



THE CITY OF THE SUN

TOMMASO CAMPANELLA

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A Poetical Dialogue between a Grandmaster of the Knights Hospitallers and a Genoese Sea-Captain, his guest.

G.M. Prithee, now, tell me what happened to you during that voyage?

Capt. I have already told you how I wandered over the whole earth. In the course of my journeying I came to Taprobane, and was compelled to go ashore at a place, where through fear of the inhabitants I remained in a wood. When I stepped out of this I found myself on a large plain immediately under the equator.

G.M. And what befell you here?

Capt. I came upon a large crowd of men and armed women, many of whom did not understand our language, and they conducted me forthwith to the City of the Sun.

G.M. Tell me after what plan this city is built and how it is governed.

Capt. The greater part of the city is built upon a high hill, which rises from an extensive plain, but several of its circles extend for some distance beyond the base of the hill, which is of such a size that the diameter of the city is upward of two miles, so that its circumference becomes about seven. On account of the humped shape of the mountain, however, the diameter of the city is really more than if it were built on a plain.

It is divided into seven rings or huge circles named from the seven planets, and the way from one to the other of these is by four streets and through four gates, that look toward the four points of the compass. Furthermore, it is so built that if the first circle were stormed, it would of necessity entail a double amount of energy to storm the second; still more to storm the third; and in each succeeding case the strength and energy would have to be doubled; so that he who wishes to capture that city must, as it were, storm it seven times. For my own part, however, I think that not even the first wall

could be occupied, so thick are the earthworks and so well fortified is it with breastworks, towers, guns, and ditches.

When I had been taken through the northern gate (which is shut with an iron door so wrought that it can be raised and let down, and locked in easily and strongly, its projections running into the grooves of the thick posts by a marvellous device), I saw a level space seventy paces¹ wide between the first and second walls. From hence can be seen large palaces, all joined to the wall of the second circuit in such a manner as to appear all one palace. Arches run on a level with the middle height of the palaces, and are continued round the whole ring. There are galleries for promenading upon these arches, which are supported from beneath by thick and well-shaped columns, enclosing arcades like peristyles, or cloisters of an abbey.

But the palaces have no entrances from below, except on the inner or concave partition, from which one enters directly to the lower parts of the building. The higher parts, however, are reached by flights of marble steps, which lead to galleries for promenading on the inside similar to those on the outside. From these one enters the higher rooms, which are very beautiful, and have windows on the concave and convex partitions. These rooms are divided from one another by richly decorated walls. The convex or outer wall of the ring is about eight spans thick; the concave, three; the intermediate walls are one, or perhaps one and a half. Leaving this circle one gets to the second plain, which is nearly three paces narrower than the first. Then the first wall of the second ring is seen adorned above and below with similar galleries for walking, and there is on the inside of it another interior wall enclosing palaces. It has also similar peristyles supported by columns in the lower part, but above are excellent pictures, round the ways into the upper houses. And so on afterward through similar spaces and double walls, enclosing palaces, and adorned with galleries for walking, extending along their outer side, and supported by columns, till the last circuit is reached, the way being still over a level plain.

But when the two gates, that is to say, those of the outmost and the inmost walls, have been passed, one mounts by means of steps so formed

¹ A pace was 1-9/25 yard, 1,000 paces making a mile.

that an ascent is scarcely discernible, since it proceeds in a slanting direction, and the steps succeed one another at almost imperceptible heights. On the top of the hill is a rather spacious plain, and in the midst of this there rises a temple built with wondrous art.

G.M. Tell on, I pray you! Tell on! I am dying to hear more.

Capt. The temple is built in the form of a circle; it is not girt with walls, but stands upon thick columns, beautifully grouped. A very large dome, built with great care in the centre or pole, contains another small vault as it were rising out of it, and in this is a spiracle, which is right over the altar. There is but one altar in the middle of the temple, and this is hedged round by columns. The temple itself is on a space of more than 350 paces. Without it, arches measuring about eight paces extend from the heads of the columns outward, whence other columns rise about three paces from the thick, strong, and erect wall. Between these and the former columns there are galleries for walking, with beautiful pavements, and in the recess of the wall, which is adorned with numerous large doors, there are immovable seats, placed as it were between the inside columns, supporting the temple. Portable chairs are not wanting, many and well adorned. Nothing is seen over the altar but a large globe, upon which the heavenly bodies are painted, and another globe upon which there is a representation of the earth. Furthermore, in the vault of the dome there can be discerned representations of all the stars of heaven from the first to the sixth magnitude, with their proper names and power to influence terrestrial things marked in three little verses for each. There are the poles and greater and lesser circles according to the right latitude of the place, but these are not perfect because there is no wall below. They seem, too, to be made in their relation to the globes on the altar. The pavement of the temple is bright with precious stones. Its seven golden lamps hang always burning, and these bear the names of the seven planets.

At the top of the building several small and beautiful cells surround the small dome, and behind the level space above the bands or arches of the exterior and interior columns there are many cells, both small and large, where the priests and religious officers dwell to the number of forty-nine.

A revolving flag projects from the smaller dome, and this in what quarter the wind is. The flag is marked with figures up to thirty-six, and the priests know what sort of year the different kinds of winds bring and what will be the changes of weather on land and sea. Furthermore, under the flag a book is always kept written with letters of gold.

G.M. I pray you, worthy hero, explain to me their whole system of government; for I am anxious to hear it.

Capt. The great ruler among them is a priest whom they call by the name Hoh, though we should call him Metaphysic. He is head over all, in temporal and spiritual matters, and all business and lawsuits are settled by him, as the supreme authority. Three princes of equal power -viz., Pon, Sin, and Mor - assist him, and these in our tongue we should call Power, Wisdom, and Love. To Power belongs the care of all matters relating to war and peace. He attends to the military arts, and, next to Hoh, he is ruler in every affair of a warlike nature. He governs the military magistrates and the soldiers, and has the management of the munitions, the fortifications, the storming of places, the implements of war, the armories, the smiths and workmen connected with matters of this sort.

But Wisdom is the ruler of the liberal arts, of mechanics, of all sciences with their magistrates and doctors, and of the discipline of the schools. As many doctors as there are, are under his control. There is one doctor who is called Astrologus; a second, Cosmographus; a third, Arithmeticus; a fourth, Geometra; a fifth, Historiographus; a sixth, Poeta; a seventh, Logicus; an eighth, Rhetor; a ninth, Grammaticus; a tenth, Medicus; an eleventh, Physiologus; a twelfth, Politicus; a thirteenth, Moralis. They have but one book, which they call Wisdom, and in it all the sciences are written with conciseness and marvellous fluency of expression. This they read to the people after the custom of the Pythagoreans. It is Wisdom who causes the exterior and interior, the higher and lower walls of the city to be adorned with the finest pictures, and to have all the sciences painted upon them in an admirable manner. On the walls of the temple and on the dome, which is let down when the priest gives an address, lest the sounds of his voice, being scattered, should fly away from his audience, there are pictures of

stars in their different magnitudes, with the powers and motions of each, expressed separately in three little verses.

On the interior wall of the first circuit all the mathematical figures are conspicuously painted -figures more in number than Archimedes or Euclid discovered, marked symmetrically, and with the explanation of them neatly written and contained each in a little verse. There are definitions and propositions, etc. On the exterior convex wall is first an immense drawing of the whole earth, given at one view. Following upon this, there are tablets setting forth for every separate country the customs both public and private, the laws, the origins and the power of the inhabitants; and the alphabets the different people use can be seen above that of the City of the Sun.

On the inside of the second circuit, that is to say of the second ring of buildings, paintings of all kinds of precious and common stones, of minerals and metals, are seen; and a little piece of the metal itself is also there with an apposite explanation in two small verses for each metal or stone. On the outside are marked all the seas, rivers, lakes, and streams which are on the face of the earth; as are also the wines and the oils and the different liquids, with the sources from which the last are extracted, their qualities and strength. There are also vessels built into the wall above the arches, and these are full of liquids from one to 300 years old, which cure all diseases. Hail and snow, storms and thunder, and whatever else takes place in the air, are represented with suitable figures and little verses. The inhabitants even have the art of representing in stone all the phenomena of the air, such as the wind, rain, thunder, the rainbow, etc.

On the interior of the third circuit all the different families of trees and herbs are depicted, and there is a live specimen of each plant in earthenware vessels placed upon the outer partition of the arches. With the specimens there are explanations as to where they were first found, what are their powers and natures, and resemblances to celestial things and to metals, to parts of the human body and to things in the sea, and also as to their uses in medicine, etc. On the exterior wall are all the races of fish found in rivers, lakes, and seas, and their habits and values, and ways of breeding, training, and living, the purposes for which they exist in the world, and their

uses to man. Further, their resemblances to celestial and terrestrial things, produced both by nature and art, are so given that I was astonished when I saw a fish which was like a bishop, one like a chain, another like a garment, a fourth like a nail, a fifth like a star, and others like images of those things existing among us, the relation in each case being completely manifest. There are sea-urchins to be seen, and the purple shell-fish and mussels; and whatever the watery world possesses worthy of being known is there fully shown in marvellous characters of painting and drawing.

