**Plato *Timaeus***

EXCERPT:

Crit. Let me proceed to explain to you, Socrates, the order in which

we have arranged our entertainment. Our intention is, that Timaeus,

who is the most of an astronomer amongst us, and has made the nature

of the universe his special study, should speak first, beginning with

the generation of the world and going down to the creation of man;

next, I am to receive the men whom he has created of whom some will

have profited by the excellent education which you have given them;

and then, in accordance with the tale of Solon, and equally with his

law, we will bring them into court and make them citizens, as if they

were those very Athenians whom the sacred Egyptian record has recovered

from oblivion, and thenceforward we will speak of them as Athenians

and fellow-citizens.

Soc. I see that I shall receive in my turn a perfect and splendid

feast of reason. And now, Timaeus, you, I suppose, should speak next,

after duly calling upon the Gods.

Tim. All men, Socrates, who have any degree of right feeling, at the

beginning of every enterprise, whether small or great, always call

upon God. And we, too, who are going to discourse of the nature of

the universe, how created or how existing without creation, if we

be not altogether out of our wits, must invoke the aid of Gods and

Goddesses and pray that our words may be acceptable to them and consistent

with themselves. Let this, then, be our invocation of the Gods, to

which I add an exhortation of myself to speak in such manner as will

be most intelligible to you, and will most accord with my own intent.

First then, in my judgment, we must make a distinction and ask, What

is that which always is and has no becoming; and what is that which

is always becoming and never is? That which is apprehended by intelligence

and reason is always in the same state; but that which is conceived

by opinion with the help of sensation and without reason, is always

in a process of becoming and perishing and never really is. Now everything

that becomes or is created must of necessity be created by some cause,

for without a cause nothing can be created. The work of the creator,

whenever he looks to the unchangeable and fashions the form and nature

of his work after an unchangeable pattern, must necessarily be made

fair and perfect; but when he looks to the created only, and uses

a created pattern, it is not fair or perfect. Was the heaven then

or the world, whether called by this or by any other more appropriate

name-assuming the name, I am asking a question which has to be asked

at the beginning of an enquiry about anything-was the world, I say,

always in existence and without beginning? or created, and had it

a beginning? Created, I reply, being visible and tangible and having

a body, and therefore sensible; and all sensible things are apprehended

by opinion and sense and are in a process of creation and created.

Now that which is created must, as we affirm, of necessity be created

by a cause. But the father and maker of all this universe is past

finding out; and even if we found him, to tell of him to all men would

be impossible. And there is still a question to be asked about him:

Which of the patterns had the artificer in view when he made the world-the

pattern of the unchangeable, or of that which is created? If the world

be indeed fair and the artificer good, it is manifest that he must

have looked to that which is eternal; but if what cannot be said without

blasphemy is true, then to the created pattern. Every one will see

that he must have looked to, the eternal; for the world is the fairest

of creations and he is the best of causes. And having been created

in this way, the world has been framed in the likeness of that which

is apprehended by reason and mind and is unchangeable, and must therefore

of necessity, if this is admitted, be a copy of something. Now it

is all-important that the beginning of everything should be according

to nature. And in speaking of the copy and the original we may assume

that words are akin to the matter which they describe; when they relate

to the lasting and permanent and intelligible, they ought to be lasting

and unalterable, and, as far as their nature allows, irrefutable and

immovable-nothing less. But when they express only the copy or likeness

and not the eternal things themselves, they need only be likely and

analogous to the real words. As being is to becoming, so is truth

to belief. If then, Socrates, amid the many opinions about the gods

and the generation of the universe, we are not able to give notions

which are altogether and in every respect exact and consistent with

one another, do not be surprised. Enough, if we adduce probabilities

as likely as any others; for we must remember that I who am the speaker,

and you who are the judges, are only mortal men, and we ought to accept

the tale which is probable and enquire no further.

Soc. Excellent, Timaeus; and we will do precisely as you bid us. The

prelude is charming, and is already accepted by us-may we beg of you

to proceed to the strain?

Tim. Let me tell you then why the creator made this world of generation.

He was good, and the good can never have any jealousy of anything.

And being free from jealousy, he desired that all things should be

as like himself as they could be. This is in the truest sense the

origin of creation and of the world, as we shall do well in believing

on the testimony of wise men: God desired that all things should be

good and nothing bad, so far as this was attainable. Wherefore also

finding the whole visible sphere not at rest, but moving in an irregular

and disorderly fashion, out of disorder he brought order, considering

that this was in every way better than the other. Now the deeds of

the best could never be or have been other than the fairest; and the

creator, reflecting on the things which are by nature visible, found

that no unintelligent creature taken as a whole was fairer than the

intelligent taken as a whole; and that intelligence could not be present

in anything which was devoid of soul. For which reason, when he was

framing the universe, he put intelligence in soul, and soul in body,

that he might be the creator of a work which was by nature fairest

and best. Wherefore, using the language of probability, we may say

that the world became a living creature truly endowed with soul and

intelligence by the providence of God.

This being supposed, let us proceed to the next stage: In the likeness

of what animal did the Creator make the world? It would be an unworthy

thing to liken it to any nature which exists as a part only; for nothing

can be beautiful which is like any imperfect thing; but let us suppose

the world to be the very image of that whole of which all other animals

both individually and in their tribes are portions. For the original

of the universe contains in itself all intelligible beings, just as

this world comprehends us and all other visible creatures. For the

Deity, intending to make this world like the fairest and most perfect

of intelligible beings, framed one visible animal comprehending within

itself all other animals of a kindred nature. Are we right in saying

that there is one world, or that they are many and infinite? There

must be one only, if the created copy is to accord with the original.

For that which includes all other intelligible creatures cannot have

a second or companion; in that case there would be need of another

living being which would include both, and of which they would be

parts, and the likeness would be more truly said to resemble not them,

but that other which included them. In order then that the world might

be solitary, like the perfect animal, the creator made not two worlds

or an infinite number of them; but there is and ever will be one only-begotten

and created heaven.

Now that which is created is of necessity corporeal, and also visible

and tangible. And nothing is visible where there is no fire, or tangible

which has no solidity, and nothing is solid without earth. Wherefore

also God in the beginning of creation made the body of the universe

to consist of fire and earth. But two things cannot be rightly put

together without a third; there must be some bond of union between

them. And the fairest bond is that which makes the most complete fusion

of itself and the things which it combines; and proportion is best

adapted to effect such a union. For whenever in any three numbers,

whether cube or square, there is a mean, which is to the last term

what the first term is to it; and again, when the mean is to the first

term as the last term is to the mean-then the mean becoming first

and last, and the first and last both becoming means, they will all

of them of necessity come to be the same, and having become the same

with one another will be all one. If the universal frame had been

created a surface only and having no depth, a single mean would have

sufficed to bind together itself and the other terms; but now, as

the world must be solid, and solid bodies are always compacted not

by one mean but by two, God placed water and air in the mean between

fire and earth, and made them to have the same proportion so far as

was possible (as fire is to air so is air to water, and as air is

to water so is water to earth); and thus he bound and put together

a visible and tangible heaven. And for these reasons, and out of such

elements which are in number four, the body of the world was created,

and it was harmonised by proportion, and therefore has the spirit

of friendship; and having been reconciled to itself, it was indissoluble

by the hand of any other than the framer.

Now the creation took up the whole of each of the four elements; for

the Creator compounded the world out of all the fire and all the water

and all the air and all the earth, leaving no part of any of them

nor any power of them outside. His intention was, in the first place,

that the animal should be as far as possible a perfect whole and of

perfect parts: secondly, that it should be one, leaving no remnants

out of which another such world might be created: and also that it

should be free from old age and unaffected by disease. Considering

that if heat and cold and other powerful forces which unite bodies

surround and attack them from without when they are unprepared, they

decompose them, and by bringing diseases and old age upon them, make

them waste away-for this cause and on these grounds he made the world

one whole, having every part entire, and being therefore perfect and

not liable to old age and disease. And he gave to the world the figure

which was suitable and also natural. Now to the animal which was to

comprehend all animals, that figure was suitable which comprehends

within itself all other figures. Wherefore he made the world in the

form of a globe, round as from a lathe, having its extremes in every

direction equidistant from the centre, the most perfect and the most

like itself of all figures; for he considered that the like is infinitely

fairer than the unlike. This he finished off, making the surface smooth

all around for many reasons; in the first place, because the living

being had no need of eyes when there was nothing remaining outside

him to be seen; nor of ears when there was nothing to be heard; and

there was no surrounding atmosphere to be breathed; nor would there

have been any use of organs by the help of which he might receive

his food or get rid of what he had already digested, since there was

nothing which went from him or came into him: for there was nothing

beside him. Of design he was created thus, his own waste providing

his own food, and all that he did or suffered taking place in and

by himself. For the Creator conceived that a being which was self-sufficient

would be far more excellent than one which lacked anything; and, as

he had no need to take anything or defend himself against any one,

the Creator did not think it necessary to bestow upon him hands: nor

had he any need of feet, nor of the whole apparatus of walking; but

the movement suited to his spherical form was assigned to him, being

of all the seven that which is most appropriate to mind and intelligence;

and he was made to move in the same manner and on the same spot, within

his own limits revolving in a circle. All the other six motions were

taken away from him, and he was made not to partake of their deviations.

