XI Oration

Given on 8th May 1709

The icy winter constitution of 1709

Although it is said that there is a sort of pleasure to be found in remembering the difficulties one has overcome with strength and fatigue, I nevertheless believe that there are very few who do not shiver at the memory of a moment when they found themselves in serious difficulty. Regardless of how they managed to survive, whether thanks to good fortune or simply by gathering their strength and courage, that precise moment still manages to cloud the eyes, which are said to be the very first to lose their clear-sightedness, thus forcing the soul to feel a certain sense of horror. This is what I myself feel at this very moment, and I am not ashamed to admit it; indeed, standing in this hall, the biggest of them all, and at this desk, where I first experienced my own sense of inadequacy nine years ago, as is the case for all those who present themselves in this arena, speaking at this University, I remember the terror I felt, intimidated by the dignity of the place and people, and just how much I feared I would lose my voice and faint before even beginning my discourse. And now, the very moment I reconsider the task required of me, in this very same place and from this high-backed chair from which so many illustrious professors have pronounced their oracles, as if sitting on a tripod, the task that requires me to pass down Practical Medicine to young students, I cannot help but shiver once again, a feeling I do not believe will be alleviated by years of familiarity and habit, but on the contrary, one that I fear will grow day by day. This is what will happen – we never think about how much our shoulders are able to bear and what is too much for them, neither do we think about just how bur-
densome a task is before accepting it. I myself had already foreseen all of this and believed it was opportune to avoid such a serious situation by renouncing any kind of promotion. Indeed, I believed it was noble modesty rather than unbecoming to withdraw my candidacy following the request to my present academic qualifications and to allow someone worthier and superior to myself to accept the post. And indeed, provisions were made with great integrity and knowledge that were advantageous to the dignity of this teaching post that had been in mourning for some time following the death of one of its professors. But what malevolent destiny then took the illustrious Count Alessandro Borromeo from the living, who had been nominated consultant of Practical Medicine by the wise Moderators of this University! If truth be told, the greatest Moderator and Arbiter of all was pleased to summon such an illustrious figure by birth, religiosity and doctrine to the celestial teaching chair, where he is now looking down on human vicissitudes and laughing at our cures, while we lament that such a brilliant light has been taken from our city, our Fraternity and our Lyceum.

Now, since the wise Moderators, the illustrious Veneto Senate and the highly serene Prince, who has left us and whom we mourn and honour as a blessed soul who has gone up to heaven, have chosen me to replace that figure, and have decided to adorn my old age with an honorary title, a sort of sepulchral inscription, I shall shake myself and if there are still any weak flames in my exhausted body, I shall fan them to produce some sort of blaze, as happens with flames that are about to die out, and I shall summon them to help give me strength. On the other hand, while I am aware that my efforts are inadequate to such a task, and are not up to what is required by the outstanding dignity of both the place and position, I decided it would be unacceptable to refuse the post. I shall try with all my heart to meet your expectations, but should I not, my conscience will be satisfied because I did not seek this engagement with obsequiousness or through intrigue, but it came from the benefaction of the Triumvirates of this University alone, who, I know not why, wanted to shower me with such gifts, such benefits, such honours, almost at the same time and without example, so there is nothing more I might ask for, and they are unable to endow me with any others. I can already see what I must now do, that is, to weave a eulogy as rightful thanks. However, while I realise I am
not totally without talent, I also think it would be an awesome
task to try and include such great merits and qualities by figures
of such high standing, when not even countless discourses would
suffice to do so adequately. Thus, since saying thanks in words is
no easy task, and since I am not even remotely able to pay back
such a favour, I believe I will do better if I limit myself to placing
my immortal thanks in the depths of my soul, and preserving it
there for all eternity. And since you are all gathered here, illustrious
listeners, to hear me speak of something that goes beyond my duty
as professor, I shall satisfy your wishes, even more gladly since I
believe I am dealing with a subject that is worthy of your attention,
but also one that is so novel it has never been presented, and thus
put your intellects to the test as well, owing to the tortuous difficul­
ties it entails. The subject is the freezing, snowy constitution of the
winter that has just come to an end, which was so intensely and
bitterly cold that it condemned not only Italy but all of Europe, to a
true massacre of living beings of all kinds. I would therefore like to
look more closely at the excessive bad weather we had this winter
from a philosophical and medical point of view. And while I will
not be able to explain the true reasons for such incredible cold, it
will be neither out of place nor unfruitful to the care of health to
how much ill we might expect with fear from the coming summer
after such a negative constitution.

