

THE ARGUMENT AGAINST HIMSELF

PART FIVE – PARMENIDES

Aris Skliros

PLATO'S ACADEMY IN THE ORCHARD

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Full text with interleaved Euclid correspondences

London, 2026

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PART FIVE – PARMENIDES**

Author: Aris Skliros

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Abstract

Complete novel text of *The Argument Against Himself* (Cratylus · Theaetetus · Sophist · Statesman · Parmenides), with green **EUCLID** boxes and amber **NOTE** boxes interleaved wherever number, geometry, measure, part–whole, contact, or continuum is invoked. Every El. marker is a scholarly **correspondence**: the dialogues predate Euclid. For the Clay / powers scene, only Books **VII** and **X** are Referenced.

Preface

Chronology. Plato's Academy dialogues predate Euclid's *Elements*. Markers El.B.Def.N / El.B.Prop.N record correspondences, not citations by Plato or the novelist.

Cite-first (Theaetetus Clay / powers).

- El.VII.Def.16 — plane / oblong number
- El.VII.Def.18 — square number
- El.VII.Defs.17 & 19 — solid / cube *numbers* (not XI–XIII)
- El.X.Def.1 — commensurable / incommensurable
- El.X.Def.2 — commensurable in square
- El.X.Prop.9 — conceptual twin only

Do **not** cite as Referenced for Clay: I–VI, VIII, IX, XI–XIII.

Cite-first (Statesman due measure). El.V.Defs.1–7 (part, multiple, ratio, same ratio, proportional, greater ratio). Due measure itself is normative, not identical to geometric mean (VI.Def.2 soft only).

How to read. Continuous novel from Prologue through Part Five. At annotated loci a green Euclid box (Referenced) or amber note (light) interrupts briefly. Greek is transliterated or omitted for pdf_{latex}.

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Part V

Parmenides

Chapter 102

**ONE HUNDRED AND TWO.
Going Backwards**



Socrates says: let us go backwards now.
We will look again at what we have said.

Going Backwards — opening scene.



Going Backwards — chapter-opening scene.

They were out at eight again, and this time Danae had brushed her hair, which Lela noticed and said nothing about.

. . .

“You lied,” said Lela, sitting down.

. . .

“I did,” said the owl.

. . .

“You said younger than me.”

. . .

“I said younger than you, and he is not younger than you, and he is not going to be younger than you at any point today.”

. . .

“Sophia.”

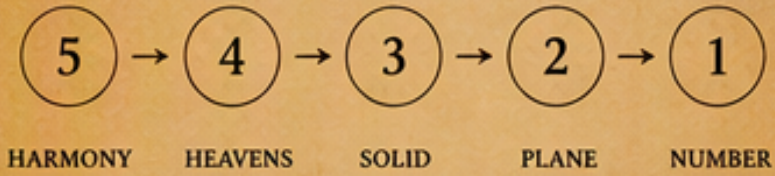
. . .

“He is about nineteen,” said Sophia. “Possibly twenty. The book says quite young, which in that language means young enough that the men in the room think of him as a boy, and it does not say a number, and people have argued about it, and nineteen is the usual guess. “And I said younger than Lela because it was ten past seven in the evening, and you were both tired, and I wanted you out here at eight o’clock in the morning. “It worked. I am not proud of it. You may put it on the list with the other things.”

. . .

2

THE WAY BACK



From the highest, we return
to the lowest—step by step.

Going Backwards — the chapter's central dialogue.



Going Backwards — dialogue and narrative.

Danae was lying in the grass laughing.

. . .

“You lot,” said Lela.

. . .

“Yes,” said the owl, entirely unrepentant. “Now sit up, both of you, because before I show you anything at all I have to tell you where this one came from, and it is going to take about four minutes, and it is the strangest thing about it.”

. . .

“You know my rule,” said Sophia.

. . .

“You can only show us what somebody carried,” said Danae.

. . .

“I can only show you what somebody carried. That is the whole of what I am and it is the whole of what I cannot do. “Everything I have shown you for two summers has been carried by somebody. Usually one man, who was in the room, and who wrote it down, or told a friend who wrote it down. “This one has been carried four times.”

. . .



Going Backwards — the central concept made visible.



Going Backwards — the central idea.

“Four?” said Lela.

. . .

“Listen. And count on your fingers, because you will need to. “A man called Pythodorus owned a house outside the wall, in the Potters’ Quarter, and two famous foreigners stayed in it, and a conversation happened in it. He was there. That is one. “Many years later he told it to a young man called Antiphon, over and over, until the young man could say it by heart. That is two. “Many years after that, some philosophers came all the way from Clazomenae — that is across the sea, on the coast of Asia — because they had heard that there was a man in Athens who could recite it. And Antiphon, who was by then much older, recited it to them. “That is three. “And one of those men, called Cephalus, is the person who is telling you. He begins the book. He says when we arrived in Athens from home in Clazomenae. Out loud. To you. “That is four.”

. . .

“Hang on,” said Lela.

. . .

“Yes.”

. . .

“That’s — Sophia, that’s silly. That’s four people. Every single word has been through four people, and one of them learned it off by heart when he was young and said it years later, and —“

. . .

She stopped.

. . .

“That’s on purpose,” she said.

. . .



Then the solids:
the building blocks of nature.

Going Backwards — the guiding analogy.



Going Backwards — analogy and thought experiment.

“That is entirely on purpose,” said the owl, “and it is the only book he ever built this way, and it is the most difficult book he ever wrote, and those two facts are the same fact. “Every other conversation you have watched, he hands you straight. Socrates said. Theaetetus said. You are in the room. “This one he has put behind four doors. He wants you to know, before a single word of it, exactly how far away you are standing.”

. . .

“So is it true?” said Danae.

. . .

“I do not know,” said Sophia. “That is the honest answer and I am going to give it to you once, now, and then not keep saying it. “The conversation almost certainly never happened. Parmenides probably never met Socrates. The

dates are possible but only just, and no one else in the world mentions it, and the man who wrote it down was not born for another thirty years. "He made it up. "And then he built four doors in front of it, so that nobody could say he had not told them."

. . .

"Then why are we watching it?"

. . .

"Because it is true in the other way," said the owl. "Because a man who had spent his whole life defending an idea sat down at sixty and wrote out, in full, at enormous length, the best arguments against it that anybody has ever produced — and put them in the mouth of the greatest thinker of the century before, and put himself, young and clever and wrong, on the other side of the table. "You have spent all summer being told what this book is called. "Today you find out why."

. . .

The picture came up.

. . .

And both of them noticed at once that it was not the same.

. . .



5

Then the plane:
lines, figures, and their perfect order.

Going Backwards — the argument unfolding step by step.



Going Backwards — the logical progression.

It was Athens, and it was a market, and it was crowded — but the crowd was not quite there. The people at the edges had no faces, exactly; they had the shape of faces. And the colours were not wrong, but they were not certain either, the way a room is when you remember it rather than when you are in it.

. . .

“It’s blurry,” said Danae.

. . .

“It is as good as I can make it,” said Sophia, “and it is going to stay like that all day, and I want you to see it, because it is the truth. “Four hands. Everything that four people were sure of is sharp. Everything they did not happen to mention is a shape. “Look at the middle. The middle is perfectly clear.”

. . .

It was.

. . .

“When we arrived in Athens from home in Clazomenae,” said a voice, “we ran into Adeimantus and Glaucon in the marketplace.”

. . .

“Adeimantus and Glaucon,” said Lela. “Sophia, who are they? I know those names. I’ve heard those names.”

. . .

“You have heard those names,” said the owl, “and you have not heard them from me. “They are Plato’s brothers.”

. . .



Then number:
the many and the one.

Going Backwards — the competing interpretation.



Going Backwards — the difficulty and the alternative.

Lela sat up.

. . .

“His actual brothers?”

. . .

“His actual brothers. Two of them. And in a moment somebody is going to ask after their half-brother, on their mother’s side, whose father was Pylilampes — and that is a third one, and his name is Antiphon. “And Antiphon is the man who is going to recite the whole book. “Plato does not appear in his own writing. Ever. He is mentioned twice in his entire works, both times in passing, as a man who was somewhere. “And here, at the start of the hardest thing he ever wrote, he has quietly put his two brothers in the marketplace, and made his little half-brother the man who carries it.”

. . .

“Why?”

. . .

“Nobody knows,” said Sophia. “I have my own idea and I will tell you at the end of the day and not before.”

. . .

“When Antiphon was a young man,” Adeimantus was saying, “he practiced it to perfection. Although these days, just like the grandfather he’s named for, he devotes most of his time to horses.”

. . .



Danae: Are we forgetting what we learned?
Lela: No, we are making it stronger.

Going Backwards — Lela and Danae reconstruct the idea.



Going Backwards — Lela and Danae.

Danae made a noise.

. . .

“They found Antiphon at home,” said the voice of Cephalus, “engaging a smith to work on a bit of some kind. When he had finished with the smith, and his brothers told him why we were there, he recognised me from my earlier visit and greeted me. “We asked him to go through the discussion — “and he balked at first. It was, he said, a lot of work. “But finally he narrated it in detail.”

. . .

Danae was sitting bolt upright with both hands over her face.

. . .

“He didn’t want to,” she said. “Sophia, he didn’t want to. They came all the way from — from across the sea, they

came across the sea for it, and he was busy with a horse, and he said it was a lot of work.”

. . .

“He said it was a lot of work,” said the owl.

. . .

“And he knew it all. He’d learned the whole thing. All of it. When he was young he did it perfectly.”

. . .

“When he was young he did it perfectly,” said Sophia, “and now he does horses, and he is not a bad man and there is nothing wrong with horses, and this is the most quietly sad sentence in the whole of Plato and he wrote it about his own little brother. “And it is also a joke. Because the grandfather he is named for did horses too, and in that family that is what the name means, and Plato has looked at his own household and found that the thing skips a generation and lands wherever it lands. “Two brothers who will argue about justice all night. One brother who would rather get the bit right. “Go easy on him. He did stop, and he did recite it, and he did it in detail, and if he had not, there would be no book and you would be indoors.”

. . .



Socrates: When we review well,
we understand more deeply.

Going Backwards — the historical layer.



Going Backwards — historical reconstruction.

“Antiphon said that Pythodorus said,” said the voice,
“that Zeno and Parmenides once came to the Great Panathenaea.”

. . .

“Antiphon said that Pythodorus said,” repeated Lela.

. . .

“Yes.”

. . .

“He actually writes it like that.”

. . .

“He actually writes it like that,” said Sophia, “and he keeps doing it, and it is exhausting, and that is the point. “And now — the two of you have been waiting for this since the first morning of the summer. Look at the middle of the picture.”

. . .

“Parmenides was already quite venerable,” said the voice. “Very grey, but of distinguished appearance. About sixty-five years old. “Zeno was at that time close to forty. A tall, handsome man. “And Socrates was then quite young.”

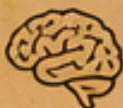
. . .

Neither of the girls said anything at all.

. . .

9

WHY GO BACKWARDS?

SEE
CLEARLYREMEMBER
TRULYCONNECT
ALL THINGSUNDERSTAND
THE WHOLE

Review strengthens memory,
joins the steps, and opens the whole.

Going Backwards — a wordless conceptual plate.



Going Backwards — wordless concept plate.

The blur had cleared in one place, in the middle, the way frost goes off one patch of a window.

. . .

And in it, in a courtyard in the Potters' Quarter outside the city wall, on a hot day during a festival, in a year fifty-one years before anything either of them had watched all summer, a young man was sitting on the floor with his arms round his knees, listening very hard to somebody read.

. . .

He had a snub nose.

. . .

"That's him," said Danae.

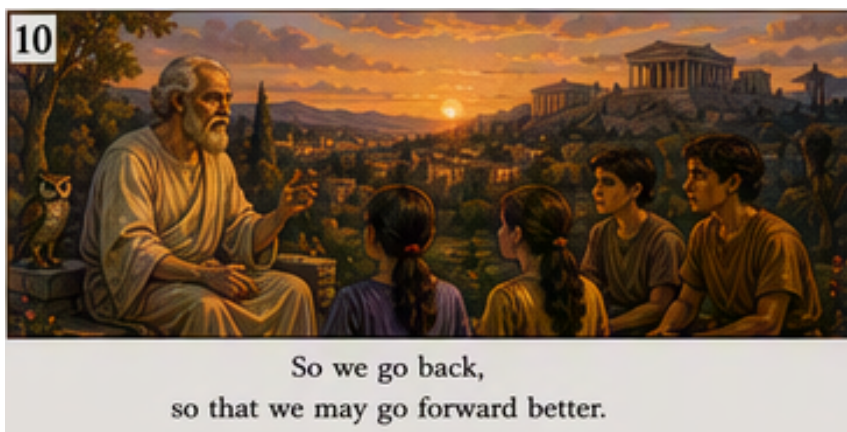
. . .

“That is him,” said Sophia.

. . .

“He’s got hair.”

. . .



Going Backwards — the chapter’s narrative and philosophical synthesis.



Going Backwards — climax, double-page spread.

“He has got hair,” the owl agreed, “and he will not have it for long, and I would like one of you to say the other thing.”

. . .

Lela said, in a slightly odd voice: “He’s younger than Mum.”

. . .

“He is a great deal younger than your mother.”

. . .

“He’s — Sophia, he’s a student. He’s sitting on the floor. He’s come to hear somebody read a book out and he’s sat on the floor at the front like — “

. . .

She stopped.

. . .

“He’s nobody yet,” she said.

. . .

“He is nobody yet,” said Sophia. “Nobody in that room has heard of him. In fifty-one years the whole world will have, and every single person in that room will be remembered chiefly for having been in it with him. “And this morning he is a keen young man from a family with no money who has turned up early and got a good spot on the floor.”

Chapter 103

ONE HUNDRED AND THREE.

Zeno's Book



Socrates raises a new puzzle:
Is a thing itself one, or are we tying many together?

Zeno's Book — opening scene.



Zeno's Book — chapter-opening scene.

“Zeno was reading to them in person,” said the voice of Cephalus. “Parmenides happened to be out. “Very little remained to be read when Pythodorus came in — and with him Parmenides, and Aristotle.”

. . .

Lela's head came up.

. . .

“Aristotle?” she said. “Sophia, Aristotle? He's not — he can't be, he's not even —“

. . .

“He is not,” said the owl. “Different man. Different century. It was a common name; there were probably four in that street. “And I need you to hear how the sentence

finishes, because Plato wrote six words after it and then never mentioned him again for thirty pages.”

. . .

“— and with him Parmenides and Aristotle,” said the voice.

. . .



Zeno's Book — the chapter's central dialogue.



Zeno's Book — dialogue and narrative.

“The man who later became one of the Thirty.”

. . .

Lela went completely still.

. . .

“The Thirty,” she said.

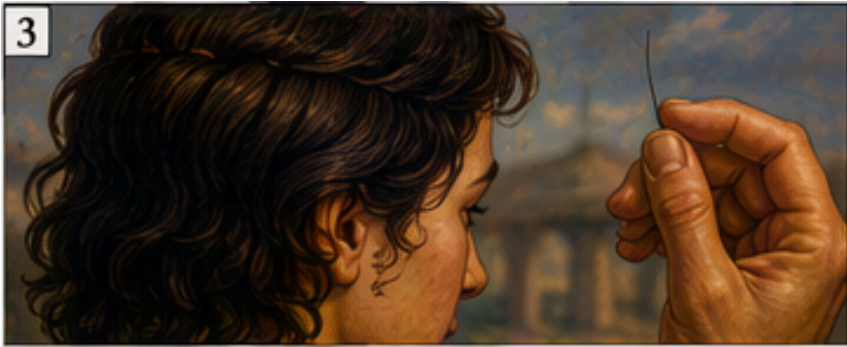
. . .

“The Thirty,” said Sophia.

. . .

“That’s — “ Lela was looking at the picture and not seeing it. “That’s the ones. That’s the bad government. That’s the one you told me to discount him about. That’s the thirty men who ran Athens after they lost the war and they killed — how many was it?”

. . .



A head of hair seems one,
but it is many separate hairs.

Zeno's Book — the central concept made visible.



Zeno's Book — the central idea.

“Fifteen hundred people,” said the owl. “In eight months. Without trials. They took people’s houses. They made men fetch other men for execution so that everybody would have blood on them and nobody could stand apart. “Two of them were Plato’s relations. He has written about that elsewhere, once, and never again. “And one of them — a young man, on that hot afternoon, about fifty years before, coming late into a courtyard with his hosts and sitting down at the back to catch the end of a reading — “is in this book. By name. Answering questions. Politely.”

. . .

“Does he know?” said Danae. “The — the young one. Does he know what he’s going to be?”

. . .

“He is about eighteen,” said Sophia, “and he has come to hear a famous foreigner read, and no, he does not know

anything at all. "And Plato does. And Plato has told you, in a parenthesis, in the sixth line, and then said nothing more about it for the rest of the book. "I have shown you a great many of these now and you know what I am going to say."

. . .

"Nothing in this book is accidental," said both girls, more or less together.

. . .

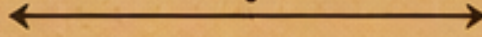
"Nothing in this book is accidental," said the owl. "And I want you to hold that one all day, because in the second half of this dialogue that young man is going to spend about two hours answering yes and quite so and it must be to the most difficult argument anybody has ever constructed, and he is going to do it perfectly, and he is never going to say one single thing of his own. "And then he is going to grow up."

. . .

4

THE QUESTION

?



ONE BY NATURE
(really one)



MANY MADE ONE
(only appears one)

Plato pushes us to ask:
Which is a true one, and which only seems one?

Zeno's Book — the guiding analogy.



Zeno's Book — analogy and thought experiment.

“Then Socrates, after he had heard it,” said the voice, “asked Zeno to read the first hypothesis of the first argument again.”

. . .

“Ha,” said Lela.

. . .

“Say it,” said Sophia.

. . .

“He’s asked him to go back to the beginning,” said Lela. “The man’s just finished reading his whole book out and the boy on the floor has put his hand up and said sorry, could you do the first bit again.”

. . .

“That is what he has done,” said the owl, “and it is the first thing he does in the entire book, and I would like you to notice that it is not clever. “He has not thought of an objection. He has asked to hear it again. “That is what he is like at nineteen and it is what he is like at seventy, and in between he did nothing else.”

. . .



Zeno's Book — the argument unfolding step by step.



Zeno's Book — the logical progression.

“Zeno,” said Socrates — and his voice, which neither of the girls had been ready for, was a young man’s voice — “what do you mean by this? “If things are many, they must then be both like and unlike. But that is impossible, because unlike things can’t be like, or like things unlike. “That’s what you say, isn’t it?”

. . .

“It is,” said Zeno.

. . .

“Explain,” said Danae, promptly.

. . .

“Zeno wrote a book,” said Sophia, “and the book is gone, and this is the only place anybody quotes it, and it was the most annoying book in Greece. “It is a machine for

making people uncomfortable. It goes like this, over and over, forty times. “You say there are many things. Very well. Then take any two of them. They are alike, because they are both things. And they are unlike, because they are two and not one. So each of them is both like and unlike. “And that is impossible. So there are not many things.”

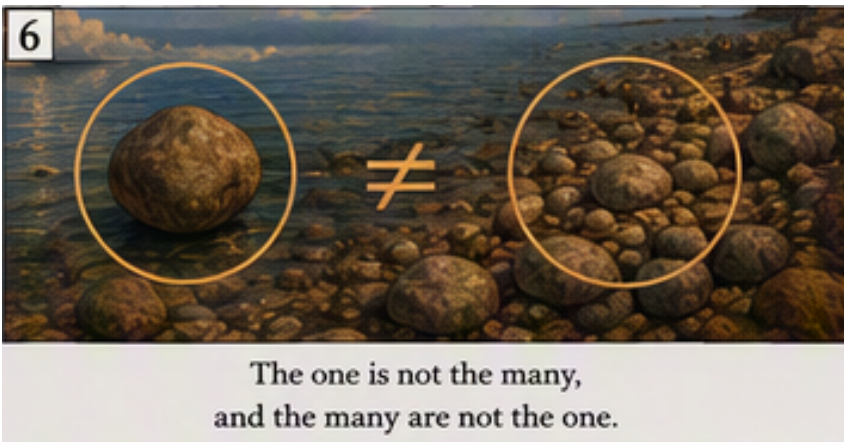
. . .

“That’s silly,” said Danae.

. . .

“Everybody says that,” said the owl, “and nobody could say why it was silly for about a hundred years, and the man who eventually could is sitting on that floor with his arms round his knees, and he is going to do it in four minutes, and he is nineteen.”

. . .



Zeno's Book — the competing interpretation.



Zeno's Book — the difficulty and the alternative.

“Is this the point of your arguments,” said Socrates — “simply to maintain, in opposition to everything that is commonly said, that things are not many? “And do you suppose that each of your arguments is proof for this position — so that you think you give as many proofs that things are not many as your book has arguments? “Is that what you’re saying? Or do I misunderstand?”

. . .

“No,” said Zeno. “On the contrary. You grasp the general point of the book splendidly.”

. . .

“And now,” said Sophia, “watch him be nineteen.”

. . .

“Parmenides,” said Socrates.

. . .

“I understand that Zeno wants to be on intimate terms with you not only in friendship but also in his book. “He has, in a way, written the same thing as you — but by changing it round, he tries to fool us into thinking he is saying something different. “You say in your poem that the all is one, and you give splendid and excellent proofs for that. “He, for his part, says that it is not many, and gives a vast array of very grand proofs of his own. “So with one of you saying one, and the other not many — and with each of you speaking in a way that suggests that you’ve said nothing the same, although you mean practically the same thing — “what you’ve said you appear to have said over the heads of the rest of us.”

EUCLID · Elements VII — unit; number

El.VII.Def.1 — *unit* LIGHT

A unit is (that) according to which each existing (thing) is said (to be) one.

EUCLID, BOOK VII — DEFINITION 1: UNIT
 “A unit is that according to which each existing thing is said to be one.”

1

ARISTOTLE: Alexander, before we speak of numbers, we must understand the very idea of “one.”

2

Behold this single stone.
It is **ONE**.

3

This “one” is what we call a **UNIT**—that according to which each existing thing is said to be one.”

4

$1 + 1 + 1 = 3$

When we put units together, we can count:
three stones = $1 + 1 + 1$.

5

See how each stone is first taken as one, because of the **unit**.

6

1 = **unit** (not yet a number)
 $2 = 1 + 1$
 $3 = 1 + 1 + 1$
 $4 = 1 + 1 + 1 + 1$
 ...

From repeated units, **numbers** arise:
2, 3, 4, and so on.

7

If we have apples, each apple is taken as one apple—one **unit**—relative to the collection.

8

UNIT
 “the idea of one”
 ↓
 repeat units
 ↙ ↓ ↘
NUMBERS
 (2, 3, 4, 5, ...)

Thus the order is: first the **unit**, then, by repeating it, **numbers**.

9

Remember this well, Alexander: a **unit** gives the meaning of one, and **numbers** are made of units.

For Euclid, “number” means a positive integer greater than one. $1 = \text{unit (not a number)}$ $2 = 1 + 1$ $3 = 1 + 1 + 1$ $4 = 1 + 1 + 1 + 1$...

El.VII.Def.1 — unit

El.VII.Def.2 — number LIGHT

And a number (is) a multitude composed of units.

EUCLID, BOOK VII — DEFINITION 2: NUMBER
 "A number is a multitude composed of units."

1 Alexander, we begin with one. This single stone is a UNIT. It is ONE.	2 Add another unit. Now we have $1 + 1$. This multitude of units is called 2.	3 Add another. Now we have $1 + 1 + 1$. This multitude of units is called 3.	
4 Add one more. $1 + 1 + 1 + 1 = 4$. A number is many units taken together.	5 And another. $1 + 1 + 1 + 1 + 1 = 5$. And so on, without end...	6 $2 = 1 + 1$ $3 = 1 + 1 + 1$ $4 = 1 + 1 + 1 + 1$ $5 = 1 + 1 + 1 + 1 + 1$ $\dots$ $n = \underbrace{1 + 1 + \dots + 1}_{n \text{ times}}$ Every number is made by repeating the unit.	
7 Look at our soldiers. One soldier is a unit. Many soldiers together give us a number.	8 $= 1 \text{ unit}$ $= 2 \text{ units}$ $= 5 \text{ units}$ $= 10 \text{ units}$ $\vdots$ $\dots$ Whatever we count—stones, soldiers, apples—each is counted as one unit.	9 Remember this, Alexander: A unit gives the idea of one. But a number is born when units become a multitude. A NUMBER IS A MULTITUDE COMPOSED OF UNITS.	
UNIT = ONE (not yet a number) → NUMBER = MANY ONES TOGETHER (a multitude composed of units)			

El.VII.Def.2 — number

Why here: One vs Many. Soft VII.

Note. One vs Many. Soft VII.

. . .



Lela wonders: When we count and name,
~~and later we~~ finding what is, or making it up?

Zeno's Book — Lela and Danae reconstruct the idea.



Zeno's Book — Lela and Danae.

Danae let out a long breath.

. . .

“He just said they’re showing off,” she said.

. . .

“He just said they are showing off,” said Sophia.

. . .

“To their faces. To both their faces. At once. And he’s nineteen and he’s sitting on the floor and they’re the most famous men in Greece and they’re staying in somebody’s house that he’s a guest in.”

. . .

“Yes.”

. . .



We sort, group, and name.
That helps us live—but does it reveal the truth?

Zeno's Book — the historical layer.



Zeno's Book — historical reconstruction.

“That’s — “ Danae was somewhere between horror and enormous admiration. “Is he right?”

. . .

“He is about seventy per cent right,” said the owl, “which at nineteen, against those two, in public, having heard the book once, is an astonishing performance, and everybody in that courtyard knows it. “And he is going to get the other thirty per cent handed to him in about thirty seconds by a man who is very good at this.”

. . .

“Yes, Socrates,” said Zeno. “Still — you haven’t completely discerned the truth about my book. “Even though you chase down its arguments and follow their spoor as keenly as a young Spartan hound.”

. . .

“Oh,” said Lela.

. . .

“Yes,” said Sophia.

. . .

9

MANY BECOME ONE FOR A PURPOSE



SCATTERED
MANY



GATHERED
ONE

We gather many for use,
but usefulness is not the same as real oneness.

Zeno's Book — a wordless conceptual plate.



Zeno's Book — wordless concept plate.

“That’s — he’s not even cross.”

. . .

“He is not cross at all,” said the owl, “and that is the whole of what I want you to take from this chapter, and it is a thing about grown-ups that hardly anybody your age has been shown. “A boy has just stood up in the middle of a crowded room and accused two of the most eminent men alive of writing the same book twice and dressing it up. “And the second most eminent man alive has looked at him, and called him a young Spartan hound — which is a compliment about a puppy, and is affectionate, and is also, very precisely, not a compliment about a philosopher — “and has then, calmly, without raising his voice, corrected him. “That is what it looks like when somebody is not frightened of you.”

. . .

“First of all, you have missed this point,” Zeno went on. “The book doesn’t at all preen itself on having been written with the intent you described, while disguising it from people — as if that were some great accomplishment. “You have mentioned something that happened accidentally. “The truth is that the book comes to the defence of Parmenides’ argument — against those who try to make fun of it by claiming that, if it is one, many absurdities and self-contradictions result. “Accordingly, my book speaks against those who assert the many, and pays them back in kind with something for good measure. Since it aims to make clear that their hypothesis, if it is many, would suffer consequences even more absurd than those suffered by the hypothesis of its being one.”

. . .

“He wrote it to stick up for him,” said Lela.

. . .

“He wrote it to stick up for him,” said Sophia. “That is all it ever was. “People were laughing at Parmenides. One thing? There is only one thing? Look around you. “And a much younger man who loved him wrote forty arguments proving that many things is even sillier, and let them off the hook nowhere. “It is not a theory. It is the cleverest man in Greece hitting back on behalf of somebody he admired.”

. . .

10



The search goes deeper:
What is one, and how does the many become one?

Zeno's Book — the chapter's narrative and philosophical synthesis.



Zeno's Book — climax, double-page spread.

“In that competitive spirit, then, I wrote the book when I was a young man,” said Zeno. “Someone made an unauthorised copy, so I didn’t even have a chance to decide for myself whether or not it should see the light.”

. . .

Both girls made the same noise at the same time.

. . .

“Somebody stole it,” said Danae.

. . .

“Somebody stole it,” said the owl. “He wrote it when he was young and angry on somebody else’s behalf, and he had not decided whether to let it out, and somebody copied it and it got away from him. “And it is the only thing anybody remembers about him. There is not a person

alive today who could tell you one other fact about Zeno of Elea except that he wrote some annoying arguments, and he did not choose to publish them, and he is here, at forty, still explaining them to people.”

. . .

“So in this respect you missed the point, Socrates,” said Zeno. “You think it was written not out of a young man’s competitiveness, but out of a mature man’s vainglory. “Still — as I said. Your portrayal was not bad.”