On the fourth interior wall all the different kinds of birds are painted, with their natures, sizes, customs, colors, manner of living, etc.; and the only real phoenix is possessed by the inhabitants of this city. On the exterior are shown all the races of creeping animals, serpents, dragons, and worms; the insects, the flies, gnats, beetles, etc., in their different states, strength, venoms, and uses, and a great deal more than you or I can think of.

On the fifth interior they have all the larger animals of the earth, as many in number as would astonish you. We indeed know not the thousandth part of them, for on the exterior wall also a great many of immense size are also portrayed. To be sure, of horses alone, how great a number of breeds there is and how beautiful are the forms there cleverly displayed!

On the sixth interior are painted all the mechanical arts, with the several instruments for each and their manner of use among different nations. Alongside, the dignity of such is placed, and their several inventors are named. But on the exterior all the inventors in science, in warfare, and in law are represented. There I saw Moses, Osiris, Jupiter, Mercury, Lycurgus, Pompilius, Pythagoras, Zamolxis, Solon, Charondas, Phoroneus, with very many others. They even have Mahomet, whom nevertheless they hate as a false and sordid legislator. In the most dignified position I saw a representation of Jesus Christ and of the twelve Apostles, whom they consider very worthy and hold to be great. Of the representations of men, I perceived Caesar, Alexander, Pyrrhus, and Hannibal in the highest place; and other very renowned heroes in peace and war, especially Roman heroes, were painted in lower positions, under the galleries. And when I asked with astonishment whence they had obtained our history, they told me that among them there was a knowledge of all languages, and that by

perseverance they continually send explorers and ambassadors over the whole earth, who learn thoroughly the customs, forces, rule and histories of the nations, bad and good alike. These they apply all to their own republic, and with this they are well pleased. I learned that cannon and typography were invented by the Chinese before we knew of them. There are magistrates who announce the meaning of the pictures, and boys are accustomed to learn all the sciences, without toil and as if for pleasure; but in the way of history only until they are ten years old.

Love is foremost in attending to the charge of the race. He sees that men and women are so joined together, that they bring forth the best offspring. Indeed, they laugh at us who exhibit a studious care for our breed of horses and dogs, but neglect the breeding of human beings. Thus the education of the children is under his rule. So also is the medicine that is sold, the sowing and collecting of fruits of the earth and of trees, agriculture, pasturage, the preparations for the months, the cooking arrangements, and whatever has any reference to food, clothing, and the intercourse of the sexes. Love himself is ruler, but there are many male and female magistrates dedicated to these arts.

Metaphysic, then, with these three rulers, manages all the above-named matters, and even by himself alone nothing is done; all business is discharged by the four together, but in whatever Metaphysic inclines to the rest are sure to agree.

G.M. Tell me, please, of the magistrates, their services and duties, of the education and mode of living, whether the government is a monarchy, a republic, or an aristocracy.

Capt. This race of men came there from India, flying from the sword of the Magi, a race of plunderers and tyrants who laid waste their country, and they determined to lead a philosophic life in fellowship with one another. Although the community of wives is not instituted among the other inhabitants of their province, among them it is in use after this manner: All things are common with them, and their dispensation is by the authority of the magistrates. Arts and honors and pleasures are common, and are held in such a manner that no one can appropriate anything to himself.

They say that all private property is acquired and improved for the reason that each one of us by himself has his own home and wife and children. From this, self-love springs. For when we raise a son to riches and dignities, and leave an heir to much wealth, we become either ready to grasp at the property of the State, if in any case fear should be removed from the power which belongs to riches and rank; or avaricious, crafty, and hypocritical, if anyone is of slender purse, little strength, and mean ancestry. But when we have taken away self-love, there remains only love for the State.

G.M. Under such circumstances no one will be willing to labor, while he expects others to work, on the fruit of whose labors he can live, as Aristotle argues against Plato.

Capt. I do not know how to deal with that argument, but I declare to you that they burn with so great a love for their fatherland, as I could scarcely have believed possible; and indeed with much more than the histories tell us belonged to the Romans, who fell willingly for their country, inasmuch as they have to a greater extent surrendered their private property. I think truly that the friars and monks and clergy of our country, if they were not weakened by love for their kindred and friends or by the ambition to rise to higher dignities, would be less fond of property, and more imbued with a spirit of charity toward all, as it was in the time of the apostles, and is now in a great many cases.

G.M. St. Augustine may say that, but I say that among this race of men, friendship is worth nothing, since they have not the chance of conferring mutual benefits on one another.

Capt. Nay, indeed. For it is worth the trouble to see that no one can receive gifts from another. Whatever is necessary they have, they receive it from the community, and the magistrate takes care that no one receives more than he deserves. Yet nothing necessary is denied to anyone. Friendship is recognized among them in war, in infirmity, in the art contests, by which means they aid one another mutually by teaching. Sometimes they improve themselves mutually with praises, with conversation, with actions, and out of the things they need. All those of the same age call one another brothers. They call all over twenty-two years of age, fathers; those that are less than

twenty-two are named sons. Moreover, the magistrates govern well, so that no one in the fraternity can do injury to another.

G.M. And how?

Capt. As many names of virtues as there are among us, so many magistrates there are among them. There is a magistrate who is named Magnanimity, another Fortitude, a third Chastity, a fourth Liberality, a fifth Criminal and Civil Justice, a sixth Comfort, a seventh Truth, an eighth Kindness, a tenth Gratitude, an eleventh Cheerfulness, a twelfth Exercise, a thirteenth Sobriety, etc. They are elected to duties of that kind, each one to that duty for excellence in which he is known from boyhood to be most suitable. Wherefore among them neither robbery nor clever murders, nor lewdness, incest, adultery, or other crimes of which we accuse one another, can be found. They accuse themselves of ingratitude and malignity when anyone denies a lawful satisfaction to another of indolence, of sadness, of anger, of scurrility, of slander, and of lying, which curseful thing they thoroughly hate. Accused persons undergoing punishment are deprived of the common table, and other honors, until the judge thinks that they agree with their correction.

G.M. Tell me the manner in which the magistrates are chosen.

Capt. You would not rightly understand this, unless you first learned their manner of living. That you may know, then, men and women wear the same kind of garment, suited for war. The women wear the toga below the knee, but the men above; and both sexes are instructed in all the arts together. When this has been done as a start, and before their third year, the boys learn the language and the alphabet on the walls by walking round them. They have four leaders, and four elders, the first to direct them, the second to teach them, and these are men approved beyond all others. After some time they exercise themselves with gymnastics, running, quoits, and other games, by means of which all their muscles are strengthened alike. Their feet are always bare, and so are their heads as far as the seventh ring. Afterward they lead them to the offices of the trades, such as shoemaking, cooking, metal-working, carpentry, painting, etc. In order to find out the bent of the genius of each one, after their seventh year, when they have

already gone through the mathematics on the walls, they take them to the readings of all the sciences; there are four lectures at each reading, and in the course of four hours the four in their order explain everything.

For some take physical exercise or busy themselves with public services or functions, others apply themselves to reading. Leaving these studies all are devoted to the more abstruse subjects, to mathematics, to medicine, and to other sciences. There are continual debate and studied argument among them, and after a time they become magistrates of those sciences or mechanical arts in which they are the most proficient; for everyone follows the opinion of his leader and judge, and goes out to the plains to the works of the field, and for the purpose of becoming acquainted with the pasturage of the dumb animals. And they consider him the more noble and renowned who has dedicated himself to the study of the most arts and knows how to practise them wisely. Wherefore they laugh at us in that we consider our workmen ignoble, and hold those to be noble who have mastered no pursuit, but live in ease and are so many slaves given over to their own pleasure and lasciviousness; and thus, as it were, from a school of vices so many idle and wicked fellows go forth for the ruin of the State.