And as this circular movement required no feet, the universe was created

without legs and without feet.

Such was the whole plan of the eternal God about the god that was

to be, to whom for this reason he gave a body, smooth and even, having

a surface in every direction equidistant from the centre, a body entire

and perfect, and formed out of perfect bodies. And in the centre he

put the soul, which he diffused throughout the body, making it also

to be the exterior environment of it; and he made the universe a circle

moving in a circle, one and solitary, yet by reason of its excellence

able to converse with itself, and needing no other friendship or acquaintance.

Having these purposes in view he created the world a blessed god.

Now God did not make the soul after the body, although we are speaking

of them in this order; for having brought them together he would never

have allowed that the elder should be ruled by the younger; but this

is a random manner of speaking which we have, because somehow we ourselves

too are very much under the dominion of chance. Whereas he made the

soul in origin and excellence prior to and older than the body, to

be the ruler and mistress, of whom the body was to be the subject.

And he made her out of the following elements and on this wise: Out

of the indivisible and unchangeable, and also out of that which is

divisible and has to do with material bodies, he compounded a third

and intermediate kind of essence, partaking of the nature of the same

and of the other, and this compound he placed accordingly in a mean

between the indivisible, and the divisible and material. He took the

three elements of the same, the other, and the essence, and mingled

them into one form, compressing by force the reluctant and unsociable

nature of the other into the same. When he had mingled them with the

essence and out of three made one, he again divided this whole into

as many portions as was fitting, each portion being a compound of

the same, the other, and the essence. And he proceeded to divide after

this manner:-First of all, he took away one part of the whole [1],

and then he separated a second part which was double the first [2],

and then he took away a third part which was half as much again as

the second and three times as much as the first [3], and then he took

a fourth part which was twice as much as the second [4], and a fifth

part which was three times the third [9], and a sixth part which was

eight times the first [8], and a seventh part which was twenty-seven

times the first [27]. After this he filled up the double intervals

[i.e. between 1, 2, 4, 8] and the triple [i.e. between 1, 3, 9, 27]

cutting off yet other portions from the mixture and placing them in

the intervals, so that in each interval there were two kinds of means,

the one exceeding and exceeded by equal parts of its extremes [as

for example 1, 4/3, 2, in which the mean 4/3 is one-third of 1 more

than 1, and one-third of 2 less than 2], the other being that kind

of mean which exceeds and is exceeded by an equal number. Where there

were intervals of 3/2 and of 4/3 and of 9/8, made by the connecting

terms in the former intervals, he filled up all the intervals of 4/3

with the interval of 9/8, leaving a fraction over; and the interval

which this fraction expressed was in the ratio of 256 to 243. And

thus the whole mixture out of which he cut these portions was all

exhausted by him. This entire compound he divided lengthways into

two parts, which he joined to one another at the centre like the letter

X, and bent them into a circular form, connecting them with themselves

and each other at the point opposite to their original meeting-point;

and, comprehending them in a uniform revolution upon the same axis,

he made the one the outer and the other the inner circle. Now the

motion of the outer circle he called the motion of the same, and the

motion of the inner circle the motion of the other or diverse. The

motion of the same he carried round by the side to the right, and

the motion of the diverse diagonally to the left. And he gave dominion

to the motion of the same and like, for that he left single and undivided;

but the inner motion he divided in six places and made seven unequal

circles having their intervals in ratios of two-and three, three of

each, and bade the orbits proceed in a direction opposite to one another;

and three [Sun, Mercury, Venus] he made to move with equal swiftness,

and the remaining four [Moon, Saturn, Mars, Jupiter] to move with

unequal swiftness to the three and to one another, but in due proportion.

Now when the Creator had framed the soul according to his will, he

formed within her the corporeal universe, and brought the two together,

and united them centre to centre. The soul, interfused everywhere

from the centre to the circumference of heaven, of which also she

is the external envelopment, herself turning in herself, began a divine

beginning of never ceasing and rational life enduring throughout all

time. The body of heaven is visible, but the soul is invisible, and

partakes of reason and harmony, and being made by the best of intellectual

and everlasting natures, is the best of things created. And because

she is composed of the same and of the other and of the essence, these

three, and is divided and united in due proportion, and in her revolutions

returns upon herself, the soul, when touching anything which has essence,

whether dispersed in parts or undivided, is stirred through all her

powers, to declare the sameness or difference of that thing and some

other; and to what individuals are related, and by what affected,

and in what way and how and when, both in the world of generation

and in the world of immutable being. And when reason, which works

with equal truth, whether she be in the circle of the diverse or of

the same-in voiceless silence holding her onward course in the sphere

of the self-moved-when reason, I say, is hovering around the sensible

world and when the circle of the diverse also moving truly imparts

the intimations of sense to the whole soul, then arise opinions and

beliefs sure and certain. But when reason is concerned with the rational,

and the circle of the same moving smoothly declares it, then intelligence

and knowledge are necessarily perfected. And if any one affirms that

in which these two are found to be other than the soul, he will say

the very opposite of the truth.

When the father creator saw the creature which he had made moving

and living, the created image of the eternal gods, he rejoiced, and

in his joy determined to make the copy still more like the original;

and as this was eternal, he sought to make the universe eternal, so

far as might be. Now the nature of the ideal being was everlasting,

but to bestow this attribute in its fulness upon a creature was impossible.

Wherefore he resolved to have a moving image of eternity, and when

he set in order the heaven, he made this image eternal but moving

according to number, while eternity itself rests in unity; and this

image we call time. For there were no days and nights and months and

years before the heaven was created, but when he constructed the heaven

he created them also. They are all parts of time, and the past and

future are created species of time, which we unconsciously but wrongly

transfer to the eternal essence; for we say that he "was," he "is,"

he "will be," but the truth is that "is" alone is properly attributed

to him, and that "was" and "will be" only to be spoken of becoming

in time, for they are motions, but that which is immovably the same

cannot become older or younger by time, nor ever did or has become,

or hereafter will be, older or younger, nor is subject at all to any

of those states which affect moving and sensible things and of which

generation is the cause. These are the forms of time, which imitates

eternity and revolves according to a law of number. Moreover, when

we say that what has become is become and what becomes is becoming,

and that what will become is about to become and that the non-existent

is non-existent-all these are inaccurate modes of expression. But

perhaps this whole subject will be more suitably discussed on some

other occasion.

Time, then, and the heaven came into being at the same instant in

order that, having been created together, if ever there was to be

a dissolution of them, they might be dissolved together. It was framed

after the pattern of the eternal nature, that it might resemble this

as far as was possible; for the pattern exists from eternity, and

the created heaven has been, and is, and will be, in all time. Such

was the mind and thought of God in the creation of time. The sun and

moon and five other stars, which are called the planets, were created

by him in order to distinguish and preserve the numbers of time; and

when he had made-their several bodies, he placed them in the orbits

in which the circle of the other was revolving-in seven orbits seven

stars. First, there was the moon in the orbit nearest the earth, and

next the sun, in the second orbit above the earth; then came the morning

star and the star sacred to Hermes, moving in orbits which have an

equal swiftness with the sun, but in an opposite direction; and this

is the reason why the sun and Hermes and Lucifer overtake and are

overtaken by each other. To enumerate the places which he assigned

to the other stars, and to give all the reasons why he assigned them,

although a secondary matter, would give more trouble than the primary.

These things at some future time, when we are at leisure, may have

the consideration which they deserve, but not at present.

Now, when all the stars which were necessary to the creation of time

had attained a motion suitable to them,-and had become living creatures

having bodies fastened by vital chains, and learnt their appointed

task, moving in the motion of the diverse, which is diagonal, and

passes through and is governed by the motion of the same, they revolved,

some in a larger and some in a lesser orbit-those which had the lesser

orbit revolving faster, and those which had the larger more slowly.

