

M E R G E D E D I T I O N · E N G L I S H

The Concept Vector Series

Deconstruct MBTI. Survey psychology, survey thought, survey the world —
all are the products of a single thought tool.

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Compiled and elaborated by AI from public notes

Translated into English by AI

The Concept Vector Series

— Merged Edition · Six Books and a Supplement

Author: tomzheng

About This Merged Edition

This volume merges the six main books of *The Concept Vector Series* and the Supplement into one. The separate volumes still exist on their own; the merged edition is reordered for the reader's ease of entry: we begin with the most familiar thing — the **person** (the framework of mind), pass through **thought**, then meet the **method itself** (concept vectors), then the **world** (the philosophical framework), then **society and life**, and finally align everything into one table (the grand synthesis). The Supplement closes the volume: the raw-materials warehouse, a self-referential reader, and one page of reference cards for the whole series.

Each book can be read independently, and skipping around costs little; the only advice is to leave Book VI (The Grand Synthesis) for last.

Author's Disclaimer

The books in this series were organized, elaborated, and expanded by AI from the author's publicly posted online notes. It must be stated plainly: **a considerable portion of the exposition does not agree with the author's own views, and part of the content added during compilation has not received the author's approval.** Read with independent judgment; for every deviation of viewpoint and every over-extension, the responsibility lies with the compiler, not the author.

Note on the Translation

This English edition was translated into English by AI from the Chinese merged edition. The author writes in Chinese and has not reviewed this translation. The figures keep their original Chinese labels; where Chinese words themselves play a role in the argument (names, tones, puns), the original is kept alongside the translation.

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B o o k I

The Framework of Mind: How People Differ, and How the Mind Is Built

The Other Half of MBTI's Answer

The book opens with what everyone knows best: **people**. How does the mind actually run? What kinds of differences exist between one person and another? After all these years of MBTI testing, what is it really saying? (The method behind this classification waits in Book III; in this book we simply put it to work.)

Contents in Brief

MBTI sorts people into sixteen types with four letters, yet no one has ever explained clearly what those four letters mean. This book gives the Framework of Mind's answer:

- Four switches: introversion/extraversion, perception/action, rational/emotional, control/spontaneity — corresponding one-to-one to MBTI's E/I, J/P, T/F, S/N. The four "columns" produced by crossing these switches turn out to be a single assembly line: information enters the brain, and the person outputs back to the world.
- A four-row structure: ego, superego, non-ego, id — rearranging Freud's classic three layers into a ring: the emotional manages the rational through the "non-ego," the rational controls instinct through the "superego," head joined to tail.
- And a series of applications: a four-question self-test, the four weapons against procrastination, the four sources of happiness, comparisons with the Enneagram and the Big Five, and a field study of INTP.

This book does not challenge MBTI. It supplies MBTI's missing "manual of principles."

How to Read This Book

Chapters 1–3 present the four switches; Chapters 4–5 present the ring structure of the mind and its lines of operation; Chapter 6 repairs MBTI; Chapter 7 compares other personality theories; Chapter 8 is the INTP special; Chapter 9 covers applications; Chapter 10 concludes.

Every chapter stands alone. If you have taken the MBTI test, bring your four letters along as you read.

Chapter 1 The Other Half of MBTI's Answer

Everyone Has Tested; No One Can Explain

In recent years MBTI has practically become social currency. People write INFP into their self-introductions, interview small talk asks "Are you E or I?", and even the matchmaking corners in the parks have begun to display the four letters.

But ask one question further, and the excitement gives itself away:

- E and I — do they mean "do you like socializing," or "where does your energy come from"?
- S and N — why is one called "sensing" and the other "intuition"? What do they have to do with the everyday words *sense* and *intuition*?
- J and P — officially "judging" and "perceiving." What on earth does "judging" mean? Why do P-types dislike planning?

The test banks keep growing, yet the meaning of the four letters stays foggy. MBTI hands you a classification but no **principle**. It tells you what an INTP looks like; it never says which part of the psyche each of the four switches I, N, T, P actually controls.

The Framework of Mind's Answer

The Framework of Mind exists to supply that missing manual. Its claim: MBTI's four letters are not four arbitrary personality labels, but **four independent switches on the mental machine**:

Framework of Mind	MBTI	What the switch governs
Introversion	I	Attention points inward
Extraversion	E	Attention points outward
Perception	P	Likes to experience, to take in
Action	J	Likes to produce, to put out
Rational	T	Speaks reason
Emotional	F	Speaks feeling
Control	S	Restrains the self
Spontaneity	N	Dislikes restraining the self

Now read your own four letters against this table. INTP = introversion + spontaneity + rational + perception: a person whose attention points inward, who dislikes constraint, who speaks reason, who loves to take in experience. Isn't that far plainer than the official explanations?

Why This Correspondence Deserves Trust

This correspondence table was not pasted on after the fact. The author's notes preserve its origin: the Framework of Mind came first (derived from Freud, introversion/extraversion, and other concepts), and only later was it found to be **exactly isomorphic** to MBTI's letter system — eight words to eight letters, no more, no less.

When two independently produced systems align, there are two explanations: coincidence, or they have touched the same real structure. The author bets on the latter.

But he admits the referee of that bet can only be a **person**: judging coincidence versus isomorphism takes human experience — it takes a concept-vector expert who is also familiar with the domain in question, sifting over a long period, to find the words that truly align. The Big Five relies on statistics; concept-vector alignment requires statistics, plus experience, plus constant version updates. Alignment is not decided once — it is proofread forever.

Of course the correspondence is not perfect, and **the imperfections are exactly where the scholarship lives**: MBTI's J/P is muddled in the official theory, and Chapter 6 of this book argues that the "planning" dimension should be removed from MBTI and replaced with "perception/action." That is the incision the Framework of Mind makes into MBTI.

Four Questions, a Three-Minute Self-Test

No need for 93 test items. The author's minimal version has only four questions:

1. **Introverted or extraverted?** (introversion is I, extraversion is E)
2. **Obedient or freedom-loving?** (obedient is S, freedom-loving is N)
3. **Rational or emotional?** (speaking reason is T, speaking feeling is F)
4. **Action or perception?** (loving to produce is J, loving to experience is P)

Answer on first instinct. When you finish, you hold four letters — and this time, you know what each letter means.

Four Letters at the Team-Building Event

A company team-building. HR hands out an MBTI questionnaire; twenty people bury their heads in the questions.

Half an hour later the results arrive and the room erupts: "I'm ENTJ, a born leader!" "I'm actually an I? But I love talking!" "Is this thing accurate? Last year I tested different." Four letters in every hand — but look closer, and everyone understands their own letters differently: one takes E as "loves socializing," another takes J as "loves tidiness," and someone stares at T for a long while and asks whether it stands for "sports."

That is the state of MBTI: the tests were handed out faster than the manual. Twenty people received twenty coordinates, yet hardly anyone knows what the axes mean — and so the letters become the new astrology: lively to chat about, mushy to use.

This chapter does the opposite: it explains the axes first, the test second. Once you know what each of the four switches governs, those four letters finally begin to be useful.

An Important Disclaimer

Before reading on, import one principle from Book III: these classifications describe **stable leanings**, not switches that lock; the corresponding traits are **probabilistic**, not verdicts. Your four letters are coordinates on a map, not a cage.

Next chapter, we take the switches apart one by one.

Chapter 2 The Four Switches, Part One: Introversion/Extraversion and Perception/Action

Switch One: Introversion / Extraversion

This is the least ambiguous switch. The author's definition runs only two lines:

- **Introversion:** likes being alone.
- **Extraversion:** likes dealing with people.

No mystical explanations about "where your energy comes from" are needed. Liking solitude is introversion.

Still, introversion/extraversion has a set of "near-synonyms" worth remembering; they connect this switch to other things:

Introversion	Extraversion
Not changing	Changing
Comfort zone	Leaving the comfort zone
Passive	Active (doubtful)

The author marked the "passive/active" row as "doubtful" — that honesty is worth emulating: a correspondence is a first draft, not an iron law.

Switch Two: Perception / Action

This switch is where the Framework of Mind contributes most to MBTI, and it deserves a slow walk.

Perception people love to experience. Watching a film, strolling a city, reading a book — the input itself is the pleasure. **Action** people love to produce results. Same film, and they must come away with a review written; same city, and they must finish a checklist of sights.

Perception is input; action is output. The author's near-synonym table stretches this switch very wide:

Perception	Action
Rest	Work

Outside the eight hours	Inside the eight hours
Input	Output
Thinking	Acting
Going with the flow	Overcoming difficulties
Liking quiet	Liking motion
A low-consumption life	A high-consumption life
Enjoyment	Striving
Tranquility	Competition

How to read this table: top to bottom, row by row, feel which side you are on. Most people's self-assessment flips a few times midway — that's fine; that is exactly what "a switch is an axis, not a point" means.

In MBTI this switch corresponds to J/P. MBTI explains J as "judging" and P as "perceiving," taking many detours. The Framework of Mind's wording is far more direct: **perception (P) = willing to spend time on experience; action (J) = willing to spend time on output.**

After Two Hours of Short Videos

The switch "perception is input, action is output" can be measured with a single phone screen.

Saturday night; two people each spend two hours scrolling short videos. The perception person puts down the phone, deeply content — two hours of bustle, jokes, and cute pets; the input itself is enjoyment, time well spent. The action person puts down the phone and feels hollow — two hours gone, nothing left behind; they have to get up and film something, write something, or at least tidy the kitchen before the evening counts as "not wasted."

Same two hours: one feels richer, the other poorer. It is not a difference in self-discipline but in where the happiness socket is plugged: one into "input," the other into "output."

So don't casually believe the blanket claim that "scrolling short videos is degenerate." For a perception person, that's charging the battery; for an action person, it's leaking. Seeing your own socket clearly beats self-blame by a mile.

A Physiological Association

The author also recorded a tentative correspondence (marked as a preliminary association, not a conclusion):

	Perception	Action
Emotion	Pleasure, reward, addiction	Anxiety, fear
Brain-region association	Nucleus accumbens	Amygdala
Temper	Slow-tempered	Quick-tempered

Pleasure keeps a person in the present (perception); anxiety pushes a person into motion (action). If this association holds, then the perception/action switch is not merely a preference but a direction of drive written into the reward system. The author's point: most of the time, a person is driven by instinct — **dopamine (actively seeking things to do) and anxiety (passively coping with things)** — exactly these two directions.

Crossing the Two Switches: The Four Columns Are Actually One Line

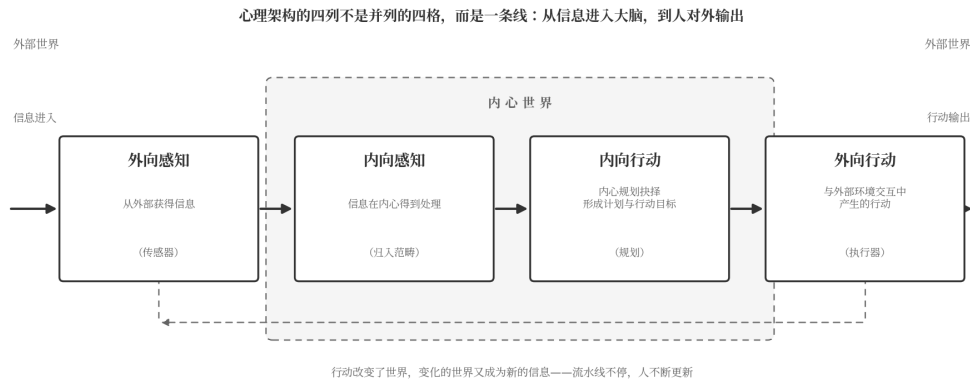
Crossing the two switches yields the four "columns" of the Framework of Mind. At first glance they look like four side-by-side boxes:

	Perception	Action
Extraversion	Extraverted perception	Extraverted action
Introversion	Introverted perception	Introverted action

But define these four boxes carefully and something more interesting appears — they are not four boxes; they are **one line**. Here inward/outward takes the most literal directional sense: inward = the inner world, outward = the external environment:

- **Extraverted perception:** information obtained from outside — like a sensor;
- **Introverted perception:** information processed in the inner world — filing new things into one's own inner categories;
- **Introverted action:** planning and choosing within, forming plans and goals for action;
- **Extraverted action:** action produced through interaction with the external environment — like an actuator.

Read in this order: information enters the brain from outside (extraverted perception) → is digested and processed within (introverted perception) → is planned into goals and plans within (introverted action) → becomes actual outward action (extraverted action).
From information entering the brain to the person outputting to the world — exactly one assembly line, no station missing.



This assembly line is immediately usable. A person leaning toward extraverted perception has a sensitive sensor — no novelty escapes them; they are the best-informed in any circle of friends. A person leaning toward introverted action has powerful planning — a blueprint forever open in their head, though unless you ask, they won't say a word. The sixteen-box inventory of Chapter 4 mounts the four rows onto this assembly line.

Chapter 3 The Four Switches, Part Two: Rational/Emotional and Control/Spontaneity

Switch Three: Rational / Emotional

The definitions are equally plain:

- **Rational:** likes to speak reason.
- **Emotional:** likes to speak feeling.

When a rational person meets disagreement, the first reaction is "let's straighten out the logic"; when an emotional person meets disagreement, the first reaction is "what kind of attitude is that?" Neither is superior — one gets the matter clear, the other keeps the relationship alive, and human society needs both.

Near-synonym table:

Rational	Emotional
Reason	Instinct
Consciousness	Subconscious
Ego	Id
Thinking	Not thinking

Watch the middle rows. Rational/emotional is not just a "style of speech"; in the Framework of Mind it leads to the deepest structure: the rational is the force on the side of **consciousness**, the emotional is the force on the side of the **subconscious (instinct)**. The inner ring of Chapter 4 turns entirely on this pair of forces.

Switch Four: Control / Spontaneity

- **Control:** likes to restrain oneself.
- **Spontaneity:** dislikes controlling oneself.

Control people set alarms, make plans, keep rules; spontaneity people sleep until they wake, follow their mood, hate being regulated.

Control	Spontaneity
Self-restraint	Following one's nature

Conformity	Individuality
Easygoing	Stubborn

This switch corresponds to MBTI's S/N. MBTI explains S/N as "sensing/intuition" — attending to concrete details versus abstract possibilities. The Framework of Mind gives a more psychological reading: **control people obey the rules of reality (so they seem "solid"); spontaneity people heed the voice within (so they seem "airy")**. Intuition is "direct" precisely because it bypasses the control of external rules.

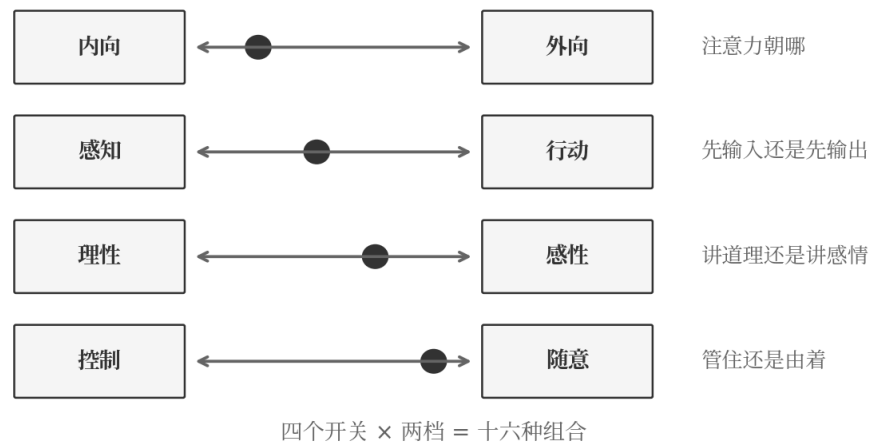
There is a deeper layer to this reading, hidden in the Framework of Thought of Book II. The author's dissection: **sensing is actually flat thinking; intuition is actually hierarchical thinking**. Flat people attend to details and cannot see the whole, so they need guidance more and appear obedient — that is the "solid." Hierarchical people carry their own map; so-called intuition is in essence big data sedimented out of hierarchical structures — they don't need anyone to lead them; they lead themselves.

Two Pairs of "Crossed Words"

The four switches also combine in pairs to form the "rows" of the Framework of Mind:

- Rational + spontaneity = **ego** (free rationality): independent thought, acting by one's own logic — this is consciousness itself;
- Rational + control = **superego** (rational-control): willpower, attention — **the means by which the rational controls instinct**;
- Emotional + control = **non-ego** (emotional-control): sensations, feelings, emotions — note well, it is not "the managed instinct"; quite the opposite, it is **the means by which the emotional manages the rational**;
- Emotional + spontaneity = **id** (free emotion): desires, habits, beliefs — instinct at romp.

Sound familiar? Freud's names have appeared. But they are not placed where Freud put them — that is the next chapter's business.



One Weekend Is Enough to See Them

Abstract as the four switches sound, a single weekend reveals them all.

Saturday morning: one person wakes and immediately rounds up friends for a game (extraversion + action); another nests in the sofa with a documentary (introversion + perception). At noon a friend weeps over a breakup: one hands tissues and joins in cursing the ex (emotional); another starts drafting a problem list for the relationship (rational). The afternoon plan was the library, but the crowd votes for karaoke — one person feels "the plan changed; awful" (control); another thinks "wonderful, I didn't want to read anyway" (spontaneity).

Review what you now hold:

- Introversion/extraversion: attention points inward or outward;
- Perception/action: loving input or loving output;
- Rational/emotional: speaking reason or speaking feeling;
- Control/spontaneity: restraining yourself or indulging yourself.

Four switches, sixteen combinations. Next chapter, we mount the latter two pairs into a turning ring: ego, superego, non-ego, id.

Chapter 4 The Ring Within: Ego, Superego, Non-Ego, Id

The Engine of Mental Activity

The first three chapters were about "classification" — what kinds of people there are. This chapter is about "operation" — how one person's inner world runs.

The Framework of Mind's answer is a single sentence:

Human mental activity is the interaction between instinct and consciousness.

Instinct is free emotion (the id); consciousness is free rationality (the ego). The two quarrel daily and cooperate daily. The question: instinct and consciousness are separated by a chasm — what carries traffic between them? Two **means**:

- **The non-ego** (emotional-control: sensations, feelings, desires, emotions, interests) — this is **the means by which the emotional manages the rational**. Note, it is not "the managed instinct"; quite the opposite: it is the hand instinct reaches over to manage rationality. When emotions swell, even the most meticulous plan gets dragged under.
- **The superego** (rational-control: willpower, attention) — this is **the means by which the rational controls instinct**. Consciousness uses it to pin down impulses and nail itself to the chair it ought to be sitting in.

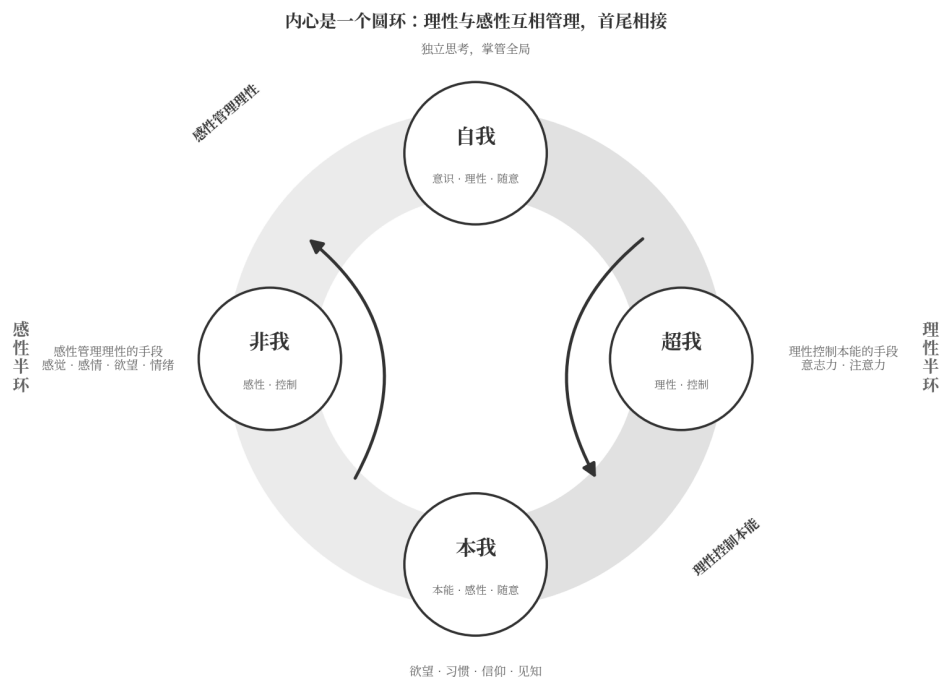
Where is the line between means and content? The author draws it at **information content**: the emotional and the rational both accumulate information from the world, so they are content; the non-ego and superego hold no information content and stay constant, so they are means. Note also that "the emotional" in this framework is a term of art — instinct, the subconscious; in the author's words, "a brain in which no logic is running."

One detail here is exquisite. Someone once asked a sharp question: the non-ego box plainly contains emotions — what does that have to do with rationality? The author's answer: "Exactly. It is precisely because this part does not speak reason that it can help the emotional constrain the rational and control the rational." Reason cannot rein in reason — what stops a person mid-oration is never a better argument but a surge of feeling. That is why on the debate stage "move them through emotion" so often beats "convince them through reason."

A Ring, Not a Four-Story Building

Lay out the four positions and you find them joined head to tail:

The id (instinct itself) acts on **the ego** (consciousness itself) through **the non-ego** (the emotional's means); **the ego** turns back to manage **the id** through **the superego** (the rational's means); and the managed id stores up the next rising... Emotional and rational each hold half the ring, each working on the other, turning as one unceasing ring.



Why insist on a "ring"? Because a building is dead — between floors there is only up and down — while the mind is alive — between the emotional and the rational there is no upstairs and downstairs, only back and forth. Every tangle you feel is this ring mid-turn; every decision is an exit the ring reaches at some moment.

Not Where Freud Put Them

Freud's three layers are: id, ego, superego. The Framework of Mind has four positions: **id**, **ego**, **superego**, **non-ego**, with an explicit note:

In Freud, the ego sits between the superego and the id, so it does not correspond to the table's position.

Meaning: Freud's arrangement is a line (id — ego — superego), while the Framework of Mind's arrangement is a **2×2** (rational/emotional × spontaneity/control), which in operation presents as the ring above. The extra position, the "non-ego," has no independent place in Freud's system: it is the toolbox in the emotional's hand — your sensations, feelings, desires, emotions; the means by which instinct reaches into consciousness and influences decisions.