I would be taxing your kindness, illustrious listeners, if I were to
describe not just the severity but rather the insolence of the winter
cold that made this year so inauspicious it will be remembered for
centuries. How many people have such a thick skin and a strong
constitution by nature that they suffered no harm, and not just ex­
ternally, but also in the interior and in the depth of the precordium,
where the vital flame has its innate dwelling, after having inhaled
such icy air? The events we witnessed were remarkable, and even
more so the ones that we heard about - we saw large rivers covered
with such thick ice that cart-yoked herds and even armies could
cross. For over two months we watched an endless quantity of
snow fall from the skies, not silently like fleeced wool as is usually
the case, but hurled to the ground with great violence and what is
more, this occurred around the equinox, which is something of a
miracle in itself in this city. Inside the houses and even in the cel­
lars we saw liquids freeze, so they burst the solid jars they were in,
and, while we were sitting down to dinner, we saw our steaming food chill in an instant, as soon as it was removed from the fire. But these things are unimportant and are easy to believe. We saw the city of Venice, isolated from the mainland with ships as its only means of communication, joined to the continent because the sea had frozen, as hard as marble, and for around seven miles long lines of travellers would walk from one side to the other, men leading laden beasts and with supplies of all kinds of food with flocks and herds, making sure the dire-stricken city would be supplied with food. And what about the other amazing, or rather distressing things we heard happened elsewhere? For example in France, England and all the lands in the north where not only the great rivers, which are usually subject to the ebb and flow of the sea, but even the Ocean itself froze over, resulting in trade being blocked and thousands of people dying in misery in the city and country, amidst the fury of the cold and pangs of hunger, while in the army there were more deaths in the winter camps than fighting at the front. For sure, if we had obituaries for every region, city and hamlet, with all the names of the deceased, and if we could calculate the myriads of people who were killed by the unbearable cold this winter, this icy constitution would find no comparison with any plague, no matter how violent and pernicious, not even the one described by historians and poets that depopulated the whole of Greece.

