The public well-being depends wholly on the health of princes; it follows from this that nothing must be left untried to safeguard it.

If among all the things of our human society directed toward the public good the desirable precept is that of having a good prince, a second must then immediately be foreseen: that the prince enjoys not only longevity but also perfect health. In the same measure (assuming that it is right to relate ordinary situations to great ones), if the head of the family, who is prince and lord of his own house, is in good health and can attend to his interests, control of his house proceeds in the right way and his social position is raised until such time as poor health intervenes. At that point, economic management becomes inadequate and assets, even if considerable at the start, are inexorably reduced. The same thing happens to a good prince. If he is in good health, his subjects attend to their duties and political rule remains stable, but if his state of health is not good or he is destined to fall ill, the well-being is threatened of all by those people, generally not very reliable, such as some proponents of change, who profit from such situations to subvert the social order and unleash civil wars. This is what happened in France under Charles IX, who was in delicate health. The kingdom, once flourishing, was afflicted by great calamities following violent upheavals. According to historical testimonies, Reuta, the seventh king of Scotland, was also afflicted by various illnesses and forced to take to his bed; even though foreseeing its ominous effects, had to abdicate in favour of a nephew who was eager to reign. There is no lack of examples confidently supporting the case that the public good is not well reconciled to a prince's poor state of
health; any period has its own events speaking for it, always very eloquently. This phenomenon is not restricted to manifestations of government, but is found in nature where similar processes take place. When a noble part of our body such as the heart or brain is affected by some illness, even if not serious, as not rarely happens, the general economy of the organism that depends on it suffers. If the stomach is weak and does not digest the foods ingested as it should, all the other organs together feel it, despite their being healthy and functioning properly in themselves. An ancient author, Q. Sereno, wrote poetry very elegantly on subjects of medicine with precisely this meaning and, regarding the stomach, wrote: “the stomach is rightfully defined the lord of all the body, because it is the stomach that ensures the health of the individual parts”.

If all this is true of our organism, it is no wonder that the same phenomena should be true of society. It is very important that he who governs others enjoys a perfect state of health; it is that which Plato says in his Republic, presenting Socrates who, adopting the precept of Asclepius, advises those of poor health not to undertake the career of public ruler. A good correlation is then observed: when the prince falls ill and is suffering, the laws and the public good also languish. The custom of the Church to also contemplate, among its other practices of worship, prayers to God to maintain the health of Christian princes and to further proclaim public manifestations with solemn rites when, unfortunately, they become seriously ill, cannot but be appreciated.

Non-Christians also have similar customs; so we read that on the occasion of the feverish illness that struck Pompei the Great in Campania, sacrifices to the gods were made all over Italy with the aim of having them intercede for his health. The devotion shown by the Roman people for Germanicus, who, adopted by Tiberius, was to become his successor, is admirable. When he became seriously ill in Antioch, the whole city was pervaded by a deep anguish and when news of an improvement in his condition arrived, the people manifested great joy, shouting around the city: “Rome is saved, the homeland is saved, Germanicus is cured”. The crowds that hastened to the Campidoglio with torches, gifts and sacrificial victims were so great that the historian reports, “the doors of the temple had to be knocked down”. Sorrow then turned to anger when, shortly after, the news spread that Germanicus was dead;
the temples were assailed, some demolished and all the others ruined, and the images of household gods (lares) were dragged through the streets. All this because those people had the life and health of Germanicus at heart and had invested in him all their hopes for future well-being, for the exceptional qualities he would have displayed, one day, after the death of Tiberius, taking control of the fate of the empire.

Seeing that the well-being of the prince is of such great importance to the prosperity of the people, it seems indispensable to adopt every care and attention to preserve it. This is a project in which medicine is closely involved as, having to fully concern itself with offering services to mankind, it cannot restrict itself to providing rules and generic precepts for the maintenance of man's health based only on such variables as age, weather and location, as Galen did in his six books on safeguarding health, and as many authors after him have done. Medicine must carry out research aimed at actively safeguarding the health of specific groups of subjects, differing from others because of the benefits they are able to bring to the public good. The celebrated Marsilio Ficino wrote a very elegant work with a similar aim, How to safeguard the health of literary men, whose example was then followed by Fortunatus Plemp, professor at the University of Louvain, who published an equally elegant work How to safeguard the health of jurists. But if the literati have been considered so important to society that illustrious authors have written specific treatises on them, medicine must, more justifiably, pay tribute to princes, custodians of the laws and bulwarks of the public good, being concerned, as far as permissible, with actively helping safeguard their health.
Second Chapter

What must be the qualities of the doctor, who is given the name of court physician, and what subjects be submitted to the attention of princes?