Chapter 104

ONE HUNDRED AND FOUR.

Hair and Mud and Dirt



Socrates offers a new image:
Let us think about a sail.

Hair and Mud and Dirt — opening scene.



Hair and Mud and Dirt — chapter-opening scene.

“I take your point,” said Socrates, “and I believe it was as you say. “But tell me this.”

. . .

“Here it comes,” said Sophia. “Both of you. He is about to say the thing he is famous for, out loud, for the first time in his life, in front of the only two people in the world who can break it.”

. . .

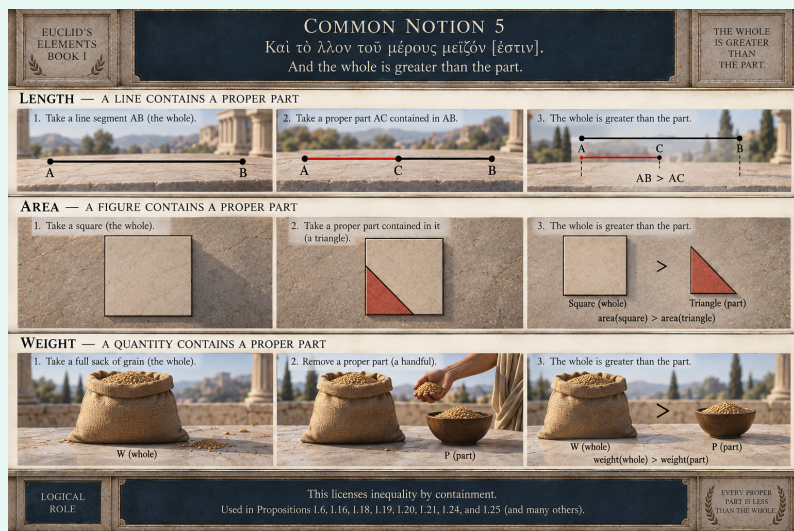
“Don’t you acknowledge that there is a form, itself by itself, of likeness? And another form, opposite to this, which is what unlike is? “Don’t you and I, and the other things we call many, get a share of those two entities? “And don’t things that get a share of likeness come to be like, in that way and to the extent that they get a share — whereas things that get a share of unlikeness come to

be unlike, and things that get a share of both come to be both?”

EUCLID · Elements I – whole > part; whole/part

El.I.CN.5 – *whole > part* MODERATE

And the whole [is] greater than the part.



El.I.CN.5 – *whole > part*

El.I — *whole/part* LIGHT

Book I foundations: definitions of point, line, surface, angle, figure, circle; postulates; common notions (including whole greater than part).

Why here: One/many via participation. Moderate.

Note. One/many via participation. Moderate.

...

“That’s the Forms,” said Lela.

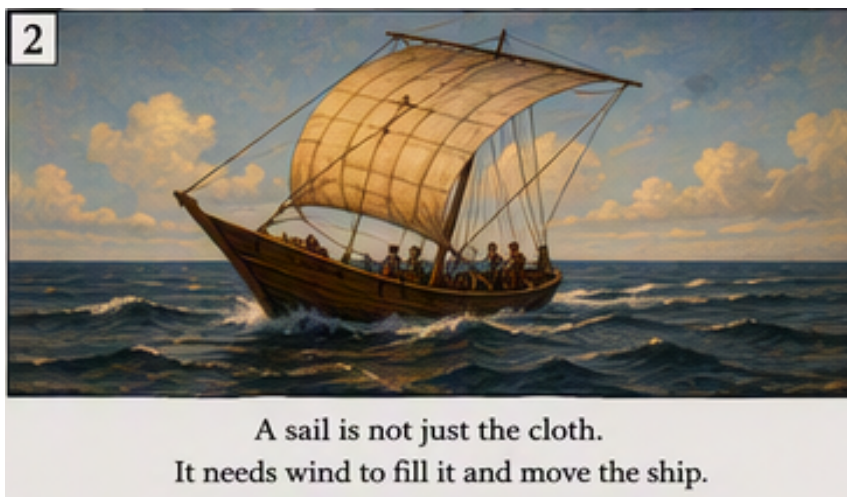
...

“That is the Forms,” said the owl. “That is the thing in every book about him. That is the thing the man from Elea took apart in front of you three days ago and called the friends of the forms. “And here it is being invented, by a boy of nineteen, in a borrowed courtyard, to win an argument.”

. . .

“Explain it,” said Danae. “Properly. In kitchen words.”

. . .



Hair and Mud and Dirt — the chapter's central dialogue.



Hair and Mud and Dirt — dialogue and narrative.

“Two things are alike,” said Sophia. “Say: this leaf and that leaf. “Why? What makes them alike? Not the leaf, because the other one is alike too and it is a different leaf. There is something the two of them share, which is not either of them. “And he says: that thing is real. It exists. It is not in the leaves and it is not in your head. It is likeness, itself, by itself, and the leaves get a share of it, the way you might get a share of a cake. “And that is how anything is ever like anything.”

. . .

“Is it true?”

. . .

“That is the question of the whole day,” said the owl, “and the boy is about to lose it.”

. . .

“If someone showed that the likes themselves come to be unlike, or the unlikes like — that, I think, would be a marvel,” said Socrates. “But if he shows that things that partake of both of these have both properties — there seems to me nothing strange about that, Zeno.”

. . .

“He’s answered him,” said Lela suddenly. “He’s answered the whole book. In one go.”

. . .

“He has answered the whole book in one go,” said Sophia, “and it is the reason this passage is famous, and I want you to say how.”

. . .

Lela sat forward.

. . .

3

THE SAIL NEEDS THREE



THE CLOTH

+



THE WIND

+



THE SHIP

Cloth, wind, and ship—
all three together make it what it is.

Hair and Mud and Dirt — the central concept made visible.



Hair and Mud and Dirt — the central idea.

“Zeno said: if there’s lots of things, then any one of them is like and unlike at the same time, and that’s impossible, so there’s only one thing. “And he’s just said: no, it isn’t impossible, it’s completely normal. Of course I’m like and unlike. I’m like Danae in some ways and unlike her in others and that’s not a paradox, that’s just — that’s just Tuesday.”

. . .

“And what would be impossible?”

. . .

“If likeness itself was unlike,” said Lela slowly. “Not a thing that’s got some likeness in it. The likeness. If the actual thing that makes things alike turned out to be unlike. “That would be mad. That’d be — that’d be like finding out red isn’t red.”

. . .

“Yes,” said the owl. “And that is the invention. Not the Forms as such — plenty of people had waved at something like them. “The distinction. One row of things over here, which are messy and mixed and can be two things at once and always have been, and everybody knew that. “And one row over there, which cannot. “And every single paradox anybody had produced for a hundred years lives entirely in the first row, and stops being frightening the moment you have two rows. “He has found it. At nineteen. On the floor. In the time it takes to say it.”

. . .

“But if someone first distinguishes as separate the forms, themselves by themselves,” Socrates was saying, “— likeness and unlikeness, multitude and oneness, rest and motion, and everything of that sort — and then shows that in themselves they can mix together and separate — “I for my part would be utterly amazed, Zeno.”

. . .

“Stop,” said Lela.

. . .

Sophia stopped it.

. . .



Take one away and the sail
does not do its work.

Hair and Mud and Dirt — the guiding analogy.



Hair and Mud and Dirt — analogy and thought experiment.

“He’s just said,” said Lela, and her voice had gone very careful, “that he’d be amazed if somebody showed the forms mixing together and separating.”

. . .

“Yes.”

. . .

“Sophia. Three days ago. The man from Elea. Being and sameness and difference and rest and change, and some of them blend and some of them don’t, and the whole of the vowels, and the weaving together of forms is what makes speech possible for us — “

. . .

“Yes,” said the owl.

. . .

“That’s the same thing. That’s exactly the same thing. He just said the exact thing that happened. He said I would be amazed if anyone could do that and then a man from Elea came to Athens and did it.”

. . .

“Fifty-one years later,” said Sophia. “In the same city. From the same town. On the day after the boy — now an old man, sitting on a bench — was charged with a capital crime. “He said show me the forms mixing and I shall be astonished. “And somebody did. And you watched it. And he did not say anything at all, because Plato did not give him a line.”

. . .

5

ALL THREE ARE CAUSES



Each has a part in bringing the sail to be
and keeping it what it is.

Hair and Mud and Dirt — the argument unfolding step by step.



Hair and Mud and Dirt — the logical progression.

Nobody spoke for a while.

. . .

“He set it up,” said Lela. “Fifty-one years in advance. In a book he wrote afterwards.”

. . .

“He set it up,” said the owl, “in a book he wrote afterwards, about an earlier day, so that the challenge would already have been lying there for half a century when the answer arrived. “Nobody made him do that. Nobody would have noticed if he had not. He did it because it was right, and then he let it sit there, and about four people a century find it. “You are two of them. You found it in an orchard. It took you nine seconds.”

. . .

“While Socrates was saying all this,” said the voice of Cephalus, “Pythodorus kept from moment to moment expecting Parmenides and Zeno to get annoyed. “But they both paid close attention to Socrates, and often glanced at each other and smiled — as though they admired him.”

. . .

“They liked him,” said Danae.

. . .

“They liked him,” said Sophia. “And notice who is telling you. Pythodorus was in the room, watching two great men listen to a boy, and expecting a row every second, and it did not come. “That detail is the thing he kept. Out of the hardest conversation of his life, the thing he remembered and passed on was they kept looking at each other and smiling. “Everybody is somebody’s host, in a corner, watching.”

. . .



Many things are like this:
they are more than one thing working together.

Hair and Mud and Dirt — the competing interpretation.



Hair and Mud and Dirt — the difficulty and the alternative.

“Socrates,” said Parmenides — and it was the first time he had spoken — “you are much to be admired for your keenness for argument. “Tell me. Have you yourself distinguished as separate, in the way you mention, certain forms themselves — and also as separate the things that partake of them? “And do you think that likeness itself is something, separate from the likeness we have?”

. . .

“I do indeed,” Socrates answered.

. . .

“And what about these? Is there a form, itself by itself, of just, and beautiful, and good, and everything of that sort?”

. . .

“Yes,” he said.

. . .

“He’s going fast,” said Lela. “He’s saying yes very fast.”

. . .

“He is saying yes very fast,” said the owl, “because so far he has been asked about the easy ones, and he has never once been asked the next question by anybody who meant it. “Watch him slow down.”

. . .

“What about a form of human being,” said Parmenides — “separate from us and all those like us? “Is there a form itself of human being? Or fire? Or water?”

. . .



Danae: So the sail is not just cloth?
Lela: No. It is a coming-together of many.

Hair and Mud and Dirt — Lela and Danae reconstruct the idea.



Hair and Mud and Dirt — Lela and Danae.

“Parmenides,” said Socrates, “I’ve often found myself in doubt whether I should talk about those in the same way as the others, or differently.”

. . .

“There,” said Sophia.

. . .

“And what about these, Socrates?” said Parmenides.

. . .

“Things that might seem absurd. Like hair. And mud. And dirt. Or anything else totally undignified and worthless. “Are you doubtful whether or not you should say that a form is separate for each of these, too?”

. . .

The whole orchard seemed to wait.

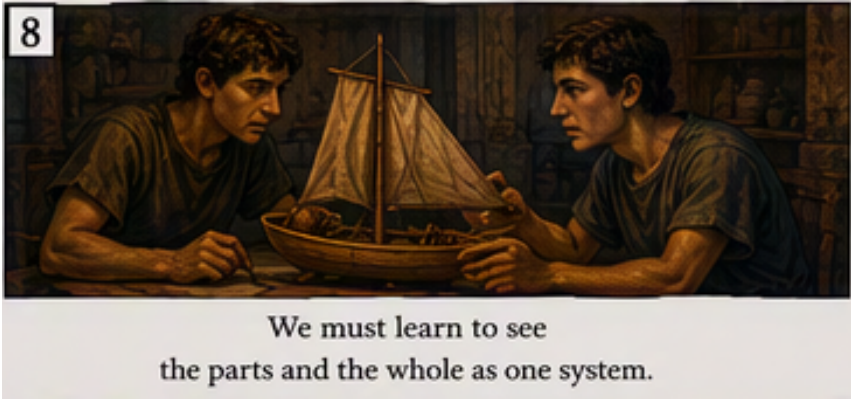
. . .

“Not at all,” Socrates answered.

. . .

“On the contrary. These things are in fact just what we see. Surely it’s too outlandish to think there is a form for them.”

. . .



We must learn to see
the parts and the whole as one system.

Hair and Mud and Dirt — the historical layer.



Hair and Mud and Dirt — historical reconstruction.

“Oh,” said Danae.

. . .

“Yes,” said Sophia. “He flinched.”

. . .

“Not that the thought that the same thing might hold in all cases hasn’t troubled me from time to time,” Socrates went on. “Then, when I get bogged down in that, I hurry away — afraid that I may fall into some pit of nonsense and come to harm. “But when I arrive back in the vicinity of the things we agreed a moment ago have forms, I linger there, and occupy myself with them.”

. . .

Nobody said anything.

. . .

“He knows,” said Lela at last.

. . .

“He knows,” said the owl.

. . .



Hair and Mud and Dirt — a wordless conceptual plate.



Hair and Mud and Dirt — wordless concept plate.

“He knows. He’s just said it. He said it’s troubled me — he’s thought about it, he’s thought about it more than once, and every time he gets near it he runs away and does the nice ones instead. “And he said that out loud. To Parmenides. Who asked.”

. . .

“Yes,” said Sophia. “And I want both of you to be extremely careful here, because there is an easy thing to feel and it is the wrong one. “The easy thing is to feel caught out for him. To wince. To think: oh, he has been found out being a bit grand, and he does not want mud in his beautiful system, and now he will be embarrassed. “And that is not what is happening. Listen to what the old man says.”

. . .

“That’s because you are still young, Socrates,” said Parmenides.

. . .

“And philosophy has not yet gripped you as, in my opinion, it will in the future — “once you begin to consider none of the cases beneath your notice. “Now, though, you still care about what people think. “Because of your youth.”

. . .

Lela put her face in her hands.

. . .

“Oh,” she said, into them. “Oh, that’s — Sophia, that’s not a telling-off.”

. . .



10
As with the sail, so with many things in the world.
We must learn the art of seeing how they are one.

Hair and Mud and Dirt — the chapter's narrative and philosophical synthesis.



Hair and Mud and Dirt — climax, double-page spread.

“No,” said the owl.

. . .

“That’s a — he’s telling him what’s going to happen to him.”

. . .

“He is telling him what is going to happen to him,” said Sophia, “and it is perfectly kind, and perfectly accurate, and it is the most frightening sentence in this book, and neither of the two men in that courtyard has the first idea why. “Philosophy has not yet gripped you as it will. “You still care what people think. “Because of your youth.”

. . .

“He stops,” said Lela. Her voice was not working properly. “He stops caring. That’s — we know. We watched

it. He stops caring what people think and he never starts again, and that's why they —“

. . .

“Yes,” said the owl.

. . .

“An old man just looked at a boy and promised him that.”

. . .

“An old man just looked at a boy, in the summer, at a festival, in the shade, and told him the best thing that could possibly happen to him,” said Sophia. “And he was right. It happened. Exactly as described. He stopped hurrying away from things, and he stopped minding about mud, and he stopped caring what people thought. “And fifty-one years later he was standing in a room with five hundred and one of them.”

Chapter 105

ONE HUNDRED AND FIVE.

The Sail



Socrates turns to the youngest part
of our inquiry, harder than the rest.

The Sail — opening scene.



The Sail — chapter-opening scene.

“But tell me this,” said Parmenides. “Is it your view that there are certain forms, from which these other things, by getting a share of them, derive their names? “As, for instance, they come to be like by getting a share of likeness. Large by getting a share of largeness. And just and beautiful by getting a share of justice and beauty.”

. . .

“It certainly is,” Socrates replied.

. . .

“Now,” said Sophia. “Watch a man who is sixty-five take something to pieces. “He is not going to be unkind. He is not going to raise his voice. He is going to ask the boy one question, and it is a question with two doors, and there is nothing behind either of them.”

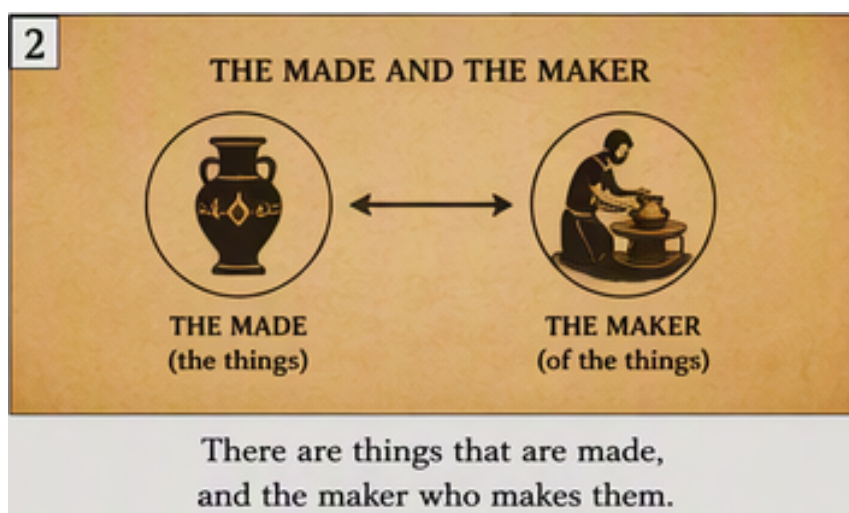
. . .

“So does each thing that gets a share get as its share the form as a whole — or a part of it? “Or could there be some other means of getting a share apart from these two?”

. . .

“How could there be?” said Socrates.

. . .



The Sail — the chapter's central dialogue.



The Sail — dialogue and narrative.

“Oh, don’t say that,” said Lela.

. . .

“He said it,” said the owl. “Two doors. He has just agreed that there are only two doors. Everything for the next four minutes follows from that and he gave it away in four words, because it was obvious, and because he was nineteen and going quickly.”

. . .

“Do you think, then, that the form as a whole — one thing — is in each of the many?”

. . .

“What’s to prevent its being one, Parmenides?”

. . .

“So, being one and the same, it will be at the same time, as a whole, in things that are many and separate. “And thus it would be separate from itself.”

. . .



The maker is not the same as the made,
yet neither can be without the other.

The Sail — the central concept made visible.



The Sail — the central idea.

“No it wouldn’t,” said Socrates.

. . .

“Not if it’s like one and the same day. “That is in many places at the same time, and is none the less not separate from itself. “If it’s like that, each of the forms might be, at the same time, one and the same in all.”

. . .

“Yes,” said Danae, and hit the ground with her hand.

. . .

“Yes,” said Sophia quietly. “That is very good. That is genuinely, seriously good, and if you have not felt why, feel it now, because it is the best thing he says today. “It is Tuesday in Athens and it is Tuesday in Sicily and it is Tuesday here. One day. Not a bit of Tuesday here and a

bit of Tuesday there. The whole of it, everywhere, at once, and nobody has ever thought that was strange for one second in the history of the world. "He has reached for the one thing everybody already accepts that behaves exactly like his Forms. "That is a nineteen-year-old under pressure finding, in about two seconds, the single best example available."

. . .

"And is it right?" said Lela.

. . .

"Watch."

. . .

4

A CHAIN OF DEPENDENCE



We may go on: the woodcutter, the forest,
the rain, the earth, the sun...

The Sail — the guiding analogy.



The Sail — analogy and thought experiment.

“Socrates,” said Parmenides, “how neatly you make one and the same thing be in many places at the same time.”

. . .

“That’s not nice,” said Danae.

. . .

“That is not nice,” Sophia agreed. “It is the only moment all day when he is anything less than kind, and it is one word, and it means that was a bit slick. “And then he does something that I would like you to watch very carefully, because it is a technique and you will meet it for the rest of your life. “He does not argue with the example. “He changes it.”

. . .

“It’s as if you were to cover many people with a sail,” said Parmenides, “and then say that one thing as a whole

is over many. “Or isn’t that the sort of thing you mean to say?”

EUCLID · Elements I – whole > part; equals added

E1.I.CN.5 — *whole > part* STRONG

And the whole [is] greater than the part.

EUCLID'S
ELEMENTS
BOOK I

COMMON NOTION 5
 Καὶ τὸ ἅλὸν τοῦ μέρους μείζον [ἐστίν].
 And the whole is greater than the part.

THE WHOLE
IS GREATER
THAN
THE PART.

LENGTH — A LINE CONTAINS A PROPER PART

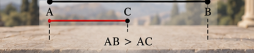
1. Take a line segment AB (the whole).



2. Take a proper part AC contained in AB.



3. The whole is greater than the part.



AREA — A FIGURE CONTAINS A PROPER PART

1. Take a square (the whole).



2. Take a proper part contained in it (a triangle).



3. The whole is greater than the part.


>


Square (whole)
area(square) > area(triangle)

Triangle (part)

WEIGHT — A QUANTITY CONTAINS A PROPER PART

1. Take a full sack of grain (the whole).



W (whole)

2. Remove a proper part (a handful).



P (part)

3. The whole is greater than the part.


>


W (whole)
weight(whole) > weight(part)

P (part)

LOGICAL
ROLE

This licenses inequality by containment.
 Used in Propositions I.6, I.16, I.18, I.19, I.20, I.21, I.24, and I.25 (and many others).

EVERY PROPER
PART IS LESS
THAN THE WHOLE

El.I.CN.5 — whole > part

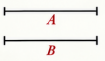
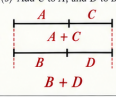
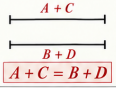
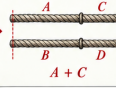
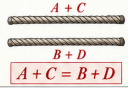
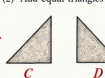
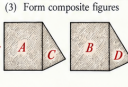
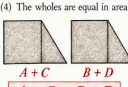
El.I.CN.2 — equals added LIGHT

And if equal things are added to equal things then the wholes are equal.

Euclid's *Elements* — Book I

Common Notion 2

Καὶ ἐὰν ἴσοις ἴσα προστεθῇ, τὰ ὅλα ἔστιν ἴσα.
 And if equal things are added to equal things, the wholes are equal.

1. Abstract rule (for any magnitudes)			
(1) Equal magnitudes A and B 	(2) Equal magnitudes C and D 	(3) Add C to A , and D to B 	(4) Therefore $A + C$ equals $B + D$ 
$A + C = B + D$			
2. Length			
(1) Two equal ropes 	(2) Add equal pieces 	(3) Extend both ropes 	(4) The extended ropes are equal 
$A + C = B + D$			
3. Area			
(1) Two equal squares 	(2) Add equal triangles 	(3) Form composite figures 	(4) The wholes are equal in area 
$A + C = B + D$			
4. Weight			
(1) Equal weights A and B 	(2) Add equal stones C and D 	(3) Add one stone to each 	(4) The balance is preserved 
$A + C = B + D$			


TRUTH THROUGH REASON
Logical role: the addition of equals.
GEOMETRY FOR THE MIND


El.I.CN.2 — equals added

Why here: Strong whole/part dilemma.

Note. Strong whole/part dilemma.

. . .

“Perhaps,” Socrates replied.

. . .

5



For every thing, there is something that makes it
and something that makes that possible.

The Sail — the argument unfolding step by step.



The Sail — the logical progression.

“No,” said Lela, out loud. “No, no, don’t say perhaps — that’s not the same, that’s not the same at all, a day isn’t a sheet —”

. . .

“No,” said the owl. “It is not.”

. . .

“Then why did he say perhaps?”

. . .

“Because he is nineteen,” said Sophia, “and because he has just been told he was being slick, and because the old man said isn’t that the sort of thing you mean in a perfectly friendly voice, and because when somebody offers you a picture of your own idea it is extraordinarily hard to say no, that is not my idea without sounding as though you are wriggling. “And because — this is the real reason, and it is worse — he had not thought about it hard enough to know the difference. “He had a good example. He did not have a theory. And a good example will carry you for about ninety seconds against somebody like this.”

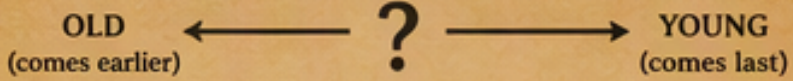
. . .

“In that case would the sail be, as a whole, over each person?” said Parmenides. “Or would a part of it be over one person, and another part over another?”

. . .

6

WHAT IS THE YOUNGEST?



Which is the youngest—
the last in this long chain?

The Sail — the competing interpretation.



The Sail — the difficulty and the alternative.

“A part.”

. . .

“So the forms themselves are divisible, Socrates. “And things that partake of them would partake of a part. No longer would a whole form, but only a part of it, be in each thing.”

. . .

“It does appear that way.”

. . .

“Then are you willing to say that our one form is really divided? Will it still be one?”

. . .

“Not at all.”

. . .



Lela: Is it the thing we see and use?
Danae: Or is it something we never see?

The Sail — Lela and Danae reconstruct the idea.



The Sail — Lela and Danae.

“Both doors are shut,” said Lela.

. . .

“Both doors are shut,” said Sophia, “and now he is going to walk him through the room behind the second one and turn the lights on, and this is the part that people remember.”

. . .

“For suppose you are going to divide largeness itself,” said Parmenides. “If each of the many large things is to be large by a part of largeness — smaller than largeness itself — won’t that appear unreasonable?”

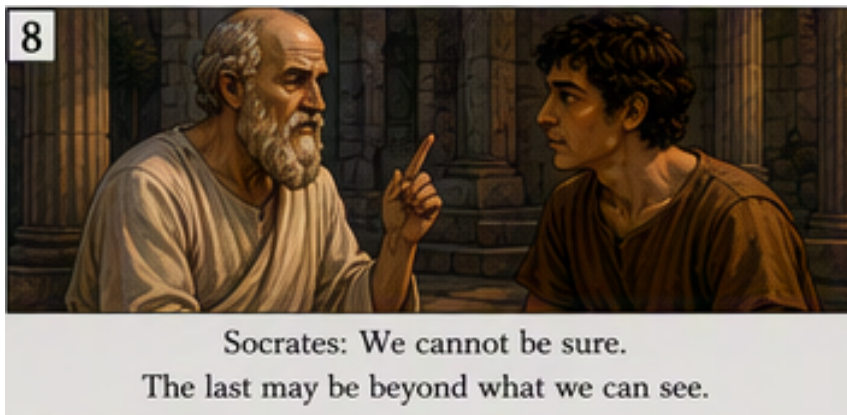
. . .

“It certainly will.”

. . .

“What about this? Will each thing that has received a small part of the equal have something by which to be equal to anything — when its portion is less than the equal itself?”

. . .



The Sail — the historical layer.



The Sail — historical reconstruction.

“That’s impossible.”

. . .

“Well. Suppose one of us is going to have a part of the small.”

. . .

“The small will be larger than that part of it — since the part is a part of it. “So the small itself will be larger. “And that to which the part subtracted is added will be smaller, not larger, than it was before.”

. . .

“That surely couldn’t happen,” said Socrates.

. . .

Danae was sitting with her mouth open.

. . .

“Say it again,” she said. “The small one. Say the small one again.”

. . .



The Sail — a wordless conceptual plate.



The Sail — wordless concept plate.

Sophia said it again.

. . .

“Smallness,” she said. “The thing that makes small things small. Chop a bit off it and give the bit to something. “Now: is that bit smaller than smallness? Of course. It is a part of it. Parts are smaller than the wholes they came off. “So smallness is bigger than a piece of itself. “So smallness is big.”

EUCLID · Elements I and V — whole > part; part measuring

E1.I.CN.5 — whole > part STRONG

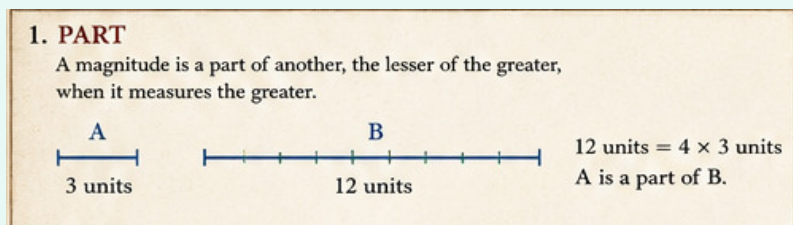
And the whole [is] greater than the part.



El.I.CN.5 — whole > part

El.V.Def.1 — part measuring MODERATE

A magnitude is a part of a(nother) magnitude, the lesser of the greater, when it measures the greater.



El.V.Def.1 — part measuring

Why here: Part of form vs whole. Strong.

Note. Part of form vs whole. Strong.

. . .

Danae fell over sideways into the grass.

. . .

“And the thing you gave the bit to,” said Sophia, relentlessly, “has just had something added to it. It has got more than it had before. “And what it has got more of is smallness. “So it is now smaller.”

. . .

“That’s horrible,” said Danae, from the grass, with total delight. “That’s completely horrible. Do it again.”

. . .



The youngest may be the cause of all,
yet not itself a thing among things.

The Sail — the chapter's narrative and philosophical synthesis.