The rest of the officials, however, are chosen by the four chiefs, Hoh, Pon, Sin and Mor, and by the teachers of that art over which they are fit to preside. And these teachers know well who is most suited for rule. Certain men are proposed by the magistrates in council, they themselves not seeking to become candidates, and he opposes who knows anything against those brought forward for election, or, if not, speaks in favor of them. But no one attains to the dignity of Hoh except him who knows the histories of the nations, and their customs and sacrifices and laws, and their form of government, whether a republic or a monarchy. He must also know the names of the lawgivers and the inventors in science, and the laws and the history of the earth and the heavenly bodies. They think it also necessary that he should understand all the mechanical arts, the physical sciences, astrology and mathematics. Nearly every two days they teach our mechanical art. They are not allowed to overwork themselves, but frequent practice and the paintings render learning easy to them. Not too much care is given to the cultivation of languages, as they have a goodly number of

interpreters who are grammarians in the State. But beyond everything else it is necessary that Hoh should understand metaphysics and theology; that he should know thoroughly the derivations, foundations, and demonstrations of all the arts and sciences; the likeness and difference of things; necessity, fate, and the harmonies of the universe; power, wisdom, and the love of things and of God; the stages of life and its symbols; everything relating to the heavens, the earth, and the sea; and the ideas of God, as much as mortal man can know of him. He must also be well read in the prophets and in astrology. And thus they know long beforehand who will be Hoh. He is not chosen to so great a dignity unless he has attained his thirty-fifth year. And this office is perpetual, because it is not known who may be too wise for it or who too skilled in ruling.

G.M. Who indeed can be so wise? If even anyone has a knowledge of the sciences it seems that he must be unskilled in ruling.

Capt. This very question I asked them and they replied thus: "We, indeed, are more certain that such a very learned man has the knowledge of governing, than you who place ignorant persons in authority, and consider them suitable merely because they have sprung from rulers or have been chosen by a powerful faction. But our Hoh, a man really the most capable to rule, is for all that never cruel nor wicked, nor a tyrant, inasmuch as he possesses so much wisdom. This, moreover, is not unknown to you, that the same argument cannot apply among you, when you consider that man the most learned who knows most of grammar, or logic, or of Aristotle or any other author. For such knowledge as this of yours much servile labor and memory work are required, so that a man is rendered unskilful, since he has contemplated nothing but the words of books and has given his mind with useless result to the consideration of the dead signs of things. Hence he knows not in what way God rules the universe, nor the ways and customs of nature and the nations. Wherefore he is not equal to our Hoh. For that one cannot know so many arts and sciences thoroughly, who is not esteemed for skilled ingenuity, very apt at all things, and therefore at ruling especially. This also is plain to us that he who knows only one science, does not really know either that or the others, and he who is suited for only one science and has gathered his knowledge from books, is unlearned and unskilled. But

this is not the case with intellects prompt and expert in every branch of knowledge and suitable for the consideration of natural objects, as it is necessary that our Hoh should be. Besides in our State the sciences are taught with a facility (as you have seen) by which more scholars are turned out by us in one year than by you in ten, or even fifteen. Make trial, I pray you, of these boys."

In this matter I was struck with astonishment at their truthful discourse and at the trial of their boys, who did not understand my language well. Indeed it is necessary that three of them should be skilled in our tongue, three in Arabic, three in Polish, and three in each of the other languages, and no recreation is allowed them unless they become more learned. For that they go out to the plain for the sake of running about and hurling arrows and lances, and of firing harquebuses, and for the sake of hunting the wild animals and getting a knowledge of plants and stones, and agriculture and pasturage; sometimes the band of boys does one thing, sometimes another.

They do not consider it necessary that the three rulers assisting Hoh should know other than the arts having reference to their rule, and so they have only a historical knowledge of the arts which are common to all. But their own they know well, to which certainly one is dedicated more than another. Thus Power is the most learned in the equestrian art, in marshalling the army, in the marking out of camps, in the manufacture of every kind of weapon and of warlike machines, in planning stratagems, and in every affair of a military nature. And for these reasons, they consider it necessary that these chiefs should have been philosophers, historians, politicians, and physicists. Concerning the other two triumvirs, understand remarks similar to those I have made about Power.

G.M. I really wish that you would recount all their public duties, and would distinguish between them, and also that you would tell clearly how they are all taught in common.

Capt. They have dwellings in common and dormitories, and couches and other necessaries. But at the end of every six months they are separated by the masters. Some shall sleep in this ring, some in another; some in the first apartment, and some in the second; and these apartments are marked by

means of the alphabet on the lintel. There are occupations, mechanical and theoretical, common to both men and women, with this difference, that the occupations which require more hard work, and walking a long distance, are practised by men, such as ploughing, sowing, gathering the fruits, working at the threshing-floor, and perchance at the vintage. But it is customary to choose women for milking the cows and for making cheese. In like manner, they go to the gardens near to the outskirts of the city both for collecting the plants and for cultivating them. In fact, all sedentary and stationary pursuits are practised by the women, such as weaving, spinning, sewing, cutting the hair, shaving, dispensing medicines, and making all kinds of garments. They are, however, excluded from working in wood and the manufacture of arms. If a woman is fit to paint, she is not prevented from doing so; nevertheless, music is given over to the women alone, because they please the more, and of a truth to boys also. But the women have not the practise of the drum and the horn.

And they prepare their feasts and arrange the tables in the following manner. It is the peculiar work of the boys and girls under twenty to wait at the tables. In every ring there are suitable kitchens, barns, and stores of utensils for eating and drinking, and over every department an old man and an old woman preside. These two have at once the command of those who serve, and the power of chastising, or causing to be chastised, those who are negligent or disobedient; and they also examine and mark each one, both male and female, who excels in his or her duties.

All the young people wait upon the older ones who have passed the age of forty, and in the evening when they go to sleep the master and mistress command that those should be sent to work in the morning, upon whom in succession the duty falls, one or two to separate apartments. The young people, however, wait upon one another, and that alas! with some unwillingness. They have first and second tables, and on both sides there are seats. On one side sit the women, on the other the men; and as in the refectories of the monks, there is no noise. While they are eating a young man reads a book from a platform, intoning distinctly and sonorously, and often the magistrates question them upon the more important parts of the reading. And truly it is pleasant to observe in what manner these young

people, so beautiful and clothed in garments so suitable, attend to them, and to see at the same time so many friends, brothers, sons, fathers, and mothers all in their turn living together with so much honesty, propriety, and love. So each one is given a napkin, a plate, fish, and a dish of food. It is the duty of the medical officers to tell the cooks what repasts shall be prepared on each day, and what food for the old, what for the young, and what for the sick. The magistrates receive the full-grown and fatter portion, and they from their share always distribute something to the boys at the table who have shown themselves more studious in the morning at the lectures and debates concerning wisdom and arms. And this is held to be one of the most distinguished honors. For six days they ordain to sing with music at table. Only a few, however, sing; or there is one voice accompanying the lute and one for each other instrument. And when all alike in service join their hands, nothing is found to be wanting. The old men placed at the head of the cooking business and of the refectories of the servants praise the cleanliness of the streets, the houses, the vessels, the garments, the workshops, and the warehouses.

They wear white under-garments to which adheres a covering, which is at once coat and legging, without wrinkles. The borders of the fastenings are furnished with globular buttons, extended round and caught up here and there by chains. The coverings of the legs descend to the shoes and are continued even to the heels. Then they cover the feet with large socks, or, as it were, half-buskins fastened by buckles, over which they wear a half-boot, and besides, as I have already said, they are clothed with a toga. And so aptly fitting are the garments, that when the toga is destroyed, the different parts of the whole body are straightway discerned, no part being concealed. They change their clothes for different ones four times in the year, that is when the sun enters respectively the constellations Aries, Cancer, Libra, and Capricorn, and according to the circumstances and necessity as decided by the officer of health. The keepers of clothes for the different rings are wont to distribute them, and it is marvellous that they have at the same time as many garments as there is need for, some heavy and some slight, according to the weather. They all use white clothing, and this is washed in each month with lye or soap, as are also the workshops of

the lower trades, the kitchens, the pantries the barns, the store-houses, the armories, the refectories, and the baths.

Moreover, the clothes are washed at the pillars of the peristyles, and the water is brought down by means of canals which are continued as sewers. In every street of the different rings there are suitable fountains, which send forth their water by means of canals, the water being drawn up from nearly the bottom of the mountain by the sole movement of a cleverly contrived handle. There is water in fountains and in cisterns, whither the rain-water collected from the roofs of the houses is brought through pipes full of sand. They wash their bodies often, according as the doctor and master command. All the mechanical arts are practised under the peristyles, but the speculative are carried on above in the walking galleries and ramparts where are the more splendid paintings, but the more sacred ones are taught in the temple. In the halls and wings of the rings there are solar time-pieces and bells, and hands by which the hours and seasons are marked off.

G.M. Tell me about their children.