An example: you know you should write (the ego's plan), yet a nameless restlessness won't let you sit (the non-ego strikes: emotion managing your rationality); finally you start a Pomodoro timer and will yourself back into the chair (the superego strikes: the rational managing instinct in return). One everyday skirmish, one full turn of the ring, three roles on stage.

What Each of the Four Positions Holds

Multiply the four rows by the four columns of Chapter 2 (extraverted perception / introverted perception / introverted action / extraverted action) and you get a sixteen-box inventory — which box each thing in the mind belongs to:

	Extraverted perception	Introverted perception	Introverted action	Extraverted action
Ego (rational·spontaneity)	Abilities	Hobbies	Career	Relationships
Superego (rational·control)	Attention	Persistence	Willpower	Reflexes
Non-ego (emotional·control)	Sensations	Feelings	Desires	Emotions
Id (emotional·spontaneity)	Inborn knowledge	Beliefs	Experiences	Habits

The Sixteen Intersections, One by One

The four rows are four roles; the four columns are four stations on the information assembly line. Their sixteen intersections are the real protagonists of this table — each box answers: **what does this role concretely govern at this station of the line?** Let us look at them one by one.

The ego boxes (the assets of consciousness itself at the four stations; together they are "my life"):

1. **Abilities** (extraverted perception): competence gained from the external world — what you have seen and learned all came in from outside.
2. **Hobbies** (introverted perception): things turned over and over in the heart — loved for no reason, growing tastier with each savoring.
3. **Career** (introverted action): a long-term goal grown from inner planning — what you intend to make of yourself.
4. **Relationships** (extraverted action): things formed in interaction with others — relationships can only arise in dealings; shut in a room you cannot think one into being.

These four boxes are not a static list; Chapter 5 will spin them into a flywheel: relationships tell you which abilities you lack, abilities prop up career, career funds hobbies, and hobbies gather people into relationships.

The superego boxes (the rational's four weapons for managing instinct — all "forces"):

5. **Attention** (extraverted perception): the force of focusing outward. When the author discusses defeating procrastination, this is the first weapon he names — the Pomodoro timer manages exactly attention.
6. **Persistence** (introverted perception): the force of holding on inwardly. The notes contain a very honest sentence: behind persistence lies hobby; "wanting badly to do it" leads to action — when you cannot keep going, what you lack is not fierceness but wanting.
7. **Willpower** (introverted action): the force of enduring inwardly. "Used to conquer pain" — the plan is set; what remains is bearing it.
8. **Reflexes** (extraverted action): the force of outward agility. "Once a habit is formed, there is no pain, only inertia" — the fastest reaction is the one that bypasses thought.

When Chapter 9 treats procrastination, these four weapons take the field one by one.

The non-ego boxes (the emotional's four tools for managing the rational — note, not the managed instinct, but the hand the emotional reaches over):

9. **Sensations** (extraverted perception): reports the senses take in directly from outside — cold, hot, sour, sweet; before reason opens its mouth, they have already voted.
10. **Feelings** (introverted perception): the part that ferments within — love, hate, closeness, distance, deepening with the years.

11. **Desires** (introverted action): things the heart schemes to obtain — impulses dressed as goals. Desire disguises itself as a plan and slips into reason's council chamber.
12. **Emotions** (extraverted action): the part that bursts outside — written on the face, directly affecting your dealings with the environment. Reason's most presentable plans are often flipped off the table by it in public.

The id boxes (the deepest stock, ruling you without a thought):

13. **Inborn knowledge** (extraverted perception): innate knowing — the part you can do without learning, shipped from the factory.
14. **Beliefs** (introverted perception): the heart's deepest certainties — things believed without argument.
15. **Experiences** (introverted action): the ruts past events left in the heart — quietly dictating how you scheme and choose.
16. **Habits** (extraverted action): patterns of action executed without thinking — the most effort-saving output, and the hardest to change.

What a person says when introducing themselves rarely escapes the four ego boxes; what truly rules a person shows in the four id boxes; and the outcome of either tug-of-war depends on whose tools are harder — the superego's four or the non-ego's four.

A Sharp Comparison: The Five Arts of Ruling the People

The author's notes contain a rather cold-blooded record: matching the five arts of governing the people from the *Book of Lord Shang* against the four boxes of the id:

The arts of ruling	The id
Unifying the people (one thought)	Inborn knowledge
Weakening the people (sapping strength)	Experiences
Exhausting the people (keeping them toiling)	Habits
Humiliating the people (breaking their pride)	Beliefs

The reading: the id's four boxes — inborn knowledge, experiences, habits, beliefs — are a person's deepest, most thoughtless parts; and precisely because they are thoughtless, they are the four ports most easily seized by outside forces. To know your own structure is also to know where your soft ribs are.

One Day on the Ring

Still too abstract? Watch the ring turn through a single day.

The alarm rings in the morning. **The id** says: five more minutes; how cozy the bed is (desire rising). **The non-ego** says: if you don't get up you'll be late, docked pay, how shameful (emotion begins managing your scheming). **The superego** says: up — only the self-disciplined deserve ideals (willpower strikes back). **The ego** says: quiet, all of you, let me reckon — no meetings this morning, so actually I can arrive twenty minutes late (independent thought makes the call).

You see, it is not "one" you making the decision; it is four parties on a ring running a relay. What we call being torn is the ring jammed; what we call decisiveness is the ring turning fast.

And who initiates "change"? Take the moment you finally rise — the initiator is not the id's discontent but the rational's computation: reason calculates that "enduring brings good results," and so dispatches the superego. Computing gains and losses, expecting consequences — reason's old trade. So **free will has its place in this framework: the self managing the self — a self-referential structure.**

How the Framework of Mind Relates to the Framework of Thought

At this point a natural question floats up: how does the Framework of Thought of Book II relate to the Framework of Mind in this book?

The author's view is layered:

- **The Framework of Thought is the ego's part — that is, consciousness's part, the rational's part.** The machine of Book II, centered on consciousness and broadcasting to the memory crowd, occupies only the "ego" segment of this ring. Thought is in essence a computing component, a mechanical component like a muscle — treat a person as a calculator, let them only input data and output results, and they are merely a calculator, with nothing to do with humanity. So thought alone cannot account for human nature.
- **The id is another structure running independently of thought.** Desires, habits, beliefs, inborn knowledge run on their own without thinking — even while you sleep, it runs. Dreams are the evidence: after falling asleep the subconscious stays active,

and a dream is the id's monologue once it slips the ego's leash — its position is exactly the id's box.

- **Id and ego interact to constitute the Framework of Mind.** The segment of consciousness (ego), plus the block of instinct (id), plus the two means of mutual management (superego, non-ego) — only then is a complete heart assembled.

So: **the Framework of Mind is more macroscopic than the Framework of Thought.** The Framework of Thought only governs how the computing component turns; the Framework of Mind governs the whole person — the computing component, plus its drive, its rival, and its hole cards.

The Core of This Chapter

Much information, but only one core sentence: **the heart is neither a pot of porridge nor a stack of floors, but a ring — the rational and the emotional each holding half, managing each other through two means, head joined to tail, turning day and night without rest.**

Next chapter, we fit this ring with finer gears: the operating lines of the four rows.

Chapter 5 The Operating Lines Within

The Cycle of the Ego's Four Boxes

The sixteen boxes of Chapter 4 are a static shelf. This chapter sets them in motion.

The author recorded the operating line of the "ego" row — four sentences forming a loop:

Only by sorting out upstream and downstream through relationships can you know which abilities to improve; only by earning money through career can you satisfy your hobbies; only with abilities can you develop a career; build relationships through shared hobbies.

Drawn out:

relationships —> abilities —> career —> hobbies —> relationships
(up/downstream) (improve) (earn) (satisfy) (build)

This is a flywheel of self-growth: **relationships tell you which abilities you lack; abilities prop up career; career funds hobbies; hobbies gather people back into relationships.** The four themes of a life are not a parallel list but a circulating production line. Wherever a link breaks, the whole line slows — a person without relationships doesn't know which abilities they lack; a person without a career cannot fund their hobbies.

Two Control Channels

Now the operation between the four rows (the ring of Chapter 4):

- **The non-ego** is the emotional's means of managing the rational: sensations, feelings, desires, and emotions surge up, and the rational plan is swept along;
- **The superego** is the rational's means of controlling instinct: attention, persistence, willpower, and reflexes strike, pressing impulses back into the rules.

The author also took special care to explain one easily confusing box: **the non-ego holds emotions — what does that have to do with rationality?** His answer: "Exactly. It is precisely because this part does not speak reason that it can help the emotional constrain the rational and control the rational." — Reason cannot rein in reason; what stops a person mid-oration is never a better argument but a surge of feeling. This explains why

on the debate stage "move them through emotion" so often beats "convince them through reason."

Where Happiness Comes From

The operating lines have one more application: happiness.

An article on Zhihu (China's Quora-like Q&A site) discussed "the sources of happiness"; the author fitted them into the four rows of the Framework of Mind:

Source of happiness	Framework of Mind row
Sensory happiness	Superego (rational·control)
External happiness	Ego (rational·spontaneity)
Serene happiness	Non-ego (emotional·control)
Harmonious happiness	Id (emotional·spontaneity)

Four happinesses, four channels: the satisfaction of bodily senses, of external achievement, of inner serenity, of harmonious relations. The author comments: most of the time a person is driven by instinct, and that drive is roughly **dopamine (actively seeking things to do) and anxiety (passively coping with things)** — and the four sources of happiness are exactly the feelings when the four interaction lines between instinct and consciousness light up.

A practical corollary: a person who long uses only one kind of happiness dries up easily. The four rows taking turns — that is a sustainable inner ecology.

Why the Four Happinesses Must Take Turns

Each of the four happinesses has its own dedicated "socket." That is not theoretical fastidiousness; it is lived experience.

A person who recognizes only external achievement feels suddenly empty after making director — the achievement socket is unplugged, and the other three sockets were never wired. A person who recognizes only sensory happiness finds it comes fast and leaves fast, and must keep raising the dose. A person who recognizes only serenity hides in the mountains for three years and returns to find they can no longer mesh with the world.

The four rows taking turns — that is a sustainable inner ecology: at work, plug into achievement; at meals, plug into the senses; in solitude, plug into serenity; with family

and friends, plug into harmony. Whichever row is long without power collects its debt by other means — insomnia, irritability, emptiness: all are dunning notices.

The mental machine now has structure (four rows and sixteen boxes) and drive (the operating lines). The state of this machine as it runs is your mood; its long-term running bias is your character.

Next chapter, back to MBTI: with this machine, we give MBTI an overhaul.

Chapter 6 Giving MBTI an Overhaul

Repair One: "Planning" Should Be Removed from MBTI

MBTI's J/P dimension is officially "judging/perceiving," and the popular phrasing is "J-types love planning, P-types love flexibility." The author performed surgery on this dimension. Here is the procedure:

Step one: separate thought from psyche. Treat a person as a calculator, letting them only input data and get results — then they are merely a calculator, with nothing to do with human nature. Thought is only a computing component, a mechanical component like a muscle; it does not need human nature.

Step two: check where "planning" belongs. What is a plan? The arrangement of a process by which a thing reaches its goal. A rock, too, has its causes, its external factors, and finally reaches a result — it, too, has a "process." Some processes need planning; some do not. Clearly "whether there is a process, whether it needs a plan" is an attribute of *things*, not of the *psyche*. **So MBTI's "planning" should be removed, because it has nothing to do with the psyche.**

Step three: install the true psychological dimension. The word "plan" can be replaced by "work arrangement" — that is transactional. The true psychological opposition is **perception (loving to experience, to input) versus action (loving results, output).**

The effect of this incision: MBTI goes from "four foggy labels" to "four psychological switches." J is no longer "a person who loves planning" (many people plan only because deadlines force them) but "a person who takes joy in producing results."

In MBTI communities, the mainstream lived experience of J/P is actually another language entirely: "loving certainty vs. loving openness." Can the two languages be translated? The author's translation is neat: **people who love openness are people who love thinking and dislike acting (perception)** — weak in action, hence weak in planning; **people who love certainty are people who love acting and dislike thinking (action)** — without thinking, of course things are certain; think more, and they stop being certain. As for people whose "plans keep changing"? Those are, of course, people with weak action.

Two People Who Both Make Plans

The biggest hole in the claim "loves planning = J-type" can be caught right in the office.

Among my colleagues are two famous "plan freaks." One is an action type: annual plans, monthly breakdowns, next week's schedule laid out on Sunday night — he makes plans because **only output makes him feel solid**; plans are his scaffolding toward production. The other actually loathes plans, but project deadlines come one after another, and without a plan he capsizes — he makes plans because deadlines force him; what his heart truly longs for is the pack-and-go weekend.

Same "loves planning": one is J (joy in output), the other P (joy in experience, pressed into spreadsheets by reality). Measured by "do you love planning," the two are the same type; measured by the Framework of Mind's switches, they are exact opposites.

This is why "planning" must be removed from MBTI: **plans are behavior, and behavior can be forced out by circumstances; switches are drive, and drive cannot hide.** Measure behavior and you measure the situation; measure drive and you measure the person.

Repair Two: S/N Also Needs a Thorough Rebuild

J/P is not the only dimension under the knife. S/N needs an equally thorough rebuild.

The official account: S is "sensing," attending to the concrete, the detailed, the facts at hand; N is "intuition," attending to the abstract, the possible, the overall picture. This division sounds clear and works muddy: a detail-loving artist and a big-picture engineer — which is S and which is N? Is "intuition" a source of information or a speed of reaction? The official theory never says.

The Framework of Mind's procedure is the same as for J/P: **replace the information preference with a psychological switch.** The true opposition in S/N is not "details versus the whole" but **control versus spontaneity**:

- **S (control)**: restraining oneself, obeying external rules;
- **N (spontaneity)**: indulging oneself, heeding the inner voice.

With this swap, the old observations suddenly make sense. Why do S-types seem "solid"? Because those who obey rules must watch reality — rules are written in reality to begin with. Why do N-types seem "intuitive"? Because those who bypass external rules have

only the inner voice left to hear. **Intuition is "direct" precisely because it bypasses the control of external rules.**

The author also left a piece of circumstantial evidence, an observation of the S-type's predicament:

S is often in the lower position: either others are greater than oneself, or some duty, some goal is greater than oneself.

Note that this sentence has nothing to do with "details versus the whole," yet dovetails perfectly with "control versus spontaneity": those who restrain themselves naturally tend to rank others, duties, and goals ahead of themselves. An observation about social posture landing exactly on the "control" switch — this suggests that what underlies S/N is indeed self-constraint, not an information channel. (This is of course a probabilistic observation, not type discrimination; it reminds S-types to watch for the dissolving of self-boundaries.)

Repair Three: Simplifying the Test

People often say MBTI gives a different result every time, so it cannot be trusted. The author's response is crisp: **don't design test items at all — ask directly, and let people state their own type.**

The reason: questionnaires simplify questions to gain feasibility, and in doing so import more uncertainty. Rather than letting a pile of foggy items guess at you, better to spell out the type definitions and let you claim your own. The problem thus shifts from "measurement precision" to "whether the type definitions are understood" — which is exactly what Chapters 1–3 of this book did.

Repair Four: Types Are Fluid

A major objection to MBTI runs "last year I was INFP, this year I'm ESFJ." The author acknowledges this fluidity and gives a list of influencing factors:

The factors influencing MBTI include: inborn, acquired, family, work, society, city, education, entertainment.

A person's type in front of their parents, at the company, and among old friends can be three different "waves" superposed. This is not test failure; this is the real structure of a

person — the superposition of innate and acquired personalities. Book VI of this series (the Grand Synthesis) devotes a chapter, "Multiple Personalities," to this question.

Repair Five: Beyond the Four Letters There Are More Letters

MBTI itself is actually incomplete — beyond the four letters, more letters can be added. Beyond the Framework of Mind (four dimensions), one can add the dimensions of the Framework of Thought (Book II) and the Philosophical Framework (Book IV). The author's arithmetic: from the three frameworks, people divide into $16 \times 16 \times 16 = \mathbf{4,096}$ **kinds**, not merely 16.

The sixteen types are only the front gate. Inside the gate are more than four thousand rooms.

Chapter 7 Comparisons with Other Personality Theories

Jung's Eight Functions: Returning to the Ancestor

MBTI's ancestor is Jung. *Psychological Types* proposed that the essence of personality is a system of cognitive functions. All functions can be split along two dimensions: information gathering (sensing S / intuition N) and decision judging (thinking T / feeling F), overlaid with the direction of introversion (I) / extraversion (E), forming eight functions — Se, Si, Ne, Ni, Te, Ti, Fe, Fi.

The correspondence with the Framework of Mind is direct:

Framework of Mind	Jung's eight functions
Rational (T)	Thinking function
Emotional (F)	Feeling function
Control (S)	Sensing function
Spontaneity (N)	Intuition function

(Jung reportedly said F and T both belong to the "rational" functions — the judging functions. This differs from the Framework of Mind's reading, which places T/F on the consciousness/subconscious axis; it stands as a divergence worth further investigation.)

There is also a derivative attempt, a Jung-inspired system that adds thinking dimensions beyond MBTI's four psychological ones, dividing people into 64 types — the "subject" corresponding to the discrete, the "background" to the continuous, the "whole" to the hierarchical, the "analytic" to the flat. This coincides with this series' expansion path: "Framework of Mind + Framework of Thought = 16×16 ."

The Big Five: A Fair Comparison

The Big Five is the most academically accepted personality model. The author's attitude mixes praise and criticism:

Where the Big Five beats MBTI: it is simpler and clearer. MBTI applies sixteen types wholesale — too complex, not rigorous; judging four or five independent factors directly is clearer.

The Big Five's shortcomings (three, in the author's view):

1. It fails to recognize **the distinctiveness of the combination**. The Big Five represents a person as five scores; MBTI represents a person as a combination — and a combination has holistic meaning: INTP is not the average of I+N+T+P but a "species" produced by the four interacting.
2. Its tone carries too much valuation, praise and blame — failing to recognize that **personality has no good or bad** (the very word "neuroticism" is pejorative).
3. "Neuroticism" is not an independent personality dimension — in the author's view, **neuroticism is the combination "rational·control"**: a person who speaks reason and restrains themselves is sensitive to losing control, and so appears neurotic. It is not a new dimension but a combination of two old ones.

The reader may disagree with this verdict. But please note the method of the verdict: check whether a candidate dimension is a combination of existing ones — this is the standard surgical procedure of concept-vector "de-duplication."

The Enneagram: Put Back into Four Boxes

The Enneagram describes nine personalities with nine words (perfection, helper, achiever, individualist, investigator, loyalist, enthusiast, challenger, peacemaker). The author fitted them into the Framework of Mind's four boxes:

	Perception	Action
Control	Perfectionist	Challenger
Spontaneity	Individualist	Helper
Introversion	Investigator	Achiever
Extraversion	Enthusiast	Loyalist
—	—	Peacemaker

Eight boxes hold eight types; the remaining "peacemaker" dwells alone in the ninth. The reading: the Enneagram's nine types are not nine parallel dimensions but combinatorial products on a few dimensions — eight are combinations, and one (peacemaker) may correspond to the state of "all dimensions centered." That the nine-grid could not be laid flat suggests the Enneagram's own axes of classification are questionable.



The picture above is the author's 2021 manuscript sketch: the Enneagram drawn as concentric circles, "peacemaker" at the center, the eight types arranged by introversion/extraversion and control/spontaneity — this chapter's correspondence table comes from that drawing.

Four Map Apps, One City

A century of personality theories each speaking its own tongue — what is that like? Like four map apps installed on one phone.

Open the same city: one app calls that road "Sun Yat-sen Road," another's layer is studded with snack shops, a third insists on its own colors and abbreviations. Four apps with different interfaces, different names, different layers — yet the city is the same city.

exactly that overlaying.

Summary of the Chapter

Jung's eight functions, the Big Five, the Enneagram, MBTI — a century of personality theories each speaking its own tongue. The Framework of Mind did one thing to them: **de-duplication**. The result: the four switches — control/spontaneity, rational/emotional, introversion/extraversion, perception/action — appear again and again; the differences among the theories are largely differences in how the combinations are made and named.

Chapter 8 An INTP Phenomenology: A Field Study of One Type

Why Single Out INTP

Sixteen types — why write only about INTP? Because the author himself is this type (self-confessed in many places in the notes) and writes it in the finest detail; and because INTP is one of the most discussed types on the internet, with the richest material. This chapter is a demonstration of "dissecting one type with the Framework of Mind" — the other fifteen types can follow the same prescription.

Starting from the Definition

Break INTP's four letters apart: **I introversion, N freedom-loving (spontaneity), T rational, P perception.**

From these four switches, by soft causality, the thinking traits with considerable probability are: strong consciousness, weak memory; strong creation, weak application; strong discrete thinking, weak continuous thinking; strong hierarchical thinking, weak flat thinking. Discrete plus hierarchical is abstract thinking — the INTP is abstract thinking incarnate.

Push further down, and with considerable probability come these bedrock worldviews: **complex, without a unified will, unchanging, global.** Complex without a unified will — the author calls this "jungle thinking": the world is not a play with a director but a jungle where each thing grows on its own.

Three Provocative Judgments

The author's notes contain three sentences that look at first like jokes and on closer look are sociological observations:

- "The INTP is spoiled by the family" — selfish, willful, cold, lazy: the other face of these labels is that the growth environment allowed him not to control, not to act, and still live fairly well;
- "Westerners are INTP";
- "Men are INTP."

From these he even wrote a half-joking "MBTI equation":

`` INTP is spoiled + INTP is the consumer + Westerners are INTP + Men are INTP
= Easterners are toiling working women ``

This equation of course cannot be taken literally — it stacks four probabilistic observations in an exaggerated way so you can see where the arrow points: **the INTP is a personality "supplied by its environment."**

INTP Is a Result of Material Abundance

This judgment has a serious version, which the author set down as a separate entry:

- **I (introversion)**: no need for social obligations — only in an age materially rich enough to live without mutual favors is solitude an option;
- **N (spontaneity)**: being one's own master, not a tool — only in an age where not everyone must obey the collective is freedom an option;
- **T (rational)**: reason in command, not a slave of feeling — only when secure and wealthy enough to ignore others' faces does speaking reason outweigh speaking feeling;
- **P (perception)**: more enjoyment, less work — only in an age of overproduction can "loving to experience" avoid starving.

Conclusion: with economic development, INTP is the trend of personality development. Conversely, "the Chinese (or rather Far Eastern) ESFJ personality looks like the personality of drudgery" — warm-hearted, responsible, considerate of others' feelings, diligently active: the optimal personality strategy for an age of scarce resources.

A type thus ceases to be merely a psychological fact and becomes an economic fact: **the distribution of personalities is a function of the environment**. This explains why cross-generational communication is so hard — the parents' personality is the optimal solution of an age of scarcity; the children's personality is the optimal solution of an age of abundance, and the two optima cannot stand each other.