But please, where are we to seek the origins of such violent cold? If this ill came from Boreas, dispenser of the cold, why was it so violent and why did it last so long this year that there is practically not one person of adult age or near death’s door who remembers ever having experienced such unbounded cold and nor is there a writer who has described anything similar? Illustrious physicians, would you like to know in what proportion the cold this year exceeded that of the last eight years I have observed in this city? According to the psychrometer, the proportion is sesquialtera, in other words, three to two. The cold this winter was so exceptional it even raged in the plant kingdom, killing not only the plants adorning the gardens, but even worse, the olive trees and vines. By God, if Cardano had lived in this age, he would certainly have rejected the stubbornly-held opinion regarding the nature of the cold. Indeed, it was this great man’s belief that the cold is not something that actually exists in itself but rather the simple priva-
tion of heat, and the winds are all warm to various degrees. This is what he claimed, and it was to this great man that that illustrious and severe critic turned, mistreating and hitting him: "Take off your shoes and hat, oh Cardano, when the Borea from the Rhaetian Alps burns – indeed it is cold and dry". However, I do not intend to go into the nature of the cold or how it starts any further. According to Aristotle, it is the water, according to Parmenides the earth, whether it is the winds that produce the cold by compressing the air, or if they are just the carriers; these and similar questions have been discussed by philosophers in ancient and recent times, as well as today. The only thing close to my heart is to understand why this winter was so bitterly and suddenly cold. We were already pleased the winter solstice had passed and the end of the year had been climatically relatively tranquil, making us hope the rest of the winter would have continued in the same way. But Janus opened the doors of the New Year so suddenly, we thought he had declared a mortal war. Indeed, whirlwinds suddenly blew down from the north for two days with such violence that everyone was terrified, accompanied by bitter cold and then snow fall. We must therefore believe that something significant occurred in the hyperborean regions, resulting in such an unexpected storm in the great sea of air. Is it possible that an enormous hiatus suddenly opened in the earth, emitting a vast quantity of nitrous spirit together with the icy winds, saturating the atmosphere with refrigerant particles completely? Experience has shown what properties nitre has to produce such feelings of cold; when it is mixed with snow and ice, the effect increases while in their absence, by dissolving a certain amount of nitre in water, in the middle of summer it gives us something cool to drink. I, on the other hand, believe that the cause of such terrible cold is to be found exclusively underground. If we wish to explain the eruption of such abrupt, violent winds, we have to imagine a place in the region of the Arctic Circle, where those turbulent gusts had, until then, been enclosed, before suddenly bursting out, as if they had escaped from prison. Not even poets, who have the faculty to dare all kinds of things, dared invent such a thing, wanting to believe that the multitude of the winds was hidden in the dark caverns of the earth and decided there was a king who was ruling them and when the request came from above, they would be given free rein. If we continue, it would appear less
reasonable to blame the celestial bodies for having conspired to harm us with their light and inspiration. Indeed, did the experts in astronomy observe anything new in the skies? Did they perhaps see fatal comets or other such wonders? While following their paths, did the planets maybe overstep their allotted course, thus upsetting the celestial harmony with unheard of syzygy, making us pay the price for their aberration? If, as they say, the moon acts as a considerable refrigerant and its light, a reflection of that of the sun, is cold; or rather, as others will have it, the moon attracts the heat of the earth and air with its magnetic strength, thus making it highly refrigerant – but did the moon come closer to us this year? I am well aware that astronomers, peasants in ancient times and even expert physicians – including Hippocrates himself – used to observe the eclipse of the Pleiades and the rising of Arthur to make forecasts about the winter drawing in, and observe, as Virgil would warn, “wither Saturn’s cold star withdraws itself”.

But such things are observed each year, and are signs rather than the reason winter is approaching. Thus, the supposition that this miraculous cold comes from the breast of Mother Nature does not seem that far removed from the truth. Indeed, as a whole the earth is all cavernous within and, similar to the bodies of animals, has distinct bowels and great cavities where not only the silent shadows and still air are housed, but is also where diverse, amazing activities are carried out, driven by a gust that passes through. For sure, nature is at its most diligent in its subterranean workshops, busy creating a vast quantity of precious stones, fossils, minerals and metals; and while on the one hand human greed rather than pure curiosity, and the wish to find the most deeply-hidden materials, leads us to steal them, digging deep down in the bowels of the earth, on the other, nature is just as assiduous at replacing them, and at making good the loss. As a consequence, an almost infinite number of sources gush forth from the origins of the earth, not just fresh water, but even medicated waters, for example those containing iron, copper, sulphur, aluminium, nitre and all other kinds. Since the boreal regions hide a vast amount of nitre in the ground, a well-known fact to those who gather it to make gun powder, and they find much greater quantities in the walls and places facing the north rather than the south, then why should one not think that in those inhospitable earths, without sun light for many months,
there is a mountain that has crumbled considerably in those subterranean caverns, as once happened in the Apennines and Alps, according to literature? There would therefore be a large door for the icy winds and nitre exhalations, and this might have been the cause for the terrible storm this winter. In Iceland there is said to be a vast cavern where icy winds blow, showering fragments of ice in the air. In Tyrrhenia, near Lake Bolsena, on the northern slopes of a mountain is a cavern where one can see a crack on the side, and in summer in particular, a wind blows through it that is so cold it is harmful to anyone who exposes himself. If wines are placed in that cavern, they freeze in an instant, and fruit comes out covered in frost – a great resort to enliven the banquets held by the locals when Procyon is raging. Acosta describes two cities in Peru, Plata and Potosi; they are not far from one another and are both in the mountains, one of which, Potosa, has a winter climate while the other, Plata, has a spring-like climate. It is written that the reason for this, which is a miracle in such a hot country, lies in the silver mines and the draughts from underground that emit icy air. Since it is much more likely that the cold comes up from the bowels of the earth to the air rather than descending from the celestial spaces to down here, I can think of no other explanation for a phenomenon that was so relevant to what we experienced this winter (nothing similar has ever been seen in the past) than that there is a vast crack in the earth, one that has only recently been formed. However, should anyone propose a more favourable proposition, I am more than happy to dismiss this thought from my mind. If, by chance, my supposition were correct, I believe this might be the cause for such prolonged, terrible cold and such heavy snowfall; indeed, together with strong winds, diffusing itself at large, nitrous fumes might have led to such intense cold, and by capturing the water vapour in the air and agglomerating it, might have formed snow, giving it its filamentous structure of a six-pointed star. Snow contains a considerable amount of nitre, as can be proven by chemical experimentation, thanks to which it is possible to extract solidified nitre from water and this has also been proven in medicine because, thanks to the amount of nitre it contains, snow water is used to prepare medicines against high fevers.