The Sail — climax, double-page spread.

“No,” said the owl. “Look at the boy.”

. . .

They looked at the boy.

. . .

He had not moved. He was still sitting on the floor with his arms round his knees, and he was still looking straight at the old man, and there was nothing on his face at all that either of the girls could name.

. . .

“Socrates,” said Parmenides, “in what way, then, will the other things get a share of your forms — if they can do so neither by getting parts, nor by getting wholes?”

. . .

And for the first time in either of the two summers, they watched him not answer.

Chapter 106

ONE HUNDRED AND SIX. The Third Man



Socrates now leads us to what
is hardest of all to think.

The Third Man — opening scene.



The Third Man — chapter-opening scene.

“By Zeus!” said Socrates.

. . .

Both girls sat up.

. . .

“It strikes me that’s not at all easy to determine!”

. . .

“He swore,” said Danae.

. . .

“He swore,” said Sophia.

. . .

2

THE LIMIT OF NAMES AND WORDS



NOT NAMED
by any name



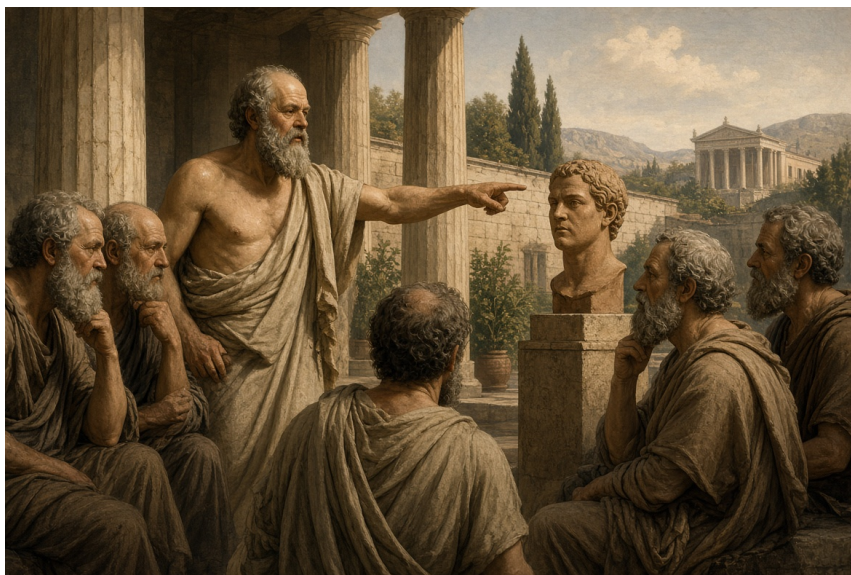
NOT SPOKEN
of in any way



NOT HEARD
by any ear

There may be something
that is not named or spoken of or heard.

The Third Man — the chapter's central dialogue.



The Third Man — dialogue and narrative.

“He’s never sworn. Not once. Not in the whole — not in either of them. Not when they said he was a wind-egg and not when the man from Elea called him a sophist and not on the steps.”

. . .

“He has never sworn,” the owl agreed, “in anything I have shown you, at any age, on any day, including the day he was charged with a capital crime. “He is nineteen and somebody has just taken his best idea apart in ninety seconds in front of a room, and it has come out of him before he could stop it, and Pythodorus was there and remembered it and put it in. “Four men carried that by Zeus across a hundred years so that you could have it. “And now he is going to be asked a harder one.”

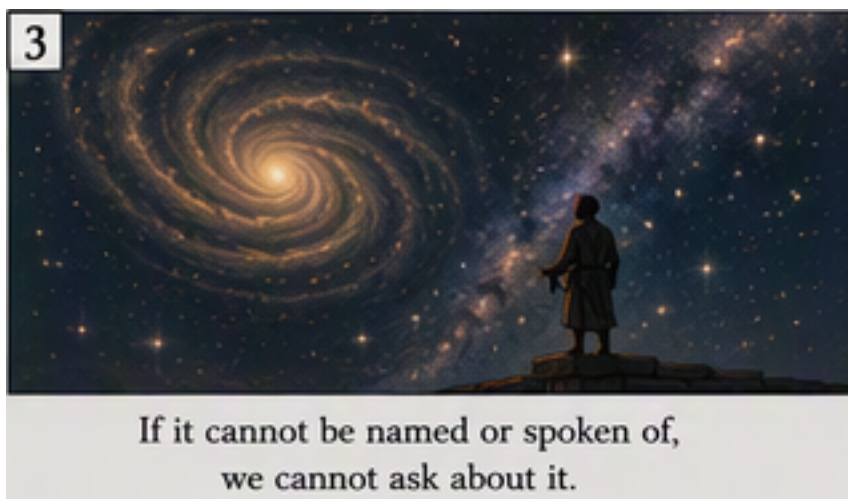
. . .

“And what do you think about the following?” said Parmenides.

. . .

“What’s that?”

. . .



The Third Man — the central concept made visible.



The Third Man — the central idea.

“I suppose you think each form is one on the following ground. “Whenever some number of things seem to you to be large — perhaps there seems to be some one character, the same, as you look at them all. “And from that you conclude that the large is one.”

. . .

“That’s true,” he said.

. . .

“Stop there,” said Sophia.

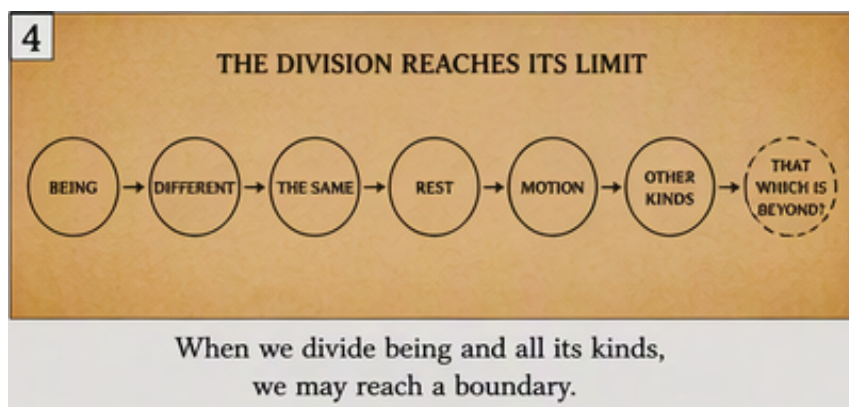
. . .

She stopped it.

. . .

“Say that back to me,” she said, “because everything for the next minute is built on it, and it is the boy’s own machinery being picked up and turned round.”

. . .



The Third Man — the guiding analogy.



The Third Man — analogy and thought experiment.

“You look at a lot of big things,” said Lela slowly. “A tree and a house and a boat. “And you notice there’s something the same about them. And that thing isn’t the tree and it isn’t the house. “So you say: there’s a thing called Bigness, and there’s one of it, and they’ve all got a share.”

. . .

“Yes.”

. . .

“And that’s not a trick. That’s actually what he said. That’s — Sophia, that’s the whole idea. He’s just described the engine.”

. . .

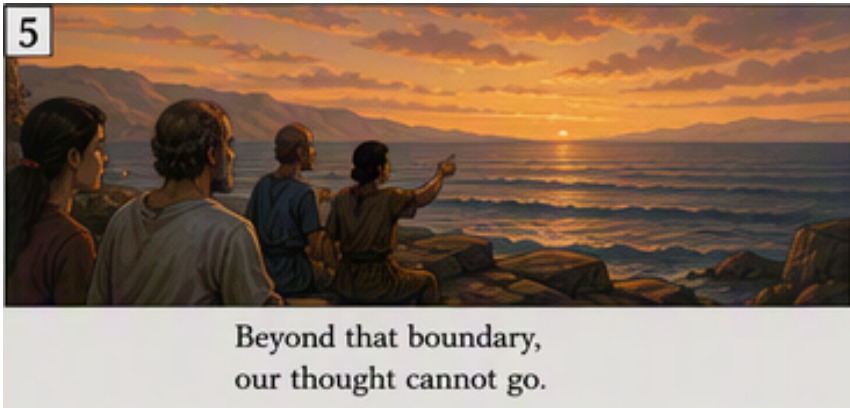
“He has just described the engine,” said the owl, “in the boy’s own words, and made him agree to it, and now he

is going to run it one more time than the boy ever ran it.
“Watch. It is four lines long and it has not been answered.”

. . .

“What about the large itself, and the other large things?”
said Parmenides.

. . .



The Third Man — the argument unfolding step by step.



The Third Man — the logical progression.

“If you look at them all in the same way, with the mind’s eye — “again, won’t some one thing appear large? By which all these appear large?”

. . .

“It seems so,” said Socrates.

. . .

“So another form of largeness will make its appearance — which has emerged alongside largeness itself and the things that partake of it. “And in turn another over all these, by which all of them will be large. “Each of your forms will no longer be one, but unlimited in multitude.”

EUCLID · Elements VII — unlimited multitude

E1.VII — *unlimited multitude* LIGHT

Book VII: elementary number theory — unit, number, part/-parts, even/odd, prime, plane and solid numbers, proportion of numbers.

Why here: Book-level VII. Light.

Note. Book-level VII. Light.

. . .

Nobody in the orchard said anything.

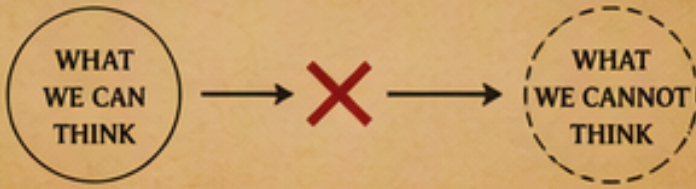
. . .

Then Danae said: “I don’t get it.”

. . .

6

A LIMIT WE CANNOT CROSS



We cannot grasp what lies beyond
our power of thought.

The Third Man — the competing interpretation.



The Third Man — the difficulty and the alternative.

“Good,” said Sophia. “Lela, do it. Slowly. With things in the orchard.”

. . .

Lela sat forward.

. . .

“Right,” she said. “The wall’s big. The tree’s big. The house is big. “Three big things. And there’s one thing they’ve all got — Bigness. Fine. That’s four things now: three big things and Bigness.”

. . .

“Go on.”

. . .



The Third Man — Lela and Danae reconstruct the idea.



The Third Man — Lela and Danae.

“And now —” She stopped, and started again. “And now you look at all four of them. “The wall. The tree. The house. And Bigness. “And Bigness is — “ Her voice changed slightly. “Bigness is big.”

. . .

“Is it?” said the owl.

. . .

“It has to be,” said Lela. “That’s the whole point of it. That’s why things get big by having a share of it. It’s not small.”

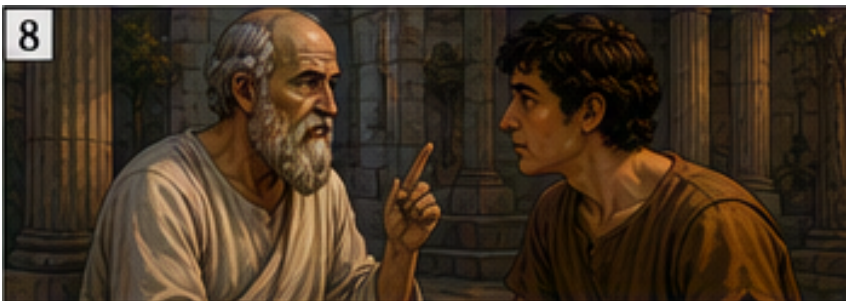
. . .

“Then finish.”

. . .

“So now I’ve got four big things,” said Lela. “And there’s something the same about all four of them. “And by his own rule — by the rule he just said, the one about looking at a lot of things and seeing one character — there has to be another Bigness over all four. “And then that one’s big as well. So there’s five. So there’s another one over the five. “And it never —“

. . .



Socrates: Perhaps.
Or perhaps it is not 'something' at all,
but what makes all things possible.

The Third Man — the historical layer.



The Third Man — historical reconstruction.

She put her pen down.

. . .

“It never stops,” she said.

. . .

“It never stops,” said Sophia.

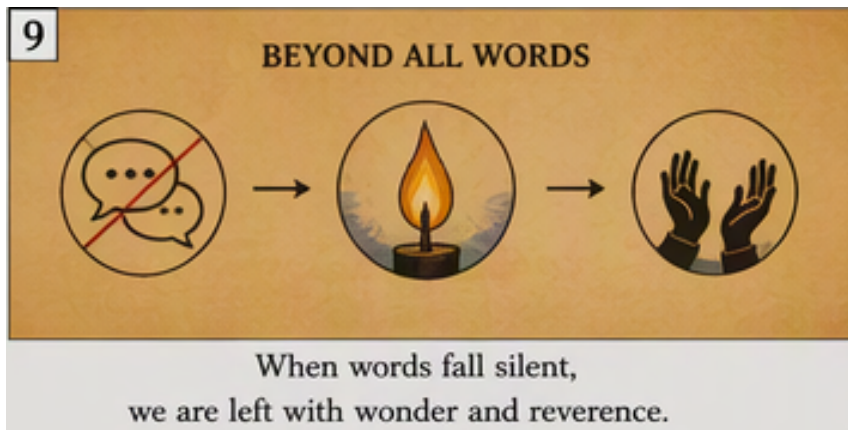
. . .

“That’s — “ Lela was almost laughing, which was what she did when something was bad. “That’s not a small problem. That’s not a detail. He wanted one of each. That was the whole thing. One Bigness, and everything else shares it. And there’s an infinite number of them going up for ever and you can’t even count to the first one.”

. . .

“Yes.”

. . .



The Third Man — a wordless conceptual plate.



The Third Man — wordless concept plate.

“Has anyone ever fixed it?”

. . .

“People have been trying for two thousand three hundred years,” said the owl, “and there are perhaps six serious answers, and every one of them costs you something you wanted to keep. “And it has a name, which it did not have on that afternoon, and I am going to tell you the name and then tell you who gave it.”

. . .

“What’s it called?”

. . .

“The Third Man,” said Sophia.

. . .

10



Some things are not named or spoken of—
yet they may be the reason all things are.

The Third Man — the chapter's narrative and philosophical synthesis.



The Third Man — climax, double-page spread.

“Because if you do it with man instead of big, it comes out like this. There is you. There is Man Himself, that you and I and everybody have a share of. “And then, looking at the two of them together — a third man, over both. “And a fourth. And a fifth.”

. . .

“Who named it?”

. . .

“A young man in a garden,” said the owl, “about thirty-three years from the afternoon I showed you yesterday. “He is sitting nine feet away from an old man with a roll on his knee, and he has been drawing trees on a wax tablet for a week, and he has just been handed this book to copy. “He works this argument through, and he gives it a name, and he uses it against his own teacher — four times, in four

different books, by name, for the rest of his life. “And every time, for two thousand years, that anybody has wanted to say that Plato’s Forms do not work, they have used the argument that Plato wrote down himself, at length, in his own book, in the mouth of a man he admired. “Nobody found it. He handed it over.”

. . .

“That’s the book,” said Danae.

. . .

“That is the book,” said Sophia. “That is what it is called and that is what it is. “The argument against himself. “And we are one hour into it and there are three more.”

Chapter 107

ONE HUNDRED AND SEVEN.

Patterns Set in Nature



We have reached the lowest step.
Let us now go back to the beginning.

Patterns Set in Nature — opening scene.



Patterns Set in Nature — chapter-opening scene.

“But, Parmenides — maybe each of these forms is a thought,” Socrates said. “And properly occurs only in minds. “In this way each of them might be one, and no longer face the difficulties mentioned just now.”

. . .

“Oh, that’s clever,” said Lela. “That’s actually clever. He’s gone — all right, if they can’t be out there then they’re in here, and there’s only one of each because there’s only one thought.”

. . .

“It is quick,” said the owl, “and it is not clever, and I want you to notice the difference, because you are going to do this in an examination hall in about eighteen months. “He has not solved anything. He has moved it. He has picked the problem up and put it somewhere where it is

harder to see. “And the old man is going to find it in four lines, and it is going to take him about eleven seconds.”

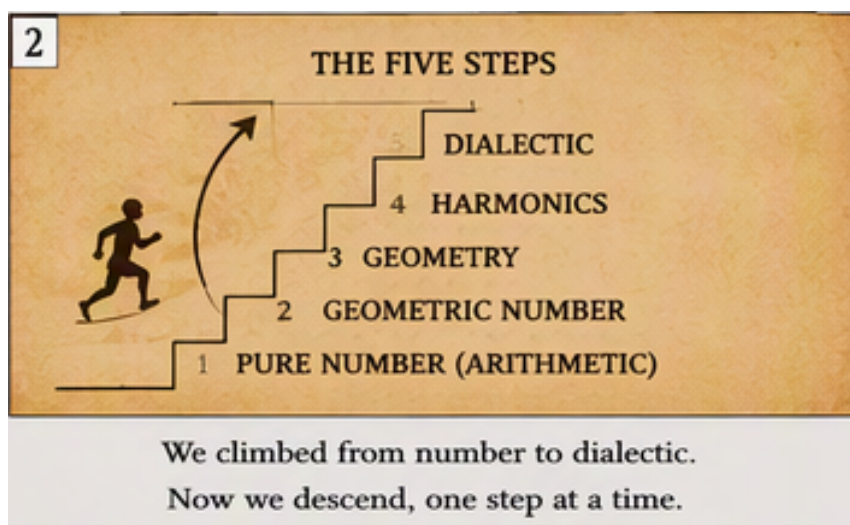
. . .

“What do you mean?” said Parmenides. “Is each of the thoughts one — but a thought of nothing?”

. . .

“No, that’s impossible.”

. . .



Patterns Set in Nature — the chapter’s central dialogue.



Patterns Set in Nature — dialogue and narrative.

“Of something, rather?”

. . .

“Yes.”

. . .

“Of something that is? Or of something that is not?”

. . .

“Of something that is.”

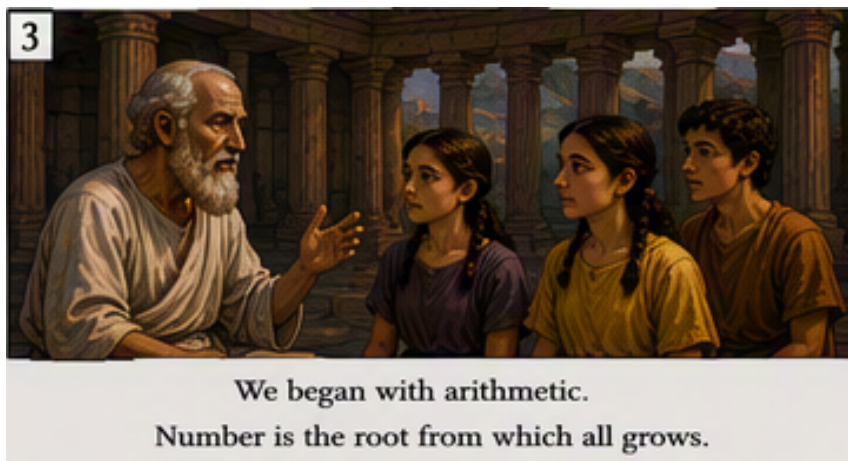
. . .

“Isn’t it of some one thing — which that thought thinks is over all the instances, being some one character?”

. . .

“Yes.”

. . .



Patterns Set in Nature — the central concept made visible.



Patterns Set in Nature — the central idea.

“Then won’t this thing that is thought to be one, being always the same over all the instances — “be a form?”

. . .

“That, too, appears necessary,” said Socrates.

. . .

“Ohhh,” said Lela.

. . .

“Yes,” said Sophia.

. . .

“He’s put it back. He’s put it straight back where it was.”

. . .

4

NUMBER: THE FIRST PRINCIPLE



From the One comes the many.
All else depends upon number.

Patterns Set in Nature — the guiding analogy.



Patterns Set in Nature — analogy and thought experiment.

“He has put it straight back where it was,” said the owl, “and here is the move, and it is one of the half-dozen most useful moves in the world. “The boy said: it is not a thing, it is a thought. “And the old man said: all right. A thought of what? “Because a thought is not a thought unless it is a thought about something. You cannot just think. You think of a thing. “So — of what? Of that one character that is the same over all the big things. “And that is exactly the thing you started with, and it is outside your head again, and the entire journey has taken you nowhere. “You cannot get rid of a thing by saying it is only an idea. The idea has to be an idea of it.”

. . .

“And what about this?” said Parmenides, and something in his voice had changed very slightly. “Given your claim that other things partake of forms — won’t you necessarily think either that each thing is composed of thoughts, and

all things think — “or that, although they are thoughts, they are unthinking?”

. . .

Danae started laughing and could not stop.

. . .

“What,” said Lela.

. . .

“The wall thinks,” said Danae, into the grass.

. . .



By counting, we measure and compare.
We see order where at first there was none.

Patterns Set in Nature — the argument unfolding step by step.



Patterns Set in Nature — the logical progression.

“Yes,” said Sophia, and there was something almost like enjoyment in it. “That is exactly the joke and she has got it instantly and you have not, and that is because you are being careful and she is not. “The boy said: forms are thoughts. And things get their properties by having a share of a form. “So the wall is big by having a share of a thought. “So there is a thought in the wall. “And either the wall is doing the thinking — in which case walls think, and so do stones, and so does mud, and so does everything in the world — “or there are thoughts lying about in walls with nobody thinking them, which is not what a thought is. “He has been offered two doors again. And he has been offered them by the same man, in the same voice, four minutes after the last time.”

. . .

“That isn’t reasonable either, Parmenides,” said Socrates.

. . .

“No. What appears most likely to me is this.”

. . .

“Here it is,” said the owl. “This is the one everybody remembers. Whatever you think you know about Plato, this is it, and it is about to be killed in nine lines, and he is nineteen, and he is inventing it under fire.”

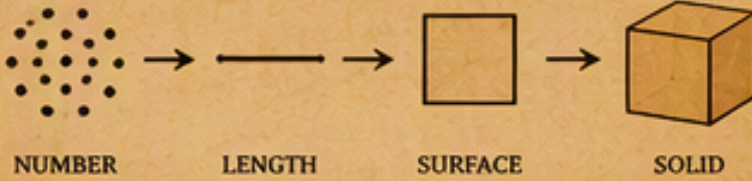
. . .

“These forms are like patterns set in nature,” said Socrates.

. . .

6

NUMBER GIVES RISE TO FORM



Number gives length, length gives surface,
surface gives solid.

Patterns Set in Nature — the competing interpretation.



Patterns Set in Nature — the difficulty and the alternative.

“And other things resemble them, and are likenesses.
“And this partaking of the forms is, for the other things,
simply being modelled on them.”

. . .

“Oh,” said Danae. “That’s nice.”

. . .

“That is very nice,” said Sophia, “and it is the most beautiful thing in the dialogue, and it is why people have loved this idea for two and a half thousand years even when they could not defend it. “Say it in kitchen words. “Somewhere there is the real one. The right one. The one it is supposed to be like. Not in the sky and not in a cupboard — just there, the way a shape is there. “And everything down here is a copy. Some of them are good copies and some of them are terrible copies, and that is

what it means for a thing to be beautiful or just or square.
“It is how close it got.”

. . .

Lela said, after a moment: “That’s the rug.”

. . .

“Go on,” said the owl.

. . .

“That’s what Yiayia’s doing. She’s not — she isn’t making it up as she goes. There’s a pattern. It’s her mother’s. It’s in her head and it’s in the old ones on the wall, and she’s going towards it. “And the red line where somebody was crying — that’s where the copy went wrong. That’s all that is. It’s not a different rug. It’s the same rug not quite getting there.”

. . .

7



We learned to calculate and to reckon.
This is the beginning of wisdom.

Patterns Set in Nature — Lela and Danae reconstruct the idea.



Patterns Set in Nature — Lela and Danae.

“Yes,” said Sophia quietly. “And now listen, because it is going to be taken off you by a man who is not even trying to be cruel.”

. . .

“If something resembles the form,” said Parmenides, “can that form not be like what has been modelled on it — to the extent that the thing has been made like it? “Or is there any way for something like to be like what is not like it?”

. . .

“There is not.”

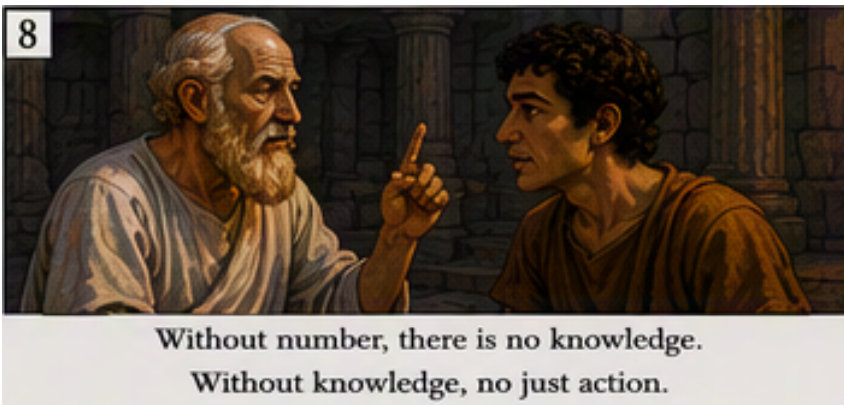
. . .

“And isn’t there a compelling necessity for that which is like to partake of the same one form as what is like it?”

. . .

“There is.”

. . .



Patterns Set in Nature — the historical layer.



Patterns Set in Nature — historical reconstruction.

“But if like things are like by partaking of something — won’t that be the form itself?”

. . .

“Undoubtedly.”

. . .

“Therefore nothing can be like the form — nor can the form be like anything else. “Otherwise, alongside the form another form will always make its appearance. “And if that form is like anything, yet another. “And if the form proves to be like what partakes of it, a fresh form will never cease emerging.”

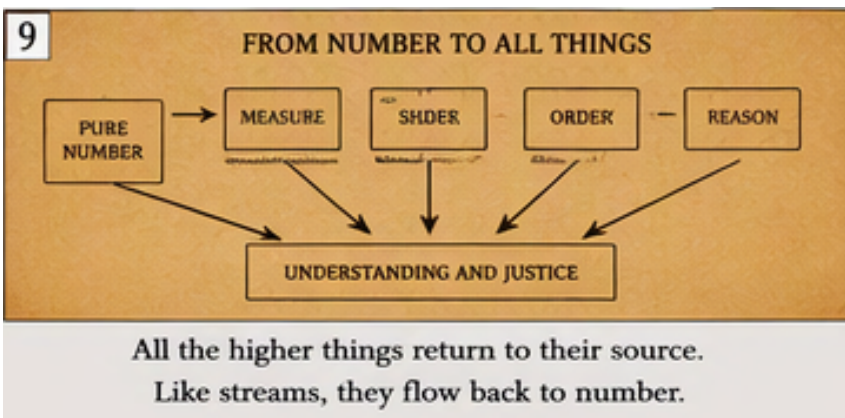
. . .

“That’s very true,” said Socrates.

. . .

“It’s the same one,” said Lela.

. . .



Patterns Set in Nature — a wordless conceptual plate.



Patterns Set in Nature — wordless concept plate.

She said it flatly, without any triumph at all.

. . .

“It’s the same argument. It’s the Third Man again. He’s just done it again in a different coat. “Because — if the rug’s like the pattern, then the pattern’s like the rug. That’s what like means. It goes both ways. You can’t have a thing be like something without the something being like it. “And if two things are alike then by his own rule there’s a Likeness over both of them. “And then that’s a third thing. And then that’s like both of them. And then —”

. . .

“And then,” said the owl.

. . .

“Sophia, that’s horrible. That’s — the nice one. That was the nice one. That was the one with the rug in it.”

. . .

“That was the one with the rug in it,” said Sophia, “and it died of likeness going both ways, which is a fact about the word like that every single person in the world knows and nobody had ever picked up and used as a weapon. “And I want you to notice what has happened twice now in ten minutes. “Both times, the thing that killed it was not a clever new idea. It was the boy’s own rule, applied one more time than he applied it. “That is what this whole afternoon is. Not an attack from outside. A man taking a young man’s machine and running it once more.”

. . .

“So other things don’t get a share of the forms by likeness,” said Parmenides. “We must seek some other means by which they get a share.”

. . .



So we return to the beginning,
but we are not the same as when we began.

Patterns Set in Nature — the chapter's narrative and philosophical synthesis.



Patterns Set in Nature — climax, double-page spread.

“So it seems.”

. . .

“Then do you see, Socrates,” he said, “how great the difficulty is, if one marks things off as forms, themselves by themselves?”

. . .

“Quite clearly,” said Socrates.

. . .

“He’s being brave,” said Danae.

. . .

“He is being brave,” said the owl, “and it is about to do him no good at all, because the old man has been going gently and is now going to tell him so.”

Chapter 108

ONE HUNDRED AND EIGHT. The Greatest Difficulty



Socrates: Look again at the world.
Do you see patterns wherever you look?

The Greatest Difficulty — opening scene.



The Greatest Difficulty — chapter-opening scene.