This proposition is in principle testable — for instance, correlate countries' type distributions with their levels of economic development. The verification, the author cheerfully hands away: "Such surveys are not what I'm good at. I'm only good at daydreaming."

Facing ESFJ Across the Divide

The author says: "The difference between INTP and ESFJ is like the difference between West and East."

ESFJ: extraverted, control (S), emotional (F), action (J) — warm, rule-abiding, feeling-laden, forever bustling. If the INTP is the product of "one can live alone," the ESFJ is the product of "no one can live without anyone." Each personality is the masterpiece of its own age.

The author also recorded a more sour observation, from some online answer (he calls it "the INTP's mouthpiece"): "The INTP is spoiled by the family: selfish, willful, cold, lazy." — That sentence itself is an indictment from the ESFJ perspective. Two evaluation systems; neither can convince the other.

Summary of the Chapter

The whole process of dissecting INTP can be replicated: split the letters → derive the thinking traits → derive the worldview → place it back in the economic environment. A type is not a label but a causal tree that can be grown from seed to crown (soft causality).

Chapter 9 Applications: Procrastination, Compatibility, and Education

The Four Weapons Against Procrastination

Procrastination is the epidemic of this age. What the Framework of Mind offers is not a slogan of "be disciplined," but four weapons — for they correspond to the four boxes of the "superego" row:

In the superego (rational-control) row lie the four weapons for defeating procrastination. Really, for defeating the subconscious.

1. **Controlling attention** — the Pomodoro timer controls attention;
2. **Persistence** — keeping at one thing, with hobby as the driving force behind it. "Wanting badly to do it" leads to action;
3. **Willpower** — the fierceness used to conquer pain;
4. **Reflexes** — once a habit is formed, there is no pain, only inertia.

Note that the four weapons correspond to four different failures: scattered attention, cooled enthusiasm, fear of hardship, unformed habits. Procrastination is not one disease but four diseases sharing a name. Diagnose which box you are stuck in, then choose the corresponding weapon — this is how the Framework of Mind treats illness.

All four weapons come from the superego side. What about the non-ego side — sensations, feelings, desires, emotions, the **causes** of procrastination — is there a matching dissection? The author's answer is four characters: **weaken the signal**. His limit demonstration: stare at a white wall for half an hour, and afterward you will be full of drive — because anything is more interesting than staring at a white wall. Staring at a white wall is turning every signal down to zero.

The Four Weapons at the Gym

The four procrastination weapons get a full-dress rehearsal at the gym every day.

Attention: those who lock their phones in the locker do a set as a set; those whose phones sit on the treadmill interrupt a set for three messages. The first weapon starts with physical isolation. **Persistence:** those who show up year-round rely not on gritted teeth

but on "wanting badly" — wanting to fit back into those trousers, wanting to win at the class reunion. Love is persistence's engine. **Willpower**: the last set of squats, legs shaking, that voice in the heart saying "two more" — that fierceness of conquering pain, dispensed by the gym per session. **Reflexes**: the highest grade is the kind who simply go at the appointed time — no agonizing, no inner friction, shoes changed and out the door. Once the habit is formed, there is no pain in the gym, only inertia.

The members change cohort every year, and each is stuck in a different box: some scatter (attention), some cool (persistence), some fear (willpower), some laze (reflexes).

Next time, before scolding yourself for "procrastinating," first ask which box you are stuck in — four diseases, four prescriptions. The gym and the desk use the same prescription pad.

Compatibility: What Kind of People Belong Together

The author's notes contain two conjectures about compatibility, both honestly marked "not necessarily right":

- **Conjecture one**: those who differ in every respect, but not by much, are most compatible. The inspiration: "highly sensitive people and moderately sensitive people can get along" — total sameness is boring, total difference is conflict; "a little bit apart" gives the best tension.
- **Conjecture two**: perhaps compatibility means complementing each other in some respects and agreeing in others — like the staffing of a team.

Another, bolder: "Given present material abundance, finding someone similar is better; in harsh environments one needs someone complementary." (He jokes: hence more homosexuality.) And he cites a datum: studies suggest 80% of couples' traits are similar.

The methodological value of these conjectures exceeds their conclusion value: translating the mystical question of "compatibility" into the structural question "on which dimensions should partners be same, on which different" — this is exactly what concept vectors do.

Education: Diagnose First, Then Prescribe

The Framework of Mind's criticism of education is very direct:

First understand the scope of application; the first work is screening people. As with treating illness, diagnosis matters more — not inventing a panacea.

Education's current method of uniform processing has a very high rate of ineffectiveness. What is urgently needed is a front-end diagnosis, followed by offering multiple educational paths.

Think about it: primary school, middle school, university — vast quantities of ineffective education. Many people meet effective education only at work — first receiving a task, then learning around the task, learning nothing superfluous.

The author's proposal: the evaluation of an educational method could imitate the way drugs come to market — first "diagnose" (what type is this learner), then prescribe (which method works for which type), and also spell out the "indications" and "side effects." Meanwhile, much essential knowledge that schooling omits must be supplied by society.

This idea is known today as "teaching according to the material" — said for two thousand years. What the Framework of Mind adds is: **exactly which dimensions that "material" has** — introversion/extraversion, perception/action, rational/emotional, control/spontaneity, plus the Framework of Thought's four modes. Once the diagnosis has coordinates, the prescription can be written.

Summary of the Chapter

Procrastination must be treated by dividing it into four boxes; compatibility must be read by dimensions; education must diagnose before prescribing. The Framework of Mind's use is not to paste labels on people, but to equip the sentence "people differ" with operable coordinates.

Chapter 10 Conclusion: Beyond the Sixteen Types, Four Thousand More Rooms

The Whole Map in Review

The entire content of the Framework of Mind can be folded back into two tables.

The four switches:

Switch	Two poles	MBTI
Direction of attention	Introversion / Extraversion	I / E
Direction of drive	Perception (input) / Action (output)	P / J
Basis of decisions	Rational (reason) / Emotional (feeling)	T / F
Self-constraint	Control (restraint) / Spontaneity (freedom)	S / N

The ring within:

Row	Alias	Contents (four columns)	Role
Ego	Rational-spontaneity	Abilities, hobbies, career, relationships	Consciousness itself (= Framework of Thought)
Superego	Rational-control	Attention, persistence, willpower, reflexes	The rational's means of controlling instinct
Non-ego	Emotional-control	Sensations, feelings, desires, emotions	The emotional's means of managing the rational
Id	Emotional-spontaneity	Inborn knowledge, beliefs, experiences, habits	Instinct itself (running independently of thought)

Mental activity = the interaction of instinct and consciousness: the id acts on the ego through the non-ego; the ego manages the id through the superego; the rational and the emotional join head to tail, turning as a ring. The ego's four boxes also have an operating flywheel: relationships → abilities → career → hobbies.

The Three Boundaries of This Book

1. **Probability:** all inferences from type to trait are soft causality; whether to believe them is for your experience to judge;

2. **Fluidity:** types are influenced by eight kinds of factors — inborn, family, work, society, and so on — layered and superposed (see "Multiple Personalities" in Book VI);
3. **Incompleteness:** the four switches are only the psychological layer; adding the Framework of Thought and the Philosophical Framework, a person is $16 \times 16 \times 16 = 4,096$ kinds.

A Note on a "Social Personality"

The author's notes contain a hand-drawn figure: horizontal axis introversion/extraversion, vertical axis control/submission. It is a sub-framework not yet unfolded — the social personality: control or submit, inward or outward, four combinations. The figure says nothing more; it is like an unsprouted seed, recorded here, waiting for the future.

Preview of the Next Book

The person now has a structure; next, one step deeper: how does this brain do its work? Why do equally smart people fail to understand each other? Please open Book II, *The Framework of Thought: Four Ways of Thinking*.

B o o k I I

The Framework of Thought: Four Ways of Thinking

Why Smart People Talk Past Each Other

The previous book sorted people into types; this one goes one layer deeper: **thought itself**. What types of thinking are there? What does each look like? And why can knowing someone's thinking type cure more than half of all communication problems?

Contents in Brief

The information inside people's heads is organized differently:

- In some minds it is a **table** — everything has its attribute columns;
- In some minds it is a **tree** — everything is sorted into categories, with parents and children;
- In some minds it is a **line** — everything has a before and an after, a cause and an effect;
- In some minds it is an **outline** — everything is divided into chapters and sections, with heads and subheads.

Table, tree, linear, outline — these are the four ways of thinking. They arise from crossing two dimensions, "discrete/continuous" and "hierarchical/flat"; add the rows (memory/consciousness, production/operation), and you get a complete typology of thought. It answers the half of the question MBTI never answered: not only **what kind of person you are**, but also **how your brain does its work**.

How to Read This Book

Chapters 1–2 cover the underlying structure of thought; chapters 3–4 cover the two dimensions; chapters 5–8 give one chapter to each way of thinking; chapter 9 presents a famous pair of contrasts (people who compare by differences vs. people who compare by similarities); chapter 10 covers applications (academic subjects, careers, knowledge management); chapter 11 discusses the framework of thought and artificial intelligence; chapter 12 is a self-test and summary.

Every chapter is short; you can open the book anywhere.

Chapter 1 Why Talking to Some People Is So Tiring

A Familiar Moment

Have you ever had this experience:

You recognize every word the other person says; you hear every sentence; yet you simply cannot tell what they are trying to say. You ask them to "get to the point," and they feel every sentence is the point; they ask you to "see the big picture," and you feel they keep floating in the clouds.

Both people are smart, both are sincere, neither is hostile — and yet they just can't have a conversation.

We usually attribute this to "incompatible personalities" or "misaligned knowledge." But the author proposes another explanation, a much simpler one:

Poor communication is not something that aligning your knowledge points can fix. A large part of the cause is that the two people have different thinking types.

An Overlooked Classification

When people hear "classifying people," they immediately think of personality: introverted or extraverted, impatient or easygoing. MBTI perfected this craft.

But personality answers only half the question. It answers "what does this person want, what do they care about" — it does not answer "how does this person's brain process information."

Two people can have equally mild personalities and yet think in diametrically opposite ways: one hears a new idea and first wonders "which category does it belong to"; the other first wonders "what consequences will it lead to." The former lives in a world of classification, the latter in a world of causality. Asking them to discuss a problem is like asking an accountant and a novelist to co-write an essay — it's not that anyone is right or wrong; their **internal file formats are incompatible**.

In the author's words: "Classifying people's thinking types is extremely important, yet very few people pay attention to this question today. Personality type alone is not enough; thinking type is equally important."

This book exists to supply that missing half.

Can Thought Even Be Described Clearly?

Before classifying, however, a more fundamental question must be answered: can this thing called thought even be described clearly?

Modern science is embarrassed here. It can measure brain waves and take fMRI scans, yet it cannot say what "an idea" actually is. The author's judgment is blunt: precisely because the stones from other hills cannot crack this jade, we must build our own tool — using the method of Book III: observe the surface, guess the interior, build a model.

The entire framework of thought is a "guessed" owner's manual for the brain. It never opens the skull; it infers the internal structure purely from thought's outward manifestations (how a person reads, how they speak, how they organize their materials, how they make decisions).

Is the guess right? The test is not an autopsy report but this: can it explain the people around you? Can it predict what they will be good at and what will cause them pain?

A Sneak Preview: The Four Ways of Thinking

Let's show the answer first and argue for it slowly afterwards.

Way of thinking	What the information in the mind looks like
Table thinking	One big table: every object a row, every attribute a column
Tree thinking	A tree: every concept has parents and children, branches in good order
Linear thinking	A river: everything comes before or after something else, link after link
Outline thinking	A book: chapters and sections, unfolding level by level

You can run a little experiment right now: recall the last set of notes you took. Were they filled into columns and cells? Did you draw a tree diagram? Did you keep a chronological running account? Or did you first lay out an outline and then fill in the flesh?

The answer tells you something. See you in Chapter 2.

Chapter 2 The Central Stage: Consciousness and Memory

First, Separate Two Things

When you think about a problem, what is happening inside your head?

Taken apart, two activities are running at the same time.

One is called **memory**: storage. It handles learning, accumulation, and collecting. It does not speak; it only stocks the shelves.

The other is called **consciousness**: processing. It handles thinking, analyzing, and creating. It stocks nothing; it only runs.

This division is so plain it sounds like a truism. But it immediately yields a useful diagnostic tool:

- Some people have strong memory and weak consciousness — they read widely, know the answer to everything, yet rarely have views of their own;
- Some people have strong consciousness and weak memory — they haven't read much, yet they insist on working out their own account of everything.

The author sums up the two tendencies in eight characters: memory people love **learning and following**; consciousness people love **thinking and holding opinions of their own**.

You certainly know both kinds of people. And you yourself certainly lean toward one of them.

But Memory Is Not "One" Machine

A likely misunderstanding needs correcting here.

The moment people hear "memory handles storage," many picture a warehouse machine, a hippocampus, a hard drive — a single thing. That picture is wrong.

In the author's view, **memory is not one; it is a crowd**. The brain has no single unified warehouse; goods are stored everywhere — memory is many stores distributed across the brain, a crowd, not a unit. The subdivision is deliberately left undone here: we do not speak of visual memory or motor memory, only of **memory** — the real brain is very likely more complicated than that, memory may have no fixed partitions or centers, and the figure at the start of this chapter is labeled only with the word "memory."

What about consciousness? Consciousness is precisely the hub that mobilizes that crowd of memories.

The author uses a vivid metaphor: **consciousness is the central stage under the spotlight**. Whatever is lit on stage, the whole theater sees. Consciousness "broadcasts" information outward, broadcasting it to the crowd of memories everywhere — each site receives the broadcast and sends its own echo back. From this angle, consciousness is also "a giant neuron connecting all neurons," the rational center relative to the instinct centers.

So the accurate statement is: **the framework of thought as a whole is one machine — a machine centered on consciousness, broadcasting to the surrounding crowd of memories**. You cannot say consciousness is one machine and memory another; memory is a crowd, consciousness is the hub, and only together do they make up that one machine.

The author later answered two further questions about this machine. First, the broadcast is **received by everyone** — the spotlight doesn't light only one spot; memories everywhere receive simultaneously and each sends back its echo. Second, **attention** sits right inside this framework: the information that appears in consciousness is the information attended to; attention is the control over "what information appears in consciousness."

Then "who pushes information onto the stage"? The echoes from the crowd of memories send up the strongest signal — but consciousness is not limited to passive reception: **consciousness can control consciousness itself; this is a kind of self-reference**. (The relationship between this self-referential structure and AI gets a prophetic expansion in Chapter 9.)

The Same Structure in Two States: Production and Operation

Both memory and consciousness have two states:

- **Operation:** running the daily business — reviewing old memories, calling up old lines of thought;
- **Production:** making something new — forming new memories, generating new ideas.

Cross memory/consciousness with production/operation, and you get four kinds of mental activity:

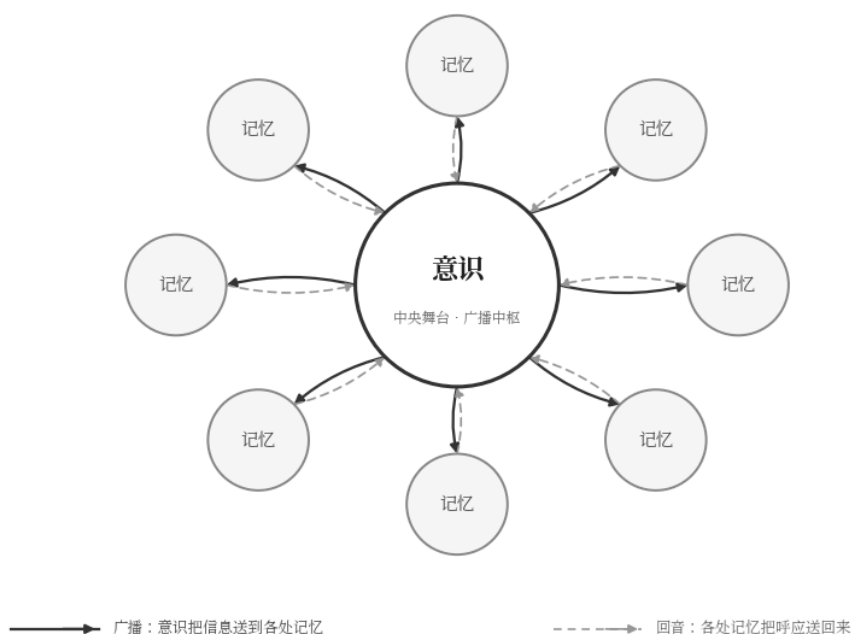
	Memory	Consciousness
Operation (use)	Learning (reviewing, retrieving, applying old knowledge)	Thinking (mulling things over with existing ideas)
Production	Digesting knowledge (new information written into memory)	Applying knowledge (new ideas produced, guiding action)

A complete example, to see these four activities turning:

You read a book on economics — new information arrives and is written into memory (**digesting knowledge**); a few days later a model from the book suddenly comes to mind, and you use it to mull over the housing prices around you (**thinking**); your mulling yields a conclusion of your own, which is written into your mind as a new memory (**digesting again**); next time a friend asks whether they should buy a house, your own analysis comes out in one breath (**applying knowledge**).

Memory and consciousness feed each other like this: **consciousness acting on memory produces memory; memory acting on consciousness produces consciousness.**

一台机器：意识在中央，记忆是一群



How a New Memory Gets Written In: A Calculation with ABC and ABD

"Consciousness acting on memory produces memory" — is there a more detailed picture of this process? In an early manuscript of the author's from 2014, a rough but vivid calculation survives (reproduced in full in Section V of the Supplement, "Understanding and Knowing Thought"):

The brain first receives a piece of information from the outside world; call it ABC; it is stored. A few days later another piece arrives; call it ABD. What the brain does now is compare ABD against the base ABC: the identical part is AB; the different parts are C and D. Once the comparison is done, the new information is written into memory in the form of "its similarities to and differences from the old information" — this is the bottom-level act of "digesting knowledge": **extract the similarities, filter out the differences.**

A few more days pass, and along comes ABCDE. The brain cuts it into two segments: a familiar segment ABC and a raw segment DE — information is first segmented, then filed away: ABC belongs to the letters branch, 123 belongs to the numbers branch; each goes to its place, and they are then organized according to their original relationships.

The calculation uses letters, but it describes something that happens every day: you remember a stranger by "who he resembles and who he doesn't"; you learn a new dish by "which two steps differ from the old dish." A new memory is never moved into the brain as a whole block — it is compared out, divided out, and filed out.

Being Good at Learning Is Not the Same as Being Good at Thinking

This looks like mere terminology, but it immediately explains a common misunderstanding.

"This person is such a good student — why can't he think?" Now we can say it precisely: his "operating memory" is strong and his "operating consciousness" is weak. The two activities are independent; strength in one says nothing about strength in the other.

Conversely: "This person is full of ideas — why are his exam scores mediocre?" His consciousness is strong and his memory weak. Exams test the operation of memory, not the production of consciousness.

Traditional education measures almost only the memory side. Whether a person is suited to research or to execution, to creation or to management, hides mostly on the

consciousness side.

Two Kinds of People You Can See in Any Office

Think of two types of colleagues in your office.

One type is the "living dictionary": company figures from every year roll off his tongue; ask him anything and he knows. But the moment the question is "so what should we do about this," he looks at you and waits for you to decide. — Strong memory, weak consciousness.

The other type is the exact opposite: ideas one after another, a new take at every meeting; but ask him for last quarter's numbers and he scratches his head: "roughly speaking..." — Strong consciousness, weak memory.

With that, the book's two underlying dimensions (memory/consciousness, operation/production) are fully laid out. Crossed, the two dimensions make just four cells — not much.

The truly exciting part comes in the next chapter: information is stored in this machine in completely different **shapes**. Those four shapes are the real watershed between one person and another.

Chapter 3 Two Dimensions: Discrete and Continuous, Hierarchical and Flat

The First Dimension: Discrete and Continuous

Close your eyes and think: "How do you remember a city?"

One kind of person remembers **a pile of locations**: my home, the office, that noodle shop, a friend's apartment... each location is a point, and the points need not connect. This is **discrete**: seeing the world as a tray of loose sand, then extracting the points' commonalities and individualities.

The other kind remembers **a few routes**: leave home, follow the river, cross the bridge, turn right, arrive at the office. Every location grows on a line. This is **continuous**: sequence in time, adjacency in space, causality in relation — in short, a line runs between things.

The author gives a brief and important correspondence: **the discrete corresponds to the abstract; the continuous corresponds to the concrete.**

Why? Because continuous information is concrete information itself — things are recorded just as they happened, unprocessed. The discrete, by contrast, requires processing: cut the connected world apart, pick out independent points one by one, then compare the similarities and differences among those points — precisely the act of "abstraction" discussed in Book III.

Discrete people: divergent, accumulating knowledge, a science-and-engineering temperament. **Continuous people**: holistic, leading to action, a humanities temperament.

Note the item "the continuous leads to action" — we will come back to it: continuous thinkers have the advantage in action — because things are continuous, there is no need to run them through the brain; you just walk straight down the line, so action can be immediate.

The Second Dimension: Hierarchical and Flat

Now think about another question: "Does the knowledge in your head have superiors and subordinates?"

Hierarchical people: yes. Knowledge is a tree, with a trunk and with branches and leaves; when approaching a topic, first lift the rope so the whole net opens, then walk down from the root. The author's criterion is very down-to-earth: **commonality makes hierarchy** — people who see commonalities among things cannot resist pulling the commonality out to serve as a parent class, and so a hierarchy appears.

Flat people: no, and no need for one. Knowledge is a level plain; every knowledge point is about equally important; the details themselves are the treasure. **Individuality makes flatness** — people who see individuality among things find every detail worth keeping on its own and cannot bear to hand it up into a generalization.

The author also has a very practical judgment: **"A hierarchical thinker is at least never lost."** Because hierarchy means a global map: seeing the whole scene from large to small, from far to near. People with no sense of direction do not lack memory; the maps in their heads are not layered — all the intersections crowd onto the same level, so of course they can't find north.

A compromise reminder is also due: the continuous can have hierarchy too — a map's regions and subregions, an action's big steps and small steps. The two dimensions are independent and combine freely.

Then is "continuous hierarchical" material (say, a book's outline) abstract? The author later drew a distinction: **hierarchy is not necessarily abstract**. Abstraction requires the discrete — it requires the comparison of multiple things, and in the continuous there are no "multiple things." Continuous hierarchy is merely the tidying of continuous information: a novel and its chapters are continuous information, and the novel's outline is not abstract; an academic book's content is itself discrete and abstract, and only then does its outline count as an abstraction.

The Origin of a Famous Saying

The physicist Freeman Dyson divided scientists into two kinds: birds and frogs.