However, in actual fact, somebody could quote the Holy Scriptures and use them against me – “Have you ever entered the reposi-
tory of snow”, you, who so assuredly explain how snow is formed in the air? I must confess, O illustrious listeners, that not even I attribute to the surmises I put forward regarding the formation of snow and on a presumed opening in the earth such weight that I am absolutely sure I have drawn from Demosthenes’ well the true cause of such uncommon cold. Nevertheless, I believe I have fulfilled the task of attempting a conjecture that is not improbable, since, in an issue that is so obscure, at least the laws of nature do not forbid that such a thing might have happened. Indeed, Aristotle asked nothing more from the scholars of natural sciences in obscure cases. Thus, what is to be said on such an arduous, impenetrable subject? Perhaps we should resort to the way out that is so familiar to actors, when the plot becomes so complex the acuity of human intelligence is no longer able to resolve the problem, that they introduce a Deus ex machina on the scene? Thus, to support a hypothesis that might be accepted as true, of this terrible constitution I shall say what the great Hippocrates himself was wont to say when speaking of epidemics, when inexplicable phenomena emerged: “one must ask oneself if there is not something divine about illnesses”. Thus, we must believe that the word divine, used so frequently by physicians for both disease and remedies, is of significance in this case as well, and that such harsh atmospheric conditions were caused by God himself (and this does not surprise us) to punish the corrupt habits and vices of the century in a new, unusual fashion. Indeed, it would be wrong for us to believe that God has only fire in his arsenal, the rightful punishment for misdeeds, and bolts of lightening, that strike the earth to the terror of many and the danger of just a few; his weapons also include “the snow and ice that obey his word”. As sung by the king prophet, it is He himself who brings the winds out of their repositories so that in just an instant, they cause great storms in the air and sea, as a clear demonstration of whom they serve. This is a fact that arouses the greatest amazement – that for the whole period from the sixth of January to the equinox such cold persisted without the south winds ever daring to blow, a fact that is extremely rare in these regions since even in the middle of a relatively harsh winter warm winds from the south usually blow, thus melting the snow and ice of frozen rivers, so that they even flood the fields. It is as if God wanted to use the tyranny of the boreal winds to punish us, as if he
wanted to keep the austral winds imprisoned in their rightful place so that they could not alleviate the harshness of the punishment inflicted on us with their balminess. Similarly, with an elegance that equals ingenuity, Ovid describes how Jupiter, who had decided to wipe out the entire human race with floods, locked up the Tramontana wind in the caverns of Aeolus together with the other winds that dispel the clouds, and in their place freed the Noti, Euronoti and the Austral wind, dispenser of rain.

Would to heaven that all this ill has now come to an end and that the end of this year is more fortunate than its beginning. It is impossible to ignore just how fatal and harmful this past winter constitution has been for mankind and which kinds of disease it brought with it. In this city alone, not to mention the others, funerals have never been so frequent, and practically each home is in mourning. The violence of this icy winter put very young children, the decrepit elderly and all those who suffered poor health at the top of the list of the afterlife, followed by young and robust men, and not just those from the masses but also many from the higher classes. There was a predominance of coughs, catarrhs, pleurisy, peripneumonia, dyspnoea and diseases of that kind. As is to be expected, these illnesses spread as an epidemic. Indeed, in the same fashion the southern winds afflict the head, those from the north harm the respiratory organs in particular. We can protect our heads from the wind with wigs, and protect our extremities from the fury of the cold with cloaks and coats with hoods. But how can we defend the viscera in the chest from the icy air, if our precarious life depends on the unceasing alternation of inhaling and exhaling air? It is therefore no surprise at all if this winter, with the penetration of icy air in the depths of the chest as if entering via an open door resulted in such a terrible massacre of men and animals of nearly all species.