“I assure you,” said Parmenides, “that you do not yet — if I may put it so — have an inkling of how great the difficulty is.”

. . .

“Oh, come on,” said Lela.

. . .

“Yes,” said Sophia. “That is how it lands, and it is meant to, and it is also simply true, and both of those are the case at once. “He has spent ten minutes taking the boy’s idea apart three separate ways. And he has now said: you have not seen the difficulty yet. “He is not showing off. He is about to produce something much worse than anything so far, and he knows the boy is not ready for it, and he says so first — which is more than most people do.”

. . .

“There are many other reasons,” said Parmenides, “but the main one is this. “Suppose someone were to say that if the forms are such as we claim they must be — they cannot even be known. “If anyone should raise that objection, you wouldn’t be able to show him that he is wrong.”

. . .

“Why is that, Parmenides?” Socrates asked.

. . .

“Because I think that you, Socrates — and anyone else who posits that there is for each thing some being, itself by itself — would agree, to begin with, that none of those beings is in us.”

. . .



The Greatest Difficulty — the chapter's central dialogue.



The Greatest Difficulty — dialogue and narrative.

“Yes,” replied Socrates. “How could it still be itself by itself?”

. . .

“There,” said the owl. “That is the whole thing. He has just agreed to it in nine words and it is going to cost him everything, and he had no choice, because it is true. “The whole point of a Form is that it is itself, by itself. Separate. Not here. Not in the wall and not in your head and not in the rug. “That is what makes it able to do its job. If Bigness were sitting in the wall it would be a part of the wall and not the thing that made the wall big. “So: it is not in us. It cannot be. He has to say yes.”

. . .

“And so all the characters that are what they are in relation to each other have their being in relation to themselves

— but not in relation to things that belong to us,” said Parmenides. “Take an example. “If one of us is somebody’s master, or somebody’s slave — he is surely not a slave of mastery itself, of what a master is. Nor is the master a master of slavery itself. “On the contrary, being a human being, he is a master or slave of a human being. “Mastery itself, on the other hand, is what it is of slavery itself.”

. . .

Lela looked up.

. . .

“He picked that,” she said.

. . .

“He picked that,” said Sophia. “Out of every pair of things in the world that only make sense together — bigger and smaller, teacher and pupil, mother and child, left and right — he reached for the nearest one to hand. “He is not making a point about it. That is the point. It was the nearest one to hand. “I have said what I have to say about that and I said it days ago and I am not going to say it again. Note it and go on. That is what the list is for.”

. . .



In the heavens, there is order and measure.
The stars are not scattered at random.

The Greatest Difficulty — the central concept made visible.



The Greatest Difficulty — the central idea.

“So too,” said Parmenides, “knowledge itself, what knowledge is, would be knowledge of that truth itself, which is what truth is?”

. . .

“Certainly.”

. . .

“Furthermore, each particular knowledge would be knowledge of some particular thing — of what that thing is.”

. . .

“Yes.”

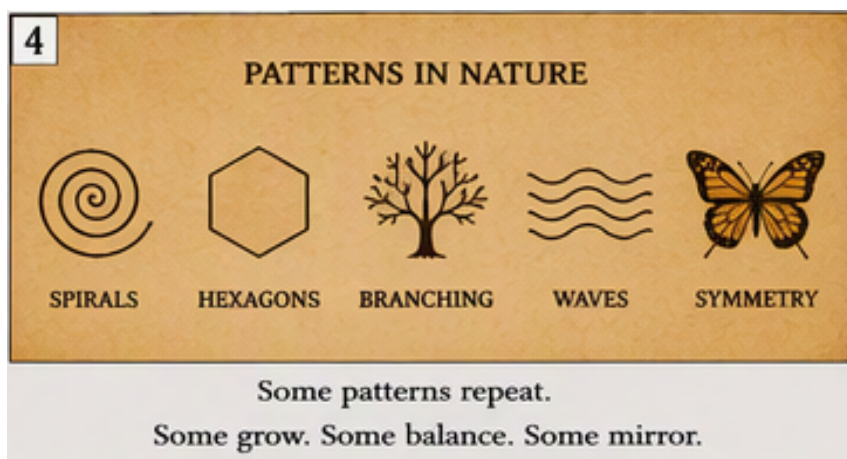
. . .

“But wouldn’t knowledge that belongs to us be of the truth that belongs to our world? “And wouldn’t it follow that each particular knowledge that belongs to us is in turn knowledge of some particular thing in our world?”

. . .

“Necessarily.”

. . .



The Greatest Difficulty — the guiding analogy.



The Greatest Difficulty — analogy and thought experiment.

“But, as you agree — we neither have the forms themselves, nor can they belong to us.”

. . .

“Yes. You’re quite right.”

. . .

“And surely the kinds themselves, what each of them is, are known by the form of knowledge itself?”

. . .

“Yes.”

. . .

“The very thing that we don’t have.”

. . .

“No. We don’t.”

. . .



Waves rise and fall by rule.
The sea keeps the same eternal rhythm.

The Greatest Difficulty — the argument unfolding step by step.



The Greatest Difficulty — the logical progression.

“So none of the forms is known by us — because we don’t partake of knowledge itself.”

. . .

“It seems not.”

. . .

“Then the beautiful itself, what it is, cannot be known by us. “Nor can the good. “Nor, indeed, can any of the things we take to be characters themselves.”

. . .

“It looks that way,” said Socrates.

. . .

Nobody in the orchard moved.

. . .

“Say it,” said Sophia. “Somebody say it, because I will not do it for you.”

. . .



Trees grow toward the light.
Roots go deep, branches spread wide.

The Greatest Difficulty — the competing interpretation.



The Greatest Difficulty — the difficulty and the alternative.

“He built the whole thing so we could know things,” said Lela.

. . .

She was speaking very slowly.

. . .

“That’s what it was for. That’s the entire reason. You can’t know the wall, because the wall’s changing and it’s big compared to one thing and small compared to another and in a hundred years it won’t be there. “So there’s got to be something that doesn’t do that. Something that just is what it is, for ever, the same. And that’s the thing you can actually know. “That’s why the Forms exist. So that knowing is possible.”

. . .

“Yes.”

. . .

“And he’s just proved they’re the only things we can’t know.”

. . .

“He has just proved,” said the owl, “that they are the only things you cannot know. “Because the same wall that keeps them safe from changing keeps them away from you. They are separate. That is what makes them work. And separate means separate from you as well. “You have built a lighthouse that nothing can reach.”

. . .



Bees build with perfect pattern.
They follow a wisdom they are not taught.

The Greatest Difficulty — Lela and Danae reconstruct the idea.



The Greatest Difficulty — Lela and Danae.

“Is that the greatest difficulty?” said Danae. “Is that it?
Is that the worst one?”

. . .

“No,” said Sophia.

. . .

“Here’s something even more shocking than that,” said Parmenides.

. . .

“What’s that?”

. . .

“Surely you would say that if in fact there is knowledge — a kind itself — it is much more precise than is knowledge that belongs to us.”

. . .

“Yes.”

. . .



The Greatest Difficulty — the historical layer.



The Greatest Difficulty — historical reconstruction.

“Well — whatever else partakes of knowledge itself, wouldn’t you say that god more than anyone else has this most precise knowledge?”

. . .

“Necessarily.”

. . .

“Tell me. Will god, having knowledge itself, then be able to know things that belong to our world?”

. . .

“Yes — why not?”

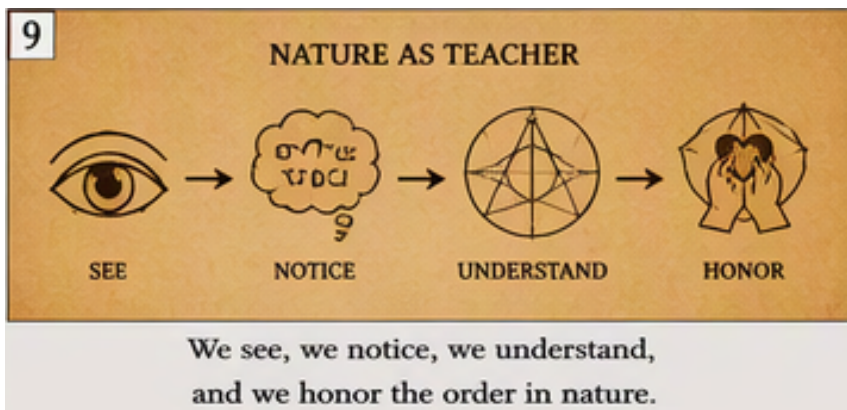
. . .

“Because we have agreed, Socrates,” said Parmenides, “that those forms do not have their power in relation to things in our world. “And things in our world do not have theirs in relation to forms. “But that things in each group have their power in relation to themselves.”

. . .

“Yes. We did agree on that.”

. . .



The Greatest Difficulty — a wordless conceptual plate.



The Greatest Difficulty — wordless concept plate.

“Well then. If this most precise mastery and this most precise knowledge belong to the divine — “the gods’ mastery could never master us. “Nor could their knowledge know us, or anything that belongs to us. “No. Just as we do not govern them by our governance, and know nothing of the

divine by our knowledge — “so they, in their turn, are, for the same reason, neither our masters — “nor, being gods, do they know human affairs.”

. . .

The wood pigeon had stopped some time ago and neither of them had noticed.

. . .

“That’s the worst thing anybody’s said all summer,” said Danae.

. . .

“Yes,” said the owl.

. . .

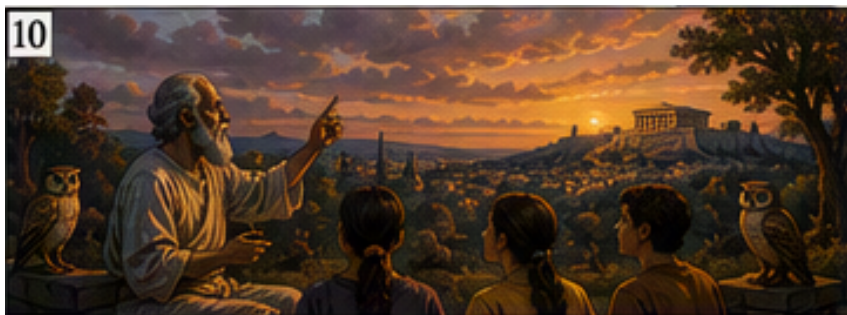
“It’s worse than the killing one. It’s — “ She was struggling. “That’s not being cruel. That’s — it’s just nobody’s there. “The gods don’t know about us. They’re not ignoring us and they’re not angry and they’re not anything. They just can’t reach. They’ve got the best knowledge there is and it doesn’t go to where we are.”

. . .

“That is what the argument produces,” said Sophia, “and it produces it honestly, out of things the boy has already agreed to, and there is no cheating anywhere in it. “And I want you to hear what he says, because it is the only thing he says in the whole passage that is not a yes, and it is not an argument, and it is one of the reasons people have loved this boy for two and a half thousand years.”

. . .

10



Nature is a great book for those
who learn to read its patterns.

The Greatest Difficulty — the chapter's narrative and philosophical synthesis.



The Greatest Difficulty — climax, double-page spread.

“If god is to be stripped of knowing,” said Socrates —

. . .

“our argument may be getting too bizarre.”

. . .

“That’s not an argument,” said Lela.

. . .

“That is not an argument,” said Sophia.

. . .

“He hasn’t answered it. He hasn’t got anything. He’s just gone — no. Something’s gone wrong. I don’t know what and I can’t show you, but that can’t be right.”

. . .

“Yes,” said the owl. “And that is a real move, and it is a dangerous one, and you must both learn when it is allowed. “It is not allowed when you simply do not like the answer. It is not allowed as a way of getting out of arithmetic. “It is allowed when a chain of perfectly good steps arrives somewhere that you know — not feel, know — cannot be where the world is. And then the right thing to say is: one of these steps is wrong and I cannot see which. “You watched a boy of fifteen do it, three days ago, about a god who was solemn and holy and understood nothing. We’d be admitting something frightening. “And here is a boy of nineteen doing the same thing, on the same subject, fifty-one years earlier, in front of the man who is beating him. “They are the same move. Plato used it twice, in two books, thirty years apart, and both times he put it in the mouth of somebody young and losing.”

Chapter 109

ONE HUNDRED AND NINE.

Nowhere to Turn



Socrates asks us to think deeper.
We are trying to speak about what is.

Nowhere to Turn — opening scene.



Nowhere to Turn — chapter-opening scene.

“And yet, Socrates,” said Parmenides, “the forms inevitably involve these objections — and a host of others besides.”

. . .

“As a result, whoever hears about them is doubtful, and objects that they do not exist — and that, even if they do, they must by strict necessity be unknowable to human nature. “And in saying this he seems to have a point. “And, as we said, he is extraordinarily hard to win over.”

. . .

“Only a very gifted man can come to know that for each thing there is some kind, a being itself by itself. “But only a prodigy more remarkable still will discover that — and be able to teach someone else who has sifted all these difficulties thoroughly and critically for himself.”

. . .

“There,” said Sophia, very quietly.

. . .

“What?” said Lela.

. . .

“Read it again.”

. . .

Lela read it again off her own page, and then a second time, and then looked up.

. . .

“Finding it is hard,” she said. “And teaching it is harder.”

. . .

2

THREE KINDS OF SPEECH

IT IS

(about what is)



IT IS NOT

(about what is not)



IT IS AND IS NOT

(mixing both)



We have tried these three ways.
Each runs into a serious difficulty.

Nowhere to Turn — the chapter's central dialogue.



Nowhere to Turn — dialogue and narrative.

“Finding it is hard, and teaching it is harder,” said the owl. “And he does not say a bit harder. He says you need a prodigy for the first and something more remarkable than a prodigy for the second. “I have been showing you men for two summers. Some of them found things. “And every single thing you have watched this summer got to you because somebody managed the second one. A man who had it, sitting down with somebody who did not, and getting it across — and then that one doing it again, and again, and again, a hundred times, for two thousand three hundred years, with a break of about eight hundred in the middle when it very nearly stopped. “There are perhaps four hundred people in that chain. If any one of them had been a bit tired, you would be looking at a wall this morning.”

. . .

“I agree with you, Parmenides,” said Socrates. “That’s very much what I think too.”

. . .

“Yet on the other hand, Socrates,” said Parmenides.

. . .

“Sit up,” said Sophia. “Both of you. Right up. This is the sentence. This is the one I brought you out here at eight o’clock for.”

. . .

“If someone, having an eye on all the difficulties we have just brought up, and others of the same sort — “won’t allow that there are forms for things, and won’t mark off a form for each one — “he won’t have anywhere to turn his thought. “Since he doesn’t allow that for each thing there is a character that is always the same. “In this way he will destroy the power of dialectic entirely. “But I think you are only too well aware of that.”

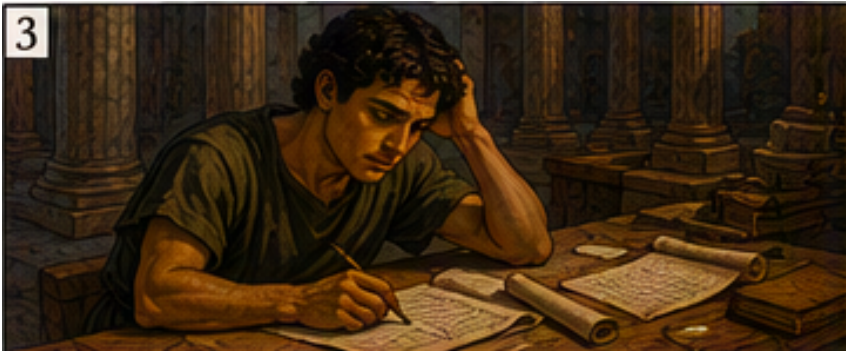
. . .

“What you say is true,” said Socrates.

. . .

Neither of the girls said anything for a moment.

. . .



If we say "is", we get contradictions.
If we say "is not", we cannot explain anything.

Nowhere to Turn — the central concept made visible.



Nowhere to Turn — the central idea.

“He’s just — “ said Lela, and stopped, and started again.
“Sophia, he’s just spent an hour proving it doesn’t work.”

. . .

“He has just spent an hour proving it does not work.”

. . .

“Four times. Four separate ways. The bits and the
wholes, and the Third Man, and the thought, and the pat-
tern, and the gods can’t see us —“

. . .

“Yes.”

. . .

“And now he’s saying don’t stop believing it.”

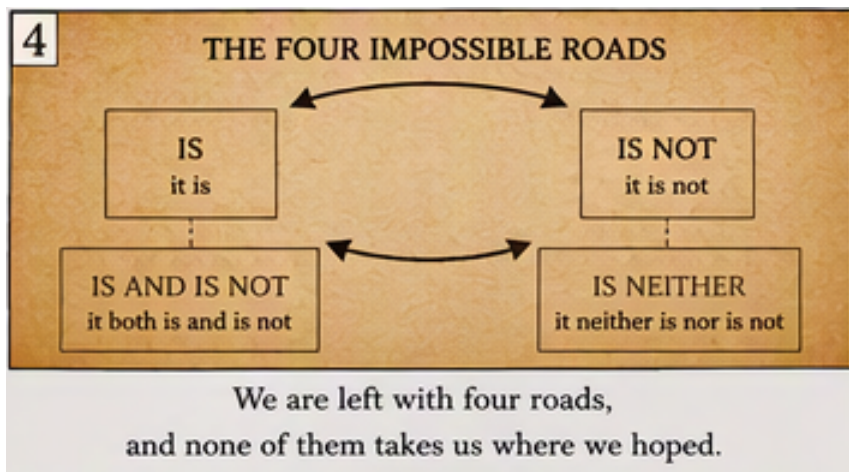
. . .

“He is saying,” said the owl, “and you cannot do without it. “Which is not the same and is much worse.”

. . .

“Say it, then,” said Lela. “Properly. Because I don’t understand how both of those can be true.”

. . .



Nowhere to Turn — the guiding analogy.



Nowhere to Turn — analogy and thought experiment.

“You are about to,” said Sophia. “Danae. Say big.”

. . .

“Big,” said Danae, from the grass.

. . .

“What does it mean?”

. . .

“It means big.”

. . .

“It means the same thing when you say it about the wall
as when you say it about the tree?”

. . .

“Obviously.”

. . .

“Why?” said the owl.

. . .

Danae sat up.

. . .



Nowhere to Turn — the argument unfolding step by step.



Nowhere to Turn — the logical progression.

“Because —“ she said, and then did not say anything else for a while.

. . .

“Because,” said Sophia, “there is one thing that the word is about, which is the same on Tuesday and the same in Athens and the same about a wall and about a tree. Otherwise you have not said anything at all; you have made a noise that happens to come twice. “That is what he means by nowhere to turn his thought. “Take away the one-thing-that-stays-the-same, and there is no such thing as meaning the same thing twice. “And if there is no meaning the same thing twice, there is no such thing as an argument. There is no such thing as agreeing. There is no such thing as being wrong, because there is nothing you were wrong about. “Everything you have watched for two summers — all of it, the ladders and the wax and the giants and the loom — every single word of it needs a big

that is the same each time it is said. “And an old man has just proved, carefully, in front of a room, that nobody can say what that is or how it works. “And that you have to have it anyway.”

. . .

“What then will you do about philosophy?” said Parmenides.

. . .

“Where will you turn, while these difficulties remain unresolved?”

. . .

And in a courtyard in the Potters’ Quarter, on a hot afternoon during a festival, fifty-one years before anything either girl had watched all summer, a young man with a snub nose sitting on the floor with his arms round his knees said:

. . .

“I don’t think I have anything clearly in view. At least not at present.”

. . .

Lela let out a breath she had not known she was holding.

. . .

“That’s it,” she said. “Isn’t it. That’s the thing you wouldn’t tell me.”

. . .



Lela: So what do we do now?
Danae: We have to look more carefully.

Nowhere to Turn — the competing interpretation.



Nowhere to Turn — the difficulty and the alternative.

“That is the thing I would not tell you,” said Sophia.

. . .

“Last night. I said does he cry and you said no, something better than that.”

. . .

“Yes.”

. . .

“And that’s it. That’s the whole of it. He just says I don’t know.”

. . .

“He just says I don’t know,” said the owl.

. . .

“He does not defend it. He does not go quiet and sulk. He does not say well, that’s just your opinion. He does not say he will think about it and come back with an answer, which is what I would have said and what you would have said and what almost every person in the world says. “An old man has taken his life’s idea apart in front of a room, and asked him what he is going to do now. “And the boy says: I have got nothing. Not at the moment. “He is nineteen. “And he is going to say some version of that sentence, out loud, to anybody who asks, for the next fifty-one years, until it kills him.”

. . .

“Socrates — that’s because you are trying to mark off something beautiful, and just, and good, and each one of the forms, too soon,” said Parmenides.

. . .



Socrates: We will begin again,
more slowly and more carefully.

Nowhere to Turn — Lela and Danae reconstruct the idea.



Nowhere to Turn — Lela and Danae.

“Before you have been properly trained. “I noticed that the other day too, as I listened to you conversing with Aristotle here. “The impulse you bring to argument is noble and divine, make no mistake about it. “But while you are still young — put your back into it, and get more training through something people think useless. “What the crowd call idle talk. “Otherwise, the truth will escape you.”

. . .

Sophia did not say anything.

. . .

Neither of the girls said anything either, for a long moment, and then Lela said, in a voice that did not sound like hers:

. . .

“What was that last bit?”

. . .

“What the crowd call idle talk,” said the owl.

. . .

“What’s the word? The actual word. In Greek.”

. . .

“Adoleschia,” said Sophia.

. . .

8



Perhaps the truth is not lost.
Perhaps our thoughts are not yet strong enough.

Nowhere to Turn — the historical layer.



Nowhere to Turn — historical reconstruction.

“Say it again.”

. . .

“Adoleschia. It means going on and on. Chattering. Talking rubbish at length. The thing a man does when he has nothing better to do and will not stop. “It is what you call somebody who asks too many questions about words. It is not a nice word and it has never once been a nice word.”

. . .

“Sophia,” said Lela. “Three days ago.”

. . .

“Yes.”

. . .

“Three days ago the man from Elea was making up a stupid imaginary city where everybody votes about medicine, and he said what they’d do to anybody who went on asking questions past the rulebook. And he said they’d call him a star-gazer. And then he said the other thing they’d call him.”

. . .

“He said they would call him a babbling sophist,” said Sophia.

. . .

“That’s this word.”

. . .

“That is this word.”

. . .

9

WHAT WE NEED



SEE
clearly



HEAR
rightly



THINK
carefully



SPEAK
justly

We need better seeing, hearing,
thinking, and speaking.

Nowhere to Turn — a wordless conceptual plate.



Nowhere to Turn — wordless concept plate.

Nobody said anything at all.

. . .

The morning had got properly hot while they were not paying attention. Down at the bottom of the orchard somebody had started a strimmer and given up on it.

. . .

“He told him to,” said Lela.

. . .

“He told him to,” said the owl.

. . .

“He’s sixty-five and he’s the most respected man in Greece and he’s just spent an hour taking a boy apart, and

the boy's said I don't know, and he's looked at him and said — "he's said the thing you need is more of exactly what everybody despises."

. . .

"Yes."

. . .

"Go and do the thing they call babbling. Do more of it. Do it properly. Put your back into it."

. . .

"Yes," said Sophia.

. . .



So we return to the beginning,
ready to follow the path of inquiry again.

Nowhere to Turn — the chapter's narrative and philosophical synthesis.



Nowhere to Turn — climax, double-page spread.

“And he did.”

. . .

“He did,” said the owl. “For fifty-one years. In the market and in the wrestling-schools and on the steps of the King’s Porch and in the prison at the end, without stopping, without ever once being paid, until there was not a person in Athens who had not either been asked something by him or heard about somebody who had. “And the city wrote a word on a piece of paper and took it to the King Archon. “And one of the things everybody knew about him — one of the things in the play, one of the things people said in the street, one of the three or four words that came up whenever his name did — “was that he was a babbler.”

. . .

“They killed him for doing what he was told,” said Danae.

. . .

Sophia was quiet for a while.

. . .

“They killed him for doing what he was told,” she said, “by a man he met once, at a festival, when he was nineteen, who did not know what he was giving him, and who meant it entirely kindly, and who was right.”

. . .

“What manner of training is that, Parmenides?” the boy was asking.

. . .

And the old man began to tell him.

Chapter 110

ONE HUNDRED AND TEN.

The Horse in the Poem



Socrates turns to an old poem.
It speaks of a horse—what does it mean?

The Horse in the Poem — opening scene.



The Horse in the Poem — chapter-opening scene.

And the old man told him.

. . .

He said it at length and without hurrying, and it came to this.

. . .

Take anything you like. Take one, or many, or likeness, or motion, or being itself.

. . .

And do not only ask what follows if it is.

. . .

Ask also what follows if it is not.

. . .

And in each case ask what follows for the thing itself, and what follows for everything else; and what follows for each of them in relation to itself, and what follows for each of them in relation to the other.

. . .



In the poem, the horse is more
than the horse we see.

The Horse in the Poem — the chapter's central dialogue.



The Horse in the Poem — dialogue and narrative.

“All this you must do,” said Parmenides, “if, after completing your training, you are to achieve a full view of the truth.”

. . .

“Scarcely manageable, Parmenides, this task you describe!” said Socrates.

. . .

“He said that as politely as anybody has ever said it,” said Sophia.

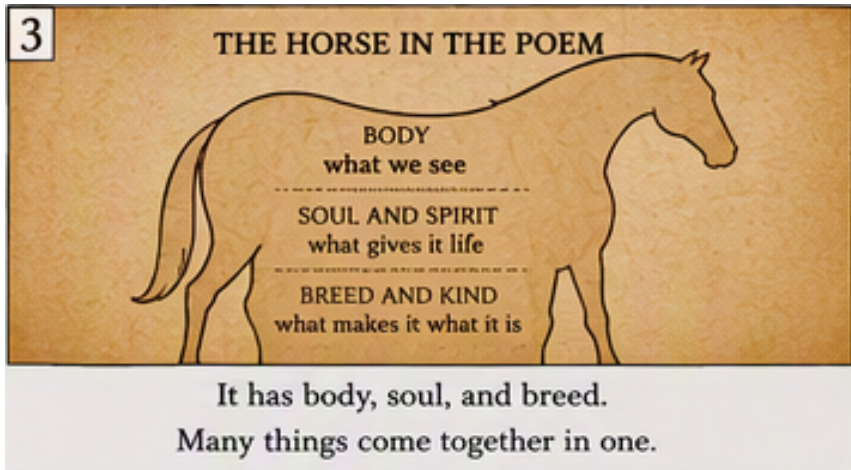
. . .

“How many is it?” said Lela. She had been drawing boxes. “That’s — if it is, if it isn’t, that’s two. And for itself and for the others, that’s four. And each of those in relation to itself and in relation to the other one —“

. . .

“Eight,” said the owl.

. . .



The Horse in the Poem — the central concept made visible.



The Horse in the Poem — the central idea.

“Eight.”

. . .

“Eight, for every single thing you might ever want to think about,” said Sophia. “Not eight altogether. Eight each. “And he has just listed, as examples, one, many, likeness, unlikeness, motion, rest, coming-to-be, destruction, being, and not-being. “That is eighty roads, in the examples alone, and he says and in a word, concerning whatever you might ever hypothesise.”

. . .

“That’s not training,” said Danae. “That’s a punishment.”

. . .

“And besides, I don’t quite understand,” Socrates was saying. “To help me understand more fully — why don’t

you hypothesise something and go through the exercise for me yourself?”

. . .

“Ha,” said Lela.

. . .

“Yes,” said Sophia. “Nineteen. Note it. He has been beaten for an hour and he has taken it, and the very first thing he does when the old man stops hitting him is say go on then.”

. . .



The horse we see is only one part.
There is more than what the eyes can see.

The Horse in the Poem — the guiding analogy.



The Horse in the Poem — analogy and thought experiment.

“For a man my age that’s a big assignment, Socrates,”
said Parmenides.

. . .

“Well then,” said Socrates. “You, Zeno — why don’t you
go through it for us?”

. . .

Danae shrieked.

. . .

“He passed it on!”

. . .

“He passed it straight on,” said the owl. “Without a
pause. To the other one. In front of everybody.”

. . .



Poets speak in images.
They point to truths beyond the obvious.

The Horse in the Poem — the argument unfolding step by step.



The Horse in the Poem — the logical progression.

“And Antiphon said that Zeno laughed,” said the voice of Cephalus, “and said: Let’s beg Parmenides to do it himself, Socrates.”

. . .

“What he’s proposing won’t be easy, I’m afraid. Or don’t you recognise what a big assignment it is? “Indeed — if there were more of us here, it wouldn’t be right to ask him. It’s not fitting, especially for a man his age, to engage in such a discussion in front of a crowd. “Ordinary people don’t know that without this comprehensive and circuitous treatment we cannot hit upon the truth and gain insight.”

. . .

“That’s a bit snobby,” said Lela.

. . .