Birds fly high and survey the broad landscape; they don't need much detail. Frogs crouch on the ground, staring at what is right in front of them, loving to go deep into the details.

In the language of this book: **birds are hierarchical; frogs are flat**. Science needs birds and needs frogs; the trouble is that birds and frogs look down on each other. Once you understand that these are two dimensions rather than a ranking of high and low, the quarrel between birds and frogs can be laid to rest.

Four Kinds of People Organizing Their Phone Photo Albums

The two dimensions sound abstract; open your phone's photo album and they are right there inside it.

Look at the first dimension first: what thread do you use to find a photo? One kind of person uses **time**: "that one from Qingdao last National Day" — sliding back along the dates, the photos all growing on a timeline. That's continuous. The other kind uses **theme**: "it's in the 'Food' album" — the photos have been cut into independent points and piled up by commonality. That's discrete.

Now the second dimension: does your album have superiors and subordinates? Hierarchical people nest albums inside albums: "Travel" splits into "Domestic" and "Abroad," and "Abroad" splits further by year — a tree. Flat people leave all five thousand photos lying in a single camera roll, and when they need one they just search "cat" — a level plain, retrieval instead of structure.

The two kinds can't stand the sight of each other: the hierarchical look at that porridge of a camera roll and their fingers itch; the flat look at those layers upon layers of folders and their hearts grow weary. In truth no album is right or wrong; dimensions only have positions — the four ways of thinking that begin in Chapter 4 are exactly the four filing methods produced by crossing these two dimensions.

Crossing the Two Dimensions

Now cross the two dimensions:

	Flat	Hierarchical
Discrete	Table	Tree
Continuous	Linear	Outline

Table, tree, linear, outline — four shapes in which information is stored; that is, four ways of thinking.

The next four chapters take them one at a time. As you read, we suggest bringing two people along in your mind: yourself, and one person you have never managed to have a real conversation with.

Chapter 4 Table Thinking: Everything Has Attribute Columns

Coordinates: Discrete + Flat

Picture an HR officer's computer screen: an employee table, one person per row, with name, age, department, performance each in its own column.

The whole world of a table thinker is one big table like this. All things are "rows," and each row carries several "columns" (attributes). Their way of getting to know a new thing is to ask: **What attributes does it have? What is the value of each attribute?**

The author's summary is one sentence: "There is a table in the head."

What This Kind of Thinking Looks Like

The everyday traits of table thinkers:

- **Comparing differences** is their instinct. Meeting two people, they align them without thinking: this one taller, that one shorter; this one impatient, that one steady. The ability of painters, musicians, and wine tasters to "feel the subtle difference in every brushstroke, every note" is the top configuration of this gear.
- **Collecting and applying** is their conscious activity. Their minds collect many different instances of a class of things — in a table, after all, the number of rows is wealth.
- Their way of **accumulating** knowledge is horizontal: they don't insist on fitting things into a system; they insist on a rich inventory.

The corresponding form in knowledge management, as the author also points out, is **tables, attributes, and tags**. People who love tagging people and things are mostly table thinkers.

Strengths and Costs

Strength: **discriminating details**. The ability the author assigns to this cell is "art" — people who can discriminate fine details have the advantage in every field requiring refined perception: connoisseurship, quality inspection, debugging, user experience.

Cost: seeing rows but not the tree. A hundred rows of data lie there; which row matters, and which row governs which — the table itself cannot answer. So table thinkers need to

watch out: the inventory grows bigger and bigger while the structure is never built.

In Holland's theory of vocational interests, "artistic" is mapped by the author onto this cell, for the same reason: the core ability of art is feeling differences.

The A4 Sheets at the Matchmaking Corner Are All Attribute Columns

If you want to see the folk headquarters of table thinking, take a walk through a park matchmaking corner.

An umbrella, a sheet of A4 paper, and on the paper no prose — only fields: "Male, born '89, 178 cm, master's from a 985 university, employed within the system, owns an apartment outright." A person compressed into one row of attribute values; hundreds of umbrellas spread out make one open-air table. The parents who stroll through scan horizontally — first they set a cutoff on the age column, then a cutoff on the property column, and only the remaining rows deserve a closer look.

Is this table cold-blooded? Cold-blooded. But it lays table thinking's instinct and cost out in the open: the instinct is **alignment** — hundreds of people can be compared at speed precisely because the columns are uniform; the cost is **seeing rows, not people** — the living human being behind that row of attribute values is more than any table can hold.

So the matchmaking corner keeps making matches, and keeps being disdained by the young. It is a handy sieve, but not a feeling heart — and that sentence can be handed, word for word, to table thinking itself.

Ask Yourself

If you make parameter-comparison tables when you shop, if you like Excel more than Word, if the way you remember a person's name is by features rather than by stories — welcome to the world of the table.

Chapter 5 Tree Thinking: Pull the Rope and the Whole Net Opens

Coordinates: Discrete + Hierarchical

If the table thinker's mind is a table spread out flat, the tree thinker's mind is an upside-down tree.

The world is a tray of loose sand? Fine — I'll **sort it into classes**. Similar points go into one group, different points off to the sides; above the groups there are bigger groups, gathered up layer by layer until a single root is collected at the top. The author's summary: "capable of abstract classification."

Biological taxonomy (kingdom, phylum, class, order, family, genus, species) is the monument of tree thinking. Library classification schemes, corporate organization charts, the folders on your computer — all are trees.

What This Kind of Thinking Looks Like

- **Comparing similarities** is their instinct. A table thinker sees a hundred things and a hundred differences; a tree thinker sees the three classes behind a hundred things. Labeling, classifying, deduplicating, finding patterns — all in one motion.
- **Understanding and imagining** is their conscious activity. To understand a thing is to know which branch it hangs on; to imagine is to try hanging the properties of one branch onto another.
- They pursue **unity**, value the big picture, and love to organize. The sight of disorder makes their fingers itch.

The author describes the direction these people travel on the great tree of knowledge: they pursue matters **toward the trunk** — forever asking "what does this belong to" and "what principle lies behind this," loving the thrill of one principle applied in many places, building the whole picture in the brain.

The Earliest Blueprint of the Machine Called "Imagination"

Tree thinking's conscious activity is "understanding and imagining." How exactly does the machine of imagination turn? An early manuscript of the author's from 2014 contains a more detailed blueprint (reproduced in full in Section V of the Supplement):

When we hear someone say "person A hit person B," we are able to construct that scene in our minds, and the action of "hitting" is likewise constructed in our minds. This is imagination.

The blueprint's logic is: imagination is not generated out of thin air; it is **feedback from discrete storage** — the mind has first stocked enough sorted old information (what A looks like, what B looks like, what the action "hit" looks like); when a new sentence comes in, the center calls up the relevant old goods, compares them, splices them together — and a scene never seen before is constructed. So the manuscript asserts: **discrete storage is the foundation of imagination** — the richer the inventory and the neater its classification, the more material imagination has to work with.

This also explains why tree thinkers (discrete + hierarchical) are good at "running experiments in the head": their inventory is organized as a tree, so retrieval is fastest and splicing smoothest.

Strengths and Costs

Strength: **abstraction and simplification**. The academic subject the author assigns is "the sciences" — the belief that the world, however complex, has simple laws behind it: first analyze out the fundamental laws, then use the laws to analyze and predict. Physics is an especially good fit: the skill of running experiments in the head.

Cost: in order to fit things into the system, they cannot resist trimming the feet to fit the shoes. Faced with a new phenomenon that fits no branch, the tree thinker's first reaction is to doubt the phenomenon, not the tree. The more perfect the tree, the stronger the rejection of the foreign.

The corresponding form in knowledge management: **inheriting attribute tags** — subclasses automatically inherit the attributes of the parent class. Learn one parent class and a whole field of subclasses comes free; this is the tree thinker's most satisfying experience.

Why Chinese Speakers Distinguish shu from jiu

Tree thinking is no bookworm's monopoly; the Chinese kinship terminology is a tree belonging to the whole people.

In English, the single word "uncle" lumps together father's elder brother, father's younger brother, mother's brother, father's sister's husband, and mother's sister's husband. Chinese refuses — paternal line or maternal line, split one big tree first (tang/biao cousins); older or younger than the father, split another layer (bo/shu); married in or born into the family, split yet another layer. Every relative has a precise coordinate on this tree of titles, and being off by one position is a breach of etiquette.

The tree's practicality gets tested every New Year: a child is led around paying respects, chanting "eldest bo, third shu, second jiu, eldest gu" — what he is actually doing is traversing a tree. And the tree pays back handsomely: once you learn the parent class "bo is father's elder brother," a whole generation's titles are inherited automatically, with no need to memorize them one by one.

One tree keeps the relatives of more than a billion people in order. The tree thinker's delight — learn the parent class, get the subclasses free — is something Chinese speakers have tasted since childhood.

Facing Table Thinking Across the Divide

Table thinking and tree thinking both belong to the "discrete"; both face a pile of points. The divergence is: one is content to collect the points; the other cannot resist layering them.

So these two kinds of people actually get along quite well (both attend to discrete information, their domains coincide, they can exchange information), yet they disdain each other: the tree disdains the table as "having no system"; the table disdains the tree as "not looking at details."

Don't rush to take sides. Chapter 9 will put this quarrelsome pair on the scales and weigh them carefully.

Chapter 6 Linear Thinking and Outline Thinking: Two Kinds of People in Time

Linear Thinking (Continuous + Flat): A River

The information in a linear thinker's mind is **connected from beginning to end**, like a novel, like a river, like a film.

In the author's words: "The information in the head runs from start to finish like a novel."

The keyword of this thinking is **sequence**: what happens first, what happens next, how it will end. Their way of understanding a thing is to tell it as a story; their way of predicting a thing is to follow the story forward — "and then?"

Linear thinking's conscious activity is **analysis and reasoning**: the chain of causality is their mother tongue. Because A, therefore B; because B, therefore C. The author's verdict on its ability is: **good at mathematics, because they can foresee consequences** — chess, deduction, dominoes: all are games of linear thinking.

The reader may blink: isn't mathematics the most abstract of disciplines — how does it land in the "continuous flat" cell? The author later supplied the argument: **mathematics has nothing to do with abstraction** — mathematics is unconcerned with reality, so there is no question of abstraction; its greatest demand is a **long chain of reasoning** — from axioms to theorems, link after link forward. And what continuous-flat thinkers are good at is precisely reasoning.

It corresponds to the "humanities" temperament: drawing directly on historical experience, caring about "how to use it," caring about how things came to be and where they are going. The ability to tell stories, to empathize, to imagine oneself inside a scene — all are gifts of the river.

The cost is also plain: a river changes course with difficulty. What linear thinkers are worst at is "stepping out of the plot" — when things are not arranged in temporal order (a big table, a tree-shaped classification), they easily lose patience.

Outline Thinking (Continuous + Hierarchical): A Book

Outline thinking is the upgraded edition of linear thinking: the river is still that river, but now there are channel markers, segments, and mileposts on it.

In the author's words: "Like an article or book with a table of chapters and sections."

This thinking processes a continuous stream of information, but instead of letting it flow as it will, it **layers it**: this matter divides into three phases; that project into five steps; each step subdivides into smaller steps. Maps have regions and subregions; actions have big steps and small steps — continuous, but with hierarchy.

Outline thinking's conscious activity is **generalization and decomposition**: cutting a big lump of continuous events into blocks (decomposition), and merging a pile of small blocks into one theme (generalization). The author's verdict on its ability: **good at completing a large undertaking step by step, because they can decompose**.

Project management, large-scale engineering, writing a book, governing a state — whatever is "large and continuous" is outline thinking's territory. Holland's "enterprising" type is mapped by the author onto this cell.

Cost: an outline is a skeleton; the flesh and blood must be supplied by other kinds of thinking. Outline thinkers easily mistake "planned" for "done," and easily lack flexibility toward accidents that are not in the outline.

A note in passing: the author had an intuition for this pair of correspondences very early on. His 2014 manuscript already says: "The thinking of short-story writers is mainly linear, while the thinking of novelists is mainly organizational." (Reproduced in full in Section V of the Supplement.) The two metaphors — "a river" and "a book" — grew out only years later; the seeds were planted back then.

The Master Table of the Four Ways of Thinking

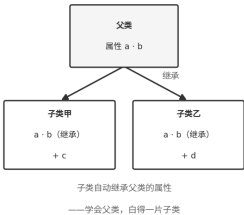
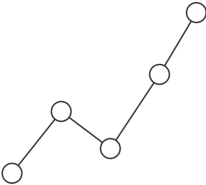
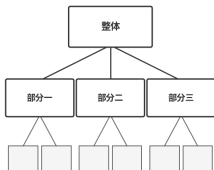
表格：离散的格子  每个格子独立成格，横竖可比	图谱：归类的树  子类自动继承父类的属性 ——学会父类，自得一子类	线性：一环扣一环  从头到尾，只有一条因果链	大纲：分解的树  整体不断分解成更小的部分
Memory production	Consciousness production	Memory operation (shape of information)	Consciousness operation

Table (discrete flat)	Comparing differences	Collecting and applying	Table	Focusing
Tree (discrete hierarchical)	Comparing similarities	Understanding and imagining	Tree	Diverging
Linear (continuous flat)	Comparing adjacent relations	Analyzing and reasoning	Linear	Linear
Outline (continuous hierarchical)	Comparing subordinate relations	Generalizing and decomposing	Outline	Decomposing

The "memory production" column deserves a reading of its own: the four ways of thinking enter the world through different gates — **comparing differences, comparing similarities, comparing adjacent relations, comparing subordinate relations**. What your first move in knowing the world is basically determines what your thinking is.

The Same Accident, Told Two Ways

Two cars scrape each other at an intersection, and the traffic officer arrives. A bystander speaks first, in the linear telling: "I saw it clear as day — first the white car comes out of the complex, wants to signal and doesn't; the black car, meanwhile, happens to glance down at his phone, looks up, and — bang!..." From beginning to end, not a second missing: one complete film.

The officer's report form is the outline telling: "1. Basic facts: time, place, parties; 2. Course of the accident; 3. Analysis of causes; 4. Determination of responsibility." The same accident is cut into four segments, each with a heading, and between the segments lies logic, not time.

Neither telling ranks above the other. The bystander's version is full of detail and puts you on the scene, but half an hour won't finish it; the officer's version can be handed off to the next processor in thirty seconds, but you cannot feel that "bang." One handles **experience**, the other handles **handoff** — the river's job is to flow; the book's job is to be flipped open.

Back to the Opening Question

The four ways of thinking are now laid out. We can go back and answer the opening question: why is talking to some people so tiring?

Very likely, you are an outline and he is a linear. You want "structure first"; he wants to "start from the beginning."

Imagine the two of you watching the evening news together. You can't hold back: "Give me the conclusion first — did the thing work out or not?" And he says: "Don't rush me, let me tell it from the start — first, last month..." Neither of you has anything wrong with you; the shapes of your information are simply different: one wants a tree, the other wants a line.

Without a format converter, it's the chicken talking to the duck. In the next chapter we give the conflicts between these two kinds of people (and between table and tree) a full unfolding.

Chapter 7 People Who Compare by Differences, People Who Compare by Similarities

First, the name: the author calls this theory of "comparing" **comparison theory**. In his later self-assessment of his system, this is the part he is most confident about and most eager to recommend — "more important than the philosophical framework."

A Sketch of the Two Kinds of People

This chapter comes from the longest single treatise in the original notes, titled simply "People Who Compare by Differences." What it depicts is a pair of mirror images inside the "discrete" world:

People who compare by differences: painters and musicians, who accumulate a great deal of material and can feel the subtle differences between works; domain experts, who command all the information of a field and can retrieve everything relevant to any topic. In everyday terms: meeting people, they compare big eyes against small, tall against short, fat against thin, and so describe a person in every aspect.

People who compare by similarities: facing a hundred things, they see three classes; they love induction, abstraction, labeling, classifying, deduplicating; they love the mathematical pleasure of "a few axioms yielding ten thousand results" — using abstraction to compress the world.

The author uses a beautiful metaphor: on the great tree of knowledge, **people who compare by differences pursue matters toward the leaves; people who compare by similarities pursue matters toward the trunk**. Those who walk toward the leaves care about application — after mastering a domain's knowledge, they want to produce results; those who walk toward the trunk care about principles — understanding the reasons behind, building the whole picture in the brain.

(In the language of this book: this is roughly the contrast between table thinking and tree thinking. But the original essay's intent is broader, referring generally to the two orientations within the great "discrete" tendency.)

A Tree of "Soft Causality"

The body of the original essay is a huge table of contrasts: starting from the way of thinking, it derives layer upon layer the differences between the two kinds of people in cognition, values, and human relations. At the opening there is an important declaration that must be read first:

The causal relations here are all **probabilistic causality**, without necessity. This is easy to understand: many causes produce any one result, so the final outcome is not very predictable. It can be called **soft causality**.

With this convention in hand, we select a few of the most explanatory chains of contrast (read each chain as "a tendency with a fairly high probability"):

Ways of knowing the world

- People who compare by similarities: abstract, simplify, find patterns and causes. The scientific cast of mind: although the world is complex, there are simple laws behind it and many necessary factors, so analyze the causes, then use the fundamental laws to analyze and predict.
- People who compare by differences: take in everything. Inclined to see the world as a mysterious black box; will believe many things, and do not think the world can be simply deduced. The humanities cast of mind: borrow directly from historical experience, don't analyze causes, care only about how to use it — like a neuron, signal in and signal out, with no reason to be given.

Why this difference? The author's explanation: the substance of memory differs. For people who compare by differences, the substance of memory is **distinct instances**, not the simple results of induction — hence they reject simplification, and lean toward complication, mystification, and wholesale acceptance.

Ways of treating the world

- People who compare by similarities: like to delve into one field, aiming at comprehensive understanding; comprehensive understanding is for the sake of digesting and thinking. They hope not to be disturbed by anyone or anything.
- People who compare by differences: like to master various skills, aiming at mastery, and mastery is for the sake of use — because they can see the improvement from each

round of practice. They value their network of contacts and spend a great deal of time maintaining relationships.

Principles and results

- People who compare by similarities: want the world to be like a soccer field — explicit rules, fair play; hold to principles and bottom lines; value the process over the result; treat everyone the same.
- People who compare by differences: tolerant, able to compromise; focused on results, on effectiveness, calculating benefit; treat different people differently — because they compare differences all day long, they naturally hold that people simply are different from one another, and treating different people differently is no problem at all.

Aesthetics and language

- People who compare by similarities: value substance — a chair, whether European-style, American-style, or Chinese-style, is for sitting on; value logical relations; abstract and deduplicate.
- People who compare by differences: value beauty, details, wording, and feeling — beauty is a field requiring enormous accumulation, exactly what "collecting" is good at.

How information is taken in

One last, exquisite contrast: people who compare by differences can only take in information through **rich information** — bodily experience, on-the-spot observation; people who compare by similarities can understand and infer a great deal of information from **a small amount of abstract information**, being good at deduction and at universal connection — show them one row of statistics and a whole world has already unfolded in their minds.

No Praise, No Blame

The original essay's notes are written with extraordinary solemnity and must be relayed:

- Listing so many differences does not mean the two are locked in opposition. On the contrary, the two often associate a great deal — because both attend to discrete information, their domains coincide, and they can exchange information. **But their lines of thought are different, and about the lines of thought themselves they cannot communicate.**

- This essay contains no praise or blame, no right or wrong. Both are understandable; each person should simply hold to themselves.
- If you want to work toward the middle way, take a look at how the other side does it.

There is also a gentle reminder: people who compare by differences "wear many masks" — not out of hypocrisy, but because in their eyes everyone is different and every occasion is different; saying the fitting thing to the fitting person is a natural result.

Two Ways of Visiting a Museum

A museum is an open-air laboratory for observing these two kinds of people.

One kind enters the exhibition hall and goes straight to the first exhibit, then looks at them one by one: this one's glaze is lustrous, that one's crackle is fine, the third has a rare form of mark on its base — every exhibit is unique in his eyes, and not a word of the placards is skipped. Three hours pass, and he still hasn't left the first hall.

The other kind enters and first looks for the floor plan: this museum is divided into five halls by dynasty; first get the thread, then pick the highlights. His steps are quick, ten seconds before each exhibit, yet in his mind a map is already assembled: what celadon is, what white porcelain is, what blue-and-white is — the ins and outs of the great categories, crystal clear.

At closing time the two meet at the door, and each feels the other came for nothing: "You walked so fast — did you see anything at all?" "You saw plenty, all right — but you never even leaned in close to the mark on the museum's treasure."

In truth the museum has room for both ways of visiting: the one who walks toward the leaves takes home texture; the one who walks toward the trunk takes home the map. What's to be feared is visiting for a lifetime with only one way.

Why This Chapter Matters

It is a live exercise of the entire "framework of thought": starting from one binary pair (comparing differences / comparing similarities), using soft causality to deduce dozens of observable differences, then using those differences to explain countless everyday cases of "mutual incomprehension."

Next time you want to say "how can this person be like this," you can swap in another question: is he a person who compares by differences, or a person who compares by similarities?

Chapter 8 The Four Modes in Everyday Life: Subjects, Careers, and Knowledge Management

Four Ways of Asking a Question

Set one thing in front of them, and the four ways of thinking each ask a different first question. The author's table of correspondences has only one row, but the longer you savor it the truer it gets:

Way of thinking	The question it asks
Table (discrete flat)	What is it
Tree (discrete hierarchical)	Why
Linear (continuous flat)	What will happen
Outline (continuous hierarchical)	What is to be done

What is it, why, what will happen, what is to be done — nearly all the questions humankind asks of the world fall within these four.

The reason students are strong in some subjects and weak in others lies here too: a school subject is essentially a training camp for one way of asking. People good at "why" fall in love with the sciences; people good at "what will happen" fall in love with the humanities; people good at "what is it" fall in love with art; people good at "what is to be done" will find school itself rather pointless — school doesn't teach what is to be done.

A Map of Subjects and Careers

The correspondences the author gives (as a first draft, for reference rather than as settled conclusions):

Way of thinking	Academic temperament	What it's good at	Holland interest type
Table	Art	Discriminating details	Artistic
Tree	Sciences	Running experiments in the head	Investigative, realistic, conventional
Linear	Humanities	Foreseeing consequences	Social

Outline	Engineering	Completing a large undertaking step by step	Enterprising
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One added word on why "discrete hierarchical is good at physics": physics requires first building a model in the mind (running experiments in the head), then checking it against reality. As for the more counterintuitive correspondence "continuous flat is good at mathematics," Chapter 6 already gave the full argument; no need to repeat it.

The author left himself room: "If someone is not good at these, they may lean toward memory or toward thinking. This is a preliminary reflection."

