12 and Syphilis I. 413-15 Fracastoro suggests that this event was a conjunction involving all three planets, whereas only Saturn and Jupiter were involved. From the point of view of a terrestrial observer, Mars was at an angular distance of about 110º from the conjunction of the two giant planets: see Arrizabalaga et al., The Great Pox, 111 and corresponding footnote. It is true that, astrologically speaking, Mars could be regarded as appearing at the time a powerful and unfavourable aspect in Aries, but Fracastoro sets no store by purely astrological considerations: for him (as is made abundantly clear in his 1538 treatise on critical days, De causis criticorum dierum: Opera 66-76) the influence exerted by the heavens on the sublunary realm is a matter, not of occult astrological processes, but of the physics of light and heat and their meteorological effects. I can only surmise that he was misinformed about the nature of the planetary conjunction in question.


24 Eatough, in the Introduction to his edition of the Syphilis, says that it is ‘tempting to identify Alcithous, the king who breaks with traditional religion and allows his own religion to be
established, the king who catches syphilis, with Henry VIII of England’ (25), but concludes that the identification is unlikely on chronological grounds. In the case of Charles V, however, who was also a victim of the disease, Eatough can point to Fracastoro’s personal dislike of the Emperor; and he thinks it ‘not improbable that Syphilus, the pastor, is Luther’ (26).

27 For an account of the voyage, see Felipe Fernández-Armesto, *Columbus* (London: Duckworth, 1996), 67-94.

28 Comino, i. 65 (2nd pagination).

29 The effect in this regard of Aristotelian poetics has been hinted at above, in n. 13; for a developed view of the matter, see the subtle reading of Fracastoro’s *Naugerius* in Giancarlo Mazzacurati, ‘Per una “poetica” ambigua: rilettura descrittiva del *Naugerius* di G. Fracastoro’, *Conflitti di culture nel Cinquecento* (Naples: Liguori, 1977), 43-81.

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