Capt. When their women have brought forth children, they suckle and rear them in temples set apart for all. They give milk for two years or more as the physician orders. After that time the weaned child is given into the charge of the mistresses, if it is a female, and to the masters, if it is a male. And then with other young children they are pleasantly instructed in the alphabet, and in the knowledge of the pictures, and in running, walking, and wrestling; also in the historical drawings, and in languages; and they are adorned with a suitable garment of different colors. After their sixth year they are taught natural science, and then the mechanical sciences. The men who are weak in intellect are sent to farms, and when they have become more proficient some of them are received into the State. And those of the same age and born under the same constellation are especially like one another in strength and in appearance, and hence arises much lasting concord in the State, these men honoring one another with mutual love and help. Names are given to them by Metaphysicus, and that not by chance, but designedly, and according to each one's peculiarity, as was the custom among the ancient Romans. Wherefore one is called Beautiful (Pulcher), another the Big-nosed (Naso), another the Fat-legged (Cranipes), another Crooked

(Torvus), another Lean (Macer), and so on. But when they have become very skilled in their professions and done any great deed in war or in time of peace, a cognomen from art is given to them, such as Beautiful the Great Painter (Pulcher, Pictor Magnus), the Golden One (Aureus), the Excellent One (Excellens), or the Strong (Strenuus); or from their deeds, such as Naso the Brave (Nason Fortis), or the Cunning, or the Great, or Very Great Conqueror; or from the enemy anyone has overcome, Africanus, Asiaticus, Etruscus; or if anyone has overcome Manfred or Tortelius, he is called Macer Manfred or Tortelius, and so on. All these cognomens are added by the higher magistrates, and very often with a crown suitable to the deed or art, and with the flourish of music. For gold and silver are reckoned of little value among them except as material for their vessels and ornaments, which are common to all.

G.M. Tell me, I pray you, is there no jealousy among them or disappointment to that one who has not been elected to a magistracy, or to any other dignity to which he aspires?

Capt. Certainly not. For no one wants either necessities or luxuries. Moreover, the race is managed for the good of the commonwealth, and not of private individuals, and the magistrates must be obeyed. They deny what we hold -viz., that it is natural to man to recognize his offspring and to educate them, and to use his wife and house and children as his own. For they say that children are bred for the preservation of the species and not for individual pleasure, as St. Thomas also asserts. Therefore the breeding of children has reference to the commonwealth, and not to individuals, except in so far as they are constituents of the commonwealth. And since individuals for the most part bring forth children wrongly and educate them wrongly, they consider that they remove destruction from the State, and therefore for this reason, with most sacred fear, they commit the education of the children, who, as it were, are the element of the republic, to the care of magistrates; for the safety of the community is not that of a few. And thus they distribute male and female breeders of the best natures according to philosophical rules. Plato thinks that this distribution ought to be made by lot, lest some men seeing that they are kept away from the beautiful women, should rise up with anger and hatred against the magistrates; and

he thinks further that those who do not deserve cohabitation with the more beautiful women, should be deceived while the lots are being led out of the city by the magistrates, so that at all times the women who are suitable should fall to their lot, not those whom they desire. This shrewdness, however, is not necessary among the inhabitants of the City of the Sun. For with them deformity is unknown. When the women are exercised they get a clear complexion, and become strong of limb, tall and agile, and with them beauty consists in tallness and strength. Therefore, if any woman dyes her face, so that it may become beautiful, or uses high-heeled boots so that she may appear tall, or garments with trains to cover her wooden shoes, she is condemned to capital punishment. But if the women should even desire them they have no facility for doing these things. For who indeed would give them this facility? Further, they assert that among us abuses of this kind arise from the leisure and sloth of women. By these means they lose their color and have pale complexions, and become feeble and small. For this reason they are without proper complexions, use high sandals, and become beautiful not from strength, but from slothful tenderness. And thus they ruin their own tempers and natures, and consequently those of their offspring. Furthermore, if at any time a man is taken captive with ardent love for a certain woman, the two are allowed to converse and joke together and to give one another garlands of flowers or leaves, and to make verses. But if the race is endangered, by no means is further union between them permitted. Moreover, the love born of eager desire is not known among them; only that born of friendship.

Domestic affairs and partnerships are of little account, because, excepting the sign of honor, each one receives what he is in need of. To the heroes and heroines of the republic, it is customary to give the pleasing gifts of honor, beautiful wreaths, sweet food, or splendid clothes, while they are feasting. In the daytime all use white garments within the city, but at night or outside the city they use red garments either of wool or silk. They hate black as they do dung, and therefore they dislike the Japanese, who are fond of black. Pride they consider the most execrable vice, and one who acts proudly is chastised with the most ruthless correction. Wherefore no one thinks it lowering to wait at table or to work in the kitchen or fields. All work they call discipline, and thus they say that it is honorable to go on foot, to do any act

of nature, to see with the eye, and to speak with the tongue; and when there is need, they distinguish philosophically between tears and spittle.

Every man who, when he is told off to work, does his duty, is considered very honorable. It is not the custom to keep slaves. For they are enough, and more than enough, for themselves. But with us, alas! it is not so. In Naples there exist 70,000 souls, and out of these scarcely 10,000 or 15,000 do any work, and they are always lean from overwork and are getting weaker every day. The rest become a prey to idleness, avarice, ill-health, lasciviousness, usury, and other vices, and contaminate and corrupt very many families by holding them in servitude for their own use, by keeping them in poverty and slavishness, and by imparting to them their own vices. Therefore public slavery ruins them; useful works, in the field, in military service, and in arts, except those which are debasing, are not cultivated, the few who do practise them doing so with much aversion.

But in the City of the Sun, while duty and work are distributed among all, it only falls to each one to work for about four hours every day. The remaining hours are spent in learning joyously, in debating, in reading, in reciting, in writing, in walking, in exercising the mind and body, and with play. They allow no game which is played while sitting, neither the single die nor dice, nor chess, nor others like these. But they play with the ball, with the sack, with the hoop, with wrestling, with hurling at the stake. They say, moreover, that grinding poverty renders men worthless, cunning, sulky, thievish, insidious, vagabonds, liars, false witnesses, etc.; and that wealth makes them insolent, proud, ignorant, traitors, assumers of what they know not, deceivers, boasters, wanting in affection, slanderers, etc. But with them all the rich and poor together make up the community. They are rich because they want nothing, poor because they possess nothing; and consequently they are not slaves to circumstances, but circumstances serve them. And on this point they strongly recommend the religion of the Christians, and especially the life of the apostles.

G.M. This seems excellent and sacred, but the community of women is a thing too difficult to attain. The holy Roman Clement says that wives ought to be common in accordance with the apostolic institution, and praises Plato and Socrates, who thus teach, but the Glossary interprets this community

with regard to obedience. And Tertullian agrees with the Glossary, that the first Christians had everything in common except wives.

Capt. These things I know little of. But this I saw among the inhabitants of the City of the Sun, that they did not make this exception. And they defend themselves by the opinion of Socrates, of Cato, of Plato, and of St. Clement; but, as you say, they misunderstand the opinions of these thinkers. And the inhabitants of the solar city ascribe this to their want of education, since they are by no means learned in philosophy. Nevertheless, they send abroad to discover the customs of nations, and the best of these they always adopt. Practice makes the women suitable for war and other duties. Thus they agree with Plato, in whom I have read these same things. The reasoning of our Cajetan does not convince me, and least of all that of Aristotle. This thing, however, existing among them is excellent and worthy of imitation - viz., that no physical defect renders a man incapable of being serviceable except the decrepitude of old age, since even the deformed are useful for consultation. The lame serve as guards, watching with the eyes which they possess. The blind card wool with their hands, separating the down from the hairs, with which latter they stuff the couches and sofas; those who are without the use of eyes and hands give the use of their ears or their voice for the convenience of the State, and if one has only one sense he uses it in the farms. And these cripples are well treated, and some become spies, telling the officers of the State what they have heard.

G.M. Tell me now, I pray you, of their military affairs. Then you may explain their arts, ways of life and sciences, and lastly their religion.

Capt. The triumvir, Power, has under him all the magistrates of arms, of artillery, of cavalry, of foot-soldiers, of architects, and of strategists; and the masters and many of the most excellent workmen obey the magistrates, the men of each art paying allegiance to their respective chiefs. Moreover, Power is at the head of all the professors of gymnastics, who teach military exercise, and who are prudent generals, advanced in age. By these the boys are trained after their twelfth year. Before this age, however, they have been accustomed to wrestling, running, throwing the weight, and other minor exercises, under inferior masters. But at twelve they are taught how to strike at the enemy, at horses and elephants, to handle the spear, the

sword, the arrow, and the sling; to manage the horse, to advance and to retreat, to remain in order of battle, to help a comrade in arms, to anticipate the enemy by cunning, and to conquer.

The women also are taught these arts under their own magistrates and mistresses, so that they may be able if need be to render assistance to the males in battles near the city. They are taught to watch the fortifications lest at some time a hasty attack should suddenly be made. In this respect they praise the Spartans and Amazons. The women know well also how to let fly fiery balls, and how to make them from lead; how to throw stones from pinnacles and to go in the way of an attack. They are accustomed also to give up wine unmixed altogether, and that one is punished most severely who shows any fear.