The Dewey Decimal Classification was also pulled in. Dewey, influenced by Bacon, divided human knowledge into three great parts: memory (history), imagination (literature and the arts), and reason (philosophy and science). The author maps table thinking onto art (imagination), tree thinking onto science (reason), and linear thinking onto memory (history) — the tripartite division of human knowledge has found its family home in the typology of thought.

Your Notes Give You Away

One interesting application is knowledge management. People of the four ways of thinking naturally manage knowledge in different ways:

Way of thinking	Form of knowledge management
Table	Tables, attributes, tags
Tree	Inheritance of attribute tags (classification systems)
Linear	Essays, novels
Outline	Articles with tables of contents

Think about your note-taking software: some people are all tags and tables (Notion databases), some are all nested folders, some are all long journal entries, some are all hierarchical outlines.

None is more advanced — **let the tool match the thinking, don't make the thinking accommodate the tool**. An outline thinker who forces himself to use a slip-box will harvest nothing but frustration. The quarrels among knowledge-management methodologies are mostly people of different thinking types selling to one another.

Asking for Directions, Four Ways of Pointing

Ask for directions in an unfamiliar place, and the four ways of thinking answer in ten seconds in four distinct schools.

The table thinker gives you **landmarks**: "Turn right when you see the red mailbox, then when you see a bank with a blue sign, it's on your left." — a string of attributes; align them and you find it. The tree thinker first gives you **structure**: "This area is a grid: east-west ones are called streets, north-south ones are called avenues; where you're going is around where Third Street crosses Second Avenue." — grasp the whole first, and the route grows out on its own. The linear thinker would love to walk you there: "First you go straight, pass one traffic light, keep going, when you see the footbridge don't go up, go under it, then..." — one complete road, paved from beginning to end. The outline thinker gives you **segments**: "Three legs. First leg, out of this alley; second leg, onto the main road and straight on; third leg, into the complex across the way. When you finish each leg, come back and ask me for the next."

All four pointings get you there. But which one you like hearing betrays what your thinking is; and how a person habitually points confesses his thinking. Asking directions is the cheapest thinking-type test there is.

Breadth and Depth, Two Last Strokes

Two final small dimensions, from scattered entries in the original notes, fit well here:

- **Production and operation**: production people are "broad" — they love fresh creations and new insights; operation people are "deep" — they love mature solutions and classic books.
- **Perception and action** (terms borrowed from the framework of mind): perception people are broad; action people are deep.

Breadth and depth have no high or low. It's just that when you're looking for a job or building a team, knowing who is to open up new territory and who is to hold the home ground spares a great deal of pain.

Chapter 9 The Framework of Thought and Artificial Intelligence: Consciousness as a Central Stage Under the Spotlight

What Is Consciousness

Consciousness is one of the greatest open cases in contemporary science. The author's view, however, is brisk:

I believe that if you are not wedded to mysticism, consciousness is not hard to understand. **Consciousness is a broadcast mechanism** (global workspace theory) — it is simply that memory, instinct, and sensation can reach consciousness.

Unpacking the metaphor: the brain is like a grand theater; the various brain regions are the cast and crew backstage (memory, instinct, sensation, emotion), while consciousness is the **central stage under the spotlight** — whatever information is pushed onto the stage, every department in the theater receives simultaneously. To "be conscious of" something is for it to "be broadcast."

The author placed his own position on the existing academic map: there are several schools of consciousness theory (global workspace theory, integrated information theory, and so on), and he states, "my answer belongs to information-processing cognitive psychology and to psychology in general" — consciousness is the central stage under the spotlight, a giant neuron connecting all neurons, and also the rational center relative to the instinct centers. He also said something harsher: after surveying the various schools, "it feels like the research is still in prehistoric times."

AI Is Unwittingly Verifying the Framework of Thought

More interesting still is the second half. From recent years of AI progress, the author sees the structures of the framework of thought being rediscovered by the engineering world:

- **The MoE (Mixture of Experts) architecture of large models** resembles his proposal that "thought is a star-shaped structure" — a central router distributing information to the expert modules. Bitcoin, too, has this structure: multiple agents competing for the right to broadcast.

- **360AI's CoE (Collaboration of Experts) method** calls on multiple large models to perform three steps: solving, supplementing, summarizing. He extrapolates: if this develops further into "send the problem to ten thousand large models, take back a few results, evaluate which is best, send it back to the ten thousand large models, and keep looping" — that becomes the consciousness model he imagined: a loop that keeps broadcasting and keeps converging.
- **AI has already touched causal inference** — in the language of the framework of thought, this is AI beginning to "compare adjacent relations."
- He also noticed directions such as "continual learning, nested learning": nested learning has many submodules, which satisfies the broadcast principle of the framework of thought; as well as designs that strip memory out of the model and distinguish deep from shallow memory — memory and consciousness separated, which is exactly the structure of Chapter 2.

Put these together: to build smarter machines, the engineering world is reconstructing, piece by piece, the structure of "memory/consciousness, broadcast/convergence." Not because the engineers read this theory, but because **the shape of the problem determines the shape of the answer.**

The Four Ways of Thinking = Four Kinds of AI

The author has an even prettier correspondence. The several technical routes of artificial intelligence happen to correspond to the four ways of thinking:

- **Mask the details and let the AI fill them in** (the principle behind large language models and image generation) — this is the **table**: completing a whole row from attribute fragments;
- **AI based on knowledge graphs and logic** — this is the **tree**: reasoning over a classification tree;
- **Mask the result and let the AI predict what happens next** (next-token prediction) — this is the **linear**: walking on down the causal chain;
- **Self-driving cars, maze-walking, gradually forming an overall map** — this is the **outline**: precipitating a layered structure out of continuous experience.

The author, however, later added a guardrail to this table of correspondences: **a large language model is not itself any one of the four ways of thinking** — it is a mechanism one level below "comparison-based thinking types," though as parameter scale grows, abilities resembling these four ways of thinking emerge. So the correct reading of this

table is **types of exam questions**: the four classes of tasks are for setting problems for AI — four question types corresponding to four ways of thinking, not a claim that some model "is" some way of thinking.

The evolutionary history of machine intelligence is walking the map of human thinking types all over again.

The Four Kinds of AI in Your Phone

"Four kinds of AI" sounds cutting-edge, but in fact you carry the full set in your pocket.

As you type, the input method keeps guessing your next word — walking forward along your words: this is **linear** AI. Your photo album automatically groups the same person's photos into one album and asks "who is this" — completing a row of attributes from fragments: this is **table** AI. Your phone map plans "40 minutes total, subway first, then walk" — precipitating a continuous road into a two-leg plan: this is **outline** AI. And behind certain question-answering apps there is a knowledge graph: you ask "who was Li Bai's father-in-law," and it chases down the chain of relations layer by layer — reasoning over a classification tree: this is **tree** AI.

Four technical routes, each company building its own, no one thinking they are verifying a theory of thought. Yet laid side by side, they happen to be the engineering editions of the four ways of thinking. The shape of the problem determines the shape of the answer — the machines took a great detour and walked back to the old map of the human brain.

A Prophetic Footnote

The author also recorded a judgment, placed here as this chapter's full stop: consciousness is a **self-referential structure** — thinking must have a kind of self-supervision. At present AI is managed by an external loop (a harness loop); the next step is necessarily to replace this loop with AI, letting the system manage itself. AI managing AI — the framework of thought calls this capacity "the control of thought," alongside the breadth, depth, and information capacity of thought.

When that day comes, the last cell in the framework of thought will be filled in.

Chapter 10 Self-Test and Summary

Four Sets of Self-Test Questions (from the Original Notes)

Below are four sets of minimalist self-test questions designed by the author. Rule: choose one of two in each set, and **don't think about "what I ought to be" — only about "what I actually do more often."**

A. Consciousness or memory? 1. I enjoy the pleasure of thinking about problems and solving them. 2. I prefer expanding my circle of knowledge and becoming a domain expert.

B. Production or operation? 1. I prefer novel creations and new insights. 2. I prefer mature solutions to problems, and classic books.

C. Continuous or discrete? 1. I prefer stories to scattered knowledge points. 2. I like mastering knowledge and don't care much about where it came from or where it's going.

D. Hierarchical or flat? 1. I like grasping a discipline's knowledge as a whole; overly detailed knowledge doesn't interest me. 2. I like detailed, operable knowledge; the overall jigsaw of a discipline doesn't interest me much.

When you're done, cross the results of questions C and D: C1D1 is outline thinking, C1D2 is linear thinking, C2D1 is tree thinking, C2D2 is table thinking. Questions A and B tell you which side of you is stronger: consciousness or memory, production or operation.

This self-test is only an entrance — the author's principle (see Chapter 10 of Book III): **your own judgment is more reliable than any questionnaire**; questionnaires only provide a mirror.

Four rulers. Working memory's capacity is measured differently in each of the four ways of thinking: linear thinking looks at how many steps of reasoning you can walk; tree thinking looks at how many things you can call to mind at once; table thinking looks at how many features you can hold in view simultaneously; outline thinking looks at how finely you can decompose a task. Whichever ruler is shortest, that way of thinking is your weak suit — faster than doing the self-test.

Summary: The Full Map of the Framework of Thought

At this point, everything the framework of thought owns can be gathered into one table:

	Table thinking	Tree thinking	Linear thinking	Outline thinking
Coordinates	Discrete·flat	Discrete·hierarchical	Continuous·flat	Continuous·hierarchical
Memory production (producing memory)	Comparing differences	Comparing similarities	Comparing adjacent relations	Comparing subordinate relations
Consciousness production (producing consciousness)	Collecting and applying	Understanding and imagining	Analyzing and reasoning	Generalizing and decomposing
Memory operation (operating memory)	Table	Tree	Linear	Outline
Consciousness operation (operating consciousness)	Focusing	Diverging	Linear	Decomposing

Plus two more dimensions: **memory/consciousness** (stocking or processing), **production/operation** (making new things or using old ones).

The "memory production" row deserves a reading of its own: the four ways of thinking enter the world through different gates — **comparing differences, comparing similarities, comparing adjacent relations, comparing subordinate relations**. What your first move in knowing the world is basically determines what your thinking is.

Sixteen Intersections, One by One

This table is 4×4; the sixteen cells are sixteen intersections: the rows are the four activities — "memory/consciousness × production/operation" — and the columns are the four ways of thinking. The intersections are the real protagonists of this table — what they answer is: **when this way of thinking performs this activity, what exactly does it do**. Let's look at them one by one.

Memory production — how the four ways of thinking write new information into memory:

1. **Comparing differences** (table thinking): compare the new thing against the inventory one by one and find the differences. A painter can feel the subtle difference in every brushstroke; a domain expert can retrieve every relevant piece of information on any topic; in daily life, on meeting people they compare big eyes against small, tall against short, fat against thin, describing a person in every aspect — this is comparing differences. They pursue matters toward the "leaves," recording the world finer and finer.
2. **Comparing similarities** (tree thinking): file the new thing under some class. Induction, abstraction, labeling, deduplication — all in one motion. They pursue matters toward the "trunk," loving the thrill of "one principle applied in many places," recording the world simpler and simpler.
3. **Comparing adjacent relations** (continuous flat): attach the new thing to what came before and after — which event it follows, which event it will lead to. A note of the author's from 2023 can bear witness for this cell: "Artificial intelligence has now touched causal inference — that is, it has begun to 'compare adjacent relations.'"
4. **Comparing subordinate relations** (continuous hierarchical): seat the new thing among superiors and subordinates — whom it belongs to, who belongs to it. Fix the position first, then talk of anything else.

Consciousness production — how the four ways of thinking produce new ideas:

5. **Collecting and applying** (table thinking): collect many instances of a class of things, then take them out and use them. A contrast from the notes: people who compare by similarities "understand" in order to digest and think; people who compare by differences "master" in order to use. See enough and you naturally know how to use — collecting is table thinking's way of creating.
6. **Understanding and imagining** (tree thinking): use the abstracted "class" to infer things never seen. Understand a class, and you can imagine members of that class that have not yet appeared.
7. **Analyzing and reasoning** (continuous flat): push forward along the causal chain. The notes say continuous-flat people are good at mathematics, "because they can foresee consequences" — once the chain is connected, the later links walk out on their own.
8. **Generalizing and decomposing** (continuous hierarchical): generalize upward into a master outline, decompose downward into steps. That a large undertaking can be completed step by step rests on this.

Memory operation — the shapes in which information is stored in the mind. This row was the protagonist of Chapters 3–6; here we only name them:

9. **Table**: a table in the mind, comparable across and down.
10. **Tree**: a classifying tree, subclasses automatically inheriting the parent class's attributes.
11. **Linear**: one river from source to mouth, link clasping link.
12. **Outline**: a book with a table of chapters and sections — build the frame first, then fill in the flesh.

Consciousness operation — the steering wheels of the four ways of thinking in daily operation:

13. **Focusing** (table thinking): nail attention to one cell and drill deep.
14. **Diverging** (tree thinking): leap in association from class to class. A reminder from the notes is worth copying here: "the side effect of concentration is that it conflicts with divergent thinking" — focusing and diverging are a gear dispute between two ways of thinking.
15. **Linear** (continuous flat): think all the way down the chain; dreads interruption above all.
16. **Decomposing** (outline thinking): on meeting a task, first break it into blocks, then do them block by block.

One last addition — the author's own unresolved doubt: he once asked himself whether the consciousness-operation row should be changed to "breadth of thought, depth of thought, information capacity of thought, control of thought." The final version did not adopt this, but the question mark itself shows that the consciousness-operation row is the part he is still polishing to this day.

What It Answered, What It Didn't

It answered: why communication is tiring, why students are lopsided across subjects, why the tool quarrels are boring, why different AI routes resemble four kinds of people.

It did not answer: can your way of thinking be changed? The author later supplied the answer: **thinking can be trained** — it's just that, compared with personality types, thinking types are harder to change and more stable. Knowing that the leaning exists is itself the beginning of change: an outline thinker who knows the person across from him

is a linear thinker will no longer say "can you get to the point first," but rather "tell it from the beginning, and I'll make the outline myself."

He also clarified one spot that is easily misread: **a person necessarily commands all four ways of thinking, and is simply better at one of them.** In different domains, everyone habitually brings out the one they are good at; but no domain uses only one way of thinking. Go is the best example: some players have a sense of the whole board, some can shape good form, some are good at calculation — yet no player can know only one of these; one who excels at the whole board cannot be too bad at calculation either. Of course, different domains demand different proportions of the four ways of thinking. As for more precise measurement, the author admits he has not thought it through; one can only reflect on oneself against the descriptions in the book.

Half the cost of communication is paid to "format incompatibility" — and a format converter is something you can install yourself.

Preview of the Next Book

The framework of thought has made clear "how the brain does its work." After reading through the two books on mind and thought, one question can no longer be suppressed: where were these classifications manufactured?

The answer lies in the foundation of the whole book — the method itself. Please turn to Book III, *Concept Vectors: A Method for Defining Concepts*.

B o o k I I I

Concept Vectors: A Method for Defining Concepts

A Thought Tool That Arranges Concepts as Clearly as Elements

Contents in Brief

The first two books (on people and on thought) have been using one tool all along without naming it. This book brings it onstage: it is the foundation of the whole volume, and it explains "how classifications are manufactured."

We use concepts every day: introversion and extraversion, rational and emotional, simple and complex, whole and part... But where do these concepts actually come from? Why are some concepts clear and others muddled? Why do two smart people argue for half a day, only to discover they were saying the same thing all along — or were never talking about the same thing at all?

This book presents a method called the **concept vector** (formerly named "binary genes"). Its claim is bold and simple: **any concept can be expressed as a combination of binary dimensions**, just as any substance can be expressed as a combination of elements. MBTI describes sixteen personalities with four letters; the eight trigrams describe eight hexagram-images with three lines — both are instances of concept vectors; it's just that no one before spelled the method out.

This book systematically answers: what a concept vector is, where it comes from, which rules it follows, what it can be used for, and where its boundaries lie. After reading it, you will have a pair of "concept-dissecting" eyes: whenever you see a pair of antonyms, a four-quadrant diagram, or any classification system, you will recognize the same structure behind them all.

How to Read This Book

- Chapters 1 and 2 explain "why it is needed"; Chapter 5 explains "what it is"; impatient readers may jump straight to Chapter 5.
- Chapters 3 and 4 present the methodological prerequisites (abstraction, modeling, analogy) — the scaffolding for understanding the whole book.
- Chapters 6–10 are rules and applications; Chapter 11 covers the intellectual sources; Chapter 12 is the summary.
- Each chapter can be read independently; when you want to dig into a term, consult the glossary at the end of the volume (see the Supplement).

Chapter 1 Origins: Is Thought Really Indescribable?

A Common Argument

A family is debating whether their child should sign up for piano lessons. The father says: first, the child isn't interested; second, two lessons a week is too much hassle; third, learning it may not be useful anyway. The mother says: first, all her colleagues' kids are learning; second, music cultivates character; third, if the child doesn't learn now, he'll regret it later.

Both could list ten more reasons. You sit there listening, growing more and more confused: should you side with reasons one-two-three, or four-five-six?

Is this argument really "one-two-three" versus "four-five-six"?

The author of this system of thought says: no.

His account is: whether one-two-three or four-five-six, behind them all are a, b, and c. The two sides are fighting because both are attacking each other with **assembled finished products**, never having taken the products apart to check whether the **components** inside are the same batch.

Take both one-two-three and four-five-six apart down to the level of a, b, and c, and the situation changes: behind the father's "no interest" and the mother's "cultivates character" stands the same component — **what is learning the piano actually for**; behind the father's "too much hassle" and the mother's "will regret it later" stands another component — **whether the time and effort are worth it**. The real disagreement is down to one or two components, which can be discussed on their merits; on all the rest, the two are actually saying the same thing.

This is the starting point of the whole system of thought: **concepts are assembled, and anything assembled can be taken apart**.

Seven Questions: The Birth Certificate of This System

The author's notes preserve a chain of questioning that he himself calls the "origins." Seven questions, step by step, forced out the entire method.

Question one: Is human thought really indescribable?

The current state of psychology seems to support "indescribable." Psychology has dozens, even hundreds of branches, each talking past the others; on personality alone there are

MBTI, the Big Five, the Enneagram, Jung's eight functions, and various temperament theories, and no one can fully explain how they relate to one another.

But the author's judgment is the opposite: it isn't that hard. The problem is the method — we lack a handy tool.

Question two: If it can't be described directly, can we use "guessing" — inferring the internal mechanism from outward appearances?

That is exactly what traditional Chinese medicine does. The ancients had no means of dissection, so they observed external signs, guessed at the body's internal workings, and then tested their guesses against clinical results.

Physics, facing elementary particles that for now cannot be split, likewise can only guess and hypothesize, first obtaining a usable model, then looking for more evidence.

If Chinese medicine and physics can both work on objects they "cannot see through," why not thought and consciousness?

Question three: There are so many appearances — which are fundamental?

A person's appearances are endless: the words he uses, the way he walks, his spending habits, the look of his anger... If every appearance were studied on its own, a hundred years wouldn't be enough.

There must be a way to recognize, among the sea of appearances, which are "components" and which are "finished products."

Question four: How do we pin down the relations between nouns?

Start with the simplest case. Antonyms stand in a relation of opposition; synonyms in a relation of proximity; what dialectics studies is the relation of unity-in-opposition between two words.

Two words already involve so much nuance — so then:

Question five: Can more complex relations among four words describe things even more precisely?

Four words, each pair bearing a relation — the total number of relations jumps up at once. If the four words are well chosen, they can stand like four pillars, holding up a complete conceptual space.

Question six: Where do these four-word sets come from?

The answer appeared: **a set of four words is generally a composite concept formed by combining two "concept vectors."**

A concept vector is a pair of antonyms — large and small, inner and outer, motion and stillness. Two concept vectors, each with two possible values, combine into exactly four. Three concept vectors combine into eight, four into sixteen, and the combining can go on.

Question seven: What is the benefit of doing this?

The benefit is immediate: once the combinatorial relations among concepts are clear, the number of nouns that need studying drops dramatically. What used to be hundreds of concepts to memorize one by one now requires only understanding a few dozen "genes"; everything else is permutation and combination.

How Big Is This

At the end of this chain of questioning sits a considerable ambition:

What the concept vector actually answers is the fundamental question "how are concepts defined, how are concepts generated." And conceptual abstraction is the foundation of philosophy, the foundation of everyone's thinking, the foundation of culture — the foundation of everything connected with abstraction: language, programming, information, thought.

That sounds grandiose. But first remember what it looks like in daily life.

Before the periodic table appeared, chemists faced dozens of seemingly unrelated substances, and every new element discovered felt like winning the lottery. After Mendeleev arranged them into a table, even the empty cells in the table acquired meaning — they predicted elements yet to be found.

The world of human concepts today is in the state "before the periodic table appeared": within the mountain of knowledge, a great deal is one meaning repeated in ten thousand ways; meanwhile, truly important conceptual combinations are left out, mentioned by no one.

The concept vector wants to be the periodic table of concepts. It may not fully succeed, but its logic is simple enough that anyone can learn it in ten minutes — and then spend a lifetime testing it.

The Components in a Sichuan Menu

"Components" sounds like a factory word, but the kitchen has them too.

Open the menu of a Sichuan restaurant and you see dozens of dishes: fish-fragrant shredded pork, kung pao chicken, mapo tofu, twice-cooked pork... Outsiders are dazzled, feeling each dish is a discipline of its own. The chef doesn't see it that way. The chef looks at the row of seasoning bowls by the stove: scallions, ginger, garlic, bean paste, sugar, vinegar, Sichuan pepper, chili. Take the dozens of dishes apart and they are all different ratios of that one row of seasonings — fish-fragrant is the ratio of sugar, vinegar, and bean paste; kung pao is scorched chili plus sugar and vinegar; mapo is bean paste and Sichuan pepper with minced pork.

So a chef learns his craft not by memorizing a hundred recipes but by getting that row of components into his fingers. Once the components are familiar, dishes are permutations and combinations; someone who only memorized recipes is lost the moment an ingredient changes.

Concepts are like dishes. The grand principles we argue about, study, and memorize are overwhelmingly "finished dishes"; what this system of thought wants to do is take you to see the row of seasoning bowls by the stove.

A Map of This Book

This slim volume unfolds along three lines:

1. **The problem line** (Chapters 2–4): Why is the scientific method not enough? Where science falls short, what other methods can we use?
2. **The method line** (Chapters 5–8): the formal definition of the concept vector, the basic relations among concepts, dimension axes and grayscale, the naming and encoding of concepts.
3. **The value line** (Chapters 9–12): what it can and cannot do, how others will challenge it, and who its intellectual ancestors are.