Now by reason of the motion of the same, those which revolved fastest

appeared to be overtaken by those which moved slower although they

really overtook them; for the motion of the same made them all turn

in a spiral, and, because some went one way and some another, that

which receded most slowly from the sphere of the same, which was the

swiftest, appeared to follow it most nearly. That there might be some

visible measure of their relative swiftness and slowness as they proceeded

in their eight courses, God lighted a fire, which we now call the

sun, in the second from the earth of these orbits, that it might give

light to the whole of heaven, and that the animals, as many as nature

intended, might participate in number, learning arithmetic from the

revolution of the same and the like. Thus then, and for this reason

the night and the day were created, being the period of the one most

intelligent revolution. And the month is accomplished when the moon

has completed her orbit and overtaken the sun, and the year when the

sun has completed his own orbit. Mankind, with hardly an exception,

have not remarked the periods of the other stars, and they have no

name for them, and do not measure them against one another by the

help of number, and hence they can scarcely be said to know that their

wanderings, being infinite in number and admirable for their variety,

make up time. And yet there is no difficulty in seeing that the perfect

number of time fulfils the perfect year when all the eight revolutions,

having their relative degrees of swiftness, are accomplished together

and attain their completion at the same time, measured by the rotation

of the same and equally moving. After this manner, and for these reasons,

came into being such of the stars as in their heavenly progress received

reversals of motion, to the end that the created heaven might imitate

the eternal nature, and be as like as possible to the perfect and

intelligible animal.

Thus far and until the birth of time the created universe was made

in the likeness of the original, but inasmuch as all animals were

not yet comprehended therein, it was still unlike. What remained,

the creator then proceeded to fashion after the nature of the pattern.

Now as in the ideal animal the mind perceives ideas or species of

a certain nature and number, he thought that this created animal ought

to have species of a like nature and number. There are four such;

one of them is the heavenly race of the gods; another, the race of

birds whose way is in the air; the third, the watery species; and

the fourth, the pedestrian and land creatures. Of the heavenly and

divine, he created the greater part out of fire, that they might be

the brightest of all things and fairest to behold, and he fashioned

them after the likeness of the universe in the figure of a circle,

and made them follow the intelligent motion of the supreme, distributing

them over the whole circumference of heaven, which was to be a true

cosmos or glorious world spangled with them all over. And he gave

to each of them two movements: the first, a movement on the same spot

after the same manner, whereby they ever continue to think consistently

the same thoughts about the same things; the second, a forward movement,

in which they are controlled by the revolution of the same and the

like; but by the other five motions they were unaffected, in order

that each of them might attain the highest perfection. And for this

reason the fixed stars were created, to be divine and eternal animals,

ever-abiding and revolving after the same manner and on the same spot;

and the other stars which reverse their motion and are subject to

deviations of this kind, were created in the manner already described.

The earth, which is our nurse, clinging around the pole which is extended

through the universe, he framed to be the guardian and artificer of

night and day, first and eldest of gods that are in the interior of

heaven. Vain would be the attempt to tell all the figures of them

circling as in dance, and their juxtapositions, and the return of

them in their revolutions upon themselves, and their approximations,

and to say which of these deities in their conjunctions meet, and

which of them are in opposition, and in what order they get behind

and before one another, and when they are severally eclipsed to our

sight and again reappear, sending terrors and intimations of the future

to those who cannot calculate their movements-to attempt to tell of

all this without a visible representation of the heavenly system would

be labour in vain. Enough on this head; and now let what we have said

about the nature of the created and visible gods have an end.

To know or tell the origin of the other divinities is beyond us, and

we must accept the traditions of the men of old time who affirm themselves

to be the offspring of the gods-that is what they say-and they must

surely have known their own ancestors. How can we doubt the word of

the children of the gods? Although they give no probable or certain

proofs, still, as they declare that they are speaking of what took

place in their own family, we must conform to custom and believe them.

In this manner, then, according to them, the genealogy of these gods

is to be received and set forth.

**Augustine *Confessions***

BOOK V

Accept the sacrifice of my confessions from the ministry of my tongue,

which Thou hast formed and stirred up to confess unto Thy name. Heal

Thou all my bones, and let them say, O Lord, who is like unto Thee? For

he who confesses to Thee doth not teach Thee what takes place within

him; seeing a closed heart closes not out Thy eye, nor can man's

hard-heartedness thrust back Thy hand: for Thou dissolvest it at Thy

will in pity or in vengeance, and nothing can hide itself from Thy heat.

But let my soul praise Thee, that it may love Thee; and let it confess

Thy own mercies to Thee, that it may praise Thee. Thy whole creation

ceaseth not, nor is silent in Thy praises; neither the spirit of man

with voice directed unto Thee, nor creation animate or inanimate, by the

voice of those who meditate thereon: that so our souls may from their

weariness arise towards Thee, leaning on those things which Thou hast

created, and passing on to Thyself, who madest them wonderfully; and

there is refreshment and true strength.

Let the restless, the godless, depart and flee from Thee; yet Thou seest

them, and dividest the darkness. And behold, the universe with them is

fair, though they are foul. And how have they injured Thee? or how have

they disgraced Thy government, which, from the heaven to this lowest

earth, is just and perfect? For whither fled they, when they fled from

Thy presence? or where dost not Thou find them? But they fled, that they

might not see Thee seeing them, and, blinded, might stumble against Thee

(because Thou forsakest nothing Thou hast made); that the unjust, I say,

might stumble upon Thee, and justly be hurt; withdrawing themselves from

thy gentleness, and stumbling at Thy uprightness, and falling upon their

own ruggedness. Ignorant, in truth, that Thou art every where, Whom no

place encompasseth! and Thou alone art near, even to those that remove

far from Thee. Let them then be turned, and seek Thee; because not as

they have forsaken their Creator, hast Thou forsaken Thy creation. Let

them be turned and seek Thee; and behold, Thou art there in their heart,

in the heart of those that confess to Thee, and cast themselves upon

Thee, and weep in Thy bosom, after all their rugged ways. Then dost

Thou gently wipe away their tears, and they weep the more, and joy

in weeping; even for that Thou, Lord,--not man of flesh and blood,

but--Thou, Lord, who madest them, re-makest and comfortest them. But

where was I, when I was seeking Thee? And Thou wert before me, but I had

gone away from Thee; nor did I find myself, how much less Thee!

I would lay open before my God that nine-and-twentieth year of mine

age. There had then come to Carthage a certain Bishop of the Manichees,

Faustus by name, a great snare of the Devil, and many were entangled

by him through that lure of his smooth language: which though I did

commend, yet could I separate from the truth of the things which I was

earnest to learn: nor did I so much regard the service of oratory as the

science which this Faustus, so praised among them, set before me to

feed upon. Fame had before bespoken him most knowing in all valuable

learning, and exquisitely skilled in the liberal sciences. And since I

had read and well remembered much of the philosophers, I compared some

things of theirs with those long fables of the Manichees, and found the

former the more probable; even although they could only prevail so far

as to make judgment of this lower world, the Lord of it they could by

no means find out. For Thou art great, O Lord, and hast respect unto the

humble, but the proud Thou beholdest afar off. Nor dost Thou draw near,

but to the contrite in heart, nor art found by the proud, no, not though

by curious skill they could number the stars and the sand, and measure

the starry heavens, and track the courses of the planets.

For with their understanding and wit, which Thou bestowedst on them,

they search out these things; and much have they found out; and

foretold, many years before, eclipses of those luminaries, the sun

and moon,--what day and hour, and how many digits,--nor did their

calculation fail; and it came to pass as they foretold; and they wrote

down the rules they had found out, and these are read at this day, and

out of them do others foretell in what year and month of the year, and

what day of the month, and what hour of the day, and what part of its

light, moon or sun is to be eclipsed, and so it shall be, as it is

foreshowed. At these things men, that know not this art, marvel and are

astonished, and they that know it, exult, and are puffed up; and by

an ungodly pride departing from Thee, and failing of Thy light, they

foresee a failure of the sun's light, which shall be, so long before,

but see not their own, which is. For they search not religiously whence

they have the wit, wherewith they search out this. And finding that Thou

madest them, they give not themselves up to Thee, to preserve what Thou

madest, nor sacrifice to Thee what they have made themselves; nor slay

their own soaring imaginations, as fowls of the air, nor their own

diving curiosities (wherewith, like the fishes of the sea, they wander

over the unknown paths of the abyss), nor their own luxuriousness, as

beasts of the field, that Thou, Lord, a consuming fire, mayest burn up

those dead cares of theirs, and re-create themselves immortally.