In truth, are we to believe that this terrible constitution has completely exhausted all its negative impetus, so that no malignant sequela remains in our bodies that might provoke some new kind of illness this summer? If we study the oracles of the venerable old man of Cos, who was able to see into the future and thus merits divine fame, the answers we find are not particularly comforting: “With regard to the seasons, if the winter be of a dry and northerly character, and the spring rainy and southerly, in summer there will nec-
necessarily be acute fevers, ophthalmies, and dysenteries”. Noteworthy is the absolute, irrefutable certainty with which Hippocrates, a man who is usually highly cautious in his forecasts, expresses himself in this case. If a winter with northern winds is followed by a spring with south winds, there will necessarily be acute fevers and dysentery. The reason for this is easy to explain; indeed, if the winter is colder and there is heavier snowfall than usual, human bodies have little transpiration, in particular in the weak. As a result, the serous filth accumulates, and even more so if the spring is rainy, and once it dissolves in the body and the summer heat makes it circulate, it is only natural it causes acute fevers and dysentery. Nobody could ever believe that Hippocrates pronounced an aphorism of such consequence unless it was based on experience – in his books on the epidemics he quotes a constitution in which the end of winter was, as in our case, characterised by northern winds and great cold and snow, followed by a rainy spring, and during the following summer and autumn the above-mentioned illnesses all appeared.

At the beginning, this current spring, half of which has now gone by, following an icy winter, appeared to be rainy. However, during the month of April we had a number of dry days, without any rainfall, but it was so hot it was like the dog days of the summer. At the end of the month, however, there was an extreme jump from hot to cold and in almost just one day we had to put away our light silk clothes and get out the heavy woollen ones from the wardrobes. And this was then followed by heavy rainfall. How the second half of spring will be, is known only to He who created the seasons, days and years. Nevertheless, what is certain is that such meteorological anomalies and aberrations are omens, heralding – heaven forbid – illnesses of a very serious nature. Indeed, to quote Hippocrates once again: “in normal meteorological conditions with an adequate equilibrium illnesses are normal and rational; in conditions that are not normal, illnesses are abnormal and irrational”.

However, what harvest can we reap from this for health prevention and protection? I shall expound my belief in a few words. The greatest defence against such excessive meteorological intemperance will be temperance, and not just in food, but in everything physicians define as something that is not natural. Purgatives will be opportune and, if necessary, blood-letting. Hippocrates always claimed, “purgatives or blood-letting should be recommended for
those who benefit from blood-letting or purgatives”. Particular attention should be paid to the disjunctive particle “or”; indeed, a considerable number of practical physicians think they are making a mistake if they prescribe emptying of the bowels in spring without adding blood-letting as well. But anyone can see just how far they are straying from the footsteps of the divine Preceptor. There are cases in which it is opportune to perform blood-letting, and others in which it is opportune to prescribe emptying of the bowels alone, while there are also others in which it is useful to resort to both remedies. However, should some of the above-mentioned diseases begin to spread on an epidemic scale this summer, a competent and expert physician should not proceed with his cures in great haste and without the necessary precautions, resorting to common remedies as he does for sporadic cases. Although he was referring to the fever caused by the plague, Celsus rightly said that “blood does not leave easily, the intestine is not easily moved”. The greatest caution is therefore required, carefully observing which method nature is using, the healer of all ills, in those cases that are cured either spontaneously or with a minimal cure. Indeed, nature finds ways and strategies to attack that we cannot foresee or imagine; whenever there is an epidemic illness, we must admit we are young and inexperienced, even if we have spent our lives practising medicine, and that we place our trust in the teachings of nature, which Hippocrates called an autodidact and taught without teachers.