The inhabitants of the City of the Sun do not fear death, because they all believe that the soul is immortal, and that when it has left the body it is associated with other spirits, wicked or good, according to the merits of this present life. Although they are partly followers of Brahma and Pythagoras, they do not believe in the transmigration of souls, except in some cases by a distinct decree of God. They do not abstain from injuring an enemy of the republic and of religion, who is unworthy of pity. During the second month the army is reviewed, and every day there is practice of arms, either in the cavalry plain or within the walls. Nor are they ever without lectures on the science of war. They take care that the accounts of Moses, of Joshua, of David, of Judas Maccabaeus, of Caesar, of Alexander, of Scipio, of Hannibal, and other great soldiers should be read. And then each one gives his own opinion as to whether these generals acted well or ill, usefully or honorably, and then the teacher answers and says who are right.

G.M. With whom do they wage war, and for what reasons, since they are so prosperous?

Capt. Wars might never occur, nevertheless they are exercised in military tactics and in hunting, lest perchance they should become effeminate and unprepared for any emergency. Besides, there are four kingdoms in the island, which are very envious of their prosperity, for this reason that the people desire to live after the manner of the inhabitants of the City of the

Sun, and to be under their rule rather than that of their own kings. Wherefore the State often makes war upon these because, being neighbors, they are usurpers and live impiously, since they have not an object of worship and do not observe the religion of other nations or of the Brahmins. And other nations of India, to which formerly they were subject, rise up as it were in rebellion, as also do the Taprobanese, whom they wanted to join them at first. The warriors of the City of the Sun, however, are always the victors. As soon as they suffered from insult or disgrace or plunder, or when their allies have been harassed, or a people have been oppressed by a tyrant of the State (for they are always the advocates of liberty), they go immediately to the Council for deliberation. After they have knelt in the presence of God, that he might inspire their consultation, they proceed to examine the merits of the business, and thus war is decided on. Immediately after, a priest, whom they call Forensic, is sent away. He demands from the enemy the restitution of the plunder, asks that the allies should be freed from oppression, or that the tyrant should be deposed. If they deny these things war is declared by invoking the vengeance of God -the God of Sabaoth -for destruction of those who maintain an unjust cause. But if the enemy refuse to reply, the priest gives him the space of one hour for his answer, if he is a king, but three if it is a republic, so that they cannot escape giving a response. And in this manner is war undertaken against the insolent enemies of natural rights and of religion. When war has been declared, the deputy of Power performs everything, but Power, like the Roman dictator, plans and wills everything, so that hurtful tardiness may be avoided. And when anything of great moment arises he consults Hoh and Wisdom and Love.

Before this, however, the occasion of war and the justice of making an expedition are declared by a herald in the great Council. All from twenty years and upward are admitted to this Council, and thus the necessities are agreed upon. All kinds of weapons stand in the armories, and these they use often in sham fights. The exterior walls of each ring are full of guns prepared by their labors, and they have other engines for hurling which are called cannons, and which they take into battle upon mules and asses and carriages. When they have arrived in an open plain they enclose in the middle the provisions, engines of war, chariots, ladders, and machines, and

all fight courageously. Then each one returns to the standards, and the enemy thinking that they are giving and preparing to flee, are deceived and relax their order: then the warriors of the City of the Sun, wheeling into wings and columns on each side, regain their breath and strength, and ordering the artillery to discharge their bullets they resume the fight against a disorganized host. And they observe many ruses of this kind. They overcome all mortals with their stratagems and engines. Their camp is fortified after the manner of the Romans. They pitch their tents and fortify with wall and ditch with wonderful quickness. The masters of works, of engines and hurling machines, stand ready, and the soldiers understand the use of the spade and the axe.

Five, eight, or ten leaders learned in the order of battle and in strategy consult together concerning the business of war, and command their bands after consultation. It is their wont to take out with them a body of boys, armed and on horses, so that they may learn to fight, just as the whelps of lions and wolves are accustomed to blood. And these in time of danger betake themselves to a place of safety, along with many armed women. After the battle the women and boys soothe and relieve the pain of the warriors, and wait upon them and encourage them with embraces and pleasant words. How wonderful a help is this! For the soldiers, in order that they may acquit themselves as sturdy men in the eyes of their wives and offspring, endure hardships, and so love makes them conquerors. He who in the fight first scales the enemy's walls receives after the battle of a crown of grass, as a token of honor, and at the presentation the women and boys applaud loudly; that one who affords aid to an ally gets a civic crown of oak-leaves; he who kills a tyrant dedicates his arms in the temple and receives from Hoh the cognomen of his deed, and other warriors obtain other kinds of crowns.

Every horse-soldier carries a spear and two strongly tempered pistols, narrow at the mouth, hanging from his saddle. And to get the barrels of their pistols narrow they pierce the metal which they intend to convert into arms. Further, every cavalry soldier has a sword and a dagger. But the rest, who form the light-armed troops, carry a metal cudgel. For if the foe cannot pierce their metal for pistols and cannot make swords, they attack him with

clubs, shatter and overthrow him. Two chains of six spans length hang from the club, and at the end of these are iron balls, and when these are aimed at the enemy they surround his neck and drag him to the ground; and in order that they may be able to use the club more easily, they do not hold the reins with their hands, but use them by means of the feet. If perchance the reins are interchanged above the trappings of the saddle, the ends are fastened to the stirrups with buckles, and not to the feet. And the stirrups have an arrangement for swift movement of the bridle, so that they draw in or let out the rein with marvellous celerity. With the right foot they turn the horse to the left, and with the left to the right. This secret, moreover, is not known to the Tartars. For, although they govern the reins with their feet, they are ignorant nevertheless of turning them and drawing them in and letting them out by means of the block of the stirrups. The lightarmed cavalry with them are the first to engage in battle, then the men forming the phalanx with their spears, then the archers for whose services a great price is paid, and who are accustomed to fight in lines crossing one another as the threads of cloth, some rushing forward in their turn and others receding. They have a band of lancers strengthening the line of battle, but they make trial of the swords only at the end.

After the battle they celebrate the military triumphs after the manner of the Romans, and even in a more magnificent way. Prayers by the way of thank-offerings are made to God, and then the general presents himself in the temple, and the deeds, good and bad, are related by the poet or historian, who according to custom was with the expedition. And the greatest chief, Hoh, crowns the general with laurel and distributes little gifts and honors to all the valorous soldiers, who are for some days free from public duties. But this exemption from work is by no means pleasing to them, since they know not what it is to be at leisure, and so they help their companions. On the other hand, they who have been conquered through their own fault, or have lost the victory, are blamed; and they who were the first to take to flight are in no way worthy to escape death, unless when the whole army asks their lives, and each one takes upon himself a part of their punishment. But this indulgence is rarely granted, except when there are good reasons favoring it. But he who did not bear help to an ally or friend is beaten with rods. That one who did not obey orders is given to the beasts,

in an enclosure, to be devoured, and a staff is put in his hand, and if he should conquer the lions and the bears that are there, which is almost impossible, he is received into favor again. The conquered States or those willingly delivered up to them, forthwith have all things in common, and receive a garrison and magistrates from the City of the Sun, and by degrees they are accustomed to the ways of the city, the mistress of all, to which they even send their sons to be taught without contributing anything for expense.

It would be too great trouble to tell you about the spies and their master, and about the guards and laws and ceremonies, both within and without the State, which you can of yourself imagine. Since from childhood they are chosen according to their inclination and the star under which they were born, therefore each one working according to his natural propensity does his duty well and pleasantly, because naturally. The same things I may say concerning strategy and the other functions.

There are guards in the city by day and by night, and they are placed at the four gates, and outside the walls of the seventh ring, above the breastworks and towers and inside mounds. These places are guarded in the day by women, in the night by men. And lest the guard should become weary of watching, and in case of a surprise, they change them every three hours, as is the custom with our soldiers. At sunset, when the drum and symphonia sound, the armed guards are distributed. Cavalry and infantry make use of hunting as the symbol of war and practise games and hold festivities in the plains. Then the music strikes up, and freely they pardon the offences and faults of the enemy, and after the victories they are kind to them, if it has been decreed that they should destroy the walls of the enemy's city and take their lives. All these things are done on the same day as the victory, and afterward they never cease to load the conquered with favors, for they say that there ought to be no fighting, except when the conquerors give up the conquered, not when they kill them. If there is a dispute among them concerning injury or any other matter (for they themselves scarcely ever contend except in matters of honor), the chief and his magistrates chastise the accused one secretly, if he has done harm in deeds after he has been first angry. If they wait until the time of the battle for the verbal decision,

they must give vent to their anger against the enemy, and he who in battle shows the most daring deeds is considered to have defended the better and truer cause in the struggle, and the other yields, and they are punished justly. Nevertheless, they are not allowed to come to single combat, since right is maintained by the tribunal, and because the unjust cause is often apparent when the more just succumbs, and he who professes to be the better man shows this in public fight.