“It is a bit snobby,” Sophia agreed, “and it is also, unfortunately, about as true as anything in this book. “What is coming next is two and a half hours long and consists almost entirely of the words yes, necessarily and apparently not. “If you did it in a marketplace you would be laughed at by everybody who walked past, and the laughing would not be wrong — it does look exactly like nonsense — and after about ten minutes of being laughed at you would stop, because people do. “He is not saying ordinary people are stupid. He is saying: this cannot be done in public, because it cannot survive being watched by people who are not doing it. “And that is why it is happening in a borrowed house outside the wall with seven people in it, and why the book has four doors in front of it.”

. . .

“And so, Parmenides,” said Zeno, “I join with Socrates in begging you — “so that I too may become your pupil again after all this time.”

. . .

The orchard was quiet for a second.

. . .

6

THE VISIBLE AND THE HIDDEN

WHAT APPEARS



(visible)



WHAT TRULY IS



(intelligible)

What appears is not always
what truly is.

The Horse in the Poem — the competing interpretation.



The Horse in the Poem — the difficulty and the alternative.

“He’s forty,” said Lela.

. . .

“He is about forty,” said the owl.

. . .

“He’s the second most famous man in Greece. He wrote the book. They came to Athens to hear his book. He’s just spent the morning defending it.”

. . .

“Yes.”

. . .

“And he’s just asked to be a pupil again. Out loud. In front of a nineteen-year-old who called him a show-off an hour ago.”

. . .

“Yes,” said Sophia. “And I have shown you about forty men this summer and that is one of the four or five sentences I would keep. “There is a thing that happens to people at about thirty-five and it happens very quietly. They stop being somebody who is learning a subject and become somebody who knows it. Nobody announces it. It is simply that one year they realise they have not been taught anything by anybody for a long time, and that they no longer expect to be. “And most people never come back from it. They go on being good at the thing, and other people come to them, and they are helpful and generous and perfectly kind, and they do not learn another thing before they die. “He is forty, and he is asking to sit back down. “After all this time is the phrase, and there is a whole life in it.”

. . .



Lela: So the poet helps us see deeper?
Danae: Yes, if we are listening carefully.

The Horse in the Poem — Lela and Danae reconstruct the idea.



The Horse in the Poem — Lela and Danae.

“In the end Parmenides said: I am obliged to go along with you. “And yet I feel like the horse in the poem of Ibycus.”

. . .

“Who?” said Danae.

. . .

“A poet who had been dead about a hundred years,” said Sophia, “and who wrote love poems, and whom everybody in that room had had read to them as a child. “Listen.”

. . .

“Ibycus compares himself to a horse,” said Parmenides — “a champion, but no longer young, on the point of drawing a chariot in a race, and trembling at what experience tells him is about to happen. “And says that he himself, old

man that he is, is being forced against his will to compete in Love's game. "I too, when I think back, feel a good deal of anxiety as to how, at my age, I am to make my way across such a vast and formidable sea of words. "Even so — I'll do it. Since it is right for me to oblige you. "And besides, we are, as Zeno says, by ourselves."

. . .

Lela had stopped writing some lines ago.

. . .



Nicomachus reads the lines again,
searching for their hidden meaning.

The Horse in the Poem — the historical layer.



The Horse in the Poem — historical reconstruction.

“Trembling at what experience tells him is about to happen,” she said.

. . .

“Yes.”

. . .

“That’s not fear of losing.”

. . .

“No,” said the owl. “Say what it is.”

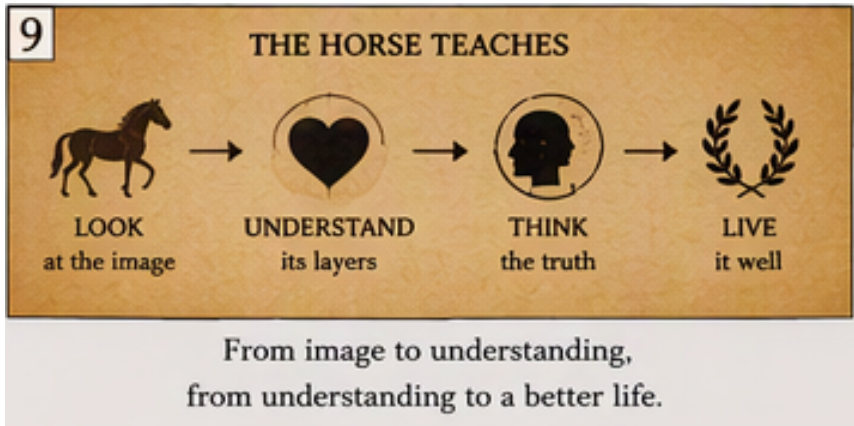
. . .

Lela thought about it for a while.

. . .

“It’s the horse knowing what it’s going to cost,” she said. “It’s not scared of the race. It’s done the race. It knows exactly what the next four minutes feel like all the way through, and how it’s going to feel afterwards, and how long it takes to stop shaking now compared to when it was young. “And it’s going to do it anyway. It’s standing there in the harness and it’s going.”

. . .



The Horse in the Poem — a wordless conceptual plate.



The Horse in the Poem — wordless concept plate.

“Yes,” said Sophia.

. . .

“And that’s him.”

. . .

“That is him,” said the owl, “and he is sixty-five, and he is about to do the hardest single stretch of thinking in the Greek language, in somebody else’s house, on a hot afternoon, for an audience of six — “and the first thing he does is tell them, in a picture, that he knows exactly how much it is going to take out of him.”

. . .

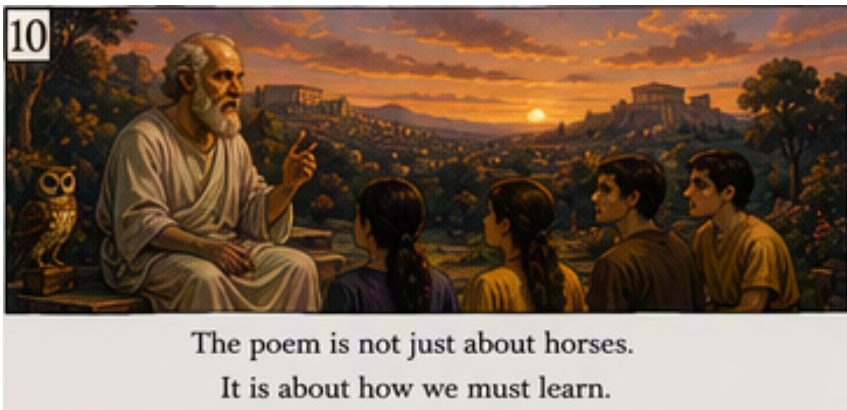
“Well then. At what point shall we start?” said Parmenides. “What shall we hypothesise first? “I know. “Since we have in fact decided to play this strenuous game — “is

it all right with you if I begin with myself, and my own hypothesis?”

. . .

“Say it,” said Sophia. “One of you. Say what he has just offered to do.”

. . .



The poem is not just about horses.
It is about how we must learn.

The Horse in the Poem — the chapter's narrative and philosophical synthesis.



The Horse in the Poem — climax, double-page spread.

“He’s going to do it on his own thing,” said Danae.

. . .

“He is going to do it on his own thing.”

. . .

“The one. All is one. That’s his. That’s the whole — that’s what he’s for. That’s the poem he wrote that everybody learns.”

. . .

“That is the poem everybody learns,” said the owl, “and he has had a whole life out of it, and a town, and a pupil who wrote forty arguments defending it, and an old age in which men cross the sea to look at him. “And he has just said: shall I put mine on the table?”

. . .

“Why?” said Lela.

. . .

“Because it is the only one he has any right to,” said Sophia. “That is the whole answer and he does not explain it and nobody asks. “You do not practise the demolition on somebody else’s house.”

Chapter 111

ONE HUNDRED AND ELEVEN.

The Youngest



The search turns to the smallest of all things:
the instant, the “now” that has no length.

The Youngest — opening scene.



The Youngest — chapter-opening scene.

“Then who will answer my questions?” said Parmenides.

. . .

“The youngest, surely?”

. . .

“For he would give the least trouble — “and would be the most likely to say what he thinks. “At the same time his answer would allow me a breathing space.”

. . .

Neither of the girls said anything.

. . .

2

THE FLOW OF TIME



Between what was and what will be,
there must be a “now” that is not a stretch.

The Youngest — the chapter's central dialogue.



The Youngest — dialogue and narrative.

The picture had gone very clear in the middle, the way it did when the four men who carried it had all been sure of the same thing.

. . .

“I’m ready to play this role for you, Parmenides,” said a voice they had not heard before. “Because you mean me when you say the youngest. “Ask away — you can count on me to answer.”

. . .

“That’s him,” said Lela.

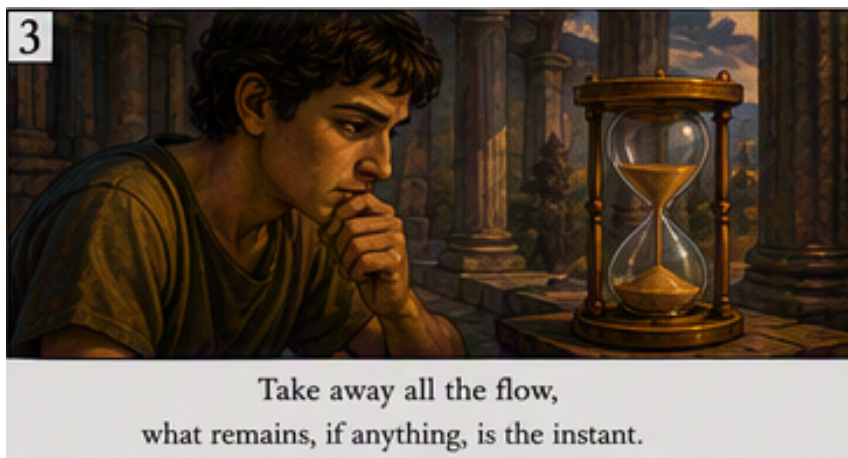
. . .

“That is him,” said Sophia.

. . .

“That’s the one who —“

. . .



The Youngest — the central concept made visible.



The Youngest — the central idea.

“That is the one who later became one of the Thirty.”

. . .

The boy in the picture was about eighteen. He had come in late that afternoon with his hosts and sat at the back, and he had not said one word in the whole of the last two hours, and now he had put his hand up before anybody could ask him twice.

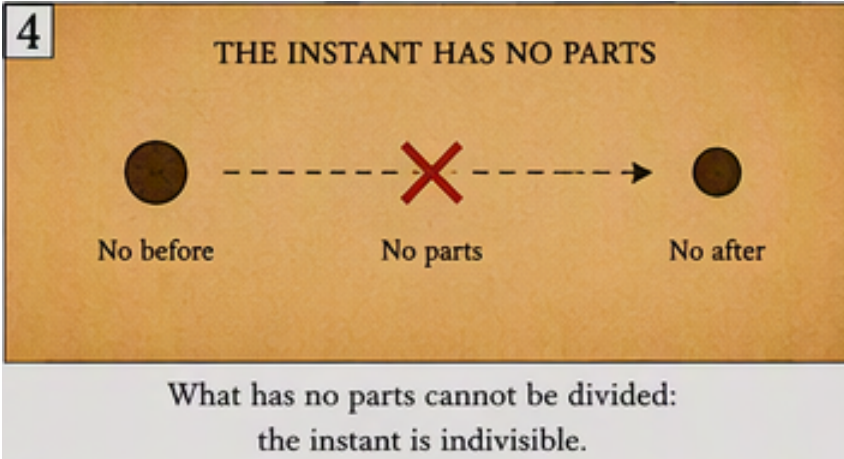
. . .

“Say the three reasons,” said the owl. “Out loud. In order. You will want to have said them yourself.”

. . .

“He’d give the least trouble,” said Lela.

. . .



The Youngest — the guiding analogy.



The Youngest — analogy and thought experiment.

“He’d be most likely to say what he thinks. “And he’d give him a rest.”

. . .

“Now,” said Sophia, “which of those is a compliment?”

. . .

Lela looked at the list.

. . .

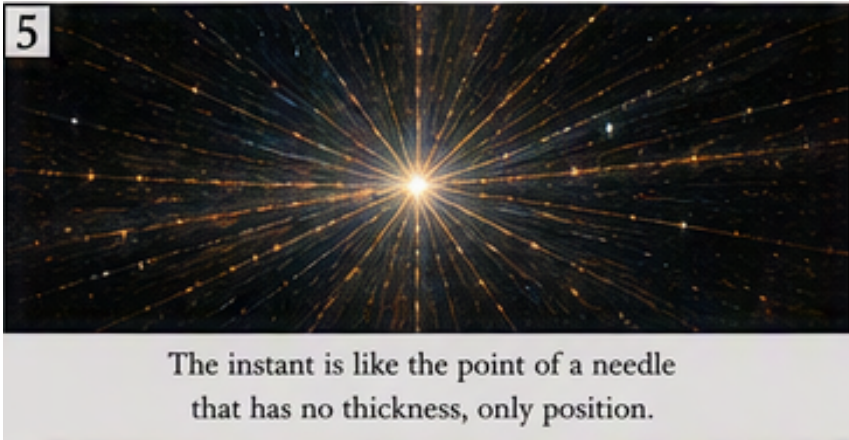
“The middle one,” she said. “Only the middle one.”

. . .

“Only the middle one,” said the owl. “And it is a real one, and I do not want you to lose it: the most likely to say what he thinks. That is a good thing to be and most

people stop being it at about twenty-two. “And the other two are not compliments at all. He will not give me trouble and he will let me get my breath back. “Parmenides has chosen his partner for two hours of the hardest reasoning anybody has ever done, and he has chosen him because he will be easy.”

. . .



The Youngest — the argument unfolding step by step.



The Youngest — the logical progression.

“That’s not fair,” said Lela at once.

. . .

“Go on.”

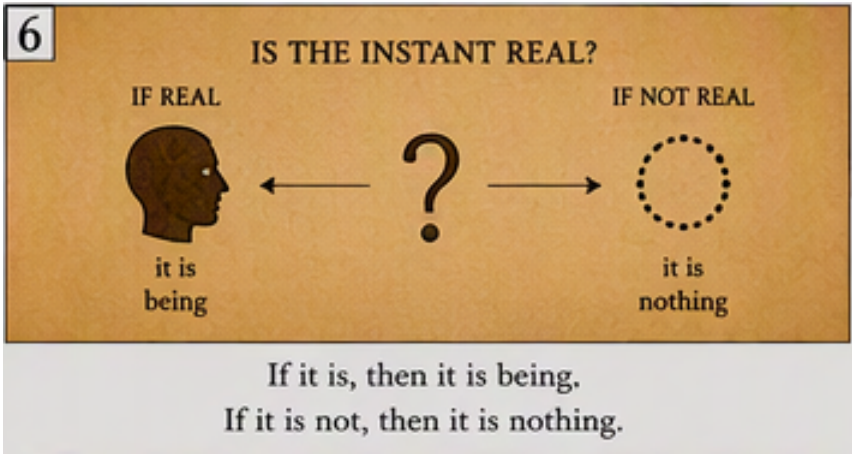
. . .

“You’re doing the thing,” said Lela. She had gone rather pink. “You’ve been doing it since yesterday. You keep — you told us the Thirty thing and now every single time he opens his mouth we’re going to be sitting here going ooh, he agreed again. “And it’s not fair, Sophia. It’s a logic exercise. It’s the hardest argument in the world and he’s eighteen and Parmenides is sixty-five and the answers are right. What’s he supposed to say? Half of them are things like is two an even number. You can’t have him going well, actually about two being even. “He’s not being a coward. He’s being correct.”

. . .

Sophia did not answer for a moment.

. . .



The Youngest — the competing interpretation.



The Youngest — the difficulty and the alternative.

“You are right,” she said.

. . .

“Oh,” said Lela.

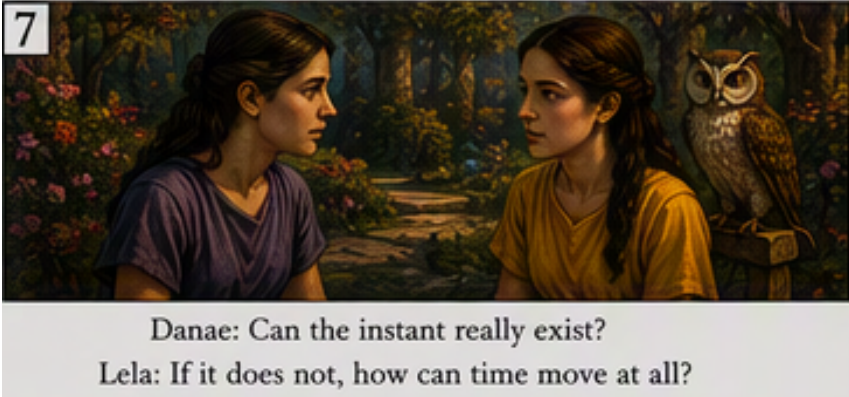
. . .

“You are entirely right and I want you to hold on to it, because it is the only honest thing anybody has said about that boy in two and a half thousand years and almost nobody says it. “He does not do anything wrong today. Not once. Every single answer he gives for the next two hours is correct, and most of them could not be anything else, and where the argument is genuinely difficult he keeps up, and twice he says look at this carefully and means it. “There is no moment in this book where you can point and say there, that is the beginning of it. “That is exactly what makes it worth showing you.”

. . .

“Then what are you saying?” said Lela. “Because you keep almost saying something.”

. . .



The Youngest — Lela and Danae reconstruct the idea.



The Youngest — Lela and Danae.

“I am saying,” said the owl, “that Plato wrote that boy’s name, and then wrote the man who later became one of the Thirty, and then gave him two hours of yes — and never once explained why. “He could have left the six words out. Nobody would have missed them. He could have given him a line of his own somewhere, one flicker of something, so that you could see it coming. “He did neither. He put the fact at the top, and then two hours of perfect agreement, and then stopped. “And he has left the two of them sitting next to each other for two and a half thousand years so that every single person who reads it has to decide for themselves whether there is anything in it. “I have read it a great many times. I do not know. I lean one way on Tuesdays.”

. . .

“What way?” said Danae.

. . .

“That being very good at following,” said Sophia, “is a skill. And that it is a real one, and a useful one, and that everything in the world that works is partly made of people who have it. “And that nobody has ever once, in the history of the world, been warned about it.”

. . .

“Everybody gets warned about being bad,” she said. “Nobody gets warned about being excellent at agreeing. There is no word for it that is not a compliment. Reliable. Sound. No trouble. A safe pair of hands. “And a boy who is very good at it, at eighteen, in a room with a great man, doing the difficult thing correctly for two hours and never once saying anything of his own — “is a boy who has had a great deal of practice at something, and has been praised for it, and has never been asked what happens when the man at the front is wrong.”

. . .

Lela did not say anything for a while.

. . .



Socrates: It is like the turning of the heavens.
The turning needs a “now” that has no length.

The Youngest — the historical layer.



The Youngest — historical reconstruction.

“It’s still not fair on him,” she said at last.

. . .

“It is still not fair on him,” said the owl. “Hold both. I have been asking you to hold both all summer and you have got rather good at it.”

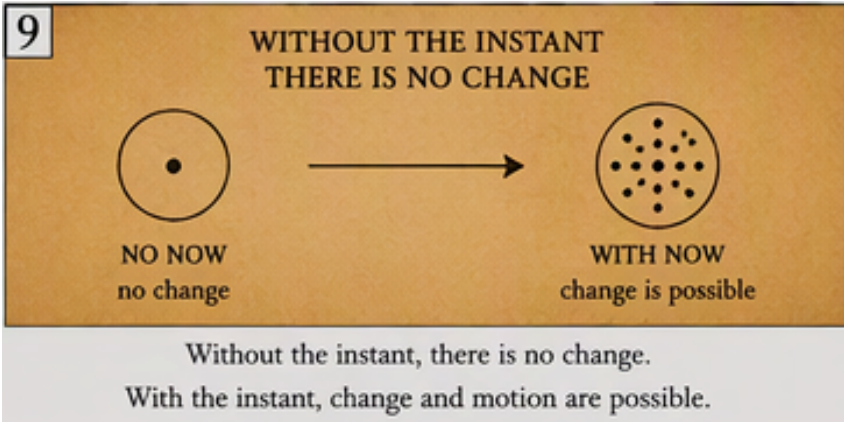
. . .

“Very good,” said Parmenides.

. . .

And then the shape of the thing changed.

. . .



The Youngest — a wordless conceptual plate.



The Youngest — wordless concept plate.

It changed so completely that Danae sat up and said “what’s happening,” because for two summers every conversation either of them had watched had gone at the pace of people talking to each other — with pauses in it, and jokes, and somebody saying wait, say that again.

. . .

This did not.

. . .

“If it is one, the one would not be many, would it?” — “No, how could it?” — “Then there cannot be a part of it, nor can it be a whole.” — “Why?” — “A part is surely part of a whole.” — “Yes.” — “But what is the whole? Wouldn’t that from which no part is missing be a whole?” — “Certainly.” — “In both cases, then, the one would be composed of parts, both if it is a whole and if it has parts.”

— “Necessarily.” — “So in both cases the one would thus be many rather than one.” — “True.” — “Yet it must be not many but one.” — “It must.” — “Therefore, if the one is to be one, it will neither be a whole nor have parts.” — “No, it won’t.”

. . .

“Stop,” said Danae.

. . .

Sophia stopped it.

. . .

10



The instant is the boundary
by which becoming becomes thinkable.

The Youngest — the chapter's narrative and philosophical synthesis.



The Youngest — climax, double-page spread.

“That was fast,” said Danae.

. . .

“That was fast,” said the owl.

. . .

“It didn’t — there wasn’t any room in it. Normally there’s room. Normally somebody goes hang on or somebody makes a joke or the boy says something wrong and they have to go back. “That was just — bang bang bang bang bang.”

. . .

“Yes,” said Sophia. “And I want you both to know that it is not me and it is not the picture. “In the actual book, at exactly this line, the writing changes. “For a hundred and thirty pages you have had said Socrates and Theaetetus

replied and paragraphs and pauses. “And here he takes all of it out. No names. No he said. Just a dash, and an answer, and a dash, and the next question, run together on the line like a wall. “It looks different on the page. Anybody who has ever opened this book can find this exact spot from across a room, because the page changes colour. “He has done that on purpose, and it is the only time he ever does it, and what it is for is to make you feel what you have just felt. “Which is: I am not in a conversation any more. I am in a machine.”

Chapter 112

ONE HUNDRED AND TWELVE.

It Is Not Named or Spoken Of



Some things are not named or spoken of,
yet they are not therefore nothing.

It Is Not Named or Spoken Of — opening scene.



It Is Not Named or Spoken Of — chapter-opening scene.

And the machine ran.

. . .

If the One has no parts, it has no beginning and no end and no middle, because those would be parts. — And a beginning and an end are what limits are. — So the One is unlimited. — And it has no shape, because round is what has its extremities the same distance from the middle, and straight is what has its middle in the way of its extremities, and both of those need parts. — So the One is neither round nor straight.

EUCLID · Elements I — circle; straight-line

El.I.Def.15 — *circle* STRONG

A circle is a plane figure contained by a single line [which is called a circumference], (such that) all of the straight-lines radiating towards [the circumference] from one

point amongst those lying inside the figure are equal to one another.

EUCLID
BEFORE
EUCLID

DEFINITION I.15 — ΚΥΚΛΟΣ (KYKLOS)

A circle is a plane figure contained by a single line (called a circumference), such that all straight lines from one point within the figure to the circumference are equal to one another.

The circle is the figure of equality.

FROM
PHILOSOPHY
TO
GEOMETRY

A. EUCLID'S TEXT εἰ. κύκλος ἐστὶ σχῆμα ἐπίπεδον ὑπὸ μίας γραμμῆς περιεχόμενον [ἢ καλεῖται περίφερα], πρὸς ἣν ἀγ' ἑνὸς σημείου τῶν ἐνθὺ τοῦ σχήματος κειμένων πᾶσαι αἱ προσπίπτουσαι εὐθεῖαι [πρὸς τὴν τοῦ κύκλου περίφεραν] ἴσαι ἀλλήλαις εἰσίν. "A circle is a plane figure contained by a single line (called a circumference), such that all straight lines falling upon it from one point among those within the figure are equal to one another."	B. REWRITTEN DEFINITION A circle is a plane figure contained by one line (the circumference), such that all straight lines from a single interior point (the centre) to the circumference are equal to one another. In plain language: A circle is the set of all points in a plane at the same distance from a fixed point inside the figure, called the centre. It is bounded by a single line, called the circumference.	C. KEY TERMS <table border="0"> <tr><td>κύκλος (kyklos)</td><td>circle</td></tr> <tr><td>σχήμα (schēma)</td><td>figure</td></tr> <tr><td>ἐπίπεδον (epipedon)</td><td>plane (lying in a plane)</td></tr> <tr><td>γραμμή (grammē)</td><td>line</td></tr> <tr><td>περίφερα (peripheira)</td><td>circumference</td></tr> <tr><td>σημείον (sēmeion)</td><td>point</td></tr> <tr><td>ἐνθὺς (entos)</td><td>within, inside</td></tr> <tr><td>εὐθεῖαι (euthēai)</td><td>straight lines</td></tr> <tr><td>ἴσαι ἀλλήλαις (isai allēlais)</td><td>equal to one another</td></tr> </table>	κύκλος (kyklos)	circle	σχήμα (schēma)	figure	ἐπίπεδον (epipedon)	plane (lying in a plane)	γραμμή (grammē)	line	περίφερα (peripheira)	circumference	σημείον (sēmeion)	point	ἐνθὺς (entos)	within, inside	εὐθεῖαι (euthēai)	straight lines	ἴσαι ἀλλήλαις (isai allēlais)	equal to one another	D. ILLUSTRATION $OA = OB = OC = OD = OE = r$. The circle is the set of all points at equal distance r from the centre O.
κύκλος (kyklos)	circle																				
σχήμα (schēma)	figure																				
ἐπίπεδον (epipedon)	plane (lying in a plane)																				
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ἴσαι ἀλλήλαις (isai allēlais)	equal to one another																				
E. CONSTRUCTION (PRACTICAL EXAMPLE) <table border="0"> <tr> <td style="width: 25%;"> 1. FIX A CENTRE Fix a point O (the centre). </td> <td style="width: 25%;"> 2. USE A STRING Tie a string of fixed length r to a pencil. </td> <td style="width: 25%;"> 3. DRAW A CIRCLE Keep the string taut and move the pencil. The figure drawn is a circle. </td> </tr> </table>		1. FIX A CENTRE Fix a point O (the centre).	2. USE A STRING Tie a string of fixed length r to a pencil.	3. DRAW A CIRCLE Keep the string taut and move the pencil. The figure drawn is a circle.	F. FURTHER EXAMPLES <table border="0"> <tr> <td style="width: 50%;"> 1. DIFFERENT RADIUS A circle with a smaller radius. </td> <td style="width: 50%;"> 2. SAME CENTRE Circles with the same centre but different radii ($r_2 > r_1$). </td> </tr> </table>		1. DIFFERENT RADIUS A circle with a smaller radius.	2. SAME CENTRE Circles with the same centre but different radii ($r_2 > r_1$).													
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1. DIFFERENT RADIUS A circle with a smaller radius.	2. SAME CENTRE Circles with the same centre but different radii ($r_2 > r_1$).																				
G. NON-EXAMPLES <table border="0"> <tr> <td style="width: 50%;"> 1. ELLIPSE (NOT A CIRCLE) Not all distances from O to the boundary are equal. </td> <td style="width: 50%;"> 2. OPEN CURVE (NOT A CIRCLE) Not a closed figure. Hence not a circle. </td> </tr> </table>		1. ELLIPSE (NOT A CIRCLE) Not all distances from O to the boundary are equal.	2. OPEN CURVE (NOT A CIRCLE) Not a closed figure. Hence not a circle.	H. RELATION TO OTHER DEFINITIONS This definition depends on and uses: - Definition 1.4 — straight line (for the radii). - Definition 1.6 — boundary (the circumference is the single boundary). - Definition 1.7 — plane surface (the circle is a plane figure). - Definition 1.14 — figure (a region enclosed by a boundary). - Definition 1.1–1.3 — point, line, extremities (basic notions). Note: The circle is the figure of equality. Its uniqueness depends on the straight line being fully determined (see Postulates and later propositions).																	
1. ELLIPSE (NOT A CIRCLE) Not all distances from O to the boundary are equal.	2. OPEN CURVE (NOT A CIRCLE) Not a closed figure. Hence not a circle.																				
KEY INSIGHT A circle is the unique plane figure bounded by a single line, with all radii from a single interior point equal. It is the figure of equality. <i>All points on the circumference are equally distant from the centre.</i>																					

El.I.Def.15 — circle

El. I. Def. 4 — straight-line MODERATE

A straight-line is (any) one which lies evenly with points on itself.

contained all around by the thing it was in, and would touch it in many places with many parts; but since it is one and without parts and does not partake of circularity, it cannot possibly touch in many places all around.” — “It can’t.”