It is a glory and source of pride for a prince to have the most illustrious persons of every discipline in his court, but not for appearance or public image only, lacking any practical usefulness. It is thus indispensable for them to be able to count on jurists, philosophers, mathematicians, historians, poets, and other learned men. But the doctors most renowned for their reputation, doctrine and experience are also necessary, and their work is to be taken advantage of both in good and ill health. In the past, kings and emperors could count on doctors of great fame and authority. Alexander the Great had Phillip Acarno and Caesar Augustus, Antonio Musa. Subsequent Caesars and kings, with the exception of the darkest centuries, were no less served. The princes of our day nevertheless have nothing to be envious of in past centuries; indeed, in the course of a single century medicine, both theoretical and practical, has developed so much that if their own fathers were able to live again, they would never stop marvelling at how a substantially useless practice, which for many centuries had remained static, managed to attain almost the highest degree of splendour in a short space of time. Although the number of doctors rich in learning and experience is great, there is no doubt that a selection must be made to identify a doctor for a prince. In addition, it is important that such a doctor who wants to make a good impression at court and keep his dignity intact is distinguished by specific qualities that are not easy to find in others.
Thus, clearly those who have only learnt the first rudiments of medicine are not suited to taking on the role of court physician, nor are recent graduates who have worked for a few years in villages and small towns. The latter, having acquired a certain ability, perhaps jeopardising the health of others, go to work in a clinic in some populous town at a certain point until making a name for themselves as good doctors, both among educated people and the ignorant. These doctors, however, will remain more or less removed from theoretical medicine and ignorant of the new acquisitions of knowledge that constantly mount up in the schools of medicine. They will not read any authors apart from those who deal with medicines, so as to have a wide and ordered back up of remedies on hand. In reality, the doctor who will preside over the health of a prince must pursue his studies both in philosophy and general medicine at an appropriate place; that is, at some famous university, and, before devoting himself to practice, must attend the studio of some competent and erudite doctor and read authors both past and present, knowing how to recognize those to read and those not to read, so as not to uselessly waste his time. His training must proceed much as that of young doctors in law who feel the need to frequent the libraries of the most famous jurists prior to approaching the bar and pleading some case. It is useful for a doctor in training who intends practising authoritatively in public institutions or being raised to the rank of court physician to live abroad while still young. This is not so much to satisfy his curiosity about different regions and countries and observe the customs of the locals, as to meet and establish relations with distinguished men of science and medicine from elsewhere, in order to learn from them different ways of dealing with illnesses and to understand the remedies they typically resort to in the different pathologies, and to bring home a vast wealth of knowledge. The quantity of science and experience that may be acquired from study abroad is inestimable; science and experience that are indispensable for the doctor, and particularly to one who aspires to the high rank of court physician. He is like Odysseus, who “knew the customs of many peoples and many lands” and this is why, it is said, worthy of the epithet “wise”. The custom of physicians in Germany undertaking several study tours as soon as they finish their studies and before dedicating themselves to practice is praiseworthy. Their favoured destination is Italy, to visit
men distinguished in medicine, known by their fame or their writings, and from whom they may obtain indispensable information for their training. Regarding this, there is a valuable work available on the travels that are of use to a physician, written by Thomas Bartholin for his son Caspar when he was staying in Italy. It deals with the behaviours to adopt, the institutions and cities to visit, and the doctors and other men of science to meet. Among the latter, the famous Antonio Magliabechi, the pride of Tuscany, is mentioned. Only after having ensured himself of these foundations and having carried out serious and intensive practice for a certain number of years in some big city where expert doctors reside, having surpassed the normal practitioners, was it possible for him to consider approaching the courts of a prince. Consequently, uncommon qualities are expected of the doctor appointed to uphold the health of a prince; the same that are needed to fight the known or unknown causes of diseases and to cure them once they have appeared. It is much the same as on the military front, where courage, experience and vigilance are indispensable for defending a position from enemy attacks and for winning it back after it has been seized. If in addition to the qualities spoken of he has others, such as knowledge of geometry, astronomy and experimental physics, his references improve and, without making him a better doctor, make him more pleasing to a prince. The importance that the health of a prince is entrusted to a doctor of distinguished name and evident fame is also precisely provided for in the law itself, as in book IX of the Code entitled professors and doctors, chapter 11, where it is forbidden to elevate to the rank of court physician a doctor who has not been confirmed by authoritative public opinion, thus preventing the promotion of candidates who would be unsuitable even though ambitious.