Owing to the unprecedented intemperance of the past winter and the weather conditions this spring that have been highly uncommendable so far, I believe that the suspicion is justified that this summer will bring an unexpected tempest of acute fevers rather than other diseases (and I hope I am not tempting fate), and that the corpses will accumulate; and since I have taught young students on fevers in general this year, I shall dedicate all the time that remains, my strength permitting, to dedicate this third and last stage of the course in medicine to the study of acute fevers of some kind of epidemic nature.
XII Oration

Given in November 1710

*Medicine began to be neglected, when it should have been more esteemed.*

As I was observing the fates and disgraces of letters no less than of the literati, and investigating as to why some intellectual abilities and some arts, once held in great consideration and in general honoured with great signs of recognition, declined from their great height so miserably that some have only a few worshippers, others have none at all and others many but neglected, I thought it possible to find some reason in some of these for their such great loss of respect (while others entirely elude me). The documentation that has come down to us from historians shows that eloquence was once considered one of the leading liberal disciplines and was long held in great consideration. It first flourished in Greece and was attributed so much authority that it held sway over the political regime, which degenerated into tyranny. When Greece was then forced to yield to Roman power, eloquence, along with the fine arts, scorned Athens and migrated to Lazio, where it shone to its highest degree. This continued as long as the dignity and care of the republic still stood, when the Ortensis, the Tullis and other illustrious orators openly showed the great power of eloquence. Then, when public security began to be in danger, due to the injustice of the times, after the professors were exiled or killed, the strength of eloquence seemed diminished and weakened, and much more when the catastrophe of the Barbarians burst into Italy and muddied the purity of the Lazio idiom with an uneducated language. Venice, where the maximum power and safeguarding of public safety are in the hands of aristocrats, may offer proof of
how much vigour eloquence has: here the citizens and especially the nobility seem born for eloquence, even before being educated. We know that the causes of the corruption of eloquence were once investigated and various reasons for this handed down – undoubtedly the laziness of the young, the neglect of parents and the ignorance of teachers – but now different causes may be found: the way of life is undoubtedly different, the institutions are different and the way of dealing with trials in the courts is also different, such that, even if there are distinguished and suitably intelligent professors, eloquence does not know where to nourish its adherents and, despairing for its fate, has for some time now taken refuge in the cloisters and in religious meetings as in a prytaneum. So we need not be amazed if it has lost most of its ancient splendour and counts few worshippers. The scholars also all know astrology, which they call "judgement", once held in great consideration and cultivated by princes and educated men, such that the destiny and luck of men was forecast (and put on sale) on the basis of the position of the stars and their configuration. Some quite illustrious and glorious predictions survive from history that, if true, deserve total admiration, such as that by which Spurinna advised Julius Caesar to beware the Ides of March. This kind of divination, taken from the light and the influence of heavenly bodies was highly esteemed by the pagans, who were convinced they could know in advance and predict the future, to the point that they undertook nothing without first taking the auspices. It was taken to the form of an art, such that anyone, having consumed a little literature, on the basis of the moment a new born baby came to light and the sign of the zodiac, which they called horoscope, drew the heavenly configuration according to the astral influences and confidently foretold the character of the baby, its good or bad fortunes, illnesses, various events, the type of life it would lead and even the type of death. The Christian religion certainly removed much of the consideration this divining art enjoyed. However, it retained many proponents and clients, until finally Giovanni Pico della Mirandola published learned books against astrology and revealed the vanity of this art and deposed it completely.

What may be said rather about medicine, which although surpassing all the other disciplines because of its grace, its effectiveness and its use, and although it is attributed almost divine honours
In an augural oration by princes and people, nevertheless is now neglected to the point that it barely retains a place among the honest disciplines? To what error must a disgrace of this kind be attributed? Certainly not the negligence of parents, who in these unjust times send their sons to the public athenaeums at great personal expense; nor to the young, who burn with a great longing for learning; nor to the ignorance of the professors, given that the teachers have given the studious scholars the purest teaching! So it is worth inquiring and seeking the reason the medical art has fallen from its height of dignity, when it should have been exacted greater veneration, and this will be the subject of my speech today.