But they knew not the way, Thy Word, by Whom Thou madest these things

which they number, and themselves who number, and the sense whereby

they perceive what they number, and the understanding, out of which they

number; or that of Thy wisdom there is no number. But the Only Begotten

is Himself made unto us wisdom, and righteousness, and sanctification,

and was numbered among us, and paid tribute unto Caesar. They knew not

this way whereby to descend to Him from themselves, and by Him ascend

unto Him. They knew not this way, and deemed themselves exalted amongst

the stars and shining; and behold, they fell upon the earth, and their

foolish heart was darkened. They discourse many things truly concerning

the creature; but Truth, Artificer of the creature, they seek not

piously, and therefore find Him not; or if they find Him, knowing Him

to be God, they glorify Him not as God, neither are thankful, but

become vain in their imaginations, and profess themselves to be wise,

attributing to themselves what is Thine; and thereby with most perverse

blindness, study to impute to Thee what is their own, forging lies of

Thee who art the Truth, and changing the glory of uncorruptible God

into an image made like corruptible man, and to birds, and four-footed

beasts, and creeping things, changing Thy truth into a lie, and

worshipping and serving the creature more than the Creator.

Yet many truths concerning the creature retained I from these men, and

saw the reason thereof from calculations, the succession of times, and

the visible testimonies of the stars; and compared them with the saying

of Manichaeus, which in his frenzy he had written most largely on these

subjects; but discovered not any account of the solstices, or equinoxes,

or the eclipses of the greater lights, nor whatever of this sort I

had learned in the books of secular philosophy. But I was commanded to

believe; and yet it corresponded not with what had been established by

calculations and my own sight, but was quite contrary.

Doth then, O Lord God of truth, whoso knoweth these things, therefore

please Thee? Surely unhappy is he who knoweth all these, and knoweth not

Thee: but happy whoso knoweth Thee, though he know not these. And whoso

knoweth both Thee and them is not the happier for them, but for Thee

only, if, knowing Thee, he glorifies Thee as God, and is thankful, and

becomes not vain in his imaginations. For as he is better off who knows

how to possess a tree, and return thanks to Thee for the use thereof,

although he know not how many cubits high it is, or how wide it spreads,

than he that can measure it, and count all its boughs, and neither owns

it, nor knows or loves its Creator: so a believer, whose all this world

of wealth is, and who having nothing, yet possesseth all things, by

cleaving unto Thee, whom all things serve, though he know not even

the circles of the Great Bear, yet is it folly to doubt but he is in a

better state than one who can measure the heavens, and number the stars,

and poise the elements, yet neglecteth Thee who hast made all things in

number, weight, and measure.

But yet who bade that Manichaeus write on these things also, skill in

which was no element of piety? For Thou hast said to man, Behold

piety and wisdom; of which he might be ignorant, though he had perfect

knowledge of these things; but these things, since, knowing not, he most

impudently dared to teach, he plainly could have no knowledge of piety.

For it is vanity to make profession of these worldly things even when

known; but confession to Thee is piety. Wherefore this wanderer to this

end spake much of these things, that convicted by those who had truly

learned them, it might be manifest what understanding he had in the

other abstruser things. For he would not have himself meanly thought of,

but went about to persuade men, "That the Holy Ghost, the Comforter and

Enricher of Thy faithful ones, was with plenary authority personally

within him." When then he was found out to have taught falsely of the

heaven and stars, and of the motions of the sun and moon (although these

things pertain not to the doctrine of religion), yet his sacrilegious

presumption would become evident enough, seeing he delivered things

which not only he knew not, but which were falsified, with so mad a

vanity of pride, that he sought to ascribe them to himself, as to a

divine person.

For when I hear any Christian brother ignorant of these things, and

mistaken on them, I can patiently behold such a man holding his opinion;

nor do I see that any ignorance as to the position or character of the

corporeal creation can injure him, so long as he doth not believe any

thing unworthy of Thee, O Lord, the Creator of all. But it doth injure

him, if he imagine it to pertain to the form of the doctrine of piety,

and will yet affirm that too stiffly whereof he is ignorant. And yet

is even such an infirmity, in the infancy of faith, borne by our mother

Charity, till the new-born may grow up unto a perfect man, so as not

to be carried about with every wind of doctrine. But in him who in such

wise presumed to be the teacher, source, guide, chief of all whom he

could so persuade, that whoso followed him thought that he followed,

not a mere man, but Thy Holy Spirit; who would not judge that so great

madness, when once convicted of having taught any thing false, were

to be detested and utterly rejected? But I had not as yet clearly

ascertained whether the vicissitudes of longer and shorter days and

nights, and of day and night itself, with the eclipses of the greater

lights, and whatever else of the kind I had read of in other books,

might be explained consistently with his sayings; so that, if they by

any means might, it should still remain a question to me whether it

were so or no; but I might, on account of his reputed sanctity, rest my

credence upon his authority.

And for almost all those nine years, wherein with unsettled mind I had

been their disciple, I had longed but too intensely for the coming of

this Faustus. For the rest of the sect, whom by chance I had lighted

upon, when unable to solve my objections about these things, still held

out to me the coming of this Faustus, by conference with whom these

and greater difficulties, if I had them, were to be most readily and

abundantly cleared. When then he came, I found him a man of pleasing

discourse, and who could speak fluently and in better terms, yet still

but the self-same things which they were wont to say. But what availed

the utmost neatness of the cup-bearer to my thirst for a more precious

draught? Mine ears were already cloyed with the like, nor did they seem

to me therefore better, because better said; nor therefore true, because

eloquent; nor the soul therefore wise, because the face was comely,

and the language graceful. But they who held him out to me were no good

judges of things; and therefore to them he appeared understanding and

wise, because in words pleasing. I felt however that another sort of

people were suspicious even of truth, and refused to assent to it, if

delivered in a smooth and copious discourse. But Thou, O my God, hadst

already taught me by wonderful and secret ways, and therefore I believe

that Thou taughtest me, because it is truth, nor is there besides Thee

any teacher of truth, where or whencesoever it may shine upon us. Of

Thyself therefore had I now learned, that neither ought any thing to

seem to be spoken truly, because eloquently; nor therefore falsely,

because the utterance of the lips is inharmonious; nor, again, therefore

true, because rudely delivered; nor therefore false, because the

language is rich; but that wisdom and folly are as wholesome and

unwholesome food; and adorned or unadorned phrases as courtly or country

vessels; either kind of meats may be served up in either kind of dishes.

That greediness then, wherewith I had of so long time expected that man,

was delighted verily with his action and feeling when disputing, and his

choice and readiness of words to clothe his ideas. I was then delighted,

and, with many others and more than they, did I praise and extol him.

It troubled me, however, that in the assembly of his auditors, I was not

allowed to put in and communicate those questions that troubled me,

in familiar converse with him. Which when I might, and with my friends

began to engage his ears at such times as it was not unbecoming for him

to discuss with me, and had brought forward such things as moved me; I

found him first utterly ignorant of liberal sciences, save grammar, and

that but in an ordinary way. But because he had read some of Tully's

Orations, a very few books of Seneca, some things of the poets, and such

few volumes of his own sect as were written in Latin and neatly, and

was daily practised in speaking, he acquired a certain eloquence, which

proved the more pleasing and seductive because under the guidance of a

good wit, and with a kind of natural gracefulness. Is it not thus, as I

recall it, O Lord my God, Thou judge of my conscience? before Thee is

my heart, and my remembrance, Who didst at that time direct me by the

hidden mystery of Thy providence, and didst set those shameful errors of

mine before my face, that I might see and hate them.

For after it was clear that he was ignorant of those arts in which I

thought he excelled, I began to despair of his opening and solving the

difficulties which perplexed me (of which indeed however ignorant, he

might have held the truths of piety, had he not been a Manichee). For

their books are fraught with prolix fables, of the heaven, and stars,

sun, and moon, and I now no longer thought him able satisfactorily to

decide what I much desired, whether, on comparison of these things with

the calculations I had elsewhere read, the account given in the books of

Manichaeus were preferable, or at least as good. Which when I proposed

to be considered and discussed, he, so far modestly, shrunk from the

burthen. For he knew that he knew not these things, and was not ashamed

to confess it. For he was not one of those talking persons, many of whom

I had endured, who undertook to teach me these things, and said nothing.