Before we begin, one convention of the author's must be accepted. He says: it is impossible for every word to be one-hundred-percent precise — the world doesn't have that many words to use; readers must "awaken" for themselves to the thing a word points at.

This is not turning readers away; it is loosening the reins in advance: this book is not read by picking at wordings, but by following the examples. The examples are all everyday matters; once the meaning arrives, the words arrive.

Convention accepted. Now let's walk into the first real question: science is already so advanced — why does this book get a turn at all?

Chapter 2 Why Science Is Not Enough

First, a Salute to Science

One fair word first: this chapter finds fault with science precisely because it respects science.

Science is the most successful cognitive tool humankind has invented to date. The boiling point of water, the load a bridge can bear, the dosage of a drug — in these domains the answers science gives almost never miss.

What the author opposes is not science, but a state of mind he calls the "Church of Science": the belief that only science is right and everything else is wrong; the belief that whatever science cannot reach is not worth thinking about, or does not even exist.

The problem is that the places science cannot reach are far larger than we suppose.

Six Limitations of Science

The author's notes contain a list of science's limitations.

One: Science values the big picture, not the details.

Science cares about large phenomena that are significant in large samples; it does not invest research into overly fine phenomena.

Take the pulse signs. In Chinese pulse diagnosis, dozens of varieties are distinguished — floating or sinking, slow or rapid — each corresponding to accumulated clinical experience. But such subtle differences, dependent on the feel of an individual's fingertips, can hardly enter science's field of vision — not because they don't exist, but because they are too "small," too small to organize large-scale experiments to verify.

Two: Science looks at causes, not at antecedents.

Science asks "what caused what" and demands a clear causal chain.

But in many real matters, what is at work is not a "cause" but "antecedents" — a series of historical conditions, environmental ground-work, chance encounters. Antecedents do not constitute a strict causal relation, yet they genuinely influence the outcome. Which city a person chooses to develop his career in today is often not determined by some "cause" but piled up out of a dozen years of antecedents.

Three: Science values certainty and handles complexity and multi-factor influence poorly.

This is the crucial one.

The ideal scene for the scientific method is: hold all other variables constant, move just one, observe the result. But when a matter is influenced by dozens of factors at once, with feedback among the factors, the control-of-variables method fails.

Psychology, sociology, and economics face nothing but such objects.

Four: Science values deduction — but deduction is not science's monopoly.

Fairness also runs the other way: non-science, too, can use the tool of deduction, and having used it becomes more rigorous, more certain, more conducive to consensus. The concept vector presented later in this book is precisely a non-scientific method that uses deduction heavily.

Five: Science demands reproducibility and handles the non-reproducible poorly.

The classic example is history. History cannot be run again as a controlled experiment.

All research that depends on one-time events — history, archaeology, parts of geology, and every person's unique life — lies outside science's comfort zone.

Six: Science favors the "low-level" tools like physics and chemistry over high-level regulation.

"Low-level" is no disparagement; it refers to the level: physics and chemistry study the bottom layer of the material world.

But many real problems are high-level problems of regulation — managing a city, nursing a body, running a relationship. The bearing of bottom-layer laws on high-level problems is like the bearing of quantum mechanics on stir-frying: related in principle, useless in practice.

Fixing a Computer and Mediating a Quarrel

Where science's boundary lies becomes clear the moment you compare two household matters.

One is fixing a computer. The computer won't boot; someone who knows the trade has a standard sequence: first swap the power cable, if that fails swap the memory stick, if that fails pull the graphics card — moving only one variable at a time; whichever step fixes it,

that's where the fault was. This is science's perfect home field: variables controllable, experiments repeatable, the causal chain crystal clear.

The other is mediating a quarrel. A young couple is fighting, and you are asked to judge. As you listen you discover: it began with a sentence last week; that sentence implicates last month's accounts; the accounts implicate the mother-in-law; the mother-in-law implicates the seating at the wedding three years ago... Dozens of factors bite each other's tails, and not a single "move just one variable" experiment can be done — you can't exactly remove the mother-in-law temporarily to see whether the quarrel still happens.

Fixing computers: science's business. Mediating quarrels: not science's business. And in life, quarrels far outnumber broken computers. So the "six limitations" are not a bookish list — they are every family's daily routine.

Why Psychology and Economics "Can't Squeeze Into" Science

The author has a sharp observation: disciplines like psychology and economics keep trying to squeeze into science, but they simply can't.

Why? Because the objects these disciplines study share several traits: too many uncontrollable factors; change the conditions and the results change. Surveys, statistics, experiments — all are "pretending to be science."

Surveys and statistics are of course meaningful, but they must not masquerade as science — they can only be called **summaries of phenomena**, and they should be content to be summaries of phenomena.

Push one layer deeper: why can't these fields become science? The author gives two reasons.

First, individual differences are too large, and both individuals and environments change with the times.

Physics studies electrons, and every electron under heaven is alike; psychology studies people, and no two people under heaven are alike. Not only are people unlike each other — the same person this year is unlike himself last year, and this generation is even more unlike the last.

Second, once complexity passes a critical point, the most important phenomena are "mutual influence and positive-and-negative feedback."

It isn't merely that induction stops working; the nature of the object itself has changed. The human body counts as a system with rather high stability, yet even so, half of its

phenomena are already phenomena past the critical point of complexity.

So the author's claim is: psychology and sociology are, like history, disciplines that "grasp the phenomena and then interpret them." What they lack is an underlying model. This system of thought — especially the framework of thought, the framework of mind, and the philosophical framework presented later — is precisely an attempt to supply these fields with an underlying model.

Science, Philosophy, Theology: A Division of Labor

Science is not enough — so who governs where it falls short? The author has a very concise chart of the division of labor:

What science cannot solve must be solved by other lines of thinking — that is philosophy. What philosophy cannot settle by persuasion, one can only pick one and believe — that is theology. (A joke: what comes after theology is classification — because classification can explain why you believe this rather than that.)

This chart deserves two more words. It does not belittle theology; it points out a fact: the problems humankind faces naturally fall into three layers.

- The first layer: **the verifiable**. Hand it to science; let experiments and observation adjudicate.
- The second layer: **the unverifiable but debatable**. Hand it to philosophy; let logic and reasoning compare the merits of the various accounts. The abstract modeling this book teaches lives on this layer.
- The third layer: **what can be neither verified nor settled by debate**. Each person can only pick one and believe. This is nothing to be ashamed of — the most important decisions in life (what values to hold, what kind of life to live) are all on this layer.

The error of the "Church of Science" lies in declaring that the second and third layers don't exist, or pretending they can be folded into the first.

In reality, second- and third-layer problems not only exist — they often bear more directly on human happiness.

One Morning, Three Layers of Problems

The three-layer division sounds abstract, but an ordinary morning runs into all three.

In the morning you open the fridge: the milk expired one day ago — drink it or not? That's a first-layer problem: verifiable. Look up what a sell-by date actually means, sniff for spoilage; the answer exists objectively and is the same whoever checks.

Mid-morning a friend messages you, inviting you to be partners in a small business — go or not? That's a second-layer problem: unverifiable but debatable. No instrument can tell you "go," but you can lay out the facts, calculate the risks, think through the exit routes, and debate the pros and cons layer by layer — the abstract modeling this chapter speaks of lives on precisely this layer.

At lunch, an elder at the table suddenly asks: "A person lives a whole lifetime — what for?" The table goes quiet for two seconds. That's a third-layer problem: neither verifiable nor capable of a standard answer by debate. In the end each person can only pick an answer to believe — those who pick "for the fun of it" and those who pick "for peace of mind" live two different lives.

What makes the "Church of Science" hard to bear is its insistence that second- and third-layer problems don't exist. Yet not even one morning can be fooled: the three layers of problems each have their own solutions, and none can replace the others.

A Concrete Dispute: Can Bayesianism Define Science?

A claim has been popular in recent years: the essence of science is not falsifiability but Bayesianism — science is the process of continually updating credences according to evidence. Some popular-science writers proclaim that "falsifiability is outdated."

The author explicitly disagrees.

His view: to judge whether something is science, still look to falsifiability; it is precisely abstract models like the concept vector that make use of Bayes.

Why? Because Bayesian credences differ from person to person; they are subjective, and many are unverifiable. Science became science precisely because it pursues intersubjective agreement — anyone performing the same experiment should get the same result. If "subjective credence updating" also counts as science, then science's boundary vanishes, and anything can be stuffed inside.

This dispute is told here because it happens to preview this book's position:

- To science, what is science's — falsifiable, reproducible, necessary laws or the law of large numbers;

- To abstract modeling, what is abstract modeling's — credences vary from person to person; the test is "is it useful," acknowledging probabilistic validity;
- Each has its own domain of application; neither may annex the other.

Summary

The boundary of science is not a defect of science, but the conditions of application of the tool called science.

Admitting that science has boundaries is not opening the door to ignorance; it is making room for other legitimate ways of thinking — abstraction, modeling, analogy, deduction.

In the next chapter we take a serious look at what these "non-scientific" ways of thinking actually are.

Chapter 3 **Abstraction: Humankind's Oldest Thought Tool**

You've Been Using It Since Childhood — No One Told You

The word "abstraction" sounds like philosophy-department jargon. In fact it is the opposite: it is something you use every day, used but unnoticed.

Language itself is abstraction. When you say the word "chair," you mean neither the wooden chair in your home nor the swivel chair in your office; you have circled all sittable things into one group.

Circling things that share a similarity into one group — that is abstraction. Conversely, dividing a group into two groups according to some difference — that difference, too, is abstraction. The process of dividing one set into two sets according to similarities and differences is the whole process of abstraction.

Personality psychology has a famous case.

The way the Big Five personality theory came about is essentially the "lexical hypothesis": researchers collected every word in human language that describes personality, ran statistical analyses to see which words always appear in clusters, and finally induced five personality factors.

In other words, the Big Five was "panned" out of the sediment of linguistic abstraction. Our ancestors compressed ten thousand observations into vocabulary; the researchers then decompressed the classification back out of the vocabulary.

Abstraction — compression — abstraction again: that is the assembly line of humankind's concept factory.

A "Have you eaten?" Is the Zip File of a Meal

Chinese people greet each other: "Eaten yet?" "Eaten."

The two characters of "eaten" compress an entire meal — what was eaten, where, with whom, whether it was good — all packed up, not one detail mentioned. No one feels this way of speaking is lazy, because both sides understand: this occasion calls only for this rate of compression.

If the other person follows up with "what did you eat," the zip file begins to decompress: "Noodles." "What noodles?" "Beef noodles, second-thinnest, with an egg." Back and forth, decompressing from the abstract all the way to the instance. Which layer the chat stops at depends entirely on how interested the other party is.

Everyone performs this maneuver skillfully; no one calls it "abstraction." Language runs precisely on this ability to adjust the compression rate to the occasion: big words for reports, instances for details. The frameworks this book presents are the same — first compressing colossi like thought, mind, and society into the small zip file of "four"; then, when details are needed, decompressing them layer by layer for you.

Why Abstraction Is Needed: Because the World Is Layered

Abstraction is no scholar's luxury; it is a necessity forced on us by the structure of the world.

The world is layered. Once quantity reaches a certain scale, higher-level structures emerge with a certain probability: molecules aggregate into macromolecular organics; macromolecules aggregate into single-celled organisms; cells form organs; organs form people; people form society.

Every level has its own new properties, and these properties differ enormously from the properties of the underlying level. The atoms composing an object obey quantum laws; the object itself obeys Newtonian mechanics; the Earth follows geological laws; the stars follow astronomical laws.

You cannot use quantum mechanics to predict the weather directly, just as you cannot use Newtonian mechanics to explain love.

The existence of layers has two consequences.

First, **because layers exist, abstraction is needed.** Each level needs its own set of concepts. Using the concepts for studying electrons to study nations is bound to fail.

Second, **the higher you climb, the less science's certainty holds.** Up the chain physics, chemistry, biology, psychology, society, complexity keeps rising, and contingency, probability, initial-dependence, and irreproducibility become ever more prominent. Objects too complex can only be described at a coarse grain — qualitative, not quantitative.

This is the moment abstraction takes the stage: when an object is too complex to measure precisely, humankind grasps it with a "simplification of thought."

Abstraction Is Modeling, and Modeling Necessarily Has Error

The cost of abstraction must be laid on the table first.

Abstraction is simplifying something complicated, like drawing a picture: a few strokes outline the shape, picking out the globally most important elements; if the picking fails, you end up having drawn only a foot or a head.

More precisely, abstraction is mathematical modeling: using the variation of a few variables to simulate reality. Since it is a model, error necessarily exists; it can only be a "fit" — an approximation, not an equality.

Whether a mathematical model is good depends on whether its error in fitting reality is small; and this fitting, with its fitting error, carries none of science's necessity, none of its law-of-large-numbers guarantees.

Two corollaries follow.

Corollary one: abstraction is a creation of the human brain, not an objective existence; it resembles mathematics rather than science.

All information in the brain is the result of abstraction; none of it is the objective itself. "The objective" is actually a reductionist way of speaking — assuming there exists a world that can be endlessly decomposed and finally completely measured.

Corollary two: an abstract model cannot be tested for "truth," only for "goodness."

After abstraction there is necessarily inconsistency with the entity, so the criterion for whether a model holds is absolutely not falsification, but: is it useful? Is it effective? Is there a better model?

This effectiveness is a probabilistic effectiveness. Whether Chinese medicine's modeling holds is judged by clinical results; whether concept-vector modeling holds is judged by how far it helps people think problems through.

There is also a quantified intuition for the goodness of an abstract model: **the longer the gene (equivalent to more parameters in a multivariate equation), the higher the fitting precision.** A four-dimensional model is finer than a two-dimensional one, and eight is finer than four — the price being that the more dimensions, the more complex the model, and the more tiring to use.

Good modeling strikes a balance between "model complexity" and "fit to reality"; what is compared is the fit at equal complexity.

Instances and Abstraction: Two Complementary Roads

Facing a problem, a person has two roads.

One is the instance road: a car — what load capacity, what horsepower, what wheelbase. Master these, and you get a precise solution. The instance road's advantage is precision; its disadvantage: instances are regional and temporary — change the place or the era and you must start over.

The other is the abstraction road: a car is just "a sofa on wheels." Starting from this rough model and gradually making it concrete, you can also arrive at a relatively precise solution. Abstraction has universality and permanence.

When studying instances becomes impossible — the object too complex, too distant, unrepeatable — abstraction is the only road left; it can deduce more results from less information.

Complex things have another trait: every individual is different; no two "persons" have exactly the same configuration. Abstraction acts on the commonality of many individuals — it is made precisely for such objects.

Artificial intelligence currently has a method of applying A's learning results to B, called transfer learning. Abstraction has been able to use this method all along. The "unity of heaven and man" spoken of by the ancient Chinese applied insights gained from nature to the human body — humankind's earliest cross-domain transfer learning.

Zang-Xiang: The Discipline of Not Taking Apart

Chinese medicine has a concept called *zang-xiang* (visceral manifestation): the functioning of the internal organs (*zang*) shows itself as outward signs (*xiang*).

The essence of *zang-xiang* thinking is: no dissection — summarize abstractly from the outside, and design (guess) the internal mechanism.

The author holds *zang-xiang* thinking to be a seriously underrated methodology. He gives it a forceful defense: physics, facing elementary particles and fundamental forces that cannot currently be split, likewise must guess and hypothesize and reach consensus; to want a unified theory requires yet more guessing and hypothesizing.

Chinese medicine and quantum mechanics are in fact isomorphic in methodology: try repeatedly, grope out a usable formula; if it works, the guess was right. The relation

between a drug and its indication was practiced out over several thousand years.

Zang-xiang — abstraction — necessarily leads to a holistic view — because you cannot take the object apart into components for study; you can only observe it as a whole.

Western medicine works only at the levels of physics (surgery), chemistry, and the cell (drugs); yet many things cannot be taken apart at all:

- The randomness of complex things is too strong;
- Humankind does not currently command every chain of knock-on reactions;
- In many situations dissection is simply impossible — if you want to know a certain country's leader's next move, you cannot get the result by dissection; nor has humankind yet explained thought clearly on the basis of dissection.

So "guessing the internal structure from outward manifestations" is not a backward stopgap; it is the regular method when facing complex objects.

The framework of thought and the framework of mind presented later in this volume are internal brain structures "guessed" by exactly this method — the same methodology by which Chinese medicine guessed the structure of the human body.

Abstraction Takes Effect Only Through Consensus

Last comes an often-neglected sociological fact: abstraction cannot be empirically verified; for it to take effect, everyone must accept it.

Language is the best example. Language is an abstraction; people cannot do without language, but language did not come into being through reasoning — it was useful, so everyone used it and accepted it.

Mathematics is also abstraction, and in mathematics the share of deduction is especially large; where the share of deduction is large, acceptance comes easily. Philosophy is also abstraction, but in philosophy the share of induction is large, so consensus is hard to reach.

So the fate of an abstract model is like the fate of a language: it lies not in whether it is "true," but in whether enough people find it useful and are willing to use it.

The Deming cycle (PDCA) is an abstract model; MBTI is an abstract model; once everyone accepts them, they take effect — equivalent to every person building a program in his own head, and these commonly accepted abstractions are humankind's third-party code library.

The concept vector is a set of techniques and a theory about "how to build programs in the brain."

There Is No Fish in Fish-Fragrant Shredded Pork

That "abstraction takes effect only through consensus" — the Sichuan menu is the best evidence.

There is no fish in fish-fragrant shredded pork — nine out of ten people ordering this dish for the first time pause in surprise. But Sichuan locals don't pause: in their consensus, "fish-fragrant" stopped referring to fish long ago; it refers to a flavor profile — pickled chili, ginger, garlic, sugar, and vinegar blended in a certain ratio. "Fish-fragrant" is an abstraction; its meaning is maintained by consensus, not guaranteed by the original sense of the character "fish" in the dictionary.

Such dish names are everywhere: there are no husbands or wives in husband-and-wife lung slices, no ants in ants-climbing-a-tree, no wives in wife cakes. Outsiders who read them literally make fools of themselves; locals use them smoothly, by consensus. That is how language is: **a word's meaning is not in the word, but in the convention jointly observed by the people who use it.**

So the fate of an abstract model is like the fate of a language — "fish-fragrant" survived not because it is "true," but because enough people find it useful and are willing to use it. Whether the concept vector's menu gets passed down works the same way.

Summary

Abstraction is classification; classification is abstraction; starting from similarities and differences, it circles the world into groups.

Because the world is layered, abstraction is necessary; because abstraction simplifies, it necessarily has error; because of error, its test can only be "usefulness" rather than "falsification"; and "usefulness" must ultimately be decided by the consensus of its users.

Understanding this nature of abstraction, we can enter the next chapter with confidence: in abstraction's toolbox there are three most-used tools — guessing, modeling, and analogy.

Chapter 4 Guessing, Modeling, and Analogy: What to Do When You Can't See Inside

Guessing Is Unavoidable

Living in the world, a person guesses every moment: guessing tomorrow's weather, guessing the other party's intent, guessing the consequences of a choice.

That people guess at many things they cannot ascertain is not weakness; it is a basic move of survival.

The real question is not "whether to guess" but "by which path to guess."

A living textbook here is stock-price prediction. Open any stock forum and you will see various theories refusing to yield to one another — chart-watchers, fundamentalists, tip-listeners, gut-followers. The same object, different guessing paths, each with its believers, each with its wins and losses.

Studying "how to guess" is as important as studying "what to guess."

The author's notes summarize three paths of guessing.

Path One: Take History as a Mirror

The first line of thinking predicts the future from history: what happened yesterday will very likely happen tomorrow in a similar way; the method that worked last year will very likely still work this year.

This is exactly what neural networks do: give them large numbers of historical samples, they extract patterns statistically, then use those patterns to predict new samples. Empiricists walk this road; machine learning walks it too.

This road's strength is stability and reliability — so long as the environment hasn't changed. Its weakness lies in the same place — once the environment changes, historical experience becomes baggage.

Path Two: Analogy

The second line of thinking is analogy: using general laws to predict individual cases.

The logic of analogical thinking: if A and B are similar in certain respects, then the laws that hold for A may also hold for B.

An example. Plants absorb energy and consume energy; animals absorb energy and consume energy; cars take in energy and consume energy — so the model "input–transform–output" applies to all three at once, and research results on this model can be used on all three at once.

Chinese medicine is the great master of analogical thinking. Chinese medicine holds that nature moves in cycles, and that the human body likewise moves in cycles, and so guesses that the body has structures similar to nature's — thus arriving at the five phases.

Using nature, the "white box," to explain the human body, the "black box": whatever happens when water flow is blocked in nature probably happens when qi and blood are blocked in the body.

Analogy and classification are twin brothers: **things with the same "genes" can be analogized.** The law of one thing can be used on all concepts and things containing the same genes.

Precisely because analogy exists, studying the most general, most abstract concepts carries the greatest significance — once you have thoroughly studied the single gene-pair "motion/stillness," you have simultaneously studied the thousands upon thousands of things that contain motion and stillness. This is why later chapters repeatedly ask after "the most general concepts."

Even art may be built on the principle of analogy: why does a passage of music make us think of various emotions? Perhaps precisely because the rises and falls, the hurry and lull of sound are structurally similar to the swells and ebbs of emotion — similar structures evoking similar experiences.

Path Three: Design

The third line of thinking is the most special, and the most representative of this system's methodological character: **seeing how a thing behaves, and — without taking it apart — designing a thing of your own that behaves the same way.**

An analogy: before you sits an opaque machine; you feed it a few numbers, it spits out results. You cannot see the structure inside, but you can build a machine of your own whose inputs and outputs match the original's exactly.

Once you've built it, you have grounds to guess: the original machine's internal structure is probably rather like the one I built.

This is precisely the engineering version of "zang-xiang," and precisely how the major frameworks later in this volume were born — the framework of thought and the framework of mind came about exactly so: observe the outward behavior of human thinking and the human psyche, then design an internal structure that produces the same behavior.

The principle of this line of thinking corresponds to "teleology" in the philosophical framework: inferring structure from function, guessing "what construction it needs" from "what purpose it must achieve."

Design-style guessing and dissection-style research divide the labor: what can be taken apart is most directly examined by opening; what cannot be taken apart, or cannot afford to be, or would be useless even if taken apart (so complex that you'd still not understand once opened) — guess by design.

Modeling: Fitting High Complexity with Low Complexity

Combine the three paths, and behind them is one and the same thing: **modeling**.

Modeling is using a model of low complexity to fit a reality of high complexity. Reality is always more complex than the model — a map is always simpler than the territory, or it would be useless.

Good modeling works in two directions:

1. **Lower the model's complexity.** The simpler the model, the more usable. The concept vector presses complexity very low: one framework involves only four genes. And if several frameworks map onto one another (as the philosophical framework, the framework of thought, and the framework of mind later in this volume in fact do), then you don't even need four genes — remembering two or three suffices.
2. **Raise the fit to reality.** Fit comes from repeated deliberation — choosing well those few most crucial dimensions.