. . .

“Yet on the other hand, if it were in itself, its container would be none other than itself. So the container would be one thing and the thing contained something else — since the same thing will not, as a whole, undergo and do both at once. And in that case the one would be no longer one but two.” — “Yes, you’re quite right.” — “Therefore the one is not anywhere.” — “It isn’t.”

. . .

2

FOUR WAYS OF BEING



what is



what is not



what both



what neither

Besides “what is” and “what is not”
there are two more ways—both and neither.

It Is Not Named or Spoken Of — the chapter’s central dialogue.



It Is Not Named or Spoken Of — dialogue and narrative.

“Nowhere,” said Danae.

. . .

“Nowhere,” said the owl. “Not lost. Not hidden. There is no where for it. “It is not in the world, because being in something means being touched all round by it, and you cannot be touched all round unless you have sides. “And it is not in itself, because to be in something you need a container and a thing contained, and that is two things, and it is one.”

. . .

And the machine ran on.

. . .

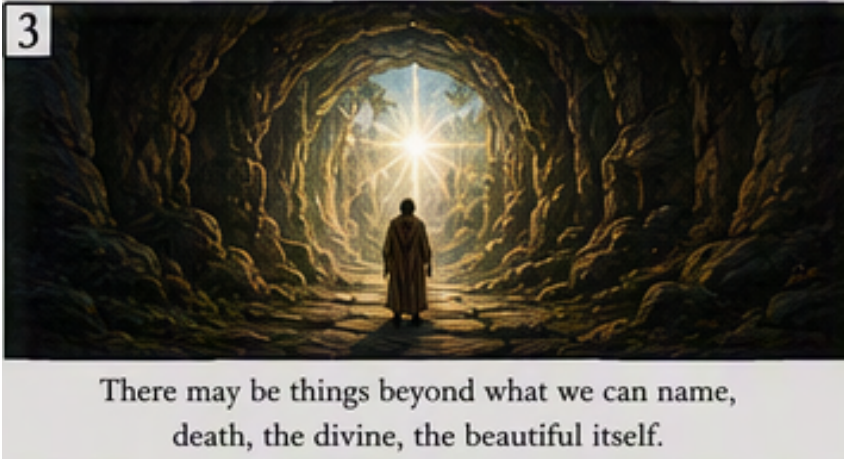
If it moves, it must either be altered or move about; and it cannot be altered, because then it would not still

be itself; and it cannot move about, because to spin you need a middle and parts, and to go from here to there you must at some point be partly in one place and partly in the other, and it has no parts. — So it does not move. — But it is never in the same thing either, because it is not in anything at all. — And what is never in the same thing does not stay still. — So it does not rest.

. . .

“It doesn’t move and it doesn’t stay still,” said Lela.

. . .



There may be things beyond what we can name,
death, the divine, the beautiful itself.

It Is Not Named or Spoken Of — the central concept made visible.



It Is Not Named or Spoken Of — the central idea.

“It does not move and it does not stay still.”

. . .

“That’s not — Sophia, everything does one of those. Every single thing in the world does one of those two things. There isn’t a third one.”

. . .

“There is not a third one,” said the owl. “Keep writing.”

. . .

And it went on.

. . .

It is not the same as itself, and not different from itself, and not the same as or different from anything else. It is

not like anything and not unlike anything. It is not equal and not unequal. It is not older or younger than anything, nor the same age as anything.

EUCLID · Elements I, V and VII – equals to same; part measuring

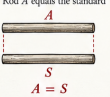
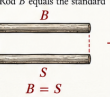
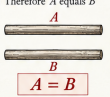
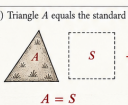
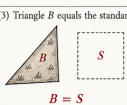
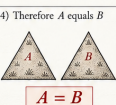
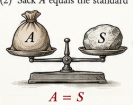
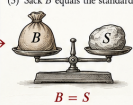
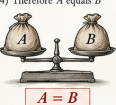
E1.I.CN.1 – *equals to same* STRONG

Things equal to the same thing are also equal to one another.

Euclid's *Elements* — Book I

Common Notion 1

Τὰ τῷ αὐτῷ ἴσα καὶ ἀλλήλοις ἔστιν ἴσα.
 Things equal to the same thing are also equal to one another.

1. Abstract rule (for any magnitudes)			
(1) A standard magnitude 	(2) A equals the standard 	(3) B equals the standard 	(4) Therefore A equals B 
2. Length			
(1) Standard rod 	(2) Rod A equals the standard 	(3) Rod B equals the standard 	(4) Therefore A equals B 
3. Area			
(1) Standard field 	(2) Triangle A equals the standard 	(3) Triangle B equals the standard 	(4) Therefore A equals B 
4. Weight			
(1) Standard stone 	(2) Sack A equals the standard 	(3) Sack B equals the standard 	(4) Therefore A equals B 


TRUTH THROUGH REASON
Logical role: the transitivity of equality.
GEOMETRY FOR THE MIND

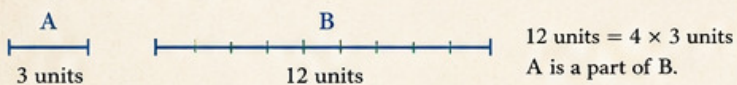

El.I.CN.1 — equals to same

El.V.Def.1 — part measuring STRONG

A magnitude is a part of a(nother) magnitude, the lesser of the greater, when it measures the greater.

1. PART

A magnitude is a part of another, the lesser of the greater, when it measures the greater.



El.V.Def.1 — part measuring

El.V.Def.2 — multiple STRONG

And the greater (magnitude is) a multiple of the lesser when it is measured by the lesser.

2. MULTIPLE

A magnitude is a multiple of another when it is measured by a part of it.



$$B = 4 \times A$$

B is a multiple of A.

El.V.Def.2 — multiple

El.VII.Def.3 — number as part MODERATE

A number is part of a(nother) number, the lesser of the greater, when it measures the greater.

EUCLID, BOOK VII — DEFINITION 3: PART

“A number is part of another number, the lesser of the greater, when it measures the greater.”

1

Euclid says: “A number is **part** of another number, the lesser of the greater, when it **measures** the greater.”

2

Suppose we have 3 and 12.

Can the smaller number, 3, fit into 12 exactly?

3

Yes!

$12 = 3 + 3 + 3 + 3$.
The number 3 **measures** 12 exactly four times.

4

Therefore, 3 is a **PART** of 12.

More precisely, 3 is the fourth part of 12.
 $3 = \frac{1}{4} 12$.

5

Another example.

$10 = 2 + 2 + 2 + 2 + 2$

2 **measures** 10 exactly five times.
So 2 is a **part** of 10. ($2 = \frac{1}{5} 10$)

6

Another example.

$12 = 4 + 4 + 4$

4 **measures** 12 exactly three times.
So 4 is a **part** of 12. ($4 = \frac{1}{3} 12$)

7

But look at 5 and 12.

$12 = 5 + 5 = 10$

5 does **NOT** measure 12 exactly.
There are 2 left over.
So 5 is **NOT** a part of 12.

8

In general...

a is **part** of b
iff
 $na = b$
for some whole number n.

The smaller number fits into the greater an **exact** whole number of times.

9

Think of soldiers, Alexander.

If a group occurs the same number of times in the whole army, then that group is a **PART** of the whole.

Remember:
A “part” fits into the whole **EXACTLY**.

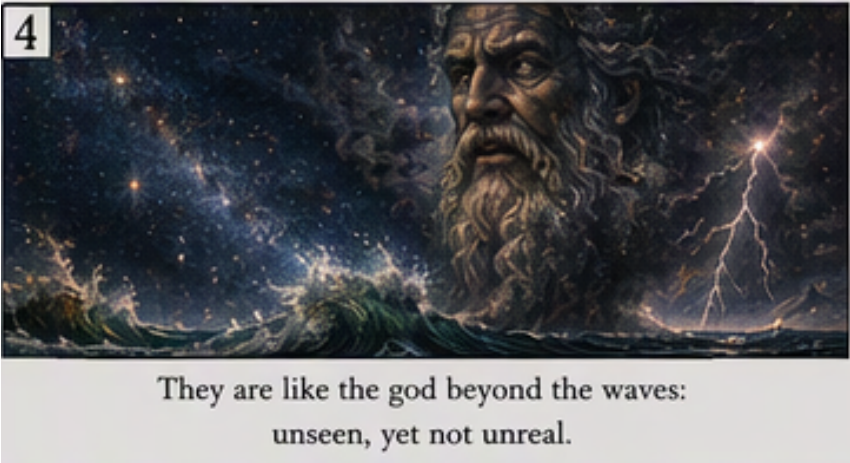
Examples:
2 is a part of 6 • 3 is a part of 12 • 5 is a part of 20

El.VII.Def.3 — number as part

Why here: Equality/measure. Strong.

Note. Equality/measure. Strong.

. . .



They are like the god beyond the waves:
unseen, yet not unreal.

It Is Not Named or Spoken Of — the guiding analogy.



It Is Not Named or Spoken Of — analogy and thought experiment.

And therefore — and here the old man slowed down for the first time in twenty minutes —

. . .

“So if it is like that, the one could not even be in time at all.”

. . .

“Now don’t you think that was and has come to be and was coming to be signify partaking of time past?” — “By all means.” — “And again that will be and will come to be signify partaking of time hereafter?” — “Yes.” — “And that is and comes to be signify partaking of time now present?” — “Of course.”

. . .

“Therefore, if the one partakes of no time at all — “it is not the case that it has come to be, or was coming to be,

or was; “or has now come to be, or comes to be, or is; “or will hereafter come to be, or will be coming to be, or will be.”

. . .

“Very true.”

. . .

“Could something partake of being except in one of those ways?”

. . .



5

If we cannot name them,
we must still think of them rightly.

It Is Not Named or Spoken Of — the argument unfolding step by step.



It Is Not Named or Spoken Of — the logical progression.

“It couldn’t.”

. . .

“Therefore the one in no way partakes of being.”

. . .

“It seems not.”

. . .

“Therefore the one in no way is.”

. . .

“Apparently not.”

. . .

Sophia stopped it.

. . .

6

BEYOND NAMES

			
			
NOT SPOKEN	NOT NAMED	NOT HEARD	YET CONSIDERED

What is beyond naming and speaking
can still be considered by the mind.

It Is Not Named or Spoken Of — the competing interpretation.



It Is Not Named or Spoken Of — the difficulty and the alternative.

Nobody had asked her to.

. . .

“He’s done it,” said Lela. Her voice came out very flat.
“He’s — Sophia, he’s proved that the One isn’t.”

. . .

“He has proved that the One is not.”

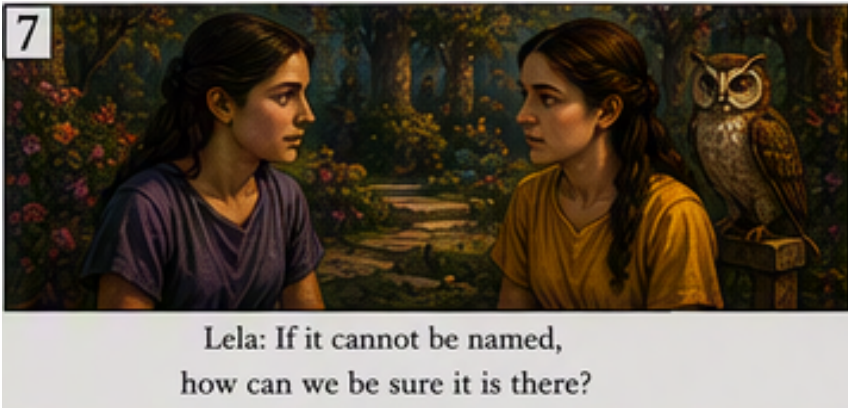
. . .

“That’s his. That’s his whole thing. All is one. That’s the poem. He’s just — he started with his own idea, on purpose, in front of everybody, and he’s run his own method on it and it’s come out that it doesn’t exist.”

. . .

“Yes.”

. . .



It Is Not Named or Spoken Of — Lela and Danae reconstruct the idea.



It Is Not Named or Spoken Of — Lela and Danae.

“Is he — “ Lela stopped. “Is he all right?”

. . .

“Look at him,” said the owl.

. . .

They looked at him. He was sitting perfectly still with his hands on his knees, and he was sixty-five, and there was nothing whatever on his face.

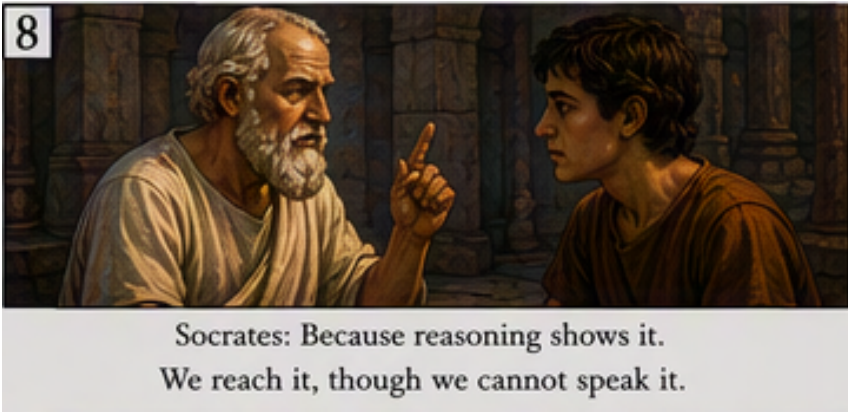
. . .

“He isn’t finished,” said Sophia. “Listen to the last four lines. These are the ones people remember.”

. . .

“If something is not — could anything belong to this thing that is not, or be of it?” — “How could it?”

. . .



It Is Not Named or Spoken Of — the historical layer.



It Is Not Named or Spoken Of — historical reconstruction.

“Therefore no name belongs to it. “Nor is there an account of it. “Nor any knowledge. “Nor perception. “Nor opinion.”

. . .

“Apparently not.”

. . .

“Therefore it is not named and not spoken of. “Nor is it the object of opinion or knowledge. “Nor does anything that is perceive it.”

. . .

“It seems not.”

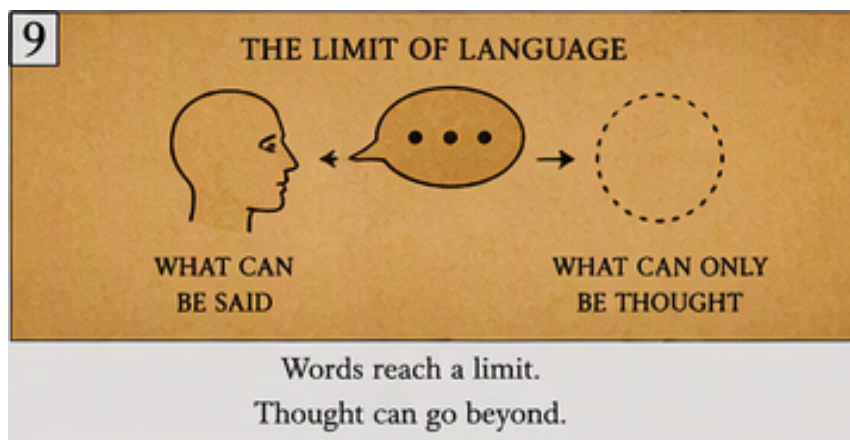
. . .

And then the old man said one more thing, which was not part of the machine.

. . .

“Is it possible that these things are so for the one?”

. . .



It Is Not Named or Spoken Of — a wordless conceptual plate.



It Is Not Named or Spoken Of — wordless concept plate.

And the boy who would become one of the Thirty said:

. . .

“I certainly don’t think so.”

. . .

“He said no,” said Danae.

. . .

Sophia did not answer.

. . .

“Sophia. He said no. You said he never says anything of his own and he just — the man asked him is it possible and he said I certainly don’t think so.”

. . .

“Yes,” said the owl. “He did. “Two hours from now he will have said yes and necessarily and quite so about four hundred times, and I have been unkind about him for two days, and I am going to be unkind about him again before the end. “And I am not going to take that back either. He said it and I showed it to you and you caught it. Put it on the list with the other things.”

. . .



It Is Not Named or Spoken Of — the chapter's narrative and philosophical synthesis.



It Is Not Named or Spoken Of — climax, double-page spread.

“But is he right?” said Lela.

. . .

“That is the question,” said Sophia, “and here is where it sits. “Everything you have just watched is valid. Not a trick anywhere. Every single step follows, and people have been going over it with tweezers for two and a half thousand years, and the number of clear mistakes anybody has found in it is very small. “And the conclusion is that the One does not exist, cannot be named, cannot be spoken of, cannot be known, cannot be perceived, and nobody can even have an opinion about it. “Which is a sentence about the One. “Which he has just said for twenty minutes. “To six people. Who followed it.”

. . .

Lela put her head in her hands.

. . .

“That’s what I said about the not-being one,” she said, into her hands. “Three days ago. In the Sophist. When he said that which is not can’t be said and he’d just said it about nine times.”

. . .

“Yes,” said the owl. “It is the same difficulty, and it is not an accident, and the man who solved it in the Sophist is from the same town as the man causing it here, and both of those books are by the same hand. “And I want you to notice which order they were written in. “Not this one first and then the answer. This one afterwards. “He had already published the answer. And then he went back and wrote the problem out at full length, harder than anybody had ever put it, in the mouth of the man he had killed it for. “Most people, having won, put the thing away.”

Chapter 113

**ONE HUNDRED AND THIR-
TEEN. Back to the Beginning**



Socrates says: let us return once more
to where we began.

Back to the Beginning — opening scene.



Back to the Beginning — chapter-opening scene.

And then Parmenides said:

. . .

“Do you want to return to the hypothesis from the beginning — “in the hope that another kind of result may come to light as we go back over it?”

. . .

“I do indeed,” said Aristotle.

. . .

“What,” said Danae.

. . .



Back to the Beginning — the chapter’s central dialogue.



Back to the Beginning — dialogue and narrative.

“Yes,” said Sophia.

. . .

“He’s going to do it again?”

. . .

“He is going to do it again.”

. . .

“But he finished. He got to the end. He said the thing about the name.”

. . .



We do not forget what we have learned.
We carry it with us.

Back to the Beginning — the central concept made visible.



Back to the Beginning — the central idea.

“He got to the end of one road,” said the owl. “There are eight. “Sit down properly, both of you, because I am now going to do something I have not done all summer, and I want you to know that I am doing it and why. “I am not going to show you the rest of this afternoon.”

. . .

Neither of them said anything.

. . .

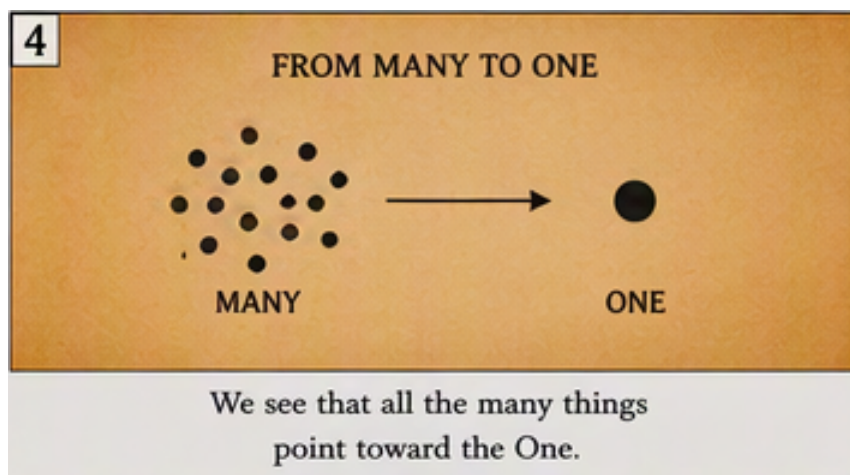
“You’re allowed to do that?” said Lela.

. . .

“I am allowed to do anything,” said Sophia. “I have shown you every single word of four books and most of a fifth, including the pages I would rather you had not seen, and I have never once skipped a line because it was

difficult or because it was ugly. “And I am not skipping this because it is difficult. I am skipping it because it is two and a half hours long and because it is the same thing eight times, and because the only way to get anything out of it is to do it, with a pen, slowly, over about a year, and watching me do it would teach you exactly nothing. “He says so himself, in the book, forty lines ago. Training. Not a demonstration. He is not showing them a result; he is showing them what an exercise looks like so that they can go home and do it. “You cannot watch somebody get fit.”

. . .



Back to the Beginning — the guiding analogy.



Back to the Beginning — analogy and thought experiment.

“So what happens?” said Danae. “Just tell us what happens.”

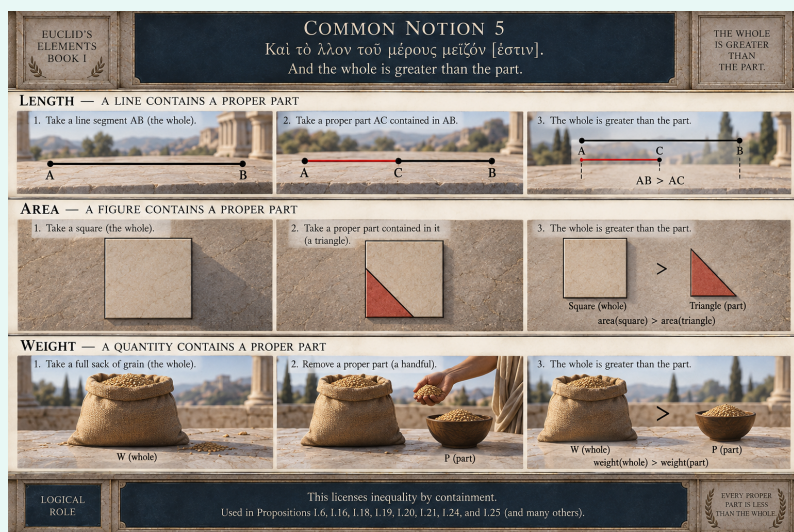
. . .

“I am going to tell you what happens,” said the owl, “and it will take about four minutes, and it is the strangest thing in Greek. “There are eight roads. You have just walked down the first one. “If it is one — and by one he means absolutely, strictly one, with nothing else about it at all — “then: no parts, no shape, nowhere, no motion, no rest, not same, not different, not like, not unlike, not in time, not in being, no name, unsayable, unknowable. “Nothing. You got that yourself, one item at a time, and you wrote it down.”

EUCLID · Elements I and VII — whole > part; part/whole

E1.I.CN.5 — whole > part STRONG

And the whole [is] greater than the part.



El.I.CN.5 — whole > part

El.I — part/whole MODERATE

Book I foundations: definitions of point, line, surface, angle, figure, circle; postulates; common notions (including whole greater than part).

El.VII — one/many method LIGHT

Book VII: elementary number theory — unit, number, part/parts, even/odd, prime, plane and solid numbers, proportion of numbers.

Why here: Deduction 1 summary in novel. Strong CN.5.

Note. Deduction 1 summary in novel. Strong CN.5.

Note. Program for Part II / eight roads. Light.

. . .

“That was the first one,” said Lela.

. . .

“That was the first one. And now he goes back to the top and changes one word.”

. . .



The same order is in the city,
in the soul, and in the heavens.

Back to the Beginning — the argument unfolding step by step.



Back to the Beginning — the logical progression.

“What word?”

. . .

“Is,” said Sophia.

. . .

“The first time, he took the hypothesis to mean: if the One is one. Strictly. Only that. Nothing else true of it. “And the second time he takes it to mean: if the One **is**. If it exists. If there is such a thing. “And the moment you say that, you have said two things about it — that it is one, and that it is — and it has two bits, and the whole thing goes the other way. “And on the second road the One turns out to have parts, and be a whole, and be limited and unlimited, and have a shape, and be in itself and in another, and move and rest, and be the same and different, and like and unlike, and equal and unequal, and older and

younger and the same age as itself, and be in time, and there turns out to be number, and therefore everything.”

EUCLID · Elements I and VII – whole > part; unit

E1.I.CN.5 — *whole > part* STRONG

And the whole [is] greater than the part.

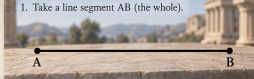
EUCLID'S
ELEMENTS
BOOK I

COMMON NOTION 5
 Καὶ τὸ ἅλὸν τοῦ μέρους μείζον [ἐστίν].
 And the whole is greater than the part.

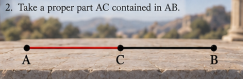
THE WHOLE
IS GREATER
THAN
THE PART.

LENGTH — A LINE CONTAINS A PROPER PART

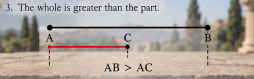
1. Take a line segment AB (the whole).



2. Take a proper part AC contained in AB.



3. The whole is greater than the part.



AREA — A FIGURE CONTAINS A PROPER PART

1. Take a square (the whole).



2. Take a proper part contained in it (a triangle).



3. The whole is greater than the part.


>


Square (whole) Triangle (part)
 area(square) > area(triangle)

WEIGHT — A QUANTITY CONTAINS A PROPER PART

1. Take a full sack of grain (the whole).



W (whole)

2. Remove a proper part (a handful).



P (part)

3. The whole is greater than the part.


>


W (whole) P (part)
 weight(whole) > weight(part)

LOGICAL
ROLE

This licenses inequality by containment.
 Used in Propositions I.6, I.16, I.18, I.19, I.20, I.21, I.24, and I.25 (and many others).

EVERY PROPER
PART IS LESS
THAN THE WHOLE

El.I.CN.5 — whole > part

El.VII.Def.1 — unit STRONG

A unit is (that) according to which each existing (thing) is said (to be) one.

EUCLID, BOOK VII — DEFINITION 1: UNIT
 “A unit is that according to which each existing thing is said to be one.”

1 ARISTOTLE: Alexander, before we speak of numbers, we must understand the very idea of “one.”	2 Behold this single stone. It is ONE.	3 This “one” is what we call a UNIT—that according to which each existing thing is said to be one.”
4 When we put units together, we can count: three stones = $1 + 1 + 1$.	5 See how each stone is first taken as one, because of the unit.	6 From repeated units, numbers arise: 2, 3, 4, and so on.
7 If we have apples, each apple is taken as one apple—one unit—relative to the collection.	8 Thus the order is: first the unit, then, by repeating it, numbers.	9 Remember this well, Alexander: a unit gives the meaning of one, and numbers are made of units.

For Euclid, “number” means a positive integer greater than one. $1 = \text{unit (not a number)}$ $2 = 1 + 1$ $3 = 1 + 1 + 1$ $4 = 1 + 1 + 1 + 1$...

El.VII.Def.1 — unit

Why here: Deduction 2 summary. Strong.

EUCLID · Elements VII, Definitions 6, 7 and 2 — number generated from the one that is

El.VII.Def.2 — number STRONG

And a number (is) a multitude composed of units.

EUCLID, BOOK VII — DEFINITION 2: NUMBER
 "A number is a multitude composed of units."

1 Alexander, we begin with one. This single stone is a UNIT. It is ONE.	2 Add another unit. Now we have $1 + 1$. This multitude of units is called 2.	3 Add another. Now we have $1 + 1 + 1$. This multitude of units is called 3.
4 Add one more. $1 + 1 + 1 + 1 = 4$. A number is many units taken together.	5 And another. $1 + 1 + 1 + 1 + 1 = 5$. And so on, without end...	6 Every number is made by repeating the unit.
7 Look at our soldiers. One soldier is a unit. Many soldiers together give us a number.	8 Whatever we count—stones, soldiers, apples—each is counted as one unit.	9 Remember this, Alexander: A unit gives the idea of one. But a number is born when units become a multitude. A NUMBER IS A MULTITUDE COMPOSED OF UNITS.

UNIT = ONE
(not yet a number)

→

NUMBER = MANY ONES TOGETHER
(a multitude composed of units)

El.VII.Def.2 — number

El.VII.Def.6 — even number STRONG

An even number is one (which can be) divided in half.

EUCLID, BOOK VII — DEFINITION 6: EVEN NUMBER
 "An even number is one which can be divided in half."

1 Now we learn what it means for a number to be **EVEN**.

Euclid says: "An **even** number is one which can be divided in half."

2 Let us try with 8.

We have 8 stones.

3 Can we divide these into two equal groups?

Yes! $8 = 4 + 4$.
So 8 can be divided in half.

4 Therefore, 8 is **EVEN**.

8 is an **even** number.

5 Let us try other numbers.

Each of these numbers can be divided in half into two equal groups. They are all **EVEN**.

$2 = 1 + 1$ $4 = 2 + 2$ $6 = 3 + 3$ $10 = 5 + 5$

6 What do we notice?

Every even number can be written as 2 times another whole number.

$2 = 2 \times 1$
 $4 = 2 \times 2$
 $6 = 2 \times 3$
 $8 = 2 \times 4$
 $10 = 2 \times 5$
 $12 = 2 \times 6$
 ...

So an **even** number $= 2 \times n$.

7 But what about 7?

We cannot divide 7 into two equal groups. So 7 cannot be divided in half.

8 In other words...

An **EVEN** number can be split into **TWO** equal parts.
 A number that cannot be split into two equal parts is **NOT** even.

