THE WORLD VIEW OF THE RENAISSANCE

Some historians like to look on Western history—intellectual history, at least—as a pendulum that swings back and forth between Plato and Aristotle. The historian, therefore—even the historian of science—needs to have some idea of how their ideas have affected us. We start with a rough chonology:

- Augustine about 400 AD; Plato, "neo-platonism"
- Aristotle later middle ages made respectable by Aquinas
- Renaissance (1400 on) Plato, neo-platonism again!

The period we call the Renaissance began in Italy in perhaps 1400 or so. It was characterized, among other things, by a renewed interest in the Greek classics and in the Greek language. It was in this period, for example, that many Greek works were "rediscovered", or were translated into Latin directly from the Greek, rather than from Arabic translations.

But along with Plato came an interest in "neo-Platonic" sources Renaissance types thought went back to the ancient Egyptians.

The resulting Renaissance neoplatonism was as strange a mix as you can imagine, and included

- interest in mathematics (goes back to Plato, recall)
- renewed interest in astrology
- interest in alchemy
- interest in magic

Example: John Dee (1527 - 1608) – English

- educated at Cambridge (England)
- capable mathematician and astronomer; early Copernican; wrote influential Preface to 1st English translation of Euclid (1553)

But also

• astrologer at court of Queen Elizabeth

"As court astrologer, he selected the most propitious day for Elizabaeth's coronation. And once, when an image of the Queen with a pin stuck in its heart was found in Lincoln's Inn fields, a thoroughly alarmed Privy-Council asked Dee to counteract any harm intended against her." (French, p. 6)

He was apparently seriously interested in magic—the conjuring up of angels
and demons, for example—and in fact gained something of a reputation as a
sorcerer and all-around disreputable character—apparently with some justice.
He apparently did believe in, and on the continent, at least, actually practiced
magic!

Now, Dee was an extreme case; but he was not altogether an isolated one. Consider for example

Marsilio Ficino (about 1433 – 1499)

- Kuhn quotes on p 130 as example of neoplatonism read
- early translator of Plato from Greek; influential in reviving interest in Plato
- but also translator of the Corpus Hermeticum, a collection of neo-Platonic writings that dates to 100 – 300 AD (Yates p 2), but which Ficino and others thought went back to the ancient Egyptians, and represented a source of occult wisdom
- interested in astrological magic (quote from Schumaker p 121 or Walker p?)

Kuhn is particularly interested in the connection with mathematics, and suggests that these ideas may perhaps have influenced Copernicus.

But in addition, it is necessary to see just how deeply the Aristotelian picture of the world had embedded itself into the European imagination—far more than one might expect of something that had as its start the comparatively limited task of describing the motion of the planets. I will use material from

Marjorie Hope Nicolson, The Breaking of the Circle

might also have used Tillard, 17th Century Background

The metaphor of the machine is a natural and easy one for us; we speak for example of the *machinery* of government, the mechanism that explains this or that, ...

But this metaphor is a comparatively modern one, dating perhaps to the 17th century. We will find it, for example, in the work of Galileo and Descartes. For the ancient Greeks, as well as for western Europeans in the middle ages down to comparatively recent times, a much more common metaphor was that of ORGANISM—the earth, for example, was often thought of as in some sense living—"Mother Earth"—and the boundaries between organic and inorganic were far less rigid and fixed than they are today.

Nicolson, then, argues that in order to understand 17th century English poetry, it is necessary to understand these metaphors, as well as the Aristotelian world view in which they are grounded.

One of the most widespread of the resultant metaphors was that of

MACROCOSM and MICROCOSM

That is, the larger universe — the coelestial and terrestrial spheres — were reflected in the human "sphere," the human head! Thus, to everything in the human sphere, something in the stars or the earth must correspond.

In this view, astrology was a very natural business—what could be less surprising than that the sphere of the stars could influence the human sphere! Similarly, the four "humors" of early medicine corresponded to the four elements: (N p 15)

There was nothing quaint about these ideas in the period of Shakespeare ... The theory of the elements was still basic to Renaissance geology; the sciences of medicine and physiology were established on belief in the humors. Few physicians treated patients without first casting their horoscopes. Back of all these—elements, planets, humors—lay one central conception: belief in the interrelationship of the little world of man and the great world of the universe. (Nicolson p. 15ff)

Consider for example the heath scene from Shakespeare's King Lear (III, 1). (Remember that Lear had divided his kingdom among his three daughters, and then had found himself at the mercy of two of them. The conflict drove him mad, and in one scene, Lear is shown in the midst of a storm, and the disarray in nature is reflected in the disarray in Lear's mind.)

Kent: Where's the King:

Gentleman: Contending with the fretful elements;

Bids the wind blow the earth into the sea,

That things might change or cease; tears his white hair,

Which the impetuous blasts, with eyeless rage,

Catch in their fury, and make nothing of;

Strives in his little world of man to out-scorn

The to-and-fro conflicting of wind and rain.

"When we ourselves see Lear on the heath, we realize that he is finding in the forces of nature the same imbalance we recognize in him:" (Nicolson, p. 17.)

A bit later, Kent comes across Lear on the heath, and Lear's madness reflects the madness of nature:

Blow, winds, and crack your cheeks! rage! blow You cataracts and hurricanoes ...
And thou, all-shaking thunder,
Strike flat the thick rotundity of the world!
Crack nature's moulds, all germens spill at once,
That make ungrateful man.