According to some, the physician, and especially the one destined to offer his services to a prince, must be assisted by a certain amount of luck; a similar, not in the least noble, opinion is also expressed by certain mediocre doctors who, furthermore, are capable of saying that their far wiser and more learned colleagues, lacking the aptitude for flattery, do not know how to assert their own qualities and are not helped by luck. They all show ignorance accompanied by malice; in fact, he who has knowledge and follows the precepts of his profession, is himself fortunate. All educated men
scorn at such a vulgar belief; as did the very talented Giovanni Cratone in particular, the doctor to three emperors, who in his letter of dedication writes: “With Hippocrates we must think that only those who are familiar with science are supported by luck and, vice versa, ignorant people are to be considered unlucky. In fact, it is right to make the most of luck and it is this that those who are familiar with science do; on the contrary, those who do evil or do not do what they ought to are not aided by luck and do not reach their proposed objective. How is it possible that a man who is conceited and, moreover, lacking in experience, should manage to achieve what is proposed by luck? Thus, it is indispensable that he who wishes his cures to be effective follows the rules of the art and trusts in God”.

This is how Cratone expresses himself. If, however, anyone is a key participant in this matter, it can be none other than the sick person himself, believing that he has found a doctor rich in experience. The condition of someone who has to go to sea and may have the use of a skilled helmsman is not dissimilar. Indeed, there is no doubt that it would seem strange if a person who, having to sail, should not concern himself with trusting in an expert helmsman rather than someone who is simply lucky and that, in the case of illness, he should not choose an expert doctor with a reputation for wisdom, rather than one considered to be merely lucky.

So these are the qualifications a doctor needs to be fit for tending the health of a prince. But there are other qualities the prince expects to see in the person called on to fulfil the role of court physician. These are the loyalty and wisdom that clearly must have been the basic criteria for his promotion to that position, the aim of which, it must be recalled, is to safeguard health. The prince must therefore have faith, and pay attention to the advice that, from time to time and according to need, the doctor will offer him. It will not be idle at this point to quote part of a long formula mentioned by Cassiodoro used by the Gothic kings in the investiture of their court physicians, at a time when, having conquered some Italian states, their barbarian origins had been softened.

“In the palace feel completely free, go where others do not normally go, if not paying a very high price. While all obey as subjects, you, respecting your prince, offer him your remedies. You are also permitted to torment us with fasts, to hold opinions contrary to ours, to prescribe, from the height of your position, for the good of
our health, all that we may oppose. Finally, know that you have a power over us that we do not have over others."

This was the kind of authority that the kings of the past, having their own health at heart, granted their doctors. The princes of our day should draw inspiration from this to relate better to their doctors, considering them not so much subjects but, as the saying goes, members of the family. They ought to encourage frank daily discussions uninfluenced by their own authority, even at times when their state of health is perfect, so as to avoid the crisis that would ensue in case of illness, when they would find themselves from one moment to the next having to comply with strict prescriptions. It is true that if a doctor is not used to regular meetings with his prince, if he does not find in him due favour, nor dares to offer a word except in response to a question from the prince, then when it becomes necessary to note or assert something, he will not feel free to do so and will remain silent.

Thus it is clear that the doctor will have greater power in absolving his duties, not neglecting anything of importance for the health of the prince, if he knows that he can speak with great freedom and that his advice is well heeded both in good and poor health. He therefore needs uncommon wisdom and must pay attention, especially if respected and treated favourably by the prince, to not feel indispensable as was the case with Jacques de Gotries, court physician to Louis XI, king of France, according to Philippe de Comines. That doctor not only thought himself indispensable to his king but, knowing that the king had a great fear of death, made him understand in very crude fashion that if he were ever to send him from the court, there would be no hope for his health. The author adds that, although he was used to rudely addressing the king as if he were his servant, he was shown more and more favour, to the point of receiving a fee of 10,000 silver coins (scudi) a month, and his tyranny over his master became more and more stern and unbearable. In the end he convinced him that without his services he would not have been able to survive even eight days.