But this man had a heart, though not right towards Thee, yet neither

altogether treacherous to himself. For he was not altogether ignorant of

his own ignorance, nor would he rashly be entangled in a dispute, whence

he could neither retreat nor extricate himself fairly. Even for this I

liked him the better. For fairer is the modesty of a candid mind, than

the knowledge of those things which I desired; and such I found him, in

all the more difficult and subtile questions.

My zeal for the writings of Manichaeus being thus blunted, and

despairing yet more of their other teachers, seeing that in divers

things which perplexed me, he, so renowned among them, had so turned

out; I began to engage with him in the study of that literature, on

which he also was much set (and which as rhetoric-reader I was at that

time teaching young students at Carthage), and to read with him, either

what himself desired to hear, or such as I judged fit for his genius.

But all my efforts whereby I had purposed to advance in that sect,

upon knowledge of that man, came utterly to an end; not that I detached

myself from them altogether, but as one finding nothing better, I had

settled to be content meanwhile with what I had in whatever way fallen

upon, unless by chance something more eligible should dawn upon me.

Thus, that Faustus, to so many a snare of death, had now neither willing

nor witting it, begun to loosen that wherein I was taken. For Thy hands,

O my God, in the secret purpose of Thy providence, did not forsake my

soul; and out of my mother's heart's blood, through her tears night and

day poured out, was a sacrifice offered for me unto Thee; and Thou didst

deal with me by wondrous ways. Thou didst it, O my God: for the steps

of a man are ordered by the Lord, and He shall dispose his way. Or how

shall we obtain salvation, but from Thy hand, re-making what it made?

Thou didst deal with me, that I should be persuaded to go to Rome, and

to teach there rather, what I was teaching at Carthage. And how I was

persuaded to this, I will not neglect to confess to Thee; because herein

also the deepest recesses of Thy wisdom, and Thy most present mercy to

us, must be considered and confessed. I did not wish therefore to go to

Rome, because higher gains and higher dignities were warranted me by my

friends who persuaded me to this (though even these things had at that

time an influence over my mind), but my chief and almost only reason

was, that I heard that young men studied there more peacefully, and were

kept quiet under a restraint of more regular discipline; so that they

did not, at their pleasures, petulantly rush into the school of

one whose pupils they were not, nor were even admitted without his

permission. Whereas at Carthage there reigns among the scholars a most

disgraceful and unruly licence. They burst in audaciously, and

with gestures almost frantic, disturb all order which any one hath

established for the good of his scholars. Divers outrages they commit,

with a wonderful stolidity, punishable by law, did not custom uphold

them; that custom evincing them to be the more miserable, in that they

now do as lawful what by Thy eternal law shall never be lawful; and they

think they do it unpunished, whereas they are punished with the very

blindness whereby they do it, and suffer incomparably worse than what

they do. The manners then which, when a student, I would not make my

own, I was fain as a teacher to endure in others: and so I was well

pleased to go where, all that knew it, assured me that the like was not

done. But Thou, my refuge and my portion in the land of the living;

that I might change my earthly dwelling for the salvation of my soul,

at Carthage didst goad me, that I might thereby be torn from it; and at

Rome didst proffer me allurements, whereby I might be drawn thither,

by men in love with a dying life, the one doing frantic, the other

promising vain, things; and, to correct my steps, didst secretly use

their and my own perverseness. For both they who disturbed my quiet were

blinded with a disgraceful frenzy, and they who invited me elsewhere

savoured of earth. And I, who here detested real misery, was there

seeking unreal happiness.

But why I went hence, and went thither, Thou knewest, O God, yet

showedst it neither to me, nor to my mother, who grievously bewailed my

journey, and followed me as far as the sea. But I deceived her, holding

me by force, that either she might keep me back or go with me, and I

feigned that I had a friend whom I could not leave, till he had a fair

wind to sail. And I lied to my mother, and such a mother, and escaped:

for this also hast Thou mercifully forgiven me, preserving me, thus full

of execrable defilements, from the waters of the sea, for the water of

Thy Grace; whereby when I was cleansed, the streams of my mother's eyes

should be dried, with which for me she daily watered the ground under

her face. And yet refusing to return without me, I scarcely persuaded

her to stay that night in a place hard by our ship, where was an Oratory

in memory of the blessed Cyprian. That night I privily departed, but she

was not behind in weeping and prayer. And what, O Lord, was she with so

many tears asking of Thee, but that Thou wouldest not suffer me to sail?

But Thou, in the depth of Thy counsels and hearing the main point of her

desire, regardest not what she then asked, that Thou mightest make me

what she ever asked. The wind blew and swelled our sails, and withdrew

the shore from our sight; and she on the morrow was there, frantic with

sorrow, and with complaints and groans filled Thine ears, Who didst then

disregard them; whilst through my desires, Thou wert hurrying me to end

all desire, and the earthly part of her affection to me was chastened

by the allotted scourge of sorrows. For she loved my being with her, as

mothers do, but much more than many; and she knew not how great joy Thou

wert about to work for her out of my absence. She knew not; therefore

did she weep and wail, and by this agony there appeared in her the

inheritance of Eve, with sorrow seeking what in sorrow she had brought

forth. And yet, after accusing my treachery and hardheartedness, she

betook herself again to intercede to Thee for me, went to her wonted

place, and I to Rome.

And lo, there was I received by the scourge of bodily sickness, and I

was going down to hell, carrying all the sins which I had committed,

both against Thee, and myself, and others, many and grievous, over and

above that bond of original sin, whereby we all die in Adam. For

Thou hadst not forgiven me any of these things in Christ, nor had He

abolished by His Cross the enmity which by my sins I had incurred with

Thee. For how should He, by the crucifixion of a phantasm, which I

believed Him to be? So true, then, was the death of my soul, as that

of His flesh seemed to me false; and how true the death of His body,

so false was the life of my soul, which did not believe it. And now the

fever heightening, I was parting and departing for ever. For had I then

parted hence, whither had I departed, but into fire and torments, such

as my misdeeds deserved in the truth of Thy appointment? And this she

knew not, yet in absence prayed for me. But Thou, everywhere present,

heardest her where she was, and, where I was, hadst compassion upon me;

that I should recover the health of my body, though frenzied as yet

in my sacrilegious heart. For I did not in all that danger desire Thy

baptism; and I was better as a boy, when I begged it of my mother's

piety, as I have before recited and confessed. But I had grown up to my

own shame, and I madly scoffed at the prescripts of Thy medicine, who

wouldest not suffer me, being such, to die a double death. With which

wound had my mother's heart been pierced, it could never be healed. For

I cannot express the affection she bore to me, and with how much more

vehement anguish she was now in labour of me in the spirit, than at her

childbearing in the flesh.

I see not then how she should have been healed, had such a death of mine

stricken through the bowels of her love. And where would have been those

her so strong and unceasing prayers, unintermitting to Thee alone? But

wouldest Thou, God of mercies, despise the contrite and humbled heart of

that chaste and sober widow, so frequent in almsdeeds, so full of duty

and service to Thy saints, no day intermitting the oblation at Thine

altar, twice a day, morning and evening, without any intermission,

coming to Thy church, not for idle tattlings and old wives' fables; but

that she might hear Thee in Thy discourses, and Thou her in her prayers.

Couldest Thou despise and reject from Thy aid the tears of such an one,

wherewith she begged of Thee not gold or silver, nor any mutable or

passing good, but the salvation of her son's soul? Thou, by whose gift

she was such? Never, Lord. Yea, Thou wert at hand, and wert hearing and

doing, in that order wherein Thou hadst determined before that it should

be done. Far be it that Thou shouldest deceive her in Thy visions and

answers, some whereof I have, some I have not mentioned, which she laid

up in her faithful heart, and ever praying, urged upon Thee, as

Thine own handwriting. For Thou, because Thy mercy endureth for ever,

vouchsafest to those to whom Thou forgivest all of their debts, to

become also a debtor by Thy promises.

Thou recoveredst me then of that sickness, and healedst the son of Thy

handmaid, for the time in body, that he might live, for Thee to bestow

upon him a better and more abiding health. And even then, at Rome, I

joined myself to those deceiving and deceived "holy ones"; not with

their disciples only (of which number was he, in whose house I had

fallen sick and recovered); but also with those whom they call "The

Elect." For I still thought "that it was not we that sin, but that I

know not what other nature sinned in us"; and it delighted my pride, to

be free from blame; and when I had done any evil, not to confess I had

done any, that Thou mightest heal my soul because it had sinned against

Thee: but I loved to excuse it, and to accuse I know not what other

thing, which was with me, but which I was not. But in truth it was

wholly I, and mine impiety had divided me against myself: and that sin

was the more incurable, whereby I did not judge myself a sinner; and

execrable iniquity it was, that I had rather have Thee, Thee, O God

Almighty, to be overcome in me to my destruction, than myself of Thee to

salvation. Not as yet then hadst Thou set a watch before my mouth, and a

door of safe keeping around my lips, that my heart might not turn

aside to wicked speeches, to make excuses of sins, with men that work

iniquity; and, therefore, was I still united with their Elect.