So when comparing two models, what is compared is: **at equal model complexity, whose fit to reality is higher.**

This criterion differs from science's. A scientific theory must be true; a model must be good.

The author stresses repeatedly: the concept vector is not truth but modeling, like programming — a tool for knowing the world, an algorithm for knowing the world. With modeling, "however you build it is right" — I build it this way because I am confident it will help me think and yield good results; if you find it unusable, build your own model, and let's compare whose is more usable.

"General systems theory" contains a superb passage, specially excerpted in the author's notes: if a model — though unable to solve a problem, or able to solve it only crudely — has its mathematical pattern or relational structure emerge independently many times across different problems in different fields, then this kind of model never goes out of date: it seems already to reveal some deep, general law of nature and society.

The concept vector aspires to be just such a "general model": its four-quadrant structure emerges again and again in personality, thought, philosophy, society, economics, and medicine.

The Subway Map Is a Deliberately Misdrawn Map

"Modeling necessarily has error" — the most famous example hangs in every subway station.

Real subway lines twist and bend underground: here detouring around an old building, there avoiding a stretch of riverbed. But on the route map in your hand, every line runs horizontal, vertical, or at forty-five degrees, and the station spacing is drawn neat as a ruler — nowhere does it strictly match geographic fact. The mapmaker **misdrew it on purpose**: he knew that what passengers want is not geographic precision but "where am I, which line do I change to, how many stops." Answer those few questions well and the map is a good map; draw it as precisely as a satellite image and it becomes unreadable.

This is the textbook case of "fitting high complexity with low complexity": the error is not an accident but a design — the mapmaker actively threw away ninety percent of the geographic information in exchange for anyone being able to read it in three seconds.

Next time you hear the criticism "this model is inaccurate," think of the subway map first: inaccuracy is sometimes modeling's failure and sometimes modeling's medal of honor. Only one question matters: did the information it threw away hold up anything you needed to do?

The Legitimacy of Modeling: From TRIZ to Chinese Medicine

Someone may ask: does this kind of "good enough if it works" modeling count as mysticism?

The author's answer is to look at precedents. TRIZ, the theory of inventive problem solving, is a method recognized by the engineering world, and it is a modeling; Chinese medicine is a modeling; the Deming cycle is a modeling; the Pyramid Principle's MECE (mutually exclusive, collectively exhaustive) is also a modeling.

Not one of these models has been tested by "falsification"; there is only one way they have been tested: whether they produce effects in use.

Whether a model holds, the criterion is absolutely not falsification — after abstraction there is necessarily inconsistency with the entity, and falsifying a model is all too easy: just find any detail that doesn't match. The true criteria are: is it useful, is there a better model, is it effective. And this effectiveness is probabilistic effectiveness.

Whether Chinese medicine's modeling holds is judged by clinical results; whether concept-vector modeling holds is judged by how much confusion it has cleared up for you.

Then where exactly is the difference between modeling and mysticism?

The difference lies in **explicability**. Mysticism often issues many assertions while never making clear how the assertions arose; to avoid mysticism, one must explain as clearly as possible the whole process by which each assertion was born.

The concept vector, too, issues many assertions, but for each one it can say clearly how it arose — from which dimensions, through which steps of combination, on the basis of which correspondences. Laying the derivation on the table for anyone to inspect: that is the boundary line between modeling and mysticism.

Complexity: Why the Scientific Method Fails Here

This chapter opened by saying "science is not enough"; here a more theoretical explanation can be given.

The reason was already stated in Chapter 3: once things reach a certain scale, new properties emerge at the upper level; climbing up the chain from biology to society,

contingency and probability multiply; objects too complex can only be described at a coarse grain — qualitative, not quantitative.

The author has a further criticism of complexity science itself: complexity science is walking the wrong road, because it still tries to solve problems with scientific tools; artificial intelligence, by contrast, is one of the correct directions, because AI "has nothing to do with" science — it does not rely on analytic solutions, it relies on fitting. Genetic algorithms within complexity science ended up classified under artificial intelligence as well.

Whether this judgment holds can be debated, but it points out a trend of the times: **facing complexity, "fitting" is replacing "solving" as the mainstream method.** And abstract modeling is precisely the human-brain version of fitting.

Why He Said Nothing Today

The three guessing paths require no special study; they run in offices every day.

Colleague Wang came in today without saying hello and sat down staring at his screen. Your mind has already started guessing.

The first way consults history: he's like this every Monday — probably didn't rest well over the weekend. This is taking history as a mirror: what worked before probably still works.

The second way looks for similarity: last time his proposal was killed, he wore the same expression. This is analogy: similar situations point to similar causes.

The third way is the most effortful: you put yourself in his shoes, packing yourself into his situation — "if I had a mortgage pressing on me and a child running a fever, I wouldn't want to talk when I came in either." This is design: without taking his heart apart, you build in your own heart a version of him that performs the same behavior.

None of the three guesses is guaranteed right; maybe he just didn't sleep enough. But note the thing itself: facing a black box that cannot be seen through, a person never just stares blankly — all three paths fire automatically. All this chapter has done is call out, by name, a set of moves you were already making.

Summary

Facing an object that cannot be seen through, a person has three guessing paths: taking history as a mirror, transfer by analogy, replication by design.

The three paths converge in modeling — fitting high-complexity reality with a low-complexity model, replacing "is it true" with "is it useful" as the criterion, and drawing the line against mysticism by "making the whole derivation clear."

With this methodological equipment in hand, we can finally invite this book's protagonist onto the stage.

Chapter 5 What Is a Concept Vector

A One-Sentence Definition

After four chapters of groundwork, the protagonist can take the stage.

Concept vector: a method of defining a concept by means of several "binary dimensions."

A concept is equivalent to a vector; each dimension of the vector has two poles like a number line — black and white, for instance: this is where "binary" comes from; several dimensions make up the vector, and the author calls this vector a "gene."

The method's current formal name is the **concept vector**, named by reference to the "word vectors" of artificial intelligence — but note: the concept vector has nothing to do with AI. An AI word vector is automatically generated by an algorithm from text; a concept vector is a **manually built** word vector, its values on each dimension fixed by human thinking rather than by statistics. In its early years it also had a more vivid name — "binary genes": dimensions are a concept's genes. That name was later retired and survives only as a historical term.

Start with the simplest example. The concept "things that are urgent and important" has two dimensions: "urgent" and "important." Two dimensions, two values each, combine into four quadrants: urgent-important, urgent-unimportant, not-urgent-important, not-urgent-unimportant — the four-quadrant rule known to everyone in time management.

两个二元维度组合出四个象限



You may have used it for years without realizing: its underlying structure is exactly the combination of two concept vectors.

The Most Famous Instance: MBTI

The most obvious example of using a concept-vector-like method to denote concepts is the MBTI personality classification.

The personality type INTP, for instance, is composed of the four letters I, N, T, P; I/E, N/S, T/F, P/J are the two poles of four binaries respectively. Four binaries, two values each, give $2^4 = 16$ combinations in all, corresponding exactly to the sixteen personality types.

Note the several exquisite points of MBTI's notation — the concept vector will inherit them all.

First, no need to name each one. If each of the sixteen personalities were given its own name (as the Enneagram does with "the Perfectionist," "the Helper"), no one could remember them; expressing sixteen concepts by combinations of four letters, you know the meaning on seeing the letters.

Second, similarity is visible at a glance. INTP and INTJ differ by only one dimension; INFP and ENFP also differ by only one — who is close to whom, and where the difference lies, is written on their faces.

Third, gaps can be checked and filled. The sixteen types are exactly sixteen, none more, none less; there is no problem of "some personality left unstudied"; every combination is forced to be described by someone.

MBTI is in fact a concept-vector system with "gene length 4." And its soft ribs are here too: why these four dimensions and not others? Are four dimensions enough? These questions will be discussed in detail when we reach the relation between MBTI and the framework of mind (Book I).

An Older Instance: The Eight Trigrams

If MBTI is a modern instance of the concept vector, the eight trigrams are its instance from two thousand years ago.

The eight trigrams are composed of three lines, each line having only two values, yin and yang — a concept-vector system with "gene length 3": $2^3 = 8$, giving the eight trigrams. Double the gene length to 6: $2^6 = 64$, giving the sixty-four hexagrams.

The author stresses repeatedly: the concept vector is a development of dualism, but it is no longer confined to two; it considers four, eight, and even more elements.

Duality is much discussed (yin and yang, dialectics, the pros and cons); "genes" are little discussed — yet genes are equally important: a gene is a road running to infinity, the very road on which taiji begets the two modes, the two modes beget the four images, and the four images beget the eight trigrams.

"I hold the gene to be a breakthrough beyond the binary" — the breakthrough lies in this: dimensions can keep lengthening.

More Isomorphic Instances

Once you understand the structure "concept = a combination of several binary dimensions," you will find it everywhere:

- **The periodic table of elements:** n electron shells, each with a number of electron slots, make dozens of elements; the elements combine further into a greater number of molecules. An element's chemical properties are determined by its "coordinates" in the table — the coordinates are the gene.
- **Composite primary keys in databases:** a row in a table is jointly defined by the values of several columns; each column is one gene position.
- **Semantic-web triples, Prolog, Lisp:** expressing concepts with structured fields.
- **Classes and interfaces, attributes and methods in programming:** object-oriented programming requires every function to be orthogonal to and non-duplicative of the others; an information node carries several attributes, and those attributes are the gene chain.
- **Four-quadrant diagrams:** every field has some four-quadrant diagrams, and every four-quadrant is a combination of two concept vectors.
- **Writing and outlines:** writing requires every heading at the same outline level to carry comparable weight — this is actually requiring that "headings at the same level be coordinate concepts" (for coordinate concepts, see the next chapter).

These examples span mathematics, biology, computing, linguistics, and the craft of writing; their common point is summed up by the author in one formula: **multiple fields jointly define one ID.**

The concept vector, the periodic table, the composite primary key, and the word vector are all instances of this formula.

Three Details of the Definition

Detail one: each dimension is first qualitative; coefficients may be added.

In general a dimension is described only qualitatively — black/white; for precision, add coefficients — a grayscale, for instance. The concept vector is first of all a qualitative tool.

Detail two: dimensions should be as orthogonal as possible.

This requirement is borrowed from programming: instead of coding one enormous class, split it into many small functions, and accomplish the same functionality by combining those small functions. Only when the dimensions do not duplicate one another is the combined conceptual space free of waste.

Detail three: gene length can be arbitrarily long.

A concept can be made ever more precise — describe it with a longer vector, each dimension of the vector being one attribute. The eight trigrams lengthening into the sixty-four hexagrams is exactly such a lengthening; Chapters 7 and 10 are devoted to the new problems lengthening brings (the sparse matrix, subdivided genes, and new genes).

Why It Has "Rigorous Beauty"

The author has a verdict: the concept vector, like mathematics, has a rigorous beauty. The Pythagorean school of ancient Greece said: mathematics is perfect; reality is not.

This beauty shows in three aspects:

- **Completeness.** Given a gene length, all combinations are caught in one net; nothing is omitted;
- **Simplicity.** A multitude of concepts is generated by combining a handful of genes; what must be memorized shrinks dramatically;
- **Operability.** Comparing the similarity of two concepts becomes comparing how many dimensions two vectors agree on — the very principle by which recommendation algorithms recommend similar content to you.

Of course, what is perfect is the tool, not the application. Reality is always rougher than the model.

The author is sober about this: modeling necessarily has error, and the concept vector is no exception; its value lies not in fitting reality perfectly but in sorting the chaotic world

of concepts into order — just as a map's value lies not in being as large as the territory but in being usable.

E-Commerce Sites Built It into Filters Long Ago

The concept vector sounds novel, but in fact you use it every time you shop online.

Open a shopping app and search "phone"; a column of filters immediately lines up along the side of the page: brand, price range, memory capacity, body color, screen size... Each filter is one dimension, and under each dimension are listed the values you can pick. Tick "256 GB," "white," "under 5,000," and you have assigned values to three dimensions of a concept vector; what the page refreshes to show is every instance located by the combination of those dimensions.

The benefits of this structure, the website has already experienced for you: no need to give each phone a separate name (benefit one); how two phones differ, and on which dimensions, is clear at one comparison (benefit two); if some combination has no product at all, that is very likely a vacancy no one has filled (benefit three).

The e-commerce engineers never read this book, but in order to keep millions of products under control, they independently groped their way to the same structure. That is how good structures are: they get groped out repeatedly by different people in different places — a sentence Chapter 11 will be devoted to.

Summary

Concept vector = defining a concept by several binary dimensions.

It is no new invention — MBTI, the eight trigrams, the periodic table, and database composite primary keys are all its instances — it is a general method being spelled out for the first time. Once spelled out, it turns from a trick of individual fields into a tool that can be actively applied to every concept.

In the next chapter we look at the basic relations between concepts: exclusion, coordination, and combination.

Chapter 6 Relations Among Concepts: Exclusion, Coordination, Combination

First, Erect a Warning Sign

Consider this sentence: "China maintains friendly relations with Trump."

In everyday language the sentence is perfectly fine; everyone understands it. But viewed conceptually, it is a flawed sentence: "China" is a country concept and "Trump" is a person concept; the two are not on the same level, not coordinate.

Everyday language does no harm speaking this way. Yet humankind's knowledge system is full of such non-coordinate discussions — many debates drag on for years not because the two sides hold different views, but because the things they are talking about are not on the same conceptual level at all.

So before studying the relations among factors, one must first ensure they are coordinate and of equal rank — that is the foundation of rigorous discourse. If the foundation is unsound, whatever is built on top leans.

The foremost use of the concept vector is to guarantee the rigor of the objects of your discourse.

Exclusion: The Two Poles Within One Dimension

The first basic relation is exclusion. The exclusion relation is the antonym relation: large and small exclude each other; inner and outer exclude each other; motion and stillness exclude each other.

The essence of exclusion is: **two concepts sit at the two poles of the same dimension.** On a dimension axis, the closer you approach one end, the farther you are from the other. Black and white exclude each other because they are the two ends of the grayscale axis.

Note: exclusion does not mean "cannot coexist."

For any individual, both poles of a binary are present at once — a person has both an introverted side and an extraverted side; at the same time, the binary is biased, and once there is bias, there are infinitely many varieties.

Exclusion speaks of the structure of the dimension, not of the reality of the individual. This point will be expanded in the next chapter, on "dimension axes and grayscale."

Coordination: Neither Contains the Other

The second basic relation is coordination. Coordination means several concepts stand in parallel, none containing the others:

- The concepts are all the same size; none is bigger, none smaller;
- The concepts all belong to the same domain;
- A typical example: in Jung's eight functions, S/N/T/F are coordinate, and E/I are coordinate.

Hidden inside the coordination relation is an important theorem: **if coordinate concepts number more than two, they can be decomposed into multi-position genes with gene length greater than 1.**

For example, S, N, T, F are four coordinate concepts — and four exceeds what a single pair of antonyms can hold — so MBTI decomposes them into multi-position genes of length 2: S/N is one dimension, T/F is another. Four concepts = two binaries.

The converse also holds: when you find that a batch of concepts numbers exactly a power of 2 (2, 4, 8, 16, 64...), you should be on alert — they are very likely the combinatorial product of some concept-vector system, and it is worth hunting for the dimensions behind them.

The eight trigrams are 8, MBTI is 16, the sixty-four hexagrams are 64 — none of these is a coincidence.

Combination: From Gene to Concept

The third relation is combination — the source of power of the whole system:

- One binary (gene length 1) describes one pair of antonyms;
- Two binaries combine into four concepts (gene length 2);
- Three binaries combine into eight concepts (gene length 3);
- Four binaries combine into sixteen concepts (gene length 4)...

Once the combinatorial relations among concepts are clear, the number of nouns needing study shrinks dramatically — this is the terminus of the "origins" chain from Chapter 1.

Now we can put it more technically: the number of concepts in the world of knowledge drops from the exponential level of "every combination must be studied separately" to the linear level of "only the dimensions themselves need studying." The eight trigrams

needn't be studied eight times; studying three lines suffices. The sixteen personalities needn't be studied sixteen times; studying four dimensions suffices.

Between a composite concept and its dimension concepts stands the relation of parent class and subclasses: "things that are urgent and important" is the subclass; "urgent" and "important" are the two parent dimensions it inherits from.

In object-oriented programming, if two classes have duplicate attributes and methods, a parent class can be abstracted out of them. The significance of the concept vector is: once you have the vector, abstraction at different levels becomes possible — how many dimensions two concepts agree on determines how close they stand and whether they can be filed under the same parent class.

A Table of Correspondences: The Division of Labor Between This Book and Logic

Logic, too, studies conceptual relations, but the division of labor differs.

The conceptual relations logic treats are only the sameness-and-difference relations among concept extensions: identity, genus, species, overlap, and total difference — five in all.

Relations among concepts, however, include — besides extension relations — relations of principle (logic, causality), of space, of time, and of intension. The author warns: once you have a concept map, you must still think clearly about which kind of relation the lines between concepts actually are — mistaking an extensional relation of coordination for a causal relation of principle is the root of countless confused discourses.

The core relations this book handles are "exclusion within a dimension, combination across dimensions." They intersect with extension relations (coordinate concepts are totally different in extension yet on the same level), but the aims differ: logic cares about the validity of inference; the concept vector cares about the definition and generation of concepts.

An Operating Mnemonic: Gather the Tags into One Column

Exclusion and coordination sound abstract, but in operation there is a very concrete move:

Gathering tags into one column of a table is precisely the process of discovering exclusion relations among concepts; at the same time, the concepts within that column are coordinate.

Suppose you have collected a hundred tags about "human character": cheerful, steady, introverted, talkative, cautious, withdrawn...

You gather them into several columns of a table. The tags gathered into the same column should be mutually exclusive or nearly so — a person cannot lean both "cheerful" and "withdrawn," at least not on the same occasion. The different columns correspond to different dimensions.

When the gathering is done you will have a matrix: columns are dimensions, rows are the values of each dimension. This matrix is a concept-vector system.

Conversely, a tag that will not gather in anywhere is also valuable: it hints that either a dimension remains undiscovered, or the tag is a "composite concept" that should be taken apart.

The Coordinate Discipline in an Expense Form

Coordination, exclusion, hierarchy — the finance department's expense form understands them all.

Printed on the expense form are several columns of accounts: transport, lodging, meals, office supplies. These columns are coordinate dimensions — none contains another; each governs its own stretch. Enter your high-speed rail ticket under "transport" and your hotel invoice under "lodging," and all is peaceful under heaven.

But if you enter the rail ticket under "office supplies," the form comes straight back from finance — that is filling in the wrong dimension. There is also a subtler error: writing "Beijing" in the accounts column. Beijing is a place, not an account; it is not on the same level as "transport" at all — this is the expense-form version of "China maintains friendly relations with Trump" from the start of this chapter.

Don't underestimate that sheet of paper. Several hundred employees, several thousand entries a month across the whole company, all kept in good order by these few coordinate dimensions. "Gathering concepts into the right columns" sounds like an academic maneuver; in fact it is the basic discipline every expense form executes every day.

Summary

Three relations among concepts concern this book: exclusion between the two poles of one dimension, coordination in parallel on one level, and the generative relation by which dimensions combine into concepts.

When coordinate concepts number more than two, they can always be decomposed into multi-position genes; when a set of concepts numbers exactly a power of 2, dimensions are very likely hiding behind it.

With these three relations in hand, the next chapter deals with a common misunderstanding: does "binary" slice the world too crudely? — No, because the concept vector in fact goes beyond two.

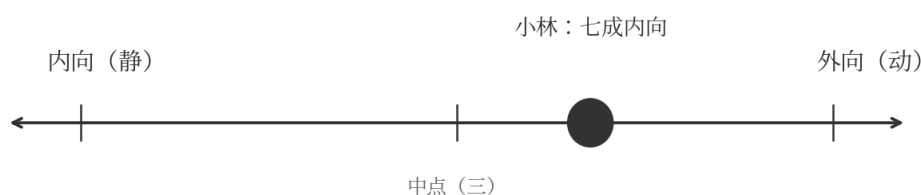
Chapter 7 More Than Two: Dimension Axes, Grayscale, and the Lengthening of Genes

The Most Common Misunderstanding of "Binary"

Hearing the name "concept vector," many people's first reaction is wariness: the world is so complex, people so subtle — how can they be fitted into "black-or-white" binaries? Isn't that oversimplification, label-slapping?

This criticism hits empty air. Because **the concept vector is not actually a "binary" but a dimension axis.**

A number line contains every number between -10 and $+10$. Saying a person "leans still" doesn't mean he is 100% stillness and 0% motion; it means his coordinate on this axis might be $+6$ — that is, 70% stillness and 30% motion.



二元是轴的两极，个体是轴上的位置

The binary is only the two endpoints of the axis, used to fix the direction; when actually describing an individual, what is used is a position on the axis.

The author here specially quotes the *Tao Te Ching*: "The Tao begets one; one begets two; two begets three; three begets the ten thousand things." He gives his own reading:

- **Two** is the binary, the two poles of the axis;
- **Three** is the middle — the mixed state of 50% motion and 50% stillness;
- **Three begets the ten thousand things (infinity)** — the percentages are infinite: 51/49, 62/38, 99/1... every value generates a new "species."

The alignment system of the tabletop game Dungeons & Dragons is a ready-made example: it has two axes, "lawful–neutral–chaotic" and "good–neutral–evil," and each axis has a "neutral" position specially set on it. Neutral is not "hard to say"; it is a legitimate middle value on the axis.

So the accurate statement is: what the concept vector describes is **dimensions**, not **switches**. It is only because, in qualitative description, saying "leans inward" or "leans outward" is more convenient than saying "coordinate +3.7 on the inner-outer axis" that everyday speech so often names the two poles.

Then why not take three poles, or five? The author's answer is crisp: a three-valued scheme adds no extra axis — it merely adds the zero point on the number line; five-star ratings are the same — however many stars, they all remain on the same number line. For more precision, the direction is not to add poles but to add digits of precision.

Someone Asks: You Can't Have Either Pole Without the Other — How Can You Classify by Them?

This is the skeptics' favorite question: everyone has both introversion and extraversion; a person is introverted at home and extraverted at a dinner party — so what's the point of classifying?

The author's answer has four layers, each finer than the last.

Layer one: classification sorts by preference, not by presence or absence.

Everyone has both introversion and extraversion — what classification sorts is **preference**: whichever state accounts for the greater share of time, whichever has the upper hand, is the side you are filed under.

Layer two: deviation from the mean, even by just 1%, is meaningful so long as the deviation is stable.