"Favour", claims a comic poet, "makes the servant loyal", but often it also makes him insolent and unsatisfied with his lot. The words in Plutarch's Apothebemata, addressed by King Antigono to his doctor to censure his avarice, are very relevant. The king had been wounded in battle and suffered fractures to the clavicle and, in the
course of the treatment, his doctor continued to ask for payment, such as to be in keeping with royal generosity. At a certain point the king turned to him, knowingly saying "Ask for all that you wish, given that you have a knife hidden up your sleeve". A doctor who too often asks for too much reward and too many favours from his prince almost always ends up with his authority and the respect accorded him diminished; in so doing he shows insatiable greed and, furthermore, almost always puts his good fortune into question. Indeed, it is likely that he would obtain more if he did not himself place limits on the generosity of the court. On this Horace aptly points out that, "Hiding one's own needs from the king pays better than displaying them, and there is a big difference between taking with a sense of moderation and plundering".

So a doctor destined to take on such a responsibility, whether it is to be exercised at court or in army camp, must persuade himself to direct all his efforts to a dual task. The first is to offer his prince total care whenever he falls ill so that, resorting to the most suitable remedies, he is returned to health. The other is to be exercised when the prince is in good health and consists of assiduously doing his utmost to preserve it. The latter task is neglected by most physicians who generally, having been called to the bed of the sick and offered the appropriate care, restrict themselves to giving some advice for recovery and going away on receipt of their fee. The person who has taken on the role of court physician and visits the prince daily to offer his services must carefully study whether his state of health is as it should be by evaluating his appearance, his voice and his humour, and comparing the situation of one day with that of another. This is because the state of health is presented very dynamically and, as the philosophers assert, is subject to positive and negative fluctuations. It is necessary, therefore, to decide whether such a state is stationary, or whether it improves or deteriorates. While a normal doctor fulfils his duty by formulating a prognosis, whether this is propitious or not, the court physician has the responsibility of precisely predicting, and for this ought to be praised, that the health of the prince is in danger and that he is slowly heading toward a state of illness. Given that he must take care of maintaining the health of the prince, the court physician's main task must be careful observation of his prince's bodily constitution, so as to establish whether it is robust by nature, or became
so in his early years, or is frail; along with the study of his physical characteristics, his mood and how much this departs from the normal, or optimum condition, according to the rule that doctors name after Polyclitus. The speed of reflexes and the main organs subject to emotional stimulus must also be examined. It will also be useful to know whether his parents were healthy and robust and whether there were any family illnesses in his family history; those that remain dormant for centuries and then, due to inheritance, are passed on and come out in the descendants.

"Much of the father and mother spills over into the children, and the grandfather is remade in the distant grandson".

All these things must be carefully observed as they can considerably enlighten the doctor and help him to keep the health of his prince in its natural state and also to predict and check all that which could threaten or alter it, even only a little. The same doctor must also take a close interest, as in with other patients, in the reactions of the prince to whom he offers his services – if he does not want to personally discover the level of commitment and assistance necessary if he is forced to stay in bed and is struck by some acute illness or chronic pathology such as the torture of gout or kidney stones. He may continue to complain, to make constant requests and, convinced of the uselessness of medicine, often utter words that are not at all pleasant.

If the prince has his health at heart, which in the end is the most precious thing in the world for a man, whoever he is, it will be important that he follows the advice of the doctor and has faith in him, whether it is a case of maintaining his health or curing an illness. While health is indeed the thing most dear to the poor, and this is shown by experience every day, it must also, with greater reason and more than any other thing, be dear to the prince, who, being above all others, and not lacking anything, is respected and obeyed like a divinity by all his subjects. He should essentially not have anything else to desire apart from the health to fully enjoy all his advantages. What Pindar wrote in the Olympians regarding health certainly applies more to a prince than any other mortal: "Psaumide, he who has health and sufficient fame and fortune is tempted to become a God".

It is pleasing to quote the fine Italian translation that Aloisio Adimari, the renowned Florentine poet, made of these lines:
Che quel che sano i giorni estremi vede
E con ricchezze onestamente riede
Cinto di fama a saettar l'oblio
Non brami più, nè cerchi esser un Dio.