But now despairing to make proficiency in that false doctrine, even

those things (with which if I should find no better, I had resolved to

rest contented) I now held more laxly and carelessly. For there half

arose a thought in me that those philosophers, whom they call Academics,

were wiser than the rest, for that they held men ought to doubt

everything, and laid down that no truth can be comprehended by man:

for so, not then understanding even their meaning, I also was clearly

convinced that they thought, as they are commonly reported. Yet did I

freely and openly discourage that host of mine from that over-confidence

which I perceived him to have in those fables, which the books of

Manichaeus are full of. Yet I lived in more familiar friendship with

them, than with others who were not of this heresy. Nor did I maintain

it with my ancient eagerness; still my intimacy with that sect (Rome

secretly harbouring many of them) made me slower to seek any other way:

especially since I despaired of finding the truth, from which they had

turned me aside, in Thy Church, O Lord of heaven and earth, Creator of

all things visible and invisible: and it seemed to me very unseemly to

believe Thee to have the shape of human flesh, and to be bounded by the

bodily lineaments of our members. And because, when I wished to think on

my God, I knew not what to think of, but a mass of bodies (for what was

not such did not seem to me to be anything), this was the greatest, and

almost only cause of my inevitable error.

For hence I believed Evil also to be some such kind of substance, and

to have its own foul and hideous bulk; whether gross, which they called

earth, or thin and subtile (like the body of the air), which they

imagine to be some malignant mind, creeping through that earth. And

because a piety, such as it was, constrained me to believe that the good

God never created any evil nature, I conceived two masses, contrary

to one another, both unbounded, but the evil narrower, the good more

expansive. And from this pestilent beginning, the other sacrilegious

conceits followed on me. For when my mind endeavoured to recur to the

Catholic faith, I was driven back, since that was not the Catholic faith

which I thought to be so. And I seemed to myself more reverential, if I

believed of Thee, my God (to whom Thy mercies confess out of my mouth),

as unbounded, at least on other sides, although on that one where the

mass of evil was opposed to Thee, I was constrained to confess Thee

bounded; than if on all sides I should imagine Thee to be bounded by the

form of a human body. And it seemed to me better to believe Thee to have

created no evil (which to me ignorant seemed not some only, but a bodily

substance, because I could not conceive of mind unless as a subtile

body, and that diffused in definite spaces), than to believe the nature

of evil, such as I conceived it, could come from Thee. Yea, and our

Saviour Himself, Thy Only Begotten, I believed to have been reached

forth (as it were) for our salvation, out of the mass of Thy most lucid

substance, so as to believe nothing of Him, but what I could imagine in

my vanity. His Nature then, being such, I thought could not be born

of the Virgin Mary, without being mingled with the flesh: and how that

which I had so figured to myself could be mingled, and not defiled, I

saw not. I feared therefore to believe Him born in the flesh, lest

I should be forced to believe Him defiled by the flesh. Now will Thy

spiritual ones mildly and lovingly smile upon me, if they shall read

these my confessions. Yet such was I.

Furthermore, what the Manichees had criticised in Thy Scriptures, I

thought could not be defended; yet at times verily I had a wish to

confer upon these several points with some one very well skilled in

those books, and to make trial what he thought thereon; for the words

of one Helpidius, as he spoke and disputed face to face against the

said Manichees, had begun to stir me even at Carthage: in that he

had produced things out of the Scriptures, not easily withstood, the

Manichees' answer whereto seemed to me weak. And this answer they

liked not to give publicly, but only to us in private. It was, that the

Scriptures of the New Testament had been corrupted by I know not whom,

who wished to engraff the law of the Jews upon the Christian faith: yet

themselves produced not any uncorrupted copies. But I, conceiving of

things corporeal only, was mainly held down, vehemently oppressed and

in a manner suffocated by those "masses"; panting under which after the

breath of Thy truth, I could not breathe it pure and untainted.

I began then diligently to practise that for which I came to Rome, to

teach rhetoric; and first, to gather some to my house, to whom, and

through whom, I had begun to be known; when lo, I found other offences

committed in Rome, to which I was not exposed in Africa. True, those

"subvertings" by profligate young men were not here practised, as was

told me: but on a sudden, said they, to avoid paying their

master's stipend, a number of youths plot together, and remove to

another;--breakers of faith, who for love of money hold justice cheap.

These also my heart hated, though not with a perfect hatred: for

perchance I hated them more because I was to suffer by them, than

because they did things utterly unlawful. Of a truth such are base

persons, and they go a whoring from Thee, loving these fleeting

mockeries of things temporal, and filthy lucre, which fouls the hand

that grasps it; hugging the fleeting world, and despising Thee, Who

abidest, and recallest, and forgivest the adulteress soul of man, when

she returns to Thee. And now I hate such depraved and crooked persons,

though I love them if corrigible, so as to prefer to money the learning

which they acquire, and to learning, Thee, O God, the truth and fulness

of assured good, and most pure peace. But then I rather for my own sake

misliked them evil, than liked and wished them good for Thine.

When therefore they of Milan had sent to Rome to the prefect of the

city, to furnish them with a rhetoric reader for their city, and sent

him at the public expense, I made application (through those very

persons, intoxicated with Manichaean vanities, to be freed wherefrom

I was to go, neither of us however knowing it) that Symmachus, then

prefect of the city, would try me by setting me some subject, and so

send me. To Milan I came, to Ambrose the Bishop, known to the whole

world as among the best of men, Thy devout servant; whose eloquent

discourse did then plentifully dispense unto Thy people the flour of Thy

wheat, the gladness of Thy oil, and the sober inebriation of Thy wine.

To him was I unknowing led by Thee, that by him I might knowingly be

led to Thee. That man of God received me as a father, and showed me an

Episcopal kindness on my coming. Thenceforth I began to love him, at

first indeed not as a teacher of the truth (which I utterly despaired

of in Thy Church), but as a person kind towards myself. And I listened

diligently to him preaching to the people, not with that intent I ought,

but, as it were, trying his eloquence, whether it answered the fame

thereof, or flowed fuller or lower than was reported; and I hung on his

words attentively; but of the matter I was as a careless and scornful

looker-on; and I was delighted with the sweetness of his discourse,

more recondite, yet in manner less winning and harmonious, than that of

Faustus. Of the matter, however, there was no comparison; for the one

was wandering amid Manichaean delusions, the other teaching salvation

most soundly. But salvation is far from sinners, such as I then stood

before him; and yet was I drawing nearer by little and little, and

unconsciously.

For though I took no pains to learn what he spake, but only to hear how

he spake (for that empty care alone was left me, despairing of a way,

open for man, to Thee), yet together with the words which I would

choose, came also into my mind the things which I would refuse; for

I could not separate them. And while I opened my heart to admit "how

eloquently he spake," there also entered "how truly he spake"; but this

by degrees. For first, these things also had now begun to appear to

me capable of defence; and the Catholic faith, for which I had thought

nothing could be said against the Manichees' objections, I now thought

might be maintained without shamelessness; especially after I had heard

one or two places of the Old Testament resolved, and ofttimes "in a

figure," which when I understood literally, I was slain spiritually.

Very many places then of those books having been explained, I now blamed

my despair, in believing that no answer could be given to such as hated

and scoffed at the Law and the Prophets. Yet did I not therefore then

see that the Catholic way was to be held, because it also could find

learned maintainers, who could at large and with some show of reason

answer objections; nor that what I held was therefore to be condemned,

because both sides could be maintained. For the Catholic cause seemed to

me in such sort not vanquished, as still not as yet to be victorious.

Hereupon I earnestly bent my mind, to see if in any way I could by any

certain proof convict the Manichees of falsehood. Could I once have

conceived a spiritual substance, all their strongholds had been beaten

down, and cast utterly out of my mind; but I could not. Notwithstanding,

concerning the frame of this world, and the whole of nature, which the

senses of the flesh can reach to, as I more and more considered and

compared things, I judged the tenets of most of the philosophers to have

been much more probable. So then after the manner of the Academics (as

they are supposed) doubting of every thing, and wavering between all, I

settled so far, that the Manichees were to be abandoned; judging that,

even while doubting, I might not continue in that sect, to which I

already preferred some of the philosophers; to which philosophers

notwithstanding, for that they were without the saving Name of Christ,

I utterly refused to commit the cure of my sick soul. I determined

therefore so long to be a Catechumen in the Catholic Church, to which

I had been commended by my parents, till something certain should dawn

upon me, whither I might steer my course.