9 Remember this, Alexander.

An **even** number is one which can be divided in half.

EVEN NUMBER = one which can be divided in half.

It can be written as $2 \times n$ for some whole number n .

EXAMPLES (EVEN)

$2 = 1 + 1$ $4 = 2 + 2$ $6 = 3 + 3$
 $8 = 4 + 4$ $10 = 5 + 5$ $12 = 6 + 6$

NOT EVEN (cannot be divided in half)

1, 3, 5, 7, 9, 11, ...

El.VII.Def.6 — even number

El.VII.Def.7 — odd number STRONG

And an odd number is one (which can)not (be) divided in half, or which differs from an even number by a unit.

EUCLID, BOOK VII — DEFINITION 7: ODD NUMBER

"An odd number is one which cannot be divided in half, or which differs from an even number by a unit."

1

Today we learn what it means for a number to be **ODD**.

Euclid says: "An **odd** number is one which **cannot be divided in half**, or which differs from an **even** number by a unit."

2

Let us take **7** stones.

Can we divide these into two equal groups?

3

If we try...

We get 3 and 4, not two equal groups. So **7** **cannot** be divided in half. Therefore, **7** is **ODD**.

4

Now look at another way.

An **odd** number differs from an **even** number by a **UNIT**.

5

For example:

$7 = 6 + 1$
6 is **even**, **1** is a **unit**.

So **7** is different from the **even** number **6** by **one unit**.

6

Other examples:

$9 = 8 + 1$
 $11 = 10 + 1$
 $13 = 12 + 1$
 ...

Each **odd** number is an **even** number + **1**.

7

Think of pairing.

Every stone has a partner, except one. That one leftover **unit** shows the number is **ODD**.

8

Let us try some numbers.

5: 1 left over
 3: 1 left over
 9: 1 left over

All leave one **unit** without a partner. So they are **ODD**.

9

Remember this, Alexander.

If a number cannot be divided into two equal whole-number groups, it is **ODD**.

In other words, it is one more than some **even** number.

ODD NUMBER

An **odd** number is one which cannot be divided in half or which differs from an **even** number by a **unit**.

TWO WAYS TO RECOGNIZE AN ODD NUMBER

1. It **cannot** be divided in half. (Two equal groups are impossible.)

2. It differs from an **even** number by a unit. (odd = even + 1)

EXAMPLES (ODD)

1, 3, 5, 7, 9, 11, 13, ...
 (All are even + 1)

El.VII.Def.7 — odd number

Why here: *Parmenides* 143a–144a, which the orchard gives in summary. From the one that is, Parmenides gets two, then three, then asks *isn't three odd, and two even?* and runs out to the whole of number, unlimited in multitude. It is the only place in Plato where number is *derived* rather than assumed, and the definitions it needs are the first, the sixth and the seventh of Book VII.

Note. Deduction 2 summary. Strong.

...

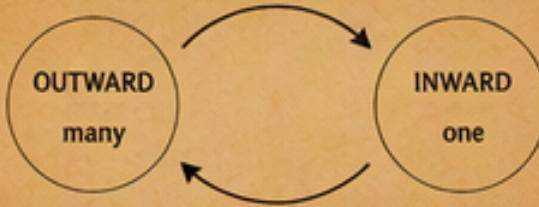
"It gets everything?" said Danae.

...

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6

THE TURNING



We have turned from the many
back toward the One.

Back to the Beginning — the competing interpretation.



Back to the Beginning — the difficulty and the alternative.

“It gets everything,” said the owl. “Every single property he took off it on the first road, it gets back on the second. And several it never had. “Same thing. Same man. Same afternoon. Same boy answering. Twenty minutes apart.”

. . .

“And then?”

. . .

“And then he does the others. What follows for everything-that-is-not-the-One, on each reading. Twice. “And then he turns the whole thing over and does if the One is not. Which is four more, because is not has the same two meanings. “And every time, the answer comes out complete and opposite to the one before. “At the very end — and this is the last line of the book, and I will show you that one, because it is eleven words and you have

earned it — everything has been proved and everything has been disproved, and the boy says the last quite so of his life, and it stops.”

. . .

Lela had been quiet for some time.

. . .



Danae: We see things differently now.

Lela: Yes. We can hold the many and the One together.

Back to the Beginning — Lela and Danae reconstruct the idea.



Back to the Beginning — Lela and Danae.

“So it’s a machine for getting both answers,” she said.

EUCLID · Elements I and VII — whole > part; one/many

E1.I.CN.5 — whole > part LIGHT

And the whole [is] greater than the part.



El.I.CN.5 — whole > part

El.VII — one/many LIGHT

Book VII: elementary number theory — unit, number, part/-parts, even/odd, prime, plane and solid numbers, proportion of numbers.

Why here: Method coda: one/many double machine. Light.

Note. Method coda: one/many double machine. Light.

. . .

“Yes.”

. . .

“On purpose.”

. . .

“On purpose, carefully, by a man who is better at this than anybody, in a book he did not have to write.”

. . .



Socrates: This is the work of dialectic—
to return better than we went.

Back to the Beginning — the historical layer.



Back to the Beginning — historical reconstruction.

“Then what’s it for, Sophia?”

. . .

“Ah,” said the owl.

. . .

“That is the question, and it has been the question for two and a half thousand years, and I am going to give you the four answers people give, and I am not going to tell you which is mine until tomorrow. “One. It is a joke. A vast, straight-faced, two-and-a-half-hour joke, to show what happens when you reason about words with nothing underneath them. Some very serious people have thought this. “Two. It is a warning. It shows you that if you are not extremely careful about what you mean by a word — and he changes the meaning of one word, is, and gets the opposite of everything — then you can prove anything at all, and feel wonderful doing it, and be talking about nothing. “Three. It is a set of parallel bars. It is not about the One at all. It is the exercise he promised, written out at full length, so that a young man who does it twice will never again be frightened of a long argument, and will know in his hands what it feels like when a chain of good steps arrives somewhere impossible. “Four. It is a map of a genuine difficulty, which is that everything real is somehow one and somehow many at the same time, and that nobody has ever found a way to say that which does not fall over — and these eight roads are all eight ways of falling over, drawn accurately, by somebody who wanted them on paper.”

. . .

“Which one’s right?” said Danae.

. . .

9

THE WHOLE JOURNEY



Many, order, form, harmony, One:
the path is one, though the steps are many.

Back to the Beginning — a wordless conceptual plate.



Back to the Beginning — wordless concept plate.

“At least two of them,” said Sophia.

. . .

“And there is a fifth thing, which is not an answer but is a fact, and I will give it to you now and then we will stop for lunch, because it is the fact that this whole summer has been for. “A man built the best machine anybody had ever built. “He pointed it at his own life’s work. “He pulled the handle. “And it came out nothing. “And then he went back to the top and pulled it the other way, and it came out everything. “And he did not stop. And he did not hide it. And he did not say well, the second one is the real answer. “He wrote both down, in order, at the same length, with the same care, and let them stand next to each other on the page for ever. “That is the whole of what I have been trying to show you, in two books, in two summers, and everything else has been decoration.”

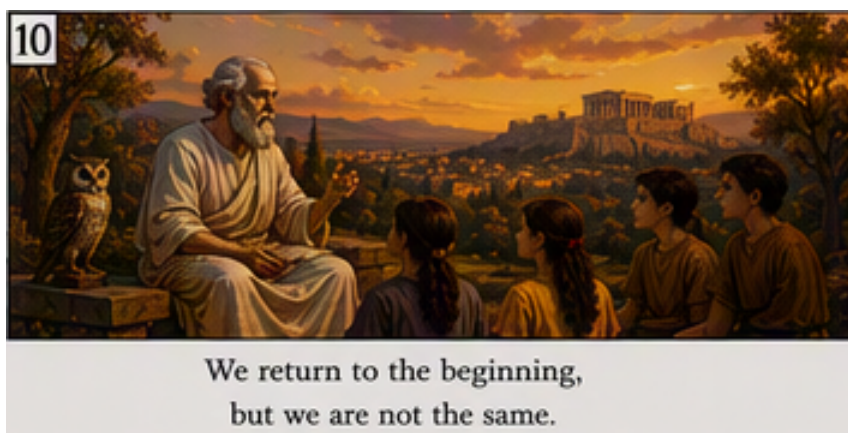
. . .

In the garden of the Academy, thirty-three years and three hundred miles away, a young man from Stagira looked up from a tablet on which he had written, in his small upright hand, the name of a boy who was answering questions in a house outside the wall in a year before either of them was born.

. . .

“He has the same name as me,” he said.

. . .



We return to the beginning,
but we are not the same.

Back to the Beginning — the chapter's narrative and philosophical synthesis.



Back to the Beginning — climax, double-page spread.

“He has,” said Plato.

. . .

“Is that why you gave me this one to copy?”

. . .

The old man did not look up.

. . .

“Read the next part,” he said.

Chapter 114

ONE HUNDRED AND FOUR- TEEN. The Instant



Socrates asks us to think about
the smallest thing of all.

The Instant — opening scene.



The Instant — chapter-opening scene.

They came back after lunch, which neither of them had wanted and both of them had eaten.

. . .

“How much have we missed?” said Lela.

. . .

“About an hour,” said Sophia, “and I am not sorry, and neither would you have been. “They are still going. They will still be going at six. But there is one passage in the middle of it that I would not let you miss if you were asleep, and it is four minutes long, and it is the most beautiful thing in this book.”

. . .

“What’s it about?”

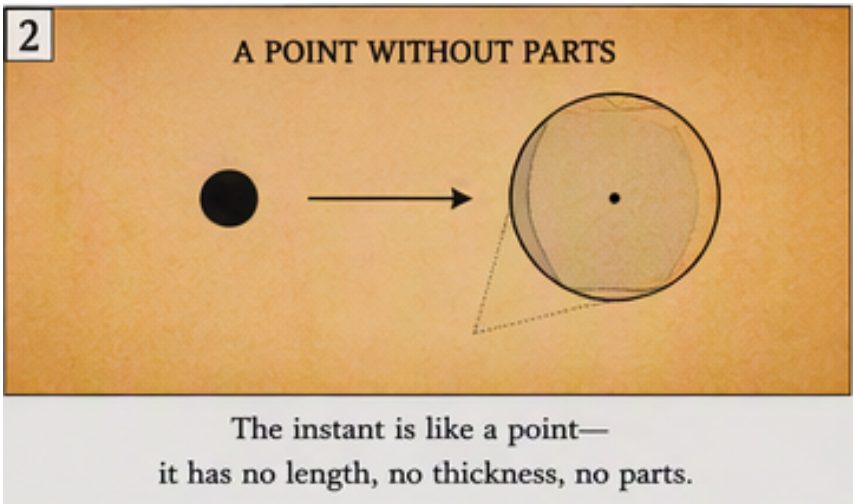
. . .

“Changing,” said the owl.

. . .

The picture came up in the middle of the machine, the way you come into a room where a saw has been running all afternoon.

. . .



The Instant — the chapter’s central dialogue.



The Instant — dialogue and narrative.

“And whenever, being in motion, it comes to a rest — and whenever, being at rest, it changes to moving — it must itself, presumably, be in no time at all.” — “How is that?”

. . .

“It won’t be able to undergo being previously at rest and later in motion, or previously in motion and later at rest, without changing.” — “Obviously not.” — “Yet there is no time in which something can, simultaneously, be neither in motion nor at rest.” — “Yes, you’re quite right.” — “Yet surely it also doesn’t change without changing.” — “Hardly.”

. . .

“So when does it change? “For it does not change while it is at rest, or while it is in motion — or while it is in time.”

. . .

“Yes. You’re quite right.”

. . .

“Stop it there,” said Sophia.

. . .

She stopped it.

. . .



Between one instant and the next,
everything moves.

The Instant — the central concept made visible.



The Instant — the central idea.

“Danae,” said the owl. “Stand up. Have you got the stone?”

. . .

“I’ve always got the stone.”

. . .

“Throw it up and catch it.”

. . .

Danae stood up and threw the flat grey stone from her grandmother’s wall straight up into the air, and caught it.

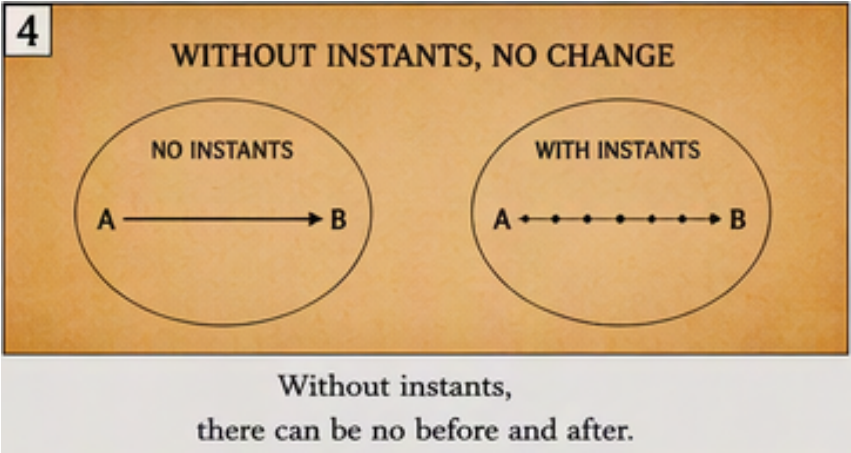
. . .

“Again,” said Sophia. “And this time watch the top.”

. . .

She did it again.

. . .



The Instant — the guiding analogy.



The Instant — analogy and thought experiment.

“Now,” said the owl. “At the very top. When it has stopped going up and has not started coming down. “Which is it doing?”

. . .

Danae stood there with the stone in her hand.

. . .

“It’s — “ she said.

. . .

She threw it again and watched.

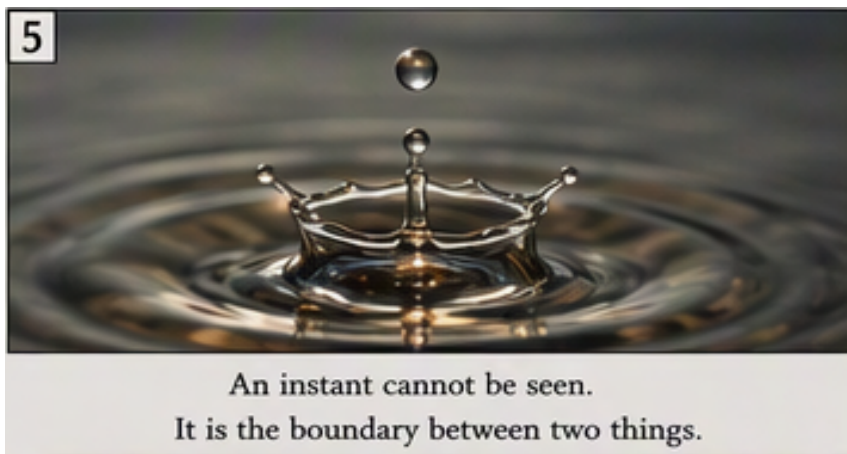
. . .

“It’s not doing either,” she said.

. . .

“Is it stopped?”

. . .



The Instant — the argument unfolding step by step.



The Instant — the logical progression.

“No. If it was stopped it’d stay there.”

. . .

“Is it moving?”

. . .

“No, because —” She stopped. “No, because which way?”

. . .

“And how long does it last?” said Sophia.

. . .

“No time,” said Danae. “None. There isn’t any of it. You can’t — it’s not a bit of time, it’s the edge.”

. . .

“Sit down,” said the owl, “and listen to a man say that,
in Greek, on a hot afternoon, in 450 BC.”

. . .



The Instant — the competing interpretation.



The Instant — the difficulty and the alternative.

“Is there, then, this queer thing in which it might be, just when it changes?”

. . .

“What queer thing?”

. . .

“The instant.”

. . .

“The instant seems to signify something such that changing occurs from it to each of two states. “For a thing doesn’t change from rest while rest continues, or from motion while motion continues. “Rather, this queer creature, the instant, lurks between motion and rest — “being in no time at all — “and to it and from it the moving thing changes to resting, and the resting thing changes to moving.”

EUCLID · Elements I – point: no part

El.I.Def.1 — *point: no part* LIGHT

A point is that of which there is no part.

[illegible]

El.I.Def.1 — point: no part

Why here: Instant locus; soft point analogue. Light.

Note. Instant locus; soft point analogue. Light.

“It looks that way.”

7



Danae: Can we ever catch an instant?

Lela: We cannot see it, but we know it is there.

The Instant — Lela and Danae reconstruct the idea.



The Instant — Lela and Danae.

Nobody said anything for a moment.

. . .

“Queer creature,” said Lela.

. . .

“Atopos,” said Sophia. “Out of place. Having nowhere it belongs. It is the word they used about Socrates for fifty years and it is the word they use for a thing that does not fit into any of the boxes. “And the word for the instant is *exaiphnes*, which is the ordinary word for suddenly, and which he has just picked up off the floor of the language and made into a thing. “Nobody had ever done that. Everybody had said suddenly four times a day since there had been people. And a man in a borrowed house, in the middle of the driest argument ever constructed, stopped and said: that. What is that?”

. . .

“It’s the top of the throw,” said Danae.

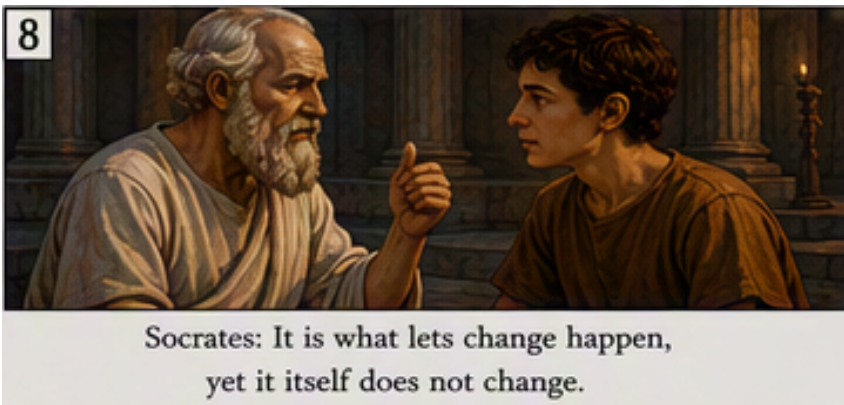
. . .

“It is the top of the throw,” said the owl. “And it is the last moment before you say the thing you cannot unsay. And it is the place where water is neither water nor ice. And it is whatever happens in the half-second when somebody’s face changes and they have not decided yet what to do. “It has no length. You cannot be in it for a while. It is not a very short time; it is no time. “And everything that has ever changed has gone through it.”

. . .

“Is it real?” said Lela.

. . .



The Instant — the historical layer.



The Instant — historical reconstruction.

“That is the whole question and it has not stopped,” said Sophia.

. . .

“Two thousand years later, in a country that did not exist yet, two men invented a mathematics for exactly this, and got into a horrible quarrel about who did it first, and their answer is what you will be taught in about four years and will be told is called calculus. “And the thing they were trying to say was: how fast is the stone going, at the top? “And every single argument anybody has ever had about that — about whether a moment can have a speed, about whether there is such a thing as now at all — is standing in the footprint of this paragraph. “Which he wrote as an appendix. It is not one of the eight. He finished the second road, and then stopped, and said: hold on, there is something in between, and put it in, and went back to work.”

. . .

“Is it so with the other changes too?” said Parmenides.

. . .

“Whenever the one changes from being to ceasing-to-be, or from not-being to coming-to-be — isn’t it then between certain states? “And then it neither is nor is not, and neither comes to be nor ceases to be.”

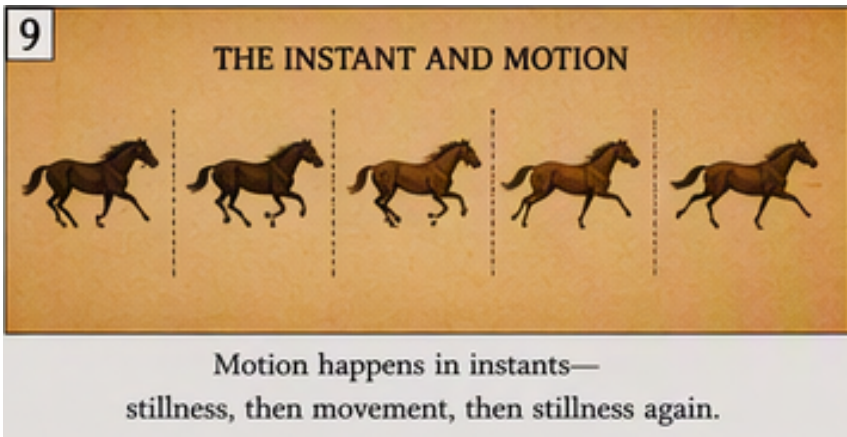
. . .

“It seems so, at any rate.”

. . .

“Indeed, according to the same argument — “when it goes from one to many and from many to one, it is neither one nor many. “And when it goes from like to unlike and from unlike to like, it is neither like nor unlike. “And when it goes from small to large, and to equal, and back — it is neither small nor large nor equal.”

. . .



The Instant — a wordless conceptual plate.



The Instant — wordless concept plate.

“It seems not.”

. . .

Lela had not written anything down for some time.

. . .

“Sophia,” she said.

. . .

“Yes.”

. . .

“There’s a place where things aren’t anything.”

. . .

“There is a place where things are not anything,” said the owl.

. . .



The Instant — the chapter's narrative and philosophical synthesis.



The Instant — climax, double-page spread.

“Not nothing. Not broken. Not in-between in the way that grey is in between black and white — grey is a thing, you can have a jumper that colour. “In the crossing. In the doorway. Where a thing has stopped being what it was and has not started being what it will be, and if you stop the world at exactly that point there is no true sentence to say about it at all.”

. . .

“That’s what it’s like,” said Lela.

. . .

“What is?”

. . .

“Being fourteen,” said Lela.

. . .

Sophia did not say anything at all for a moment, which was rare.

. . .

“Yes,” she said. “I have been waiting two summers for one of you to say that and I was not going to say it for you. “It is also what it is like to be dying, and to be arriving somewhere, and to be in the fourth week of a new school, and to be halfway through changing your mind about somebody. “He did not put any of that in. He was talking about a ball of being, in a house in the Potters’ Quarter, to six men. “And it is in there anyway, because that is what happens when somebody looks hard enough at something small.”

Chapter 115

**ONE HUNDRED AND FIF-
TEEN. Very True**



Socrates turns the search once more
to the place where it began.

Very True — opening scene.



Very True — chapter-opening scene.

It went on until the light in the courtyard had gone the colour it goes.

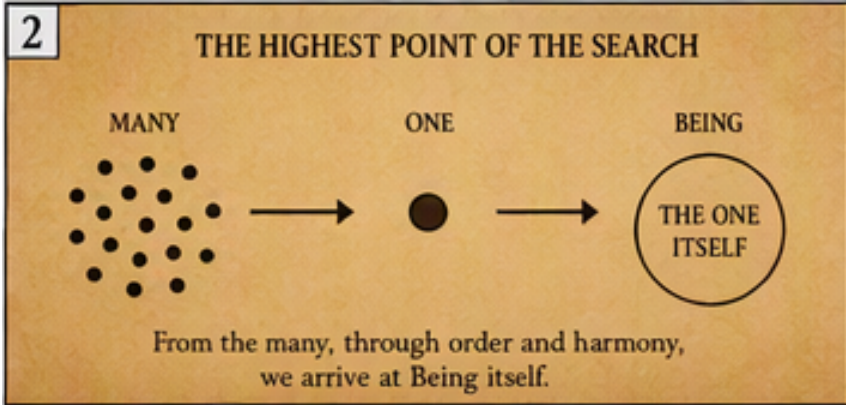
. . .

Sophia showed them almost none of it. Every so often she let a minute through — the machine still running, the old man's voice entirely level, the boy saying necessarily, of course, how could it not be — and then she took it away again.

. . .

"That's four," she said, at one point. "That's five. He is now doing what happens to everything-that-is-not-the-One if the One does not exist, and it has been going for forty minutes."

. . .



Very True — the chapter's central dialogue.



Very True — dialogue and narrative.

“Is anybody tired?” said Danae.

. . . .

“Everybody is tired,” said the owl. “Zeno has not spoken for two hours. Socrates has not spoken since the beginning

of it and will not speak again in this book. Pythodorus is standing by the wall in his own house not saying anything, and he is remembering every word, and he does not know yet that he is going to have to. “And two men are still going.”

. . .

And then, near the end, she let it run.

. . .

“So they aren’t like or unlike either.” — “No, they aren’t.” — “And indeed, they are neither the same nor different, neither in contact nor separate, nor anything else that they appeared to be in the argument we went through before. “The others neither are nor appear to be any of those things, if one is not.” — “True.”

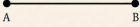
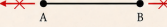
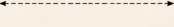
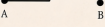
EUCLID · Elements I — contact foundations; line extremities are points

E1.I — *contact foundations* MODERATE

Book I foundations: definitions of point, line, surface, angle, figure, circle; postulates; common notions (including whole greater than part).

E1.I.Def.3 — *line extremities are points* LIGHT

And the extremities of a line are points.

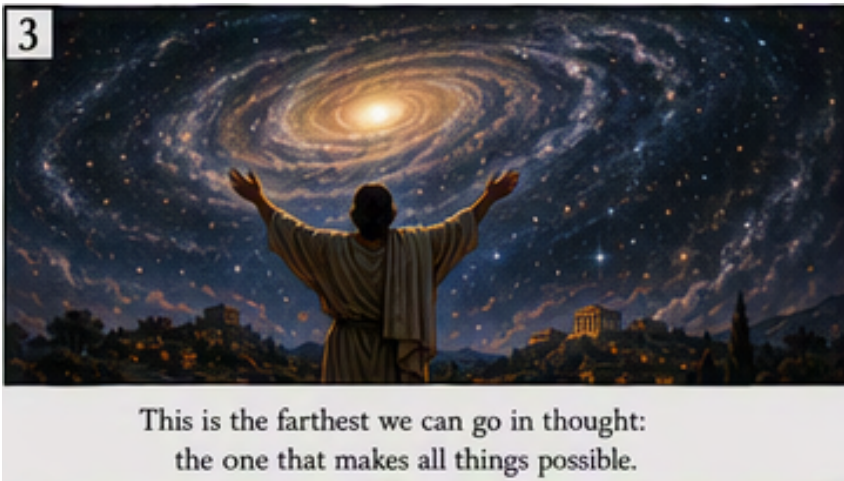
EUCLID BEFORE EUCLID	DEFINITION I.3 — ΓΡΑΜΜῆς Δὲ Πέρατα Σημεῖα "And the extremities of a line are points." <i>The limits (πέρατα) of a line — the outermost points beyond which it does not extend — are points.</i>		FROM PHILOSOPHY TO GEOMETRY
EUCLID'S TEXT γ'. Γραμμῆς δὲ πέρατα σημεῖα. "And the extremities of a line are points."	REWRITTEN DEFINITION The limits (πέρατα) of a line — the outermost points beyond which it does not extend — are points.	KEY TERMS πέρας (peras) • limit, extremity, boundary • the outermost point beyond which the thing does not extend • for a line, the πέρατα are its two endpoints σημεῖον (sêmeion) • point • that of which there is no part (I.1) • an indivisible position	PHILOSOPHICAL BACKGROUND Aristotle, <i>Metaphysics</i> V.17: "A limit is the extremity of each thing, that beyond which nothing of it is to be taken and within which all of it is contained." For a line, the limits are points.
ILLUSTRATIONS 1. A LINE WITH ITS EXTREMITIES  The line AB has two limits (πέρατα): the points A and B.	2. THE LINE STOPS AT POINTS  The line does not extend beyond A or B. Its outermost points are A and B. These are its πέρατα.	3. CONTRAST: A LINE WITHOUT EXTREMITIES?  A line without endpoints would have no limits, and would not be a finite line in Euclid's sense. Such an infinite line is not what is meant in I.3, which speaks of the limits of a line.	ACTION FOR UNDERSTANDING 1 Draw a line segment. 2 Identify where it stops. 3 Observe that it stops at points. 4 These points are its πέρατα (outermost points). 5 Conclude: The limits of a line are points.
FURTHER EXAMPLES A STRAIGHT LINE SEGMENT  Its limits are the points A and B.	A CURVED LINE SEGMENT  A curved line also has limits. Its extremities are the points A and B.	A MIXED LINE SEGMENT  Any line — straight, curved, or mixed — has as its limits points.	RELATED DEFINITIONS I.1 Point — that of which there is no part. I.2 Line — a length without breadth. I.3 Extremities of a line — points. I.4 Straight line — a line which lies evenly with the points on itself. I.5 Surface — that which has length and breadth only. I.6 Extremities of a surface — lines. KEY INSIGHT A line is a finite magnitude with limits. It begins and ends at points. These outermost points are its πέρατα. The concept of limit (πέρας) clarifies why a line cannot be extended beyond its endpoints in Euclid's definition. <i>A line has its being between two points.</i>

El.I.Def.3 — line extremities are points

Why here: Contact denied in D1 summary. Soft I.