May he who sees his last days healthy
And with riches modestly returns
Surrounded by fame to illuminate oblivion
No longer yearning or seeking to be a God.
No age like the present one has managed to better understand the characteristics of the air and the influence it has on living beings; so, starting from that knowledge, it is necessary to establish and put into practice firm rules to safeguard health.

The condition of man is such that, having left the maternal uterus after a stay of nine months during which the amniotic fluid played the part of the air, once he has drawn breath he cannot do without air for as long as he lives. Inhaling and exhaling is an important physiological need such that, although the organism can fast for several days, it can survive without air for only a very short time. The ancient philosophers have handed down limited knowledge on the characteristics of air and its astounding properties, but much more plentiful and scientific information has recently been provided by naturalist researchers. Boyle's apparatus, for example, shows that air can easily be compressed and expanded, and that, when it is powerfully compressed, as if imprisoned, it reacts violently displaying its true nature. The "pneumatic explosion" demonstrates the same phenomenon: compressed air explodes with great force and noise in the same way as gunpowder. Many instruments have been invented to study and demonstrate the various properties of air, such as the thermometer, the barometer, the hygrometer and the wind-gauge (anemometer); the very lucid Christian Wolff has published *Aerometria*, a truly excellent work, in which all one could want to know about air may be read. Going back to our subject, we shall look at what the relations are between air and health. The main role assigned by doctors to the air that surrounds us is that of moderating the overheated blood in the lungs by inhalation.
According to this theory, the air, saturated with nitrous particles, with the lungs acting as bellows, increases rather than neutralizes the heat found in the blood. It can be demonstrated experimentally that air is the origin and also nourishes the fermentation of our organism and of all fluids. If, at the time of the grape harvest, some recently squeezed must is kept in a hermetically sealed glass container, after many months it will be found to have retained its flavour. So it is no wonder that the air that surrounds us has such an influence on our organism. Indeed, it penetrates to the inside of the organs by way of the mouth and mixes with the blood; it can also reach the veins from outside through the pores of the skin. This is precisely why Hippocrates in his book *On Airs* defined "the air the cause and arbiter of all that happens in our organism". Indeed, comparing the alterations caused in the human organism by the air with those caused by foods and other non-natural agents, it is found that the former, those induced by the air, are incomparably more numerous and profound than the others; in fact, the air that surrounds us continually ensnares us from inside and out. "Our body is now subject to cold, now to heat, and is weakened by these sudden changes in temperature".

On the basis of what has been said, it is right that the physician entrusted with the health of a prince should find out what his master's real temperament is, whatever it may be, using the most suitable instruments. It must be considered that health can be maintained at any temperature, though this certainly should not depart greatly from the average, where the prince spends most of his time, provided his temperament is reactive and capable of a process of adjustment. The purest air is unanimously recommended, as it is most suited to the fermentation and circulation of the blood and the generation of animal vigour. However, some people, according to temperament, may require a denser air, others a thinner air, such that at times it will be necessary for those who are sickly to move from a place where the air is healthy and thin to places where it is thick and dense; as Celsus says "The air that causes illness is very bad", and, on the contrary, that which makes one feel well is excellent. "In nature, some beings feel better in winter than in summer, others, on the contrary, feel better in summer than in winter"; the same thing must be true for men. There are those who are well in places where the air is dense and poorly where it is thin, and vice
versa. This is why princes usually have palaces in different places, some on the plain and others in the hills, and they go to one or the other according to their needs, the season and the need to improve their state of health. This is why the Pope has two grand palaces in Rome, the Quirinale and the Vatican, each distinguished by a different air and climate because of its different location; the Pope normally stays in the Vatican in winter and the Quirinale in summer. On this matter it seems opportune to observe that, especially in Italy, most of the palaces of princes actually are built in the less healthy parts of the city, far from the market and from where people gather. I think this is because the original builders of these palaces were more inspired by the delight, the convenience, and the beauty of the site and by expansive gardens, than by the needs of health. It is easy to note how the air that is breathed within the confines of cities is unhealthy because of the presence of drains into which every kind of filth is poured. Those who live near these places must be more subject than others to illnesses caused by blocked transpiration, which is not caused by anything as much as by air saturated in toxic fumes. As Santorio shows in his Statica, the surrounding air obstructing the cutaneous and glandular pores with consequent alteration of skin transpiration causes damage to the combined humours of the blood and to the intestines. The observations made by Hippocrates, in the first book of The Epidemics, regarding the case of Filisco, must also be remembered: "Filisco lived near the walls. He went to bed; the first day acute fever..." Mercurial, commenting on this clinical story, emphasizes how that note of Hippocrates on the place where the sick man lay was not made casually. His intention was to advise doctors to treat those sick people who live in places with such characteristics more carefully, as they are more often struck by malign fevers.