**Montaigne *Essays, Volume II, Essay 12***

And this is the excuse that, upon consideration of this subject, Scvola, a high priest, and Varro, a great theologian in their times, make us: “That it is necessary that the people should be ignorant of many things that are true, and believe many things that are false.” *Quum veritatem qua liberetur inquirat credatur ei expedire quod fallitur.* “Seeing he inquires into the truth, by which he would be made free, ‘tis fit he should be deceived.” Human eyes cannot perceive things but by the forms they know; and we do not remember what a leap miserable Phton took for attempting to guide his father’s horses with a mortal hand. The mind of man falls into as great a depth, and is after the same manner bruised and shattered by his own rashness. If you ask of philosophy of what matter the heavens and the sun are? what answer will she return, if not that it is iron, or, with Anaxagoras, stone, or some other matter that she makes use of? If a man inquire of Zeno what nature is? “A fire,” says he, “an artisan, proper for generation, and regularly proceeding.” Archimedes, master of that science which attributes to itself the precedency before all others for truth and certainty; “the sun,” says he, “is a god of red-hot iron.” Was not this a fine imagination, extracted from the inevitable necessity of geometrical demonstrations? Yet not so inevitable and useful but that Socrates thought it was enough to know so much of geometry only as to measure the land a man bought or sold; and that Polynus, who had been a great and famous doctor in it, despised it, as full of falsity and manifest vanity, after he had once tasted the delicate fruits of the lozelly gardens of Epicurus. Socrates in Xenophon, concerning this affair, says of Anaxagoras, reputed by antiquity learned above all others in celestial and divine matters, “That he had cracked his brain, as all other men do who too immoderately search into knowledges which nothing belong to them:” when he made the sun to be a burning stone, he did not consider that a stone does not shine in the fire; and, which is worse, that it will there consume; and in making the sun and fire one, that fire does not turn the complexions black in shining upon them; that we are able to look fixedly upon fire; and that fire kills herbs and plants. ‘Tis Socrates’s opinion, and mine too, that the best judging of heaven is not to judge of it at all. Plato having occasion, in his *Timous*, to speak of the demons, “This undertaking,” says he, “exceeds my ability.” We are therefore to believe those ancients who said they were begotten by them; ‘tis against all reason to refuse a man’s faith to the children of the gods, though what they say should not be proved by any necessary or probable reasons; seeing they engage to speak of domestic and familiar things.

Let us see if we have a little more light in the knowledge of human and natural things. Is it not a ridiculous attempt for us to forge for those to whom, by our own confession, our knowledge is not able to attain, another body, and to lend a false form of our own invention; as is manifest in this motion of the planets; to which, seeing our wits cannot possibly arrive, nor conceive their natural conduct, we lend them material, heavy, and substantial springs of our own by which to move:—

 *Temo aureus, aurea summ*

 *Curvatura rot, radiorum argenteus ordo.*

 *“Gold was the axle, and the beam was gold;*

 *The wheels with silver spokes on golden circles roll’d.”*

You would say that we had had coachmakers, carpenters, and painters, that went up on high to make engines of various motions, and to range the wheelwork and interfacings of the heavenly bodies of differing colours about the axis of necessity, according to Plato:—

 *Mundus domus est maxima rerum,*

 *Quam quinque altiton fragmine zon*

 *Cingunt, per quam limbus pictus bis sex signis*

 *Stellimicantibus, altus in obliquo there, lun*

 *Bigas acceptat.*

 *“The world’s a mansion that doth all things hold,*

 *Which thundering zones, in number five, enfold,*

 *Through which a girdle, painted with twelve signs,*

 *And that with sparkling constellations, shines,*

 *In heaven’s arch marks the diurnal course*

 *For the sun’s chariot and his fiery horse.”*

These are all dreams and fanatic follies. Why will not nature please for once to lay open her bosom to us, and plainly discover to us the means and conduct of her movements, and prepare our eyes to see them? Good God, what abuse, what mistakes should we discover in our poor science! I am mistaken if that weak knowledge of ours holds any one thing as it really is, and I shall depart hence more ignorant of all other things than my own ignorance.

Have I not read in Plato this divine saying, that “nature is nothing but enigmatic poesy!” As if a man might perhaps see a veiled and shady picture, breaking out here and there with an infinite variety of false lights to puzzle our conjectures: *Latent ista omnia crassis occullata et circumfusa tenebris; ut nulla acies humani ingenii tanta sit, qu penetrare in coelum, terram intrare, possit.* “All those things lie concealed and involved in so dark an obscurity that no point of human wit can be so sharp as to pierce heaven or penetrate the earth.” And certainly philosophy is no other than sophisticated poetry. Whence do the ancient writers extract their authorities but from the poets? and the first of them were poets themselves, and writ accordingly. Plato is but a poet unripped. Timon calls him, insultingly, “a monstrous forger of miracles.” All superhuman sciences make use of the poetic style. Just as women make use of teeth of ivory where the natural are wanting, and instead of their true complexion make one of some artificial matter; as they stuff themselves out with cotton to appear plump, and in the sight of every one do paint, patch, and trick up themselves with a false and borrowed beauty; so does science (and even our law itself has, they say, legitimate fictions, whereon it builds the truth of its justice); she gives us in presupposition, and for current pay, things which she herself informs us were invented; for these *epicycles, eccentrics, and concentrics*, which astrology makes use of to carry on the motions of the stars, she gives us for the best she could invent upon that subject; as also, in all the rest, philosophy presents us not that which really is, or what she really believes, but what she has contrived with the greatest and most plausible likelihood of truth, and the quaintest invention. Plato, upon the discourse of the state of human bodies and those of beasts, says, “I should know that what I have said is truth, had I the confirmation of an oracle; but this I will affirm, that what I have said is the most likely to be true of any thing I could say.”

‘Tis not to heaven only that art sends her ropes, engines, and wheels; let us consider a little what she says of us ourselves, and of our contexture.

There is not more retrogradation, trepidation, accession, recession, and astonishment, in the stars and celestial bodies, than they have found out in this poor little human body. In earnest, they have good reason, upon that very account, to call it the little world, so many tools and parts have they employed to erect and build it. To assist the motions they see in man, and the various functions that we find in ourselves, in how many parts have they divided the soul, in how many places lodged it? in how many orders have they divided, and to how many stories have they raised this poor creature, man, besides those that are natural and to be perceived? And how many offices and vocations have they assigned him? They make it an imaginary public thing. ‘Tis a subject that they hold and handle; and they have full power granted to them to rip, place, displace, piece, and stuff it, every one according to his own fancy, and yet they possess it not They cannot, not in reality only, but even in dreams, so govern it that there will not be some cadence or sound that will escape their architecture, as enormous as it is, and botched with a thousand false and fantastic patches. And it is not reason to excuse them; for though we are satisfied with painters when they paint heaven, earth, seas, mountains, and remote islands, that they give us some slight mark of them, and, as of things unknown, are content with a faint and obscure description; yet when they come and draw us after life, or any other creature which is known and familiar to us, we then require of them a perfect and exact representation of lineaments and colours, and despise them if they fail in it.