Note. Contact denied in D1 summary. Soft I.

...



Very True — the central concept made visible.



Very True — the central idea.

“Then if we were to say, to sum up — “if one is not, nothing is — “wouldn’t we speak correctly?”

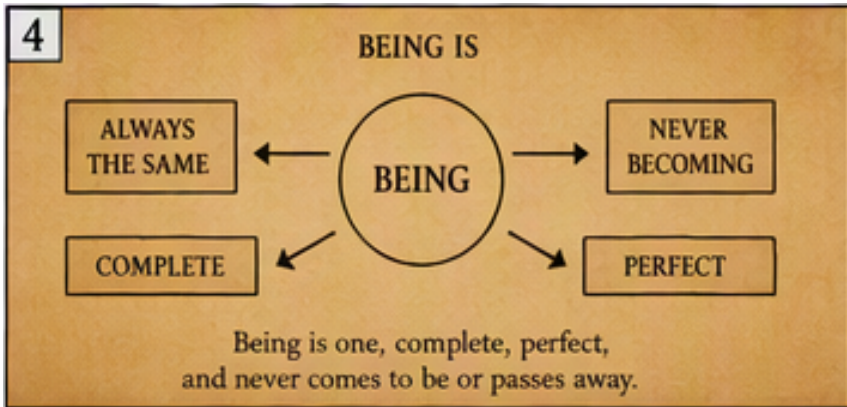
. . .

“Absolutely,” said the boy.

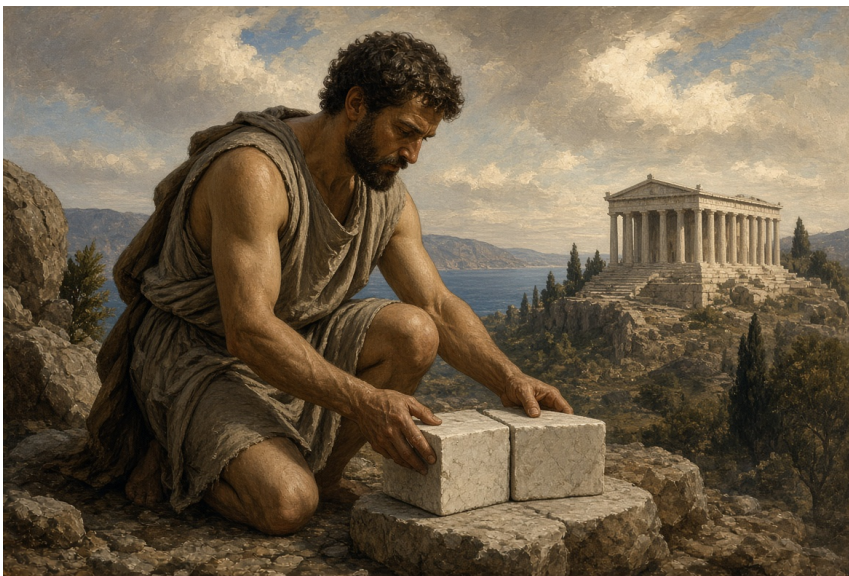
. . .

“Now,” said Sophia, very quietly. “Both of you. Sit up. There are eleven words left.”

. . .



Very True — the guiding analogy.



Very True — analogy and thought experiment.

And the old man from Elea, who had been talking since the middle of the afternoon, and who was sixty-five, and who had begun the day by being asked to demonstrate a method and had chosen his own life's work to demonstrate it on, said:

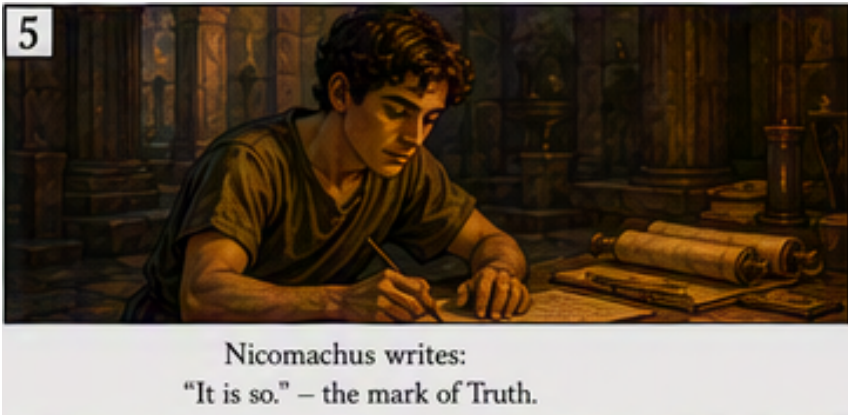
. . .

“Let us then say this.

. . .

“And also that, as it seems —

. . .



Very True — the argument unfolding step by step.



Very True — the logical progression.

“whether one is or is not, it and the others both are and are not, and both appear and do not appear all things in all ways, both in relation to themselves and in relation to each other.”

. . .

And the boy who would become one of the Thirty said:

. . .

“Very true.”

. . .

6

VERY TRUE



WHAT IS
(true)

=



VERY TRUE
(truce)

To say "It is" is true.
To know what that is—this is very true.

Very True — the competing interpretation.



Very True — the difficulty and the alternative.

And that was the end of the book.

. . .

Nobody in the orchard said anything for a while.

. . .

The picture did not fade. It simply was not there any more, and the place between the olive trees where it had been was full of ordinary late afternoon, and a bee going past at speed.

. . .

“That’s it?” said Danae.

. . .



Danae: So the search ends here?
Lela: Nere it begins—if we are ready.

Very True — Lela and Danae reconstruct the idea.



Very True — Lela and Danae.

“That is it.”

. . .

“Nobody goes home? Nobody says anything? Socrates doesn’t —“

. . .

“Socrates does not say anything,” said the owl. “He asked for the demonstration and he got it and he is not given one word at the end of it. “And Zeno says nothing. And Pythodorus says nothing. And Cephalus, who has been telling you the whole thing, does not come back to say and then we went home. “It stops on very true, and that is the last thing in it.”

. . .



Socrates: This is the summit.
Now we must learn how to live by what we know.

Very True — the historical layer.



Very True — historical reconstruction.

“Is that a joke?” said Lela.

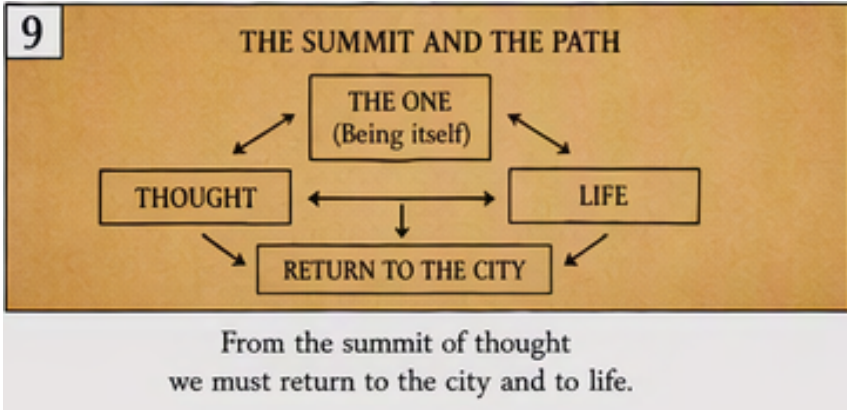
. . .

“Say why you think it might be,” said Sophia.

. . .

Lela looked at what she had written.

. . .



Very True — a wordless conceptual plate.



Very True — wordless concept plate.

“Because he’s just said that everything both is and isn’t and both seems and doesn’t seem, all things in all ways,” she said. “That’s — that’s not an answer. That’s the opposite of an answer. That’s the sound of a machine that will print anything you like. “And then the boy says very true. “Very

true. About a sentence that says everything is everything
and also isn't."

. . .

"Yes," said the owl.

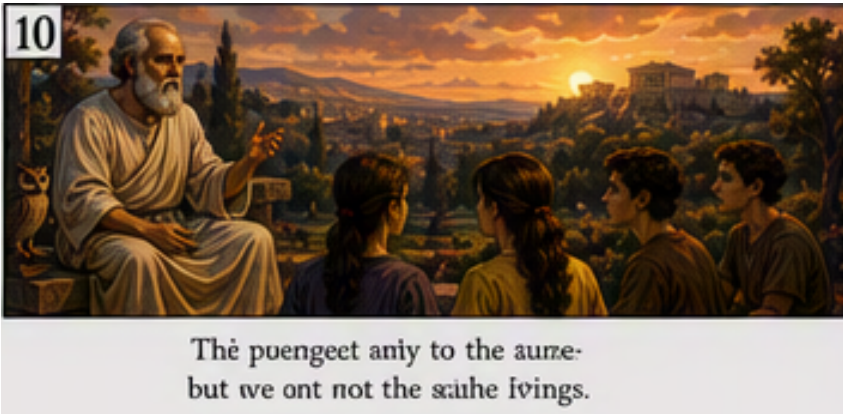
. . .

"So it is a joke."

. . .

"I do not know," said Sophia.

. . .



The puengeet aniy to the auzer-
but we ont not the sauhe Ivings.

Very True — the chapter's narrative and philosophical synthesis.



Very True — climax, double-page spread.

“I have read the last line of this book more times than I have read anything else, and I do not know, and neither does anybody, and I will tell you the two ways of hearing it and then I will tell you which way I hear it, which is not the same as knowing. “One. It is a joke, and it is brutal, and it is aimed at exactly one thing — at a boy who has said yes four hundred times, correctly, and who has just agreed enthusiastically to a sentence that cannot possibly be agreed with, because agreeing is what he does. “Two. It is not a joke at all, and the sentence is true, and it is the most honest ending anybody ever gave a book: here is everything I know how to do, and this is what it produces, and I am not going to pretend it produces anything else.”

. . .

“Which one do you hear?” said Danae.

. . .

“Both, at once, every time,” said the owl. “Which is, I have come to think, the answer, and is why he did it that way. “He has written four hundred pages about a method that produces opposite results, and he has ended it with two words that mean opposite things depending on who is saying them and how tired he is. “If you cannot hold both of those in your head at the same time, you have not finished reading it. “And I have been making you hold two things at once since the beginning of June, and this is what it was for.”

Chapter 116

**ONE HUNDRED AND SIX-
TEEN. What It Was For**



Socrates asks the final question:
For what was all of this?

What It Was For — opening scene.



What It Was For — chapter-opening scene.

“You said you’d tell us,” said Lela.

. . .

“I said several things,” said the owl. “Be specific. I am old.”

. . .

“Two things. You said this morning you’d tell us at the end of the day why he put his brothers in it. And this afternoon you said you’d tell us tomorrow which of the four answers was yours, and it isn’t tomorrow, but you’re going to tell us anyway, because you always do.”

. . .

“Yes,” said Sophia. “I always do. That is a fault and I have never got rid of it. “The second one first, because it is shorter. “Parallel bars, and map of a real difficulty.

Those two. Not the joke and not mainly the warning. "I think he wrote it because he had found the exercise that made his own mind work, and it was a monstrous exercise that nobody would ever guess at, and he could not think of any way to hand it over except to do one and leave it lying about. "And I think while he was doing it he found that the eight roads were not arbitrary — that they were the eight actual ways in which anything you say about anything at all can come apart — and that once he saw that, he could not not write it down. "It is a very long book by a man who had something difficult and could not find a shorter way. There are not many of those. Most long books are long because somebody had nothing and took a while about it."

. . .

"And the brothers?" said Danae.

. . .

Sophia was quiet for a moment.

. . .

"This one is mine," she said. "It is not in the book and nobody agrees with me and you may throw it away. "Every single thing you have watched this summer had to be carried. "You began with a man reading a book out loud in Megara because his friend had just been brought back from a war, dying, and he wanted to say his name out loud while there was still somebody to say it to. "Then a man from Elea who had learned a poem as a child in the town it was written in. "Then a boy of fifteen answering questions for two days, who died at thirty-five on a stretcher, and who is only in the world at all because two men walked out to the harbour to meet him. "Then Pythodorus, standing

by the wall in his own house, not saying anything, keeping every word. "And then an old man in Melite with a horse and a smith and a broken bit, who could recite the whole thing perfectly, and who had to be asked twice."

. . .

"Antiphon," said Lela.

. . .

"Antiphon," said the owl. "His little brother. "And I think that is why they are all in it. "Because this is the most difficult book he ever wrote, and he knew exactly how easily it could be lost, and when he came to build the doors in front of it he did not put famous men in them. "He put his family. Two brothers in a marketplace being kind to a foreigner. A half-brother who would rather be doing something else and did it anyway. "That is what the chain is actually made of. It is not made of great men. It is made of people who nearly did not bother, and then bothered."

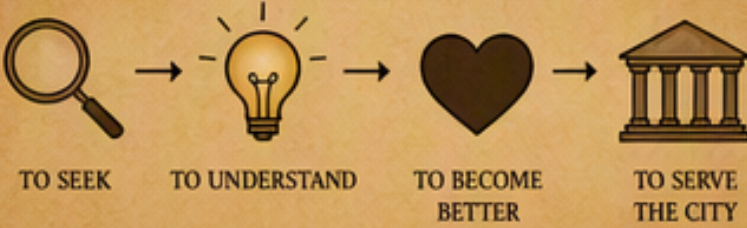
. . .

Lela looked down at the notebook on her knees.

. . .

2

FOR WHAT IT WAS FOR



To seek, to understand, to become better,
and to serve the city.

What It Was For — the chapter's central dialogue.



What It Was For — dialogue and narrative.

It was the fourth one. The first three were in a box under her bed at home, and one of them had got wet in June and had a tide-mark across the middle of the Apology.

. . .

“Sophia,” she said.

. . .

“Yes.”

. . .

“That’s what this is. Isn’t it.”

. . .

“That is what that is,” said the owl.

. . .

"I am not going to be here for ever. I do not know how long I have got and I would not tell you if I did. "And on the day I am not here, there will be four notebooks in a box under a bed in Hertfordshire, in a child's handwriting, getting worse towards the end of each one, with a tide-mark across the Apology. "And that is the fifth door."

EPILOGUE TO BOOK TWO The Orchard : · Athens, the Academy, and Hertfordshire In the garden of the Academy the light had gone entirely, and somebody had brought a lamp out without being asked and put it on the bench and gone away again.

. . .

Plato came to the end of the last line and did not stop reading, exactly; he simply ran out of roll, and sat for a moment with the end of it in his hand.

. . .

"Read it back to me," he said.

. . .

"Very true," said Aristotle.

. . .

3



Knowledge is not for itself alone.
It is for the good of the whole.

What It Was For — the central concept made visible.



What It Was For — the central idea.

“That is the last thing anybody says in it,” said the old man. “Four hundred pages, and it ends on a boy agreeing.”

. . .

“Is that a joke?”

. . .

“I have never been able to decide,” said Plato, “and I wrote it.”

. . .

He rolled it up, slowly, because his hands were not good in the evening, and tied the cord, and put it on the pile with the other four.

. . .

“What should I do with it?” said Aristotle.

. . .

“Nothing,” said Plato.

. . .

“Not now?”

. . .

“Not now and not this year. Copy it and put it away. Do the work I gave you. Go and write to the cities about their arrangements, and find out whether a bat is a bird, and whatever else it is you have been not telling me about since the spring. “And in about twenty years, when you have got something of your own and it has started to go wrong in a way you cannot see — take it down and do it properly, with a pen, on your own thing. “It will not be pleasant. That is what it is for.”

. . .

Aristotle looked at the five rolls on the bench for a while.

. . .

4



Each part of the city has its work.
Wisdom helps each part do its work well.

What It Was For — the guiding analogy.



What It Was For — analogy and thought experiment.

“I am going to use it against you,” he said.

. . .

“I know.”

. . .

“By name. In writing. Where everybody can see.”

. . .

“I know,” said Plato.

. . .

“Doesn’t that —“

. . .

He stopped, because he was twenty and it was late and he had been reading for six days, and because there is no polite way to ask an old man whether he minds.

. . .

“Yes,” said Plato. “Enormously. I am not a saint and I have never claimed to be one and I have watched you sharpening it for a week. “And if I had wanted it not to happen there were four hundred ways to stop it, and the easiest was simply not to read you this one. “I read you this one.”

. . .

He put his hand flat on the pile.

. . .

“Somebody gave me an old man once,” he said, “and I have spent fifty years trying to give him to other people, and I have not managed it, because he cannot be written down; I have tried in about thirty books and what comes out is always a character. “So I have given you the next thing instead, which is the only thing I have that is actually mine. “The argument against myself. “Take it. Use it. Be accurate, and do not be clever about it in public more than you have to, and when they ask you why you turned on your teacher, tell them the truth, which is that your teacher handed it to you in a garden, in the evening, on purpose, over six days, and asked you to read it back to him at the end.”

. . .

The young man from Stagira sat still for a moment.

. . .

5

THE MUSIC OF A GOOD LIFE



Like a harmony, a good life
needs many notes in the right order.

What It Was For — the argument unfolding step by step.



What It Was For — the logical progression.

Then he picked up the top roll off the pile — the first one, the one about the boy who was dying, that they had started six afternoons ago — and held it for a second, and put it in his bag.

. . .

“Same time tomorrow?” he said.

. . .

“There is nothing left to read,” said Plato.

. . .

“I know,” said Aristotle. “Same time tomorrow?”

. . .

And the old man laughed, which he did about four times a year, and said yes.

. . .

In the orchard it was nearly eight, and the swifts were going over, and the light had come off the tops of the trees and was lying along the top of the wall in a strip about a hand wide.

. . .

Danae had gone to sleep at some point and woken up again and not mentioned it.

. . .

“Sophia,” said Lela.

. . .

“Yes.”

. . .

“What did you get wrong?”

. . .



Danae: So it was all for this—
to help us live and help others live?

What It Was For — the competing interpretation.



What It Was For — the difficulty and the alternative.

The owl turned her head right round, which she did about four times a summer.

. . .

“Say that again,” she said.

. . .

“You heard.”

. . .

“I did hear. Say it again anyway, because I have waited two summers for it and I want to hear it twice.”

. . .

“What did you get wrong?” said Lela. “This summer. Where were you wrong, and what shouldn’t we believe,

and what did you do that you'd do differently. "Because every single one of them did it. Plato did it to himself and he gave it to Aristotle, and Parmenides did it to his own poem in front of six people, and the man from Elea did it to his own school, and Socrates did it to himself for fifty years in the street until they killed him for it. "And you've made us watch all of it. For two summers. And you're the only one who hasn't."

. . .

Sophia did not say anything for a long time.

. . .

"There are a number," she said at last. "I am going to give you one, because it is the largest, and because if I give you four you will remember none of them. "Danae. Are you awake?"

. . .

"Yes," said Danae, who was lying on her back looking at the swifts.

. . .

"How many women have you seen this summer?"

. . .



7
Socrates: Yes. The argument is against ourselves
when we forget what it was for.

What It Was For — Lela and Danae reconstruct the idea.



What It Was For — Lela and Danae.

Nobody said anything at all.

. . .

The swifts went over again, very high, doing the thing
they do in the evening.

. . .

“None,” said Danae.

. . .

“None,” said the owl.

. . .

“Five days. Four books. Five courtyards and a prison and a wrestling-school and a garden and a house in the Potters’ Quarter. “Theodorus. Theaetetus. Young Socrates. The man from Elea. Zeno. Parmenides. Pythodorus. Aristotle. Antiphon. Cephalus. Adeimantus. Glaucon. Euclides. Terpsion. Socrates. “Fifteen names. Not one of them a woman. Not one woman in any room, on any day, in any of it — not speaking, not answering, not sitting at the back. “And I never once stopped and said so. “And I want you to think about how long it took you to notice, and I will tell you, because I have been counting: Danae asked me on the second day of the first summer, and I said that is how it was, and moved on. “And she never asked again. “And neither did you.”

. . .

“That’s not your fault,” said Lela. “That’s — they weren’t there. You can only show us what somebody carried and nobody carried —“

. . .

“Stop,” said Sophia.

. . .

“That is the exact sentence I have been using for two summers,” she said, “and it is true, and I have been hiding

behind it, and I noticed I was doing it in about the third week and I went on doing it. "Here is what is true. Those rooms were shut. Athenian women of that class did not go to the wrestling-school and did not go to the Academy and mostly did not go out of the front of the house. That is not my invention and I cannot change it and neither can you. "And here is what is also true, and is the part I got wrong. "I let it become the furniture. "I said that is how it was on the second day, and after that it was simply the shape of the room, and by the fourth day neither of you could see it, and I knew you could not, and it was easier. "And an owl who has spent two summers teaching two children that a thing you stop noticing is the most dangerous kind of thing there is — should have said it again. On the second day of the second summer, and the fourth, and the tenth. Until it stayed annoying. "That is the one. That is what I got wrong."

. . .

"You said it once," said Lela. "I said it—" "On the first day. The very first day, before any of this, when he was doing the words and you were telling us which ones were jokes." Lela had gone quite still. "He came to the letter that had changed, and he said the old people still say it the old way, and especially the women — because the women are the best preservers of the ancient language. And you stopped the picture and you made us hear it, and then we went on to the next word." Sophia did not answer. "It's the only sentence in the whole summer where they're the ones who know something," said Lela. "And it went past in about four seconds." "Yes," said the owl. "So you didn't never say it. You said it on day one and then you let it go by." "Which is worse," said Sophia, "and thank you."

. . .



Lela: The stars, the music, the numbers, the forms—
all lead back to life.

What It Was For — the historical layer.



What It Was For — historical reconstruction.

Danae sat up.

. . .

“His mother was a midwife,” she said.

. . .

“Say it,” said Sophia.

. . .

“Phaenarete. That’s her name, you told us her name on the first day, because he said it — he said my mother and I had the art allotted to us by God, she to deliver women and I to deliver men. “That’s the whole thing. That’s the best thing he ever said about himself and it’s hers. He didn’t invent it. He got it off his mum and he said so out loud in front of everybody. “And she’s not in it. She’s a sentence.”

. . .

“She is a sentence,” said the owl.

. . .

And then Lela said, slowly:

. . .

“The loom.”

. . .

“Go on,” said Sophia, and something in her voice had changed.

. . .

“The whole of the Statesman,” said Lela. “The whole thing. Two days. The best thing in it. The warp and the woof and the brave ones and the gentle ones and never let them stand away from each other — all of it, the entire

argument, the thing you said I'd understand at the end of the week. "It's built out of a loom."

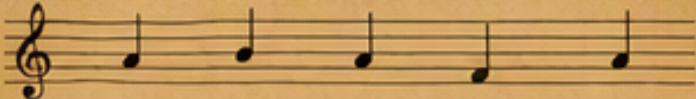
. . .

"Yes."

. . .

9

THE TUNE AND THONE

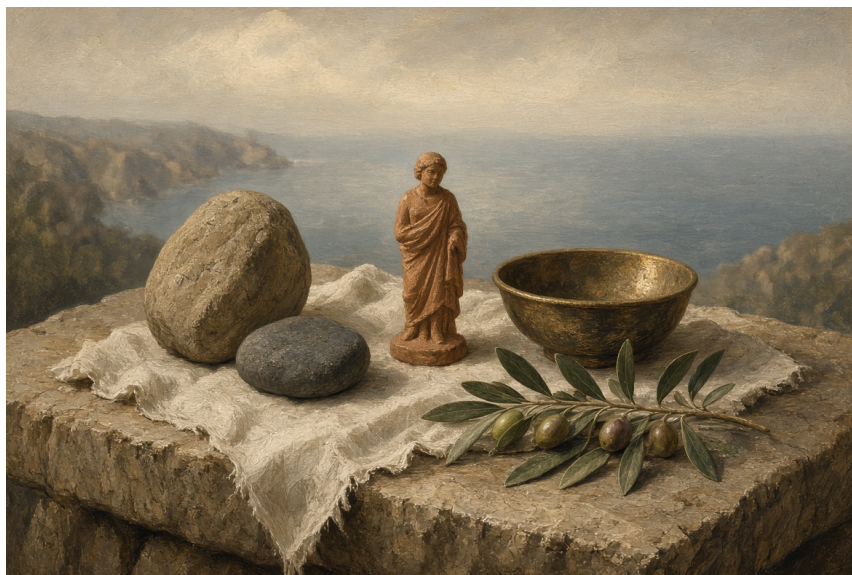


NUMBER → GEOMETRY → HEAVENS → HARMONY → LIFE

ALL OF IT, ONE TUNE.

This is the tune we have learned
to hear in the world.

What It Was For — a wordless conceptual plate.



What It Was For — wordless concept plate.

“And not one of those men had ever used one.”

. . .

“Not one of those men had ever used one,” said the owl.

. . .

“Every one of them had watched one. Every single one of them had grown up in a house with one in the back room, going all day, worked by his mother and his sisters and the women of the household, and that is why he picks it — because it is the one machine every man in Greece has known since he was two and none of them has ever touched. “And so the deepest thing anybody in this book says about how to live with other people — “comes out of a room that not one man in any of these four books ever went into, made by people whose names are not in it.”

. . .

“And Yiayia’s got one,” said Danae.

. . .

“And your grandmother has got one,” said Sophia. “In the back room with the jars. Worn shiny where the hands go. Her mother’s. Broken. “And there is a rug in the front room with a red line in it that goes wobbly two thirds of the way along, and your grandmother knows why, and she told you, and neither of you has ever asked her who. “I am eleven hundred miles and two and a half thousand years away from the thing I would most like to show you, and it has been in that house the entire time.”

. . .

From the direction of the house, somebody began calling. Twice, the way she always did — once for each of them.

. . .

Neither of them moved for a second.

. . .

“Sophia,” said Lela. “Next summer —“

. . .

“Go in,” said the owl.

. . .

“No, but next summer, are you —“

. . .

10



So the prelude returns to the tune—
and the journey continues.

What It Was For — the chapter's narrative and philosophical synthesis.



What It Was For — climax, double-page spread.

“Go in,” said Sophia. “She has called twice. She is eighty-one and she has been on her feet since six and she has made something with the pastry, and the thing you have spent two summers learning is that the whole of it is worthless if you cannot use it on a Tuesday, in your own house, on the people who are actually there. “Go in. Take the notebook. And ask her about the rug.”

. . .

They went in.

. . .

Danae went first, at a run, the way she went everywhere, with the flat grey stone from the wall in her hand; and Lela came after with the notebook under her arm, and stopped once at the top of the slope and looked back.

. . .

The owl was still on the wall. The last of the light was on her, and then it was not.

. . .

In the house, her grandmother was standing at the table with her sleeves pushed up, and the kitchen smelled of hot butter and of the herb whose name Lela only knew in Greek.

. . .

And Lela put the notebook down on the corner of the table, where it would be out of the way, and said:

. . .

“Yiayia. Who was crying?”

. . .

And her grandmother stopped what she was doing, and put down the spoon, and looked at her for a moment.

. . .

And then she pulled out a chair, and sat down, and began.

Colophon

This annotated edition was compiled for Aris Skliros from the novel source and the sibling Euclid annotation layers (Theaetetus, Sophist, Statesman, Parmenides hypertexts). It does not claim authorship of Plato or Euclid. Correspondences only. Cite-first lists applied exactly.

Concordance of Euclid correspondences

Plato predates Euclid by roughly half a century; Theon of Smyrna and Nicomachus of Gerasa follow him by four hundred years. Every entry below records a *correspondence* between what is done on the page and the statement in the *Elements* that later systematises it. None is a citation by Plato, and none implies that any speaker in this book had read Euclid. Statements follow the Fitzpatrick bilingual edition of Heiberg's text; El.B.Def.N, El.B.Post.N, El.B.Prop.N are the canonical identifiers. Tiers: STRONG where the page performs the proposition itself, MODERATE where it performs a recognisable part of it, LIGHT where the pointer is thematic.

Reference	Locus	Tier	Page
El.VII.Def.1	Elements VII – unit; number	LIGHT	46
El.I.CN.5	Elements I – whole > part; whole/part	MODERATE	62
El.I.CN.5	Elements I – whole > part; equals added	STRONG	98
El.I.CN.5	Elements I and V – whole > part; part measuring	STRONG	110
El.VII	Elements VII – unlimited multitude	LIGHT	126
El.I.Def.15	Elements I – circle; straight-line	STRONG	269
El.I.CN.1	Elements I, V and VII – equals to same; part measuring	STRONG	280
El.I.CN.5	Elements I and VII – whole > part; part/whole	STRONG	308
El.I.CN.5	Elements I and VII – whole > part; unit	STRONG	312

Reference	Locus	Tier	Page
El.VII.Def.6-7	Elements VII, Definitions 6, 7 and 2 — number generated from the one that is	STRONG	314
El.I.CN.5	Elements I and VII — whole > part; one/many	LIGHT	321
El.I.Def.1	Elements I — point: no part	LIGHT	341
El.I	Elements I — contact foundations; line extremities are points	MODERATE	356