G.M. This is worth while, so that factions should not be cherished for the harm of the fatherland, and so that civil wars might not occur, for by means of these a tyrant often arises, as the examples of Rome and Athens show. Now, I pray you, tell me of their works and matter connected therewith.

Capt. I believe that you have already heard about their military affairs and about their agricultural and pastoral life, and in what way these are common to them, and how they honor with the first grade of nobility whoever is considered to have knowledge of these. They who are skilful in more arts than these they consider still nobler, and they set that one apart for teaching the art in which he is most skilful. The occupations which require the most labor, such as working in metals and building, are the most praiseworthy among them. No one declines to go to these occupations, for the reason that from the beginning their propensities are well known, and among them, on account of the distribution of labor, no one does work harmful to him, but only that which is necessary for him. The occupations entailing less labor belong to the women. All of them are expected to know how to swim, and for this reason ponds are dug outside the walls of the city and within them near to the fountains.

Commerce is of little use to them, but they know the value of money, and they count for the use of their ambassadors and explorers, so that with it they may have the means of living. They receive merchants into their States from the different countries of the world, and these buy the superfluous goods of the city. The people of the City of the Sun refuse to take money, but in importing they accept in exchange those things of which they are in need, and sometimes they buy with money; and the young people in the City of the Sun are much amused when they see that for a small price they receive so many things in exchange. The old men, however, do not laugh.

They are unwilling that the State should be corrupted by the vicious customs of slaves and foreigners. Therefore they do business at the gates, and sell those whom they have taken in war or keep them for digging ditches and other hard work without the city, and for this reason they always send four bands of soldiers to take care of the fields, and with them there are the laborers. They go out of the four gates from which roads with walls on both sides of them lead to the sea, so that goods might easily be carried over them and foreigners might not meet with difficulty on their way.

To strangers they are kind and polite; they keep them for three days at the public expense; after they have first washed their feet, they show them their city and its customs, and they honor them with a seat at the Council and public table, and there are men whose duty it is to take care of and guard the guests. But if strangers should wish to become citizens of their State, they try them first for a month on a farm, and for another month in the city, then they decide concerning them, and admit them with certain ceremonies and oaths.

Agriculture is much followed among them; there is not a span of earth without cultivation, and they observe the winds and propitious stars. With the exception of a few left in the city all go out armed, and with flags and drums and trumpets sounding, to the fields, for the purposes of ploughing, sowing, digging, hoeing, reaping, gathering fruit and grapes; and they set in order everything, and do their work in a very few hours and with much care. They use wagons fitted with sails which are borne along by the wind even when it is contrary, by the marvellous contrivance of wheels within wheels.

And when there is no wind a beast draws along a huge cart, which is a grand sight.

The guardians of the land move about in the meantime, armed and always in their proper turn. They do not use dung and filth for manuring the fields, thinking that the fruit contracts something of their rottenness, and when eaten gives a short and poor subsistence, as women who are beautiful with rouge and from want of exercise bring forth feeble offspring. Wherefore they do not as it were paint the earth, but dig it up well and use secret remedies, so that fruit is borne quickly and multiplies, and is not destroyed.

They have a book for this work, which they call the Georgics. As much of the land as is necessary is cultivated, and the rest is used for the pasturage of cattle.

The excellent occupation of breeding and rearing horses, oxen, sheep, dogs, and all kinds of domestic and tame animals is in the highest esteem among them as it was in the time of Abraham. And the animals are led so to pair that they may be able to breed well.

Fine pictures of oxen, horses, sheep, and other animals are placed before them. They do not turn out horses with mares to feed, but at the proper time they bring them together in an enclosure of the stables in their fields. And this is done when they observe that the constellation Archer is in favorable conjunction with Mars and Jupiter. For the oxen they observe the Bull, for the sheep the Ram, and so on in accordance with art. Under the Pleiades they keep a drove of hens and ducks and geese, which are driven out by the women to feed near the city. The women only do this when it is a pleasure to them. There are also places enclosed, where they make cheese, butter, and milk-food. They also keep capons, fruit, and other things, and for all these matters there is a book which they call the Bucolics. They have an abundance of all things, since everyone likes to be industrious, their labors being slight and profitable. They are docile, and that one among them who is head of the rest in duties of this kind they call king. For they say that this is the proper name of the leaders, and it does not belong to ignorant persons. It is wonderful to see how men and women march together collectively, and always in obedience to the voice of the king. Nor do they regard him with loathing as we do, for they know that although he is greater than themselves, he is for all that their father and brother. They keep groves and woods for wild animals, and they often hunt.

The science of navigation is considered very dignified by them, and they possess rafts and triremes, which go over the waters without rowers or the force of the wind, but by a marvellous contrivance. And other vessels they have which are moved by the winds. They have a correct knowledge of the stars, and of the ebb and flow of the tide. They navigate for the sake of becoming acquainted with nations and different countries and things. They injure nobody, and they do not put up with injury, and they never go to

battle unless when provoked. They assert that the whole earth will in time come to live in accordance with their customs, and consequently they always find out whether there be a nation whose manner of living is better and more approved than the rest. They admire the Christian institutions and look for a realization of the apostolic life in vogue among themselves and in us. There are treaties between them and the Chinese and many other nations, both insular and continental, such as Siam and Calicut, which they are only just able to explore. Furthermore, they have artificial fires, battles on sea and land, and many strategic secrets. Therefore they are nearly always victorious.

G.M. Now it would be very pleasant to learn with what foods and drinks they are nourished, and in what way and for how long they live.

Capt. Their food consists of flesh, butter, honey, cheese, garden herbs, and vegetables of various kinds. They were unwilling at first to slay animals, because it seemed cruel; but thinking afterward that it was also cruel to destroy herbs which have a share of sensitive feeling, they saw that they would perish from hunger unless they did an unjustifiable action for the sake of justifiable ones, and so now they all eat meat. Nevertheless, they do not kill willingly useful animals, such as oxen and horses. They observe the difference between useful and harmful foods, and for this they employ the science of medicine. They always change their food. First they eat flesh, then fish, then afterward they go back to flesh, and nature is never incommoded or weakened. The old people use the more digestible kind of food, and take three meals a day, eating only a little. But the general community eat twice, and the boys four times, that they may satisfy nature. The length of their lives is generally 100 years, but often they reach 200.

As regards drinking, they are extremely moderate. Wine is never given to young people until they are ten years old, unless the state of their health demands it. After their tenth year they take it diluted with water, and so do the women, but the old men of fifty and upward use little or no water. They eat the most healthy things, according to the time of the year.

They think nothing harmful which is brought forth by God, except when there has been abuse by taking too much. And therefore in the summer they

feed on fruits, because they are moist and juicy and cool, and counteract the heat and dryness. In the winter they feed on dry articles, and in the autumn they eat grapes, since they are given by God to remove melancholy and sadness; and they also make use of scents to a great degree. In the morning, when they have all risen they comb their hair and wash their faces and hands with cold water. Then they chew thyme or rock-parsley or fennel, or rub their hands with these plants. The old men make incense, and with their faces to the east repeat the short prayer which Jesus Christ taught us. After this they go to wait upon the old men, some go to the dance, and others to the duties of the State. Later on they meet at the early lectures, then in the temple, then for bodily exercise. Then for a little while they sit down to rest, and at length they go to dinner.

Among them there is never gout in the hands or feet, nor catarrh, nor sciatica, nor grievous colics, nor flatulency, nor hard breathing. For these diseases are caused by indigestion and flatulency, and by frugality and exercise they remove every humor and spasm. Therefore it is unseemly in the extreme to be seen vomiting or spitting, since they say that this is a sign either of little exercise, or of ignoble sloth, or of drunkenness, or gluttony. They suffer rather from swellings or from the dry spasm, which they relieve with plenty of good and juicy food. They heal fevers with pleasant baths and with milkfood, and with a pleasant habitation in the country and by gradual exercise. Unclean diseases cannot be prevalent with them because they often clean their bodies by bathing in wine, and soothe them with aromatic oil, and by the sweat of exercise they diffuse the poisonous vapor which corrupts the blood and the marrow. They do suffer a little from consumption, because they cannot perspire at the breast, but they never have asthma, for the humid nature of which a heavy man is required. They cure hot fevers with cold potations of water, but slight ones with sweet smells, with cheese-bread or sleep, with music or dancing. Tertiary fevers are cured by bleeding, by rhubarb or by a similar drawing remedy, or by water soaked in the roots of plants, with purgative and sharp-tasting qualities. But it is rarely that they take purgative medicines. Fevers occurring every fourth day are cured easily by suddenly startling the unprepared patients, and by means of herbs producing effects opposite to the humors of this fever. All these secrets they told me in opposition to their own

wishes. They take more diligent pains to cure the lasting fevers, which they fear more, and they strive to counteract these by the observation of stars and of plants, and by prayers to God. Fevers recurring every fifth, sixth, eighth or more days, you never find whenever heavy humors are wanting.