I am very well pleased with the Milesian girl, who observing the philosopher Thales to be always contemplating the celestial arch, and to have his eyes ever gazing upward, laid something in his way that he might stumble over, to put him in mind that it would be time to take up his thoughts about things that are in the clouds when he had provided for those that were under his feet. Doubtless she advised him well, rather to look to himself than to gaze at heaven; for, as Democritus says, by the mouth of Cicero,—

 *Quod est ante pedes, nemo spectat: coeli scrutantur plagas.*

 *“No man regards what is under his feet;*

 *They are always prying towards heaven.”*

**Copernicus *On the Revolutions of the Heavenly Spheres***

**To His Holiness, Pope Paul III,
Nicolaus Copernicus’ preface
to his Books on the Revolutions.**I can readily imagine, Holy Father, that as soon as some people hear that in this volume, which I have written about the revolutions of the spheres of the universe, I ascribe certain motions to the terrestrial globe, they will shout that I must be immediately repudiated together with this belief. For I am not so enamored of my own opinions that I disregard what others may think of them. I am aware that a philosopher’s ideas are not subject to the judgment of ordinary persons, because it is his endeavor to seek the truth in all things, to the extent permitted to human reason by God. Yet I hold that completely erroneous views should be shunned. Those who know that the consensus of many centuries has sanctioned the conception that the earth remains at rest in the middle of the heaven as its center would, I reflected, regard it as an insane pronouncement if I made the opposite assertion that the earth moves. There- fore I debated with myself for a long time whether to publish the volume which I wrote to prove the earth’s motion or rather to follow the example of the Pythagoreans and certain others, who used to transmit philosophy’s secrets only to kinsmen and friends, not in writing but by word of mouth, as is shown by Lysis’ letter to Hipparchus. And they did so, it seems to me, not, as some suppose, because they were in some way jealous about their teachings, which would be spread around; on the contrary, they wanted the very beautiful thoughts attained by great men of deep devotion not to be ridiculed by those who are reluctant to exert themselves vigorously in any literary pursuit unless it is lucrative; or if they are stimulated to the non-acquisitive study of philosophy by the exhortation and example of others, yet because of their dullness of mind they play the same part among philosophers as drones among bees. When I weighed these considerations, the scorn which I had rea- son to fear on account of the novelty and unconventionality of my opinion almost induced me to abandon completely the work which I had undertaken.

But while I hesitated for a long time and even resisted, my friends drew me back. Foremost among them was the cardinal of Capua, Nicolaus Schönberg, renowned in every field of learning. Next to him was a man who loves me dearly, Tiedemann Giese, bishop of Chelmno, a close student of sacred letters as well as of all good literature. For he repeatedly encouraged me and, some- times adding reproaches, urgently requested me to publish this volume and finally permit it to appear after being buried among my papers and lying concealed not merely until the ninth year but by now the fourth period of nine years. The same conduct was recommended to me by not a few other very eminent scholars. They exhorted me no longer to refuse, on account of the fear which I felt, to make my work available for the general use of students of astronomy. The crazier my doctrine of the earth’s motion now appeared to most people, the argument ran, so much the more admiration and thanks would it gain after they saw the publication of my writings dispel the fog of absurdity by most luminous proofs. Influenced therefore by these persuasive men and by this hope, in the end I allowed my friends to bring out an edition of the volume, as they had long besought me to do.

However, Your Holiness will perhaps not be greatly surprised that I have dared to publish my studies after devoting so much effort to working them out that I did not hesitate to put down my thoughts about the earth’s motion in written form too. But you are rather waiting to hear from me how it occurred to me to venture to conceive any motion of the earth, against the traditional opinion of astronomers and almost against common sense. I have accordingly no desire to conceal from Your Holiness that I was impelled to consider a different system of deducing the motions of the universe’s spheres for no other reason than the realization that astronomers do not agree among themselves in their investigations of this subject. For, in the first place, they are so uncertain about the motion of the sun and moon

that they cannot establish and observe a constant length even for the tropical year. Secondly, in determining the motions not only of these bodies but also of the other five planets, they do not use the same principles, assumptions, and explanations of the apparent revolutions and motions. For while some employ only homocentrics, others utilize eccentrics and epicycles, and yet they do not quite reach their goal. For although those who put their faith in homocentrics showed that some nonuniform motions could be compounded in this way, nevertheless by this means they were unable to obtain any incontrovertible result in absolute agreement with the phenomena. On the other hand, those who devised the eccentrics seem thereby in large measure to have solved the problem of the apparent motions with appropriate calculations. But meanwhile they introduced a good many ideas which apparently contradict the first principles of uniform motion. Nor could they elicit or deduce from the eccentrics the principal consideration, that is, the structure of the universe and the true symmetry of its parts. On the contrary, their experience was just like someone taking from various places hands, feet, a head, and other pieces, very well depicted, it may be, but not for the representation of a single person; since these fragments would not belong to one another at all, a monster rather than a man would be put together from them. Hence in the process of demonstration or “method,” as it is called, those who employed eccentrics are found either to have omitted something essential or to have admitted something extraneous and wholly irrelevant. This would not have happened to them, had they followed sound principles. For if the hypotheses assumed by them were not false, everything which follows from their hypotheses would be confirmed beyond any doubt. Even though what I am now saying may be obscure, it will nevertheless become clearer in the proper place.

For a long time, then, I reflected on this confusion in the astronomical traditions concerning the derivation of the motions of the universe’s spheres. I began to be annoyed that the movements of the world machine, created for our sake by the best and most systematic Artisan of all, were not understood with greater certainty by the philosophers, who otherwise examined so precisely the most insignificant trifles of this world. For this reason I undertook the task of rereading the works of all the philosophers which I could obtain to learn whether anyone had ever proposed other motions of the universe’s spheres than those expounded by the teachers of astronomy in the schools. And in fact first I found in Cicero that Hicetas supposed the earth to move. Later I also discovered in Plutarch that certain others were of this opinion. I have decided to set his words down here, so that they may be available to everybody: Some think that the earth remains at rest. But Philolaus the Pythagorean believes that, like the sun and moon, it revolves around the fire in an oblique circle. Heraclides of Pontus and Ecphantus the Pythagorean make the earth move, not in a progressive motion, but like a wheel in a rotation from west to east about its own center.

Therefore, having obtained the opportunity from these sources, I too began to consider the mobility of the earth. And even though the idea seemed absurd, nevertheless I knew that others before me had been granted the freedom to imagine any circles whatever for the purpose of explaining the heavenly phenomena. Hence I thought that I too would be readily permitted to ascertain whether explanations sounder than those of my predecessors could be found for the revolution of the celestial spheres on the assumption of some motion of the earth.

Having thus assumed the motions which I ascribe to the earth later on in the volume, by long and intense study I finally found that if the motions of the other planets are correlated with the orbiting of the earth, and are computed for the revolution of each planet, not only do their phenomena follow therefrom but also the order and size of all the planets and spheres, and heaven itself is so linked together that in no portion of it can anything be shifted without disrupting the remaining parts and the universe as a whole. Accordingly in the arrangement of the volume too I have adopted the following order. In the first book I set forth the entire distribution of the spheres together with the motions which I attribute to the earth, so that this book contains, as it were, the general structure of the universe. Then in the remaining books I correlate the motions of the other planets and of all the spheres with the movement of the earth so that I may thereby determine to what extent the motions and appearances of the other planets and spheres can be saved if they are correlated with the earth’s motions. I have no doubt that acute and learned astronomers will agree with me if, as this

discipline especially requires, they are willing to examine and consider, not superficially but thoroughly, what I adduce in this volume in proof of these matters. However, in order that the educated and uneducated alike may see that I do not run away from the judgment of anybody at all, I have preferred dedicating my studies to Your Holiness rather than to anyone else. For even in this very remote corner of the earth where I live you are considered the highest authority by virtue of the loftiness of your office and your love for all literature and astronomy too. Hence by your prestige and judgment you can easily suppress calumnious attacks although, as the proverb has it, there is no remedy for a backbite.

Perhaps there will be babblers who claim to be judges of astronomy al- though completely ignorant of the subject and, badly distorting some passage of Scripture to their purpose, will dare to find fault with my undertaking and censure it. I disregard them even to the extent of despising their criticism as unfounded. For it is not unknown that Lactantius, otherwise an illustrious writer but hardly an astronomer, speaks quite childishly about the earth’s shape, when he mocks those who declared that the earth has the form of a globe. Hence scholars need not be surprised if any such persons will likewise ridicule me. Astronomy is written for astronomers. To them my work too will seem, unless I am mistaken, to make some contribution also to the Church, at the head of which Your Holiness now stands. For not so long ago under Leo X the Lateran Council considered the problem of reforming the ecclesiastical calendar. The issue remained undecided then only because the lengths of the year and month and the motions of the sun and moon were regarded as not yet adequately measured. From that time on, at the suggestion of that most distinguished man, Paul, bishop of Fossombrone, who was then in charge of this matter, I have directed my attention to a more precise study of these topics. But what I have accomplished in this regard, I leave to the judgment of Your Holiness in particular and of all other learned astronomers. And lest I appear to Your Holiness to promise more about the usefulness of this volume than I can fulfill, I now turn to the work itself.

**Kant *Pure Reason***

The investigations and calculations of astronomers have taught us much that is wonderful; but the most important lesson we have received from them is the discovery of the abyss of our *ignorance* in relation to the universe – an ignorance the magnitude of which reason, without the information derived, could never have conceived. This discovery of our deficiencies must produce a great change in the determination of the aims of human reason.