Notes on METAPHYSICS III, IV, VI, VII, VIII, IX

(Book III) Aporiae (Difficulties)

Whether the investigation of the causes belongs to one or more sciences.
If to one science, whether it belongs to this science to investigate the axioms, or principles of all reasoning. (In modern philosophy before Russell, these were called the Laws of Thought.)
If the science in question deals with substance, does one science deal with all substances?
Do sensible substances alone exist or others also, and if others, how many kinds of them?
Is the investigation of causes and principles concerned with substance only or also with the essential attributes of substance? For example, with the question whether one thing always has one contrary?
Are principles and elements of things their genera or their parts—if their genera, are they the most universal or most particular genera?
Is there any cause besides matter? If so is it separable and is it more than one?
Is there something apart from the concrete (matter + form) thing?
Are the principles limited or unlimited in number?
Are the principles of perishable and imperishable things the same or different?
Are unity and being the principles of things?
Are the principles universal or individual? Are they potential or actual?
Are numbers, lines, figures, and points substance or not?

(Book IV) The Science of Being qua Being and the Axioms of Thought

The science of first principles and causes is the science of being qua being. (This answers the aporia whether the investigation of first principles and causes belongs to a single science.)
Being is not a univocal (synonymous) genus, but has a *PROS HEN* ("in relation to one") sort of unity—all that is is relative in some way to substance (*OUSIA*),
which is in the primary sense of "to be". This sort of unity is sufficient for the subject of a single science.

It belongs to this science to consider the Axioms of Thought. (This answers the aporia on the Axioms of Thought.) It is impossible for a thing both to be and not be at the same time and in the same respect, etc. (The Principle of Contradiction, the first principle of all reasoning.)

It is impossible to think otherwise (that is, to think, in a particular case, that the same thing both is and is not, etc.), because then the same mind would be simultaneously in two contrary states.

The person who denies this principle can be refuted if he says anything significant.

Any significant discourse asserts a certain limited part of being (of some definite category) and excludes another part--otherwise nothing is being said.

Dialectical Procedure:

Objector: A thing CAN both be and not be simultaneously and in the same respect. etc. (Call this proposition P.)

Defender: Do you also allow that not-P?
Objector: Yes.
Defender: Then you have contradicted yourself.
Objector: I change my answer to NO.
Defender: Why can't P and not-P both be true?
Objector: Because a thing cannot both be and not be simultaneously and in the same respect, etc.
Defender: You're contradicting yourself.
Objector: I mean that in this case, we cannot have both P and not-P, although in general it's possible.
Defender: So a thing both can and cannot both be and not be simultaneously and in the same respect, and yet it is not true that a thing both can and cannot both be and not be simultaneously and in the same respect?
Objector: I'm bored.

There is no third alternative between being and not being. (The Law of Excluded Middle.)

(Book VI) The three kinds of substance and primary philosophy.

The divisions of substance:
Mutable but not separable (nature)
Immutable but not separable (mathematical objects)
Immutable and separable (the cause of the rotation of the Heaven)

If there do not exist things of this last class, then physics is primary philosophy. But if there do exist such things, then the science of these will also be the science of being qua being, because these are divine and are the first principles of all being. This then will be first philosophy and "theology". (Thus the aporia is answered whether there are different sciences of different kinds of substances, and also the aporia which of these will be the science of first causes and principles.

Being is divided in four ways: the categories, actuality and potentiality, essential and accidental, and the true and the false.

There is no science of the accidental.
Truth and falsity are in the mind, not in things.

(Book VII) Substance

i. Substance is the primary sense of "being". It is only substance that has independent existence. Substance as such exists (is), but the other things that are are accidentally because they are attributes of that which is per se. Hence the primary investigation of the science of being qua being is into substance.

ii. Those things which most of all are thought to be substance are living things and the parts of the visible heaven. We must investigate whether these are substances and whether there are substances not included among these.

iii. Substance is thought to be essence, genus, universal, and substratum.

Substratum is either matter, form, or composite. In outline, this is the nature of substance--namely that which is not predicated of a subject.

Substratum cannot be substance primarily in the sense of matter, because matter in itself is none of the categories (is not a definite thing), but is that of which all else is predicated, but substance is a definite thing. So substratum must be substance primarily in the sense of form.

First we must investigate sensible substance.

iv. We must advance to the more intelligible [in itself, from that which is more intelligible to us.]

On to essence (*TO TI EN EINAI*) ("what was to be")
What is essence?
The essence of a thing is what it is just as itself.
Of what things are there essences?
Only of things that are not compounds of items from more than one category.
v. Even so, there are essences in the fullest sense only of substances, because only they can be defined without reference to things of another kind (qualities, quantities, etc., can be defined only with reference to their proper substrata).

vi. Is the essence of a thing identical or distinct from the thing?

Whatever is substance in itself (per se, kath' hauto) is identical with its essence. Otherwise the essence would be different from the thing, and by knowing the thing's essence one would not thereby know the thing.

(This is an important objection to the developed (esoteric) theory of forms, in which apparently the One was the essence of everything. This is true in Neoplatonism.)

vii. Everything which is generated is generated by something and from something and becomes something. (It becomes something in one of the categories.)

In natural generation, all these are nature, because the agent is of the same species as that which is generated. In artificial generation, the form pre-exists in the soul of the agent. So in every case the form pre-exists.

viii. In generation, neither matter nor form (essence) is generated, but only the composite.

If the forms were separate (independent), the composite could not be generated, for then one independent substance would be in another.

Further, independently existing substances are not required for generation, because the form pre-exists in the agent.

ix. Further arguments in support of points in Chapter viii.

So the principle not only of the syllogism (and thus knowledge) but also of generation is essence or form.

x. The definition is of the essence.
The parts of the definition are prior to the essence.
The parts of the composite are prior to the composite, but posterior to the essence.

xi. Forms which do not require a specific kind of sensible matter (i.e., mathematical objects) are "separable" and may have intelligible matter. They are like "concave" as opposed to "snub". If they are combined with sensible matter, the combination may have a formula, but does not have an essence because it is not a single thing. For example, brazen sphere.

Forms which DO require a specific kind of matter are inseparable and have only sensible matter. Their definition in some way includes they kind of matter they must contain.

xii. Why is definition a unity?
We consider the case of definition by genus and difference. 
\[ A = G + D_1 + D_2 + D_3, \text{ ETC.} \]

In a definition by genus and difference, each further difference must differentiate the thing qua differentiated by the previous difference.

xiii-xiv. The universal is not substance. For if it is, then many absurd consequences follow, including the dilemma that either each substance is distributed throughout the things of which it is the substance or else it is not present in that of which it is the substance. These arguments also show that the (Platonic) Ideas cannot be the substance of things.

xv. Form is not generated or corrupted, but without generation or corruption it is or is not. Only knowable things can be defined. Knowable things are imperishable. Thus composite individual substances cannot be defined.

Nor can the Ideas can be defined. For the general terms in which we define things cannot be their names, since they are each of them unique.

xvi. Neither unity nor being is the substance of things.

xvii. There is inquiry and definition only of the composite. At this point the aporia whether there are substances other than sensible ones has been partly solved--there are no Platonic Ideas, although there are immutable forms.