They use baths, and moreover they have warm ones according to the Roman custom, and they make use also of olive oil. They have found out, too, a great many secret cures for the preservation of cleanliness and health. And in other ways they labor to cure the epilepsy, with which they are often troubled.

G.M. A sign this disease is of wonderful cleverness, for from it Hercules, Scotus, Socrates, Callimachus, and Mahomet have suffered.

Capt. They cure by means of prayers to heaven, by strengthening the head, by acids, by planned gymnastics, and with fat cheese-bread sprinkled with the flour of wheaten corn. They are very skilled in making dishes, and in them they put spice, honey, butter, and many highly strengthening spices, and they temper their richness with acids, so that they never vomit. They do not drink ice-cold drinks nor artificial hot drinks, as the Chinese do; for they are not without aid against the humors of the body, on account of the help they get from the natural heat of the water; but they strengthen it with crushed garlic, with vinegar, with wild thyme, with mint, and with basil, in the summer or in time of special heaviness. They know also a secret for renovating life after about the seventieth year, and for ridding it of affliction, and this they do by a pleasing and indeed wonderful art.

G.M. Thus far you have said nothing concerning their sciences and magistrates.

Capt. Undoubtedly I have. But since you are so curious I will add more. Both when it is new moon and full moon they call a council after a sacrifice. To this all from twenty years upward are admitted, and each one is asked separately to say what is wanting in the State, and which of the magistrates have discharged their duties rightly and which wrongly. Then after eight days all the magistrates assemble, to wit, Hoh first, and with him Power, Wisdom, and Love. Each one of the three last has three magistrates under him, making in all thirteen, and they consider the affairs of the arts

pertaining to each one of them: Power, of war; Wisdom, of the sciences; Love, of food, clothing, education, and breeding. The masters of all the bands, who are captains of tens, of fifties, of hundreds, also assemble, the women first and then the men. They argue about those things which are for the welfare of the State, and they choose the magistrates from among those who have already been named in the great Council. In this manner they assemble daily, Hoh and his three princes, and they correct, confirm, and execute the matters passing to them, as decisions in the elections; other necessary questions they provide of themselves. They do not use lots unless when they are altogether doubtful how to decide. The eight magistrates under Hoh, Power, Wisdom, and Love are changed according to the wish of the people, but the first four are never changed, unless they, taking counsel with themselves, give up the dignity of one to another, whom among them they know to be wiser, more renowned, and more nearly perfect. And then they are obedient and honorable, since they yield willingly to the wiser man and are taught by him. This, however, rarely happens. The principals of the sciences, except Metaphysic, who is Hoh himself, and is, as it were, the architect of all science, having rule over all, are attached to Wisdom. Hoh is ashamed to be ignorant of any possible thing. Under Wisdom therefore are Grammar, Logic, Physics, Medicine, Astrology, Astronomy, Geometry, Cosmography, Music, Perspective, Arithmetic, Poetry, Rhetoric, Painting, Sculpture. Under the triumvir Love are Breeding, Agriculture, Education, Medicine, Clothing, Pasturage, Coining.

G.M. What about their judges?

Capt. This is the point I was just thinking of explaining. Everyone is judged by the first master of his trade, and thus all the head artificers are judges. They punish with exile, with flogging, with blame, with deprivation of the common table, with exclusion from the church and from the company of women. When there is a case in which great injury has been done, it is punished with death, and they repay an eye with an eye, a nose for a nose, a tooth for a tooth, and so on, according to the law of retaliation. If the offence is wilful the Council decides. When there is strife and it takes place undesignedly, the sentence is mitigated; nevertheless, not by the judge but by the triumvirate, from whom even it may be referred to Hoh, not on

account of justice but of mercy, for Hoh is able to pardon. They have no prisons, except one tower for shutting up rebellious enemies, and there is no written statement of a case, which we commonly call a lawsuit. But the accusation and witnesses are produced in the presence of the judge and Power; the accused person makes his defence, and he is immediately acquitted or condemned by the judge; and if he appeals to the triumvirate, on the following day he is acquitted or condemned. On the third day he is dismissed through the mercy and clemency of Hoh, or receives the inviolable rigor of his sentence. An accused person is reconciled to his accuser and to his witnesses, as it were, with the medicine of his complaint, that is, with embracing and kissing.

No one is killed or stoned unless by the hands of the people, the accuser and the witnesses beginning first. For they have no executioners and lictors, lest the State should sink into ruin. The choice of death is given to the rest of the people, who enclose the lifeless remains in little bags and burn them by the application of fire, while exhorters are present for the purpose of advising concerning a good death. Nevertheless, the whole nation laments and beseeches God that his anger may be appeased, being in grief that it should, as it were, have to cut off a rotten member of the State. Certain officers talk to and convince the accused man by means of arguments until he himself acquiesces in the sentence of death passed upon him, or else he does not die. But if a crime has been committed against the liberty of the republic, or against God, or against the supreme magistrates, there is immediate censure without pity. These only are punished with death. He who is about to die is compelled to state in the presence of the people and with religious scrupulousness the reasons for which he does not deserve death, and also the sins of the others who ought to die instead of him, and further the mistakes of the magistrates. If, moreover, it should seem right to the person thus asserting, he must say why the accused ones are deserving of less punishment than he. And if by his arguments he gains the victory he is sent into exile, and appeases the State by means of prayers and sacrifices and good life ensuing. They do not torture those named by the accused person, but they warn them. Sins of frailty and ignorance are punished only with blaming, and with compulsory continuation as learners under the law and discipline of those sciences or arts against which they have sinned. And

all these things they have mutually among themselves, since they seem to be in very truth members of the same body, and one of another.

This further I would have you know, that if a transgressor, without waiting to be accused, goes of his own accord before a magistrate, accusing himself and seeking to make amends, that one is liberated from the punishment of a secret crime, and since he has not been accused of such a crime, his punishment is changed into another. They take special care that no one should invent slander, and if this should happen they meet the offence with the punishment of retaliation. Since they always walk about and work in crowds, five witnesses are required for the conviction of a transgressor. If the case is otherwise, after having threatened him, he is released after he has sworn an oath as the warrant of good conduct. Or if he is accused a second or third time, his increased punishment rests on the testimony of three or two witnesses. They have but few laws, and these short and plain, and written upon a flat table and hanging to the doors of the temple, that is between the columns. And on single columns can be seen the essences of things described in the very terse style of Metaphysic -viz., the essences of God, of the angels, of the world, of the stars, of man, of fate, of virtue, all done with great wisdom. The definitions of all the virtues are also delineated here, and here is the tribunal, where the judges of all the virtues have their seat. The definition of a certain virtue is written under that column where the judges for the aforesaid virtue sit, and when a judge gives judgment he sits and speaks thus: O son, thou hast sinned against this sacred definition of beneficence, or of magnanimity, or of another virtue, as the case may be. And after discussion the judge legally condemns him to the punishment for the crime of which he is accused -viz., for injury, for despondency, for pride, for ingratitude, for sloth, etc. But the sentences are certain and true correctives, savoring more of clemency than of actual punishment.

G.M. Now you ought to tell me about their priests, their sacrifices, their religion, and their belief.

Capt. The chief priest is Hoh, and it is the duty of all the superior magistrates to pardon sins. Therefore the whole State by secret confession, which we also use, tell their sins to the magistrates, who at once purge their souls and teach those that are inimical to the people. Then the sacred magistrates

themselves confess their own sinfulness to the three supreme chiefs, and together they confess the faults of one another, though no special one is named, and they confess especially the heavier faults and those harmful to the State. At length the triumvirs confess their sinfulness to Hoh himself, who forthwith recognizes the kinds of sins that are harmful to the State, and succors with timely remedies. Then he offers sacrifices and prayers to God. And before this he confesses the sins of the whole people, in the presence of God, and publicly in the temple, above the altar, as often as it had been necessary that the fault should be corrected. Nevertheless, no transgressor is spoken of by his name. In this manner he absolves the people by advising them that they should beware of sins of the aforesaid kind. Afterward he offers sacrifice to God, that he should pardon the State and absolve it of its sins, and to teach and defend it. Once in every year the chief priests of each separate subordinate State confess their sins in the presence of Hoh. Thus he is not ignorant of the wrongdoings of the provinces, and forthwith he removes them with all human and heavenly remedies.