Another example (Nicolson p. 33) from George Herbert, an English poet:

Man is all symmetrie,
Full of proportions, one limbe to another,
And all to all the world besides:
Each part may call the furthest, brother:
For head with foot hath private amitie,
And both with moon and tides.

Or another poet, William Hammond: (Nicolson, p 33):

I shall a perfect microcosm grow When, as the Alps, I crowned am with snow. I will believe this white the milky way When leads into the endless court of May.

And here is John Donne, another 17th century poet, and a famous preacher and Dean of St. Paul's Cathedral besides, in his *Devotions*

It is too little to call Man a little World. Man consists of more pieces, more parts, than the World.... The whole world hath nothing, to which something in man doth not answer.... Is this the honour which Man hath by being a little world, That he hath these earthquakes in him selfe, sodaine shakings; these lightnings, sodaine flashes; these thunders, sodaine noises; these Eclypses, sodaine offuscations, and darnings of his senses; these Blazing Stars, sodaine fiery exhalations; these Rivers of Blood, sodaine red waters?

(quotation taken from Nicolson, p. 23)

Still another example is from Paracelsus, a famous Renaissance physician:

Man is the lesser, and for his sake the Macrocosm, the greater world, was founded.... This therefore is the condition of the Microcosmus, or smaller world. It contains in its body all the minerals of the world. Consequently the body acquires its own medicine from the world. There is a vast variety of things contained in the body of the Microcosm which elude the observation of the senese, though God, the Creator, has willed thim to exist in that structure. There are, for example, more than a thousand species of trees, stone, minerals, and metals.... Accordingly know that the mysteries of the microcosm are to be mystically understood.

(quotation taken from Nicolson, p. 23)

Finally, here is a parody from Jonathan Swift's A Tale of a Tub, written in the 18th century, when this metaphor had begun to lose its hold:

They held the universe to be a large suit of clothes which invests everything; that the earth is invested by air; the air is invested by the stars; and the stars are invested by the *Primum Mobile*. Look on this globe of earth, you will find it to be a very complete and fashionable dress. What is that which some call land but a fine coat faced with green, or the sea but a waistcoat of water-tabby? Proceed to the particular works of the creation, you will find how curious journeyman Nature hath been to trim up the vegetable beaux; observe how sparkish a periwig adorns the head of a beech, and what a fine doublet of white satin is worn by the birch. To conclude from all, what is man himself but a micro-coat, or rather a complete suit of clothes with all its trimmings?

(quotation taken from Nicolson, p. 46)

Equally, the metaphor of the circle or the sphere—in fact, geometric imagery more generally—was common in poetry; here for example is the 17th century English poet Richard Loveless:

Compendious Snayl! Thou seem'st to me Large Euclid's strict Epitome;
And in each diagram dost fling
Thee from the point unto the ring.
A figure now triangulare,
And oval now, and now a square,
And then a serpentine, dost crawl,
Now a straight line, now crook'd, now all....

(quotation taken from Nicolson, p. 61)

Even love poetry showed this geometrical imagery; here is Loveless again: (N, p63)

See! with what constant motion,
Even and glorious as the sun,
Gratiana steers that noble frame,
Soft as her breast, sweet as her voice,
That gave each winding law and poise, ...

So did she move; so did she sing
Like the harmonious spheres that bring
Unto their rounds their music's aid;
Which she performed in such a way
As all th' enamored world will say,
The Graces danced, and Apollo played.

(quotation taken from Nicolson, p. 63)

Here is another example from Andrew Marvell, another 17th century English poet: (N, p 64)

As Lines so Loves oblique may well Themselves in every Angle greet: But ours so truly Paralel Though infinite can never meet.

(quotation taken from Nicolson, p. 64)

or yet another example from Thomas Carew:

My whole life is 'bout you, the centre star,
But a perpetual motion circular.
I am the dial's hand, still walking round;
You are the compass; and I never sound
Beyond your circle, neither can I show
Aught, but what first expressed is in you.

(quotation taken from Nicolson, p. 65)

The new astronomy of Copernicus was thus far more than a technical revolution in astronomy—it challenged and called into doubt an entire world-view—and at a time, remember, less accustomed than our own to rapid change!

Nicolson quotes extensively from John Donne, who at one point could express a fairly standard point of view:

Who vagrant transitory Comets sees, Wonders, because they are rare; But a new starre Whose motion with the firmament agrees, Is miracle; for, there no new things are.

(quotation taken from Nicolson, p. 118)

But he could also write (An Anatomie of the World:

And new Philosophy calls all in doubt,
The Element of fire is quite put out;
The Sun is lost, and th' earth, and no mans wit
Can well direct him where to looke for it.
And freely men confesse that this world's spent,
When in the Planets, and the Firmament
They seek so many new: then see that this

Is Crumbled out againe to his Atomies; 'Tis all in peeces, all cohaerence gone; All just supply, and all Relation:

(quotation taken from Nicolson, p. 120)

Here is Donne in a less serious mood (*Meditations XXI*), shortly having recovered from a serious illness and still a little giddy:

I am up, and I seem to stand, and I go round; and I am a new argument of the new philosophy, that the earth moves round; why may I not believe that the whole earth moves in a round motion, though that seem to me to stand, when as I seem to stand to my company, and yet am carried, in a giddy and circular motion as I stand?

(quotation taken from Nicolson, p. 62)

The opposition to the Copernican universe was often put in philosophical and theological terms; but it is important to remember that often as not, that opposition was even more firmly based on a closely held, not particularly "rational" or "intellectual" view of the world, to which the attachment was often emotional, and the strain of giving up, substantial.

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