Hippocrates takes up the same idea in his eighth story of Erasmus: "Erasmus, who lived near the Boota stream, was assailed by a powerful fever after dining". In the course of five years spent in Modena, I was also able to observe, during summer and then during the following autumn, the epidemic nature of the malign, tertiary, intermittent fevers that struck those who lived near the city walls, while those who lived in the more central parts inside the walls of the same city were spared. In order to enjoy optimum health it is therefore very important to live where the air is more pure and free
of pollutants. Where there is pure air, without exhalations and dust, transpiration, which is so necessary for health, occurs more easily and more effectively and all the functions of the organism are more readily activated, unlike when there is denser, humid air. Princes usually have stables and racecourses built luxuriously near their palaces where one can see hundreds of well-groomed and tended horses in perfect order and an expenditure of resources that clearly demonstrates the magnificence of the prince. This was what the stables of the Latin king spoken of by Virgil were like, where “three hundred sleek horses, eat at the high feeding troughs”.

The grooms normally mount up the dung and litters in big heaps not far from the stables where, standing for months, they begin to putrefy and, when taken out of the city, give off mephitic exhalations that circulate not only in the palace but also in all the local environs. So it would be better if, rather than heaping up this kind of waste, it were moved elsewhere daily so that on its removal it would not pollute the air and thus cause serious illnesses.

Some think it paradoxical that the barometer drops more when the north wind blows with fair weather than the rainy south wind. Borelli must have made a mistake on this question in his book on natural movements in relation to gravity. He thought to demonstrate, by theory rather than experiment, that the mercury rises in the capillary tube when it is rainy and falls when fine weather returns; this is a problem that has engaged many minds in search of the right interpretation. On this question, I carried on an argument with Schelhamer, professor at Kiel University, and for its solution wrote in the current year a letter to the distinguished Lucas Schroekius, president of the so-called Society of Those Curious about Nature.

I believe that the rainy southern breeze reduces transpiration not so much because it blocks the cutaneous pores, as the fact that, the atmosphere being lighter, less compression is caused both inside and outside the organism, with a consequent relaxation of the fibres. But when the weather is clear and the north wind blows, the atmosphere is heavier and keeps the fibres tense. Precisely because they are more tense and active, they favour the circulation of the blood, which in turn is able to increase transpiration through the skin. It must thus be understood why “the winds of the south cause headache, induce deafness and languor and cloud the vision”, precisely as Hippocrates says, believing that the light
The health of princes. At high altitude, the atmosphere causes less compression, with the consequence that the fibres are more slack, the bloodstream slower and transpiration more difficult. Such effects cease if the atmosphere becomes heavy with the return of fine weather. The extent to which correct, moderate compression of the air is necessary, not only to maintain health, but also for survival, is well demonstrated by the pneumatic machine. Indeed, in the absence of air, animals die and liquids are made less dense. This is why pulmonary respiration is more difficult at the top of the highest mountains, where the pressure is lower and thus the column of air rarefied.

The hypothesis advanced by some commentators on Hippocrates, according to which his obscure term *to thion* refers to the air, is not without reason. Indeed, there is something of the divine and unknown to us in the air if, after the numerous philosophers who up to the present have been concerned with studying its nature, there is still material to which others may apply their minds. On these subjects the physician appointed to safeguard the health of the prince must apply prudence and research, having not only to gain knowledge of the nature of the air he breathes, but also to harmonise this with his temperament and procure for him the right transpiration in relation to whether his organism is robust or frail. The advantages of such a procedure were known, before all others, to Hippocrates, who speaks of them in the following terms in his book Greek or Latin (On Aliments): "Those who have freer transpiration are more frail and at the same time more healthy and recover more easily from illnesses; in contrast, those who have more difficulty transpiring are more robust yet, in the event of illness, recover less speedily".

