The Desire to Know

- By nature, human beings desire to know.
- A sign of this is our liking of the use of the senses, even when it is not practical.
- The explanation of our delight in the sense of sight above the other senses is that it “gives us knowledge of things and clarifies many differences among them.”
The Origins of Knowledge

- Sense-perception is the first requirement for knowledge, and is found in animals
- Memory with sense-perception allows for a single experience
- Experience gives rise to science and craft
- Craft arises through induction: “many thoughts that arise from experience result in one universal judgment about similar things”
Knowledge of Causes

- Experience concerns particulars, while craft gives a rational account, using universals.
- If one does not know particulars, rational accounts may be misapplied.
- Craft is superior to mere experience because it knows the cause, the reason why.
- Knowing the reason why makes the master craftsman superior to the manual craftsman.
- The theoretical scientist is more superior still.
The Wise Person

- Wisdom is knowledge of certain kinds of principles and causes
- We have a clue as to what these are by considering what we take a wise person to be
  - Knows as much as possible about all things, without knowing particular things
  - Capable of knowing difficult things
The Wiser Man

- One person is wiser than another when he
  - Is more exact than the other
  - Is better teacher of causes than the other
  - Seeks knowledge for its own sake, while the other seeks knowledge for practical reasons
  - Gives orders, while the other takes orders
The Superior Science

- The wise man will engage in the superior science
  - It is the science of the universal
  - It is the most difficult science
  - It is the most exact science
  - It is for its own sake
  - It investigates the end, which is the good in all things in nature

- The superior science was born of wonder and undertaken at leisure
The Divine Science

• The superior science is the most free because it is pursued for its own sake
• It is divine, yet not beyond the capacities of human beings
  – It is the kind of science that a god would be expected to engage in
  – It finds a god to be a first principle of all things
• It begins with wonder, but leaves one in the contrary state, one which is better
Early Attempts at Science

- Most early philosophers thought the only causes of things are material.
- This does not explain why things happen, so philosophers turned to a source of motion.
- The best such source is mind, because it also explains why things turn out well.
- A truly primary cause would be one that is both the source of motion and the reason that things turn out well.
Plato’s Advancement of Science

- Plato recognized the need to describe the form as cause.
- The common formula of things (“one over many”) is the Form, which exists apart.
- The particular (e.g., Socrates) is said to “participate” or “share” in the Form (Man-itself).
- Forms are said to be causes of the “what-it-is” of a thing.
Criticisms of Platonic Forms

- **Extravagance**: there is a Form for whatever something has in common with another
  - Some things (e.g., relatives), do not have forms
  - A Form has something in common with a particular thing sharing in it, so there would be a Form for the particular-sharing-in-Form (the “third man”)
- **Inefficacy**: Forms cannot be causes if they are not in the world of caused things
- **Unknowability**: knowledge comes from perception, and “itself” adds only a word
- **Unintelligibility**: “Sharing in” is a metaphor
The Science of Being *qua* Being

- The superior, divine science is the science of being (and its properties) insofar as it is being
- It is not a special science
  - Each special science cuts off a part of being
  - It studies something which is coincidental with being as such
    - Geometry studies the shapes of beings
- It seeks the primary causes or first principles of being insofar as it is being
Ways of Describing Being

• Being can be described in many ways, as
  – Substances
  – Attributes of substances
  – The perishing, privations, or qualities of substances
  – What is productive of substances or what is said of substance
  – Negations of substances or what is said of them
    • Even not-being is (not-being)
Primary Being

- Every science is concerned with a primary object
- The primary object of the superior science is substance
- So, the superior science investigates the principles and causes of substances and what is said of them *qua* substances
- As it is the superior science and its objects are primary beings, it is first philosophy
How to Study Being

- We study being using dialectic, proceeding from the opinions of the wise
  - We do not use sophistical argument, which gives only the appearance of knowledge
- We also use an axiom which is not an assumption
  - “It is impossible for the same thing both to belong and not to belong at the same time to the same thing and in the same respect”
Substance

- Substance is separable while the other ways of being (attributes) are not
  - Sitting implies a sitting thing, but a sitting thing need not sit

- There are several candidates for substance
  - Animals, plants, and their parts (most evident)
  - The elements: fire, water, earth, air
  - What is composed of elements
  - Geometrical limits of bodies
  - The Platonic Forms and mathematicals
What is Substance?

- There are four ways in which substance is spoken of:
  - The primary subject
  - The essence
  - The universal
  - The genus

- Substance will be shown to be the essence
  - This claim is in apparent conflict with the treatment of substance as primary subject in the *Categories*
The Primary Subject

- Substance is a subject that has other things said of it but is not said of anything
- This appears to be substance most of all
- This primary subject may be:
  - The matter (the bronze)
  - The form (the shape of the bronze)
  - The compound (the statue)
- Which is most fundamental?
Matter

- When all that is said of a thing is taken away, only the matter remains
- Matter “in its own right” is not what is said of it and so is something indeterminate
- Matter cannot be substance
  - It is not separable from its form
  - It is not a “this,” a particular thing
- The composite of form and matter is derivative and cannot be substance, which must be primary
Essence

- Form will be studied through essence
- The essence is what a thing is in its own right
- It is given in a definition, not a coincidental account of the thing
- A definition is an account given by something is not in another (hence, not by an attribute)
- So the definition will be the species of a genus
- For example, the essence of Socrates is man
- Attributes have definitions, but these are only secondarily essences (there is a definition of pale)
Thing and Essence

- In one way, the essence is the same as the thing
  - The thing is a Platonic Idea
  - The thing is a primary subject
- In another way, the essence is different from the thing
  - The thing is a coincidental
    - The pale is not the same as the pale in the man
Some think that the universal is the most basic cause and principle, and hence that substance is the universal.

But substance is not the universal.

- The universal is common, but the substance is what is distinctive of a thing.
- The universal is said of a subject, but substance is not said of a subject.
- The same substance would be in different things.
- The universal is not a “this”.

Universal
The Unity of Substance

- Some substances are composed of parts that are thought to be substances.
- Animals are composed of parts that have their own principles of motion.
- But because they are united in one substance, they are substances only in potentiality.
- There are no substances composed of substances.
Final Account of Substance

- The substance of a thing is the primary cause of its being what it is
- Things that are substances are unities by nature
- What unifies a number of elements is not an element itself
- It is a form, which explains why a thing is what it is
- This form is the essence of the thing, so substance is essence
Divine Substance

• There are three types of substance
  – Sublunary substance (moved and mover)
  – Superlunary substance (moved and mover)
  – Unmoved substance

• There must be an unmoved substance to account for continuous motion
  – Continuous motion can only be circular

• The mover must always actually be moving something, not merely potentially moving it
How the Unmoved Moves

- An object of understanding or desire initiates motion without being moved
  - The desire is moved by its object
- God is the object of the universe and its end
- So “desire” for god is what keeps the universe moving
- The god is the good of the universe
- It is separate from the universe
- It has no magnitude or parts, and is indivisible
The Divine Understanding

- The nature of the god is an understanding
- The object of its understanding is itself
- “Its understanding is an understanding of understanding”
- It does so throughout all time
- It is the good of the whole universe