Sacrifice is conducted after the following manner: Hoh asks the people which one among them wishes to give himself as a sacrifice to God for the sake of his fellows. He is then placed upon the fourth table, with ceremonies and the offering up of prayers: the table is hung up in a wonderful manner by means of four ropes passing through four cords attached to firm pulley-blocks in the small dome of the temple. This done they cry to the God of mercy, that he may accept the offering, not of a beast as among the heathen, but of a human being. Then Hoh orders the ropes to be drawn and the sacrifice is pulled up above to the centre of the small dome, and there it dedicates itself with the most fervent supplications. Food is given to it through a window by the priests, who live around the dome, but it is allowed a very little to eat, until it has atoned for the sins of the State. There with prayer and fasting he cries to the God of heaven that he might accept its willing offering. And after twenty or thirty days, the anger of God being appeased, the sacrifice becomes a priest, or sometimes, though rarely, returns below by means of the outer way for the priests. Ever after, this man is treated with great benevolence and much honor, for the reason that he offered himself unto death for the sake of his country. But God does not require death.

The priests above twenty-four years of age offer praises from their places in the top of the temple. This they do in the middle of the night, at noon, in the morning and in the evening, to wit, four times a day they sing their chants in the presence of God. It is also their work to observe the stars and to note with the astrolabe their motions and influences upon human things, and to find out their powers. Thus they know in what part of the earth any change has been or will be, and at what time it has taken place, and they send to find whether the matter be as they have it. They make a note of predictions, true and false, so that they may be able from experience to predict most correctly. The priests, moreover, determine the hours for breeding and the days for sowing, reaping, and gathering the vintage, and are, as it were, the ambassadors and intercessors and connection between God and man. And it is from among them mostly that Hoh is elected. They write very learned treatises and search into the sciences. Below they never descend, unless for their dinner and supper, so that the essence of their heads do not descend to the stomachs and liver. Only very seldom, and that as a cure for the ills of solitude, do they have converse with women. On certain days Hoh goes up to them and deliberates with them concerning the matters which he has lately investigated for the benefit of the State and all the nations of the world.

In the temple beneath, one priest always stands near the altar praying for the people, and at the end of every hour another succeeds him, just as we are accustomed in solemn prayer to change every fourth hour. And this method of supplication they call perpetual prayer. After a meal they return thanks to God. Then they sing the deeds of the Christian, Jewish, and Gentile heroes, and of those of all other nations, and this is very delightful to them. Forsooth, no one is envious of another. They sing a hymn to Love, one to Wisdom, and one each to all the other virtues, and this they do under the direction of the ruler of each virtue. Each one takes the woman he loves most, and they dance for exercise with propriety and stateliness under the peristyles. The women wear their long hair all twisted together and collected into one knot on the crown of the head, but in rolling it they leave one curl. The men, however, have one curl only and the rest of their hair around the head is shaven off. Further, they wear a slight covering, and above this a round hat a little larger than the size of their head. In the fields

they use caps, but at home each one wears a biretta, white, red, or another color according to his trade or occupation. Moreover, the magistrates use grander and more imposing-looking coverings for the head.

They hold great festivities when the sun enters the four cardinal points of the heavens, that is, when he enters Cancer, Libra, Capricorn, and Aries. On these occasions they have very learned, splendid, and, as it were, comic performances. They celebrate also every full and every new moon with a festival, as also they do the anniversaries of the founding of the city, and of the days when they have won victories or done any other great achievement. The celebrations take place with the music of female voices, with the noise of trumpets and drums, and the firing of salutations. The poets sing the praises of the most renowned leaders and the victories. Nevertheless, if any of them should deceive even by disparaging a foreign hero, he is punished. No one can exercise the function of a poet who invents that which is not true, and a license like this they think to be a pest of our world, for the reason that it puts a premium upon virtue and often assigns it to unworthy persons, either from fear of flattery, or ambition, or avarice.

For the praise of no one is a statue erected until after his death; but while he is alive, who has found out new arts and very useful secrets, or who has rendered great service to the State either at home or on the battle-field, his name is written in the book of heroes. They do not bury dead bodies, but burn them, so that a plague may not arise from them, and so that they may be converted into fire, a very noble and powerful thing, which has its coming from the sun and returns to it. And for the above reasons no chance is given for idolatry. The statues and pictures of the heroes, however, are there, and the splendid women set apart to become mothers often look at them. Prayers are made from the State to the four horizontal corners of the world -in the morning to the rising sun, then to the setting sun, then to the south, and lastly to the north; and in the contrary order in the evening, first to the setting sun, to the rising sun, to the north, and at length to the south. They repeat but one prayer, which asks for health of body and of mind, and happiness for themselves and all people, and they conclude it with the petition "As it seems best to God." The public prayer for all is long, and it is poured forth to heaven. For this reason the altar is round and is divided

crosswise by ways at right angles to one another. By these ways Hoh enters after he has repeated the four prayers, and he prays looking up to heaven. And then a great mystery is seen by them. The priestly vestments are of a beauty and meaning like to those of Aaron. They resemble nature and they surpass Art.

They divide the seasons according to the revolution of the sun, and not of the stars, and they observe yearly by how much time the one precedes the other. They hold that the sun approaches nearer and nearer, and therefore by ever-lessening circles reaches the tropics and the equator every year a little sooner. They measure months by the course of the moon, years by that of the sun. They praise Ptolemy, admire Copernicus, but place Aristarchus and Philolaus before him. They take great pains in endeavoring to understand the construction of the world, and whether or not it will perish, and at what time. They believe that the true oracle of Jesus Christ is by the signs in the sun, in the moon, and in the stars, which signs do not thus appear to many of us foolish ones. Therefore they wait for the renewing of the age, and perchance for its end.

They say that it is very doubtful whether the world was made from nothing, or from the ruins of other worlds, or from chaos, but they certainly think that it was made, and did not exist from eternity. Therefore they disbelieve in Aristotle, whom they consider a logician and not a philosopher. From analogies, they can draw many arguments against the eternity of the world. The sun and the stars they, so to speak, regard as the living representatives and signs of God, as the temples and holy living altars, and they honor but do not worship them. Beyond all other things they venerate the sun, but they consider no created thing worthy the adoration of worship. This they give to God alone, and thus they serve Him, that they may not come into the power of a tyrant and fall into misery by undergoing punishment by creatures of revenge. They contemplate and know God under the image of the Sun, and they call it the sign of God, His face and living image, by means of which light, heat, life, and the making of all things good and bad proceed. Therefore they have built an altar like to the sun in shape, and the priests praise God in the sun and in the stars, as it were His altars, and in the heavens, His temple as it were; and they pray to good

angels, who are, so to speak, the intercessors living in the stars, their strong abodes. For God long since set signs of their beauty in heaven, and of His glory in the sun. They say there is but one heaven, and that the planets move and rise of themselves when they approach the sun or are in conjunction with it.

They assert two principles of the physics of things below, namely, that the sun is the father, and the earth the mother; the air is an impure part of the heavens; all fire is derived from the sun. The sea is the sweat of earth, or the fluid of earth combusted, and fused within its bowels, but is the bond of union between air and earth, as the blood is of the spirit and flesh of animals. The world is a great animal, and we live within it as worms live within us. Therefore we do not belong to the system of stars, sun, and earth, but to God only; for in respect to them which seek only to amplify themselves, we are born and live by chance; but in respect to God, whose instruments we are, we are formed by prescience and design, and for a high end. Therefore we are bound to no father but God, and receive all things from Him. They hold as beyond question the immortality of souls, and that these associate with good angels after death, or with bad angels, according as they have likened themselves in this life to either. For all things seek their like. They differ little from us as to places of reward and punishment. They are in doubt whether there are other worlds beyond ours, and account it madness to say there is nothing. Nonentity is incompatible with the infinite entity of God. They lay down two principles of metaphysics, entity which is the highest God, and nothingness which is the defect of entity. Evil and sin come of the propensity to nothingness; the sin having its cause not efficient, but in deficiency. Deficiency is, they say, of power, wisdom, or will. Sin they place in the last of these three, because he who knows and has the power to do good is bound also to have the will, for will arises out of them. They worship God in trinity, saying God is the Supreme Power, whence proceeds the highest Wisdom, which is the same with God, and from these comes Love, which is both power and wisdom; but they do not distinguish persons by name, as in our Christian law, which has not been revealed to them. This religion, when its abuses have been removed, will be the future mistress of the world, as great theologians teach and hope. Therefore Spain found the New World (though its first discoverer, Columbus, greatest of heroes, was a

Genoese), that all nations should be gathered under one law. We know not what we do, but God knows, whose instruments we are. They sought new regions for lust of gold and riches, but God works to a higher end. The sun strives to burn up the earth, not to produce plants and men, but God guides the battle to great issues. His the praise, to Him the glory!

G.M. Oh, if you knew what our astrologers say of the coming age, and of our age, that has in it more history within 100 years than all the world had in 4,000 years before! of the wonderful inventions of printing and guns, and the use of the magnet, and how it all comes of Mercury, Mars, the Moon, and the Scorpion!

Capt. Ah, well! God gives all in His good time. They astrologize too much.