Hippocrates' words, saying those who have good skin transpiration are healthier and at the same time more frail, must be emphasized. The reason must lie in the fact that, in the case of those with freer transpiration, not only the residues of the third stage of digestion, but also a large part of the elements introduced with the food are discharged together from the glands through the excretory ducts whose orifices are in the skin, and so they are more frail than those with less efficient transpiration and yet recover more quickly. On the contrary, those who have a thicker skin are more robust, but are also more prone to illness. That is why athletes, more concerned at showing off their strength and vitality than staying in
Bernardino Ramazzini. Works

good health, had the habit of going from a hot bath to a cold one in order to be able to call on greater strength in the fight. This was because the blood and vigour brought to the skin and the pores by the heat of the former were kept in by the latter, intended to close the pores and increase the capacity of the sinews and muscles. As it is better that a prince is healthy and less subject to illness, albeit frail rather than robust, and has sufficient energy to be able to fulfil his natural functions; and as there is nothing that can alter the transpiration like cold, especially if sudden, his physician should be on the lookout for sudden changes in temperature when moving from a hot place to a cold one, as these so often underlie illnesses. The physician must then advise his prince absolutely not to expose himself to cold, humid air to ensure that he does not procure a sudden contraction of the cutaneous pores, so dangerous for health. Princes who go hunting in autumn and winter should be advised to do so when the weather is clear rather than when the north wind blows and it rains steadily. The south wind, which alters the transpiration as it induces a relaxation of the fibres, as mentioned above, is also to be avoided. To reduce the difficulties of convincing the prince of what is useful for his health, it will be wise for doctors to convince themselves of the need to possess barometers, hygrometers, wind-gauges and other instruments of this kind among their most valuable items so that they themselves may note the effect of sudden changes of weather on the atmosphere and observe how the mercury falls in the barometer tube announcing rain and how, rising again, it announces the return of fine weather when the north wind blows. As the great Boyle has shown in his experiments, variations in atmospheric pressure may be gauged more precisely if water is used in place of mercury in the barometer. Princes must be convinced that during the winter they must avoid exposing themselves to the morning cold, remaining rather quietly in bed, which is generally not difficult to achieve. It will then be necessary to convince them that during the summer they rise with the sun to breathe a sweeter air and contrast the high temperature of the blood. This, however, is not so easy to achieve, as most princes usually make the night day, living their active life during the night and abandoning themselves to sleep during the day.

Thus the air, taking into account its variability, is very important for maintaining health. Indeed, air is called the spirit of fire, as the
latter cannot exist in its absence, so when it is pure, serene and enriched with nitrous particles, it represents the spirit and life of the vital heat contained in the blood, but when it is infected and polluted, it leads to death and extinction.

In order to safeguard the health of the prince, it will be important to note in advance the signs of an onset of an epidemic disease and decide whether or not this is caused by some alteration in the air or by spoilt food, as may be the case with fruit and wine. If it is the former, the doctor may advise the prince to move to a more salubrious place where the air is not suspect. Attention must also be paid to some pustular pathologies, precisely when they begin to spread among children, and decide whether they may have been due to an alteration in the air. Cutaneous disease is often associated with other epidemics, such as malign fevers and dysentery, as I have been able to observe on more than one occasion. These are the general precepts that I believe ought to be mentioned on the subject, but there are others that apply to the whole population and regard age, temperament, season, country, and living habits. Experience then comes into this and, thus, the preference given to a certain type of air that, as has been shown, is more suited to health; as I have had cause to say above, “The air that causes illness is very bad”.

Pietro Damiano da Ravenna, the ecclesiastical author, recalls how, living in Rome with Pope Nicolas II and almost always feverish and feeling unwell, he pleaded with the Supreme Pontiff to be allowed to return to Ravenna. But the latter, to whom Pietro was evidently very dear, being famous for his moral rectitude and no less for his doctrine, did not intend granting this request and replied that the air in Ravenna was not only worse than that of Rome, but that in all the country he would not have found healthier water. Pietro Damiano, feverish and despairing of being able to leave, wrote the following lines on Rome: “Rome you prostrate bodies and consume them, you who produce fatal fevers that doggedly attack the body, and moreover, never leave it all life long”.

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