If I were to go back to the ancient glories of the medical art, to recall how much esteem and dignity obtained over the long course of the centuries by this discipline, the oldest and most effective of all, and wanted to compare those past times with our age, I would almost dare to say that either it is now a completely different art, or there is now a completely different kind of man and different customs. It was once normal to say that medicine was the most imperious of all the arts, now it is rather inevitable to admit that none of the arts is born for slavery more than medicine. Do not be saddened, illustrious listeners, to hear the formula and the words themselves with which the kings of the Goths used to appoint their archiaters, after they had seized power in Italy and begun to discard their barbarism:

Take care of our palace, have the courage to engage that which is usually procured at great cost; others serve according to law, you rather take care of the lords of the world with the zeal of one who is superior; you are permitted to weary us with fasting, you are permitted to think contrary to our desires.

See here how much authority and respect this art once had in the halls of princes, and how much veneration we must believe it had in private homes and among the people! What it is now, is better not to be recalled, so that all our faults are not put before the eyes of all, which would be better hidden than emphasised in words. But if we note the advances made in the space of about 70 years in physiology, pathology, therapeutic methods, pharmacy, botany and even surgery, and if we then consider how much it has
broadened its confines, moving many of the principles of statics and hydrostatics into its sphere, and how much it has contributed to the natural sciences with its experiments and observations, then we can easily claim that philosophy has been restored to health by medicine. If we put these facts and many others together, then for some time it should have been placed at the peak of its dignity and respect. What must we think has removed medicine in recent times from its ancient possession of glory and honour, after so much effort, after so many illustrious enterprises made so suddenly and unexpectedly? Each will think as he prefers on this, but I am unable to imagine any other reason than the excessive study of the professors of this art, their excessive wish to investigate, the excessive – some may believe – love of truth. Perhaps these claims will seem paradoxical, but if they are carefully appraised, they will be recognised as extraordinarily true.