The key is not the magnitude but the stability. A person who is 51% introverted and 49% extraverted, stably so year after year, and a person who swings violently between 20% and 80%, are two kinds of people.

Layer three: if it seems crude, add digits.

Some people do not accept simple binary classification; then digits can be added for precision — for instance, appending four numbers after a type's four letters to indicate the degree of leaning on each dimension. The concept vector holds from the start that number lines and dimensions are more precise; letters are only shorthand.

The author himself, though, prefers to stop at the two poles, for a very practical reason: agreement is hard enough to reach with two values; the more precise the digits, the more disputes — one could go on forever arguing over the size of some number. The binary

split is for simplification, to save brain cells. Computers, with energy to spare, are the ones that can afford more digits.

Layer four: admit the probabilistic.

Some hold that "a given MBTI type does not necessarily have such-and-such traits" — indeed not necessarily; the relation is only probabilistic. Some probabilities are larger, some smaller; if some probability is even below 50%, that statement should be regarded as erroneous.

The attitude toward such probabilistic assertions: in light of your own life experience, believe the points that ring true, ignore those that don't; accept the points a causal inference can explain, ignore the unexplainable; or even ignore all the specific traits of a type altogether and look only at the fact "that these classifications exist."

The Lengthening of Genes: Subdivision and New Genes

Another misunderstanding of the concept vector: "just four dimensions — too few."

In fact gene length is open-ended; it can keep lengthening. Lengthening comes in two utterly different situations, which must be kept apart.

Situation one: subdivision — more detailed genes.

Within the range of the old instances, keep splitting the old dimensions finer. For example, personality can add the Big Five's dimensions beyond MBTI's four; the sixteen types can be subdivided into thirty-two or sixty-four types. The sixty-four hexagrams are a lengthening of the eight-trigram chain.

Situation two: new genes — something new has appeared.

Whenever a new technology or new thing appears, it gets combined exhaustively with the old classifications. Take the evolution of information media: from word-of-mouth storytelling, to theatrical performance, to radio broadcast, to television and film, to games — each generation of new technology forms a new classification dimension, dimensions that simply did not exist in the old era.

Biological evolution is the same: first came nerves, then the central nervous system, then the brain, then the prefrontal cortex, then language — each time a new gene appears, living things are split into two classes.

The way to distinguish the two situations is simple: **look at whether the instances are old or new.** Subdividing an old framework is subdivision on the basis of old instances;

only the appearance of new instances brings new genes.

This is why studying old genes is never wasted: after the change, the old genes do not disappear; the new genes are lengthenings on the basis of the old.

Once Genes Lengthen, the World Becomes a Sparse Matrix

Lengthening has a cost. If the gene is long, not every gene combination will have instances in reality.

Mathematically this is clear: with gene length 4, the combination space has 16 kinds, and in reality all sixteen personalities are found in plenty of living people; with gene length 12, the combination space has 4,096 kinds, and many of those combinations may never have occurred — those instance-less combinations may exist in the past and the future, or they may be highly unlikely under present space-time conditions.

Biological genes are a sparse matrix: not every base combination gets traversed. The author is candid about this:

Someone like me, finding only a countable few important genes — then every result of the traversal generally exists. Classification can keep going down; just lengthen the gene chain — it's only that my brain is no longer up to it; I haven't the energy to lengthen the chains.

Here is an honest trade-off: **short-gene systems** (three or four dimensions) have few combinations, full instances, and are easy to remember and use — but coarse; **long-gene systems** are fine-grained, but combinations explode, instances grow sparse, and the human brain cannot hold them.

Artificial intelligence has no such limit — in today's AI, the vector for "car" has several hundred dimensions. So the author predicts a division of labor between humans and AI: push the dimensions up, turn the binary into more values, and AI can define all knowledge; while the concept vectors the human brain uses for itself should stay at single-digit dimensions.

Why Mysticism Easily Goes Wrong on This Point

Mysticism often uses ultra-long chains of vague conceptual combinations, able neither to say what the dimensions are nor what the values are, with a combination space too large to test. The concept vector does the opposite: **dimensions should be few and explicit**,

the two poles of each dimension clearly mutually exclusive, the combinations countable.

If you cannot count how many combinations a conceptual system has, it has very likely already slid into mysticism.

What the Electric Fan Understood Long Ago

"A binary is not a switch but a number line" — the electric fan at home understood this long ago.

The buttons of an old-fashioned fan are printed with three settings: 1, 2, 3. "Blowing" and "not blowing" are the two endpoints of this axis, but no one runs a fan only at the endpoints — high summer gets setting three, early spring gets setting one, and most of the time it stops in the middle. Then came stepless air coolers, and the button simply became a slider: from minimum to maximum, stop at whichever notch you like.

People are the same. Saying someone "leans introverted" doesn't mean he is 100% introverted; it means he stops year-round at some notch on this axis — just as your fan stays on setting two all year. When guests occasionally arrive, he too will temporarily turn up to setting four and be lively for a while; when the guests leave, the needle springs back to setting two.

What classification sorts is precisely that "notch where it stops year-round." So don't quarrel with people over "are you ultimately introverted or extraverted" — that question is like asking a fan "do you ultimately blow or not blow": the answer always lies on the axis, not at the endpoints.

Summary

The binary is not a switch but a number line; classification sorts stable preferences, not presence or absence; genes can lengthen, and lengthening divides into "subdivision" and "new genes"; lengthening brings a combination explosion, so that reality becomes a sparse matrix — the human brain should use short genes; AI can use long ones.

Now that we understand the elasticity of dimensions, the next practical question is: how should these dimensions, these concepts, be named?

Chapter 8 Naming and Encoding: Giving a Concept a Name That Won't Be Misunderstood

Why Naming Is a Big Problem

Once a concept is made, it will be used by people; to be used by people, it needs a name.

And names are the greatest source of misunderstanding.

You say "introversion," and the introversion Zhang San understands may not match yours; you say "emotional," and what floats up in Li Si's mind may be tears while in Wang Wu's it is intuition. One word with many meanings, one meaning with many words — such is the daily state of confusion in human knowledge.

The author sighs: names are truly hard to choose — **one might as well use codes.**

Four Naming Schemes, from Worst to Best

Scheme one: everyday vocabulary.

The advantage is intelligibility; the disadvantage is ambiguity sprouting everywhere. Everyday words are like a worn-out wrench, slipping at every turn.

Scheme two: proper nouns.

If a binary's names are easily misunderstood, use proper nouns, as the eight trigrams do with "qian" and "kun" — first coin a word with no everyday meaning, then explain and delimit it.

The advantage is clean semantics; the disadvantages are high learning cost and an easy slide into "jargon." The author holds himself to an explicit restraint on coining terms: he opposes creating large numbers of technical terms, and tries as far as possible to say things everyone can understand, rather than speaking jargon or trading in in-jokes.

Scheme three: definition by a set of instances.

Don't try to define the concept in one sentence; instead give a set of instances: what the instances have in common is the concept's definition. This is the most precise way to define, but wordy.

Scheme four: encoding.

The most precise of all is not to name at all, but to use only the concept vector's code — as MBTI does. The four letters INTP have no everyday meaning and cannot be misunderstood; anyone who knows the rules sees the structure on seeing the code.

The author also offered a half-joking but quite serious notation, borrowing the representational form of the programming language Eve:

```
<#framework-of-mind a:1 b:1 c:0 d:0>
```

The first half says which system the concept belongs to (the framework of mind); the second half gives the values on the four dimensions. One concept = the system it belongs to + a dimension vector. This is the "multiple fields jointly define one ID" way of writing: machine-readable, and hard for humans to misunderstand.

The Substance Behind Names: One Thing Can Have Many Aliases

"The thing is just the thing; it can simply have different aliases and different descriptions."

This sentence looks simple, but it is good medicine for curing "quarrels over nouns."

A great many quarrels in the history of human knowledge are quarrels over nouns: the same thing the ancients called *qi*, the moderns call energy; the same thing the Confucians called *ren*, the Buddhists called compassion.

Looked at with encoding thinking, a noun is only a pointer; the memory object the pointer points to is the substance. Rather than quarreling over nouns, two people had better each state the set of instances their pointer points to, and see whether it is the same object — if it is, the quarrel is a translation problem and needn't be fought; if it isn't, there is still time to fight.

This book calls the same method by different names in different places: concept vector, concept vector, "one divides into four" (a former name). This is not confusion but a deliberate demonstration: names are the coat; the vector structure is the body. Readers should practice early the art of "seeing the structure through the noun."

The Meta-Rule of Definition: The Parent-Node Method

Then how should a new concept be defined? The author describes his own method of definition, which may be called "structured definition":

1. **Define by the parent node:** for instance, the parent node of "non-ego" is "emotional control" — the parent-node method is really the gene method: stating what values it takes on which dimensions;
2. **Define by the child nodes:** the child nodes of "non-ego" are sensation, desire, emotion, and feeling — listing the instances under its jurisdiction;
3. **Define by relations among model elements:** "the non-ego is the route by which the id acts upon the ego" — stating its position and function in the whole structure.

None of the three methods relies on an isolated gloss of a noun; all anchor the concept in a structure.

A word's meaning is defined by the structure it sits in, not borrowed from someone else's definition elsewhere. The reason this word was chosen is merely that it comes closest to the meaning to be expressed.

This, too, is the correct posture for reading this book (and for reading any conceptual work): don't pick at the nouns; look at the structure.

Why the Hospital Queue Caller Calls Out Numbers

The loudspeaker in the outpatient hall sounds: "A137, please proceed to Internal Medicine, Room 3."

Why not call a name? Because three men named Zhang Wei may be sitting in the waiting area. Names are everyday vocabulary, and collisions are routine; a number is a one-off code, one person one code, never misunderstood. Look again at the structure of that number: the letter prefix is the department, the digits are the order, and a room number follows — one code packs in several dimensions: "which department, which in line, which room to go to."

This is this chapter's scheme four: the most precise naming is a code. The queue caller uses no everyday description like "Zhang Wei — the one in the gray jacket," nor does it labor to coin a proper noun; it simply issues everyone an INTP-style code.

Of course, hospitals also have places where names are used — by the sickbed, the doctor softly says "Auntie Zhang," not "A137." Codes take charge of making no mistakes; names take charge of not being cold. How to choose among the four naming schemes comes down, in the end, to the same old line: look at the occasion, look at what works.

Summary

Naming is where a conceptual system most easily goes wrong.

From everyday vocabulary to proper nouns to instance sets to codes, precision rises level by level; the best naming is encoding, because a code displays the structure directly. And the sound method for defining a concept is to anchor it among its parent node, its child nodes, and its structural relations — not to chase in circles inside a noun.

With that, the rules part of the method is finished. The next chapter enters the value part: what this method can actually be used to do.

Chapter 9 What Concept Vectors Can Do: Find Gaps, Deduplicate, Classify, Complete

The Four Practical Problems It Targets

Before the uses, look at the problems it targets. The author lists four:

1. **Many fields have no full picture.** It is like several sheets of paper that cannot be pieced into one map — every expert holds one sheet and believes his sheet is the whole world.
2. **The Church of Science.** Rejecting other thought tools, it leads to a great many problems beyond science's reach being abandoned by thought.
3. **Concepts have only verbal descriptions, no rigorous definitions.** Everything stays at the fuzzy stage of natural language.
4. **Non-coordinate concepts get discussed in a jumble.** Level confusion of the "China maintains friendly relations with Trump" kind.

Against these four problems, the concept vector has six signature skills.

Skill One: Finding Gaps and Filling Vacancies

The concept vector is both a map of knowledge and a periodic table of knowledge.

The power of the periodic table lies not in the elements already present, but in the **empty cells**: arranging his table, Mendeleev found several vacancies and predicted undiscovered elements and their properties, each later borne out.

The concept vector works the same way: when you organize a field's concepts into a matrix of "several dimensions $\times$ their respective values," **the empty cells speak for themselves** — some dimensional combination that ought to exist in reality, yet has never been studied by anyone: that is a vacancy of knowledge waiting to be filled.

Later in this volume there is a fine instance. People often say humans have a "natural side" and a "social side" — that is in the textbooks. After completing the picture with the concept vector, the author points out: speaking only of these two sides is missing items — humans also have an "interest side" and an "ideal side." The four sides correspond to the philosophical framework's four rows, no more, no less.

Whether this completion is right, readers may debate; but the very fact of "being able to find missing items" proves the tool's power.

Skill Two: Deduplication

Deduplication is discovering "you state your idea and I state my idea, when in fact the two of us are saying the same thing."

The author has a bold judgment: **after deduplication you will find that the mountain of human knowledge is actually not so large; a great deal of it is one meaning repeated in ten thousand ways.**

Every culture, every discipline, every era has been telling the same few truths in its own dialect. Deduplicated, they connect; they are islands no longer. It is like the languages of the nations, like the various programming languages: sum up the commonalities and study them together, instead of everyone talking about the same thing in their own tongue — that is sheer waste.

Then what remains after deduplication? The author's answer is this book series itself: the grand synthesis of Book VI is the "slimmed-down list" he drew up — the philosophical framework's four cells have shadows in many disciplines, and the knowledge of the various disciplines has been compressed once by it.

The operating method of deduplication is the comparison of conceptual genes: if two concepts take the same value on every dimension, they are two names for one concept (a synonym relation); if they agree on only some dimensions, their similarity lies quantified before your eyes.

The author even proposes: **what replaces verification is deduplication.** Verifying an assertion is hard, but discovering "the ancients said this assertion long ago, and another discipline said it too" achieves consensus across time and space. For example, deduplicating the five phases of Chinese medicine with "pluralism" makes Chinese medicine understandable at a stroke — that is consensus achieved.

The present state of psychology is the counter-example: psychology has dozens, even hundreds of branches, each talking in its own tongue, all preliminary summaries of experience, dazzling the eyes and hiding the essence from view.

Between appearance and essence, what is needed is precisely a deduplication — two dogs with similar genes, one black and one white, needn't be studied separately.

Skill Three: Classification

Classification is not label-slapping; it is **the right to treat differently**.

The author puts it bluntly: to believe that a species has a uniform structure and uniform behavior, and to treat it with a uniform method — that kind of thinking is foolish.

Education that treats all children by one uniform processing method achieves little; medicine prizes diagnosis, and diagnosis is a kind of classification — get the diagnosis wrong, and the dearest medicine is useless. To make a rigorous argument, one must first make concepts explicit, and making concepts explicit cannot do without classification and deduplication; the orthogonality of concepts must be guaranteed.

The by-products of classification are also valuable: classification discovers relations of exclusion and coordination among concepts; classification preserves individuality — recognizing people different from yourself, and finding your own kind; classification lets one understand the middle way — knowing you are a +6 on the axis, you know there are also -6 people on the axis.

Of course classification has limits, and the author is equally candid: attending to commonality easily overlooks individuality; attending to the whole picture easily ignores details. Biological genes number in the hundreds of millions, while classifications can only be a finite single-digit number — the difference is too great, so classification can only be an auxiliary tool of thought; truly fine-grained consideration must still proceed case by case, in the manner of the common-law tradition.

What classification satisfies is the human hunger for the full picture — a rough map first is better than groping in the dark.

Skill Four: Completion and the Avoidance of Extremes

The concept vector's structure forces one to "look at the other side":

- One who speaks only of "motion" is reminded there is also "stillness";
- One who speaks only of "the individual" is reminded there is also "the whole";
- One who speaks only of science is reminded there are also the problem-domains of philosophy and theology.

Many problems arise because someone has walked too far down one road — the antidote lies not at the road's end, but on the forgotten other side.

The author uses the metaphor of a "T-square": special strength and all-roundness are both indispensable — choose one road and go deep, but do not specialize yourself away; preserve your changeability, so that when the environment changes, you can change too.

In other words: in judging anything, never use just one dimension — one ruler measuring everything does everything an injustice.

Skill Five: Quantified Analogy

Two things are "a bit alike" — exactly how alike?

The concept vector can turn fuzzy intuition into a computable structure: things with the same genes can be analogized; the more dimensions they share, the deeper the analogy runs.

Recommendation algorithms are the everyday version of this principle: information nodes carry several attributes (gene chains); comparing the gene chains yields a similarity, and the system recommends similar information to you.

Skill Six: Handling Complexity

Facing the complex problems reductionism cannot solve, the author's way is: look from the angle of the indivisible whole, and solve by abstraction — that is the concept vector.

There is an easily misread spot here that must be made clear: the concept vector also "divides," but it is not reductionism. Reductionism's dividing is **dismantling** — taking the whole apart into components that can stand without the whole; present-day science is mainly reductionist, and its means is dismantling. The concept vector's dividing is precisely the opposite: **every binary is a division of the whole** — "inner/outer" does not take two pieces off a person; it divides the whole person into two poles along one dimension, and the two poles together are still that whole. So the concept vector's position is **holism: it can divide, but it does not dismantle**.

The author holds this to be an important feature of the concept vector, and an important contribution of it. Note that it does not emphasize the same thing as the holism of Book IV (the philosophical framework): there it is a worldview — complex things should be viewed as unified wholes; here it is a method — dividing without dismantling.

As for the term he used in his early years, "appearance-ism," it now finds its accurate place: some wholes temporarily **cannot be divided** at all, and one can only stand outside and describe their manifestations — that is a fallback of necessity, not a position.

It rests on the philosophical view of the "indivisible": the binary is indivisible, mutually dependent — without unity there is no dispersion; without stillness there is no motion.

This is top-down holistic thinking, the same methodological character as Chinese medicine.

A Reminder: Don't Use an Ox-Cleaver on a Chicken

The author specially warns: using the concept vector is a very difficult thing.

It is very hard to find the most important concepts of a field, very hard to find a complete set of concepts of equal gene length; it may take years to work out the concept vector of one field.

The concept vector is a generalization standing at the highest level, useful for grasping the most principal aspects and analyzing positive-and-negative feedback; but for concrete problems, don't use the concept vector — the analysis cost is too high.

An ox-cleaver is for carving oxen, not for peeling apples.

The Four-Character Mnemonic Before Leaving Home Is a Gap-Checking Table

Many people recite a mnemonic before going out: "Reach, hand, want, money."

In Chinese these four words — shēn, shǒu, yào, qián — are homophones for: ID card, phone, keys, wallet. Four homophonic characters covering four things. The mnemonic works not only because it rhymes, but because it happens to be a gap-checking table of "gene length 4": identity credential, communication tool, access tool, payment tool — four dimensions each in charge of one thing, no more, no less. People who forget things on their way out have mostly missed one of the four dimensions; recite the mnemonic, and the empty cell speaks for itself.

In recent years some have added a fifth item to the mnemonic: the power bank. Under the communication-tool dimension, a new life-or-death item — "charge" — has grown. This is exactly the "new gene" of Chapter 7: a new thing appears, and the old list lengthens accordingly.

Gap-checking, completion, lengthening — the three signature skills of this chapter are all present in one folk mnemonic. Good tools never distinguish between temple and street.

Summary

The concept vector solves four problems (no full picture, the Church of Science, fuzzy concepts, level confusion) by means of six skills: finding gaps, deduplication, classification, completion, quantified analogy, and handling complexity.

It is a high-level tool and does not handle concrete problems. In the next chapter we deal with objections — what challenges this method will meet, and how the author responds.

Chapter 10 Challenges and Responses: A Dialogue on Concept Vectors

Half the value of a method shows in the challenges it has withstood. The author's notes specially preserve entries headed "disbelief" and "Q&A" — he expected people to disbelieve, and he took those disbeliefs seriously. All the answers below come from the original notes; the compiler has only made them coherent.

Challenge One: "I Don't Believe in Personality Classification"

Challenge: Many people simply don't believe personality can be classified.

Response: Many who don't believe in personality classification in fact have a different way of thinking — some people read maps by nature, some memorize street names by nature, and getting a street-name memorizer to believe in maps is hard to begin with.

For example, someone who attends to details will bristle at "rough classifications"; some people are interested in neither classifications nor individuals, caring only about causes and consequences.

Disbelieving classification is itself a thinking type — a phenomenon classification can precisely explain.

Challenge Two: "Type Descriptions Don't Necessarily Hold"

Challenge: A given MBTI type does not necessarily have those character traits.

Response: Indeed not necessarily — the relation is only probabilistic. Some probabilities are larger, some smaller; some are even below 50% — that statement is then erroneous and may be deleted.

The way to use them: in light of your life experience, believe the points that ring true, ignore those that don't; accept what causal inference can explain, ignore the unexplainable; or even look only at the classification itself and not at the specific traits.

This is not laxity; it is **the correct way of using probabilistic knowledge**.

Follow-up: Probabilistic things are meaningless; attend to necessary laws!

Further response: Necessary laws are extremely important, but where in the world are there so many necessary laws? Can you confirm with one-hundred-percent certainty that

a certain politician has senile dementia? Have you taken him apart and measured him atom by atom? To know only necessary laws and not the law of large numbers (laws of what happens with probability) is to have too confined a mind.

Challenge Three: "Questionnaires Measure Inaccurately"

Challenge: There is no necessary connection between a questionnaire and its results; and many people get a different result every time they test.

Response: Half agreed. Questionnaires do simplify the questions in exchange for feasibility, while introducing more uncertainty.

So the author simply declines to design questionnaire-style tests — **ask directly, and let people state for themselves which type they belong to**. The problem then simplifies to: whether they understand the definitions of the types, with detailed explanations of the types' meanings to aid self-assessment. This is better than importing a pile of test questions with their attendant uncertainty.

(Later the author did produce a small number of type tests and a "framework questionnaire" — see the notes in the Supplement — but their purpose is to provoke self-observation, not scientific measurement.)

Challenge Four: "What Makes Your Classification Right?"

Challenge: If the concept-vector framework someone proposes cannot achieve general consensus, what then?

Response: Let everyone propose their own classification, let the classifications be compared with one another, and let the winner emerge — the market is open.

Moreover, the concept vector proposes that each binary can be taken apart: for instance, pull out the single dimension "closeness/distance" and classify by it, discussing whether the concepts under this classification are correctly divided — thereby achieving **partial consensus**.

If overall consensus cannot be reached, settle for local consensus; there is no right or wrong — it only matters which is more usable.

Challenge Five: "Isn't This Mysticism?"

Response: Mysticism often issues many assertions while never making clear how the assertions arose. To avoid mysticism, explain as clearly as possible the whole process by which each assertion was born.

The concept vector, too, issues many assertions, but can say clearly how each arose — how the dimensions were chosen, how the concepts were combined, whether a correspondence is definitional or probabilistic — all laid out.

Moreover, the explicability of mysticism faces a new demand today: even artificial intelligence is studying the problem of explicability — mysticism should all the more study explication.

Challenge Six: "Are These Correspondences Among Concepts Reliable?"

Challenge: You say Confucianism corresponds to this, blood type