Indeed, after that sterile custom of subscribing to the opinions of others had ended and the free followers of this art began to study the nature of the microcosm more closely, no less than the astronomers on the ancient system of the microcosm, they demonstrated the harmony in human bodies. This arises out of the constant movement of the blood, the lymph, the chyle, the bile, the liquid of the nerves, the animal spirits and the other fluids. After the operation of the main intestines and the even the smallest parts had been revealed, and it was shown how the heart with its contractions and expansions dispenses food like a good distributor to the individual parts; how the brain draws the spirits from the arterial blood by chemical action, how such spirits then swell the fibres and produce so many diverse movements in the human body; how the respiratory organs, like cushions, incite rather than impede the holy fire that rests in the blood mass; how in a few hours the stomach dissolves the ingested food into a liquid similar to a decoction of barley, something that the kitchen oven could not do in many days; how the liver secretes the bile, the kidneys the serous liquid, the spleen its particular juice, the glands some juices from the blood mass; how conception takes place in the female uterus, that is, the story of human generation from the beginning; in short, after the real and natural harmonious order of the human body, previously unknown and completely obscure, began to appear in a manifest light, then the splendour of medicine seemed to flag.
So when many great and clever discoveries began to be applied to medical procedures – not without offence and dispute between the physicians themselves – then learned men when ill or with a family member in bed began to doubt whether medicine really did exist or was perhaps an illusory art. They had been used to listening to physicians who referred any ailment and also the remedies to the so-called prime qualities of the elements and, if something hidden took over in the disease, referred it to the public sanctuary of ignorance, that is, to hidden qualities; physicians who had a means of escape ready, prescribing antidotes of any kind without even selecting them. They had been used to hearing that when the head aches, blood must be let from the second cephalic vein, when the pain is in the liver, from the basilic vein, when the spleen suffer, from the splenic vein; and when the strength is not sufficient, the salvatella vein must be slit; that where there is the need to purge, medicines that draw out this humour rather than that one thanks to their capacity must be prescribed. They were also used to hearing things it would have been proper to be suspicious of. So when they understood from the most honest and informed physicians that things were different, that both the causes of diseases and the remedies in serious illnesses derived from undoubtedly different sources than cold, heat, dryness or humidity, that there was no agreement on the nature of the harmful humour (whether it thickens or thins the blood); that the hasty use of antidotes was dangerous, that medicines do not have the power of choice; that in blood letting there is no other function than to stimulate, so there is no point worrying about which vein; that the blood flows from the basilic vein the same as it does from the cephalic; that more arterial than venous blood flows from the salvatella, and so the strength is weakened; that what is withdrawn by blood letting is not so much forces, as once thought, but that it will continue as long as the vein remains open; that the testimonies of the historians, despite being of great fame, must be read with caution by the young so they do not imbibe false theories on diseases; that now it really is necessary to follow a method to avoid errors much more than in the times of the then much celebrated Santorio, professor in this university, and many other things of this kind. So the amount of the false and fabulous that has been removed from the medical art has been matched by glory and esteem:
What good are effort and reward, what good does it do nature to have opened a way also to hidden places? may we be permitted to exclaim with the poet: what good did it do to have offered sacrifices to truth with so many victims of every kind of living thing, large, small, very small, sacrificed and purified according to custom, so that cures for diseases could be more favourably established? This certainly does not happen in the navigation and military disciplines, which are completely similar to medicine and at times subject to dubious events. The art of navigation, with the sole discovery of the previously unobserved alignment of the magnet to the pole, opened up a great theatre of glory, or the entire ocean to ply with great success as far as both Indies beyond the path of the year and of the sun. The military discipline, with the discovery of the explosive force of gunpowder, seemed to have now reached the peak of its glory and honour, to the point that, if it were only conceded to revive the great combatants, who once famously lived through the sieges of cities – like Demetri- os, who for this reason was said to have been called “Poliorcete”, whose machines were a source of terror and pleasure for he who destroyed everything due to their power, but also for the enemies themselves due to their elegance – and if it were conceded them to contemplate the way in which war is now conducted and well fortified castles stormed, they would laugh at their catapults, their rams and other war machines, and also their Vegezio and other writers. So only this fate awaited the medical art; that is, to be considered vile and scorned, after having cast aside its make up and begun to advance in public with simpler ornaments and a more noble face. So perhaps it would have been better if many discoveries, so excellent and useful for the educated world, had never become known, and if those who observed them, studying them first, had kept them silently in their womb, and dying had had them buried with them, so as not to disturb the fairly calm state of the Republic of Medicine. Perhaps Galileo, a man of undoubtedly acute vision, would have acted with more thought if in the darkness of the night he had blessed his telescope alone, contemplating the unknown planets, never before seen by any mortal, and the minute scattering of stars that form the galaxy, and if before departing from the living he had broken that optical tube, worthy of being placed in
heaven among the constellations, into a thousand pieces so as not to completely overturn the generally accepted theory of the planets among astronomers. And if those that lived a thousand years before us had spent their lives content with the discoveries of their times and had not tried to investigate anything new or add some discoveries, would we perhaps have arts as erudite as they now are, and which give us so many criticisms and so many benefits? Horace, the poet of Venosa, spoke very well on this:

On the other hand, if Greece had been as opposed to the new as we are, would the ancients exist? And whatever would we have in the public domain to read and re-read to the point of wearing it out from hand to hand?

I know very well that all the innovations, whatever they be, are suspected for being new, and that they have a bad reputation as much among the physicists as the politicians, especially where they could weaken or remove a custom that, by its long use has now almost become natural: “that which has long been customary, even if now worn out, usually does not much bother those who are used to it, said our tutor”. So the people of Israel, who in the Arabian desert once had need of manna, this heavenly food, despite being steeped in grace, caused annoyance: “our soul is dried away” by this very light food, exclaimed those people, used to the garlic and onions of Egypt. But what must be done when small annoyances are compensated by benefits? One must dare to strongly oppose widespread errors, but if the new that is brought is supported by solid, infallible justifications and also by experiments, it should be accepted; if rather there are doubts and uncertainties, they must be rejected like the plague, because they destroy public peace. As the poet philosopher Lucretius well said:

So when appalled by something that is new only because it is new, stop banishing reason from the spirit, but rather turn the mind with judgement, and if the thing seems true to you, give in; if instead it is false, get ready to fight.

Given that more celebrated discoveries than recent ones that initially appeared heterodox and monstrous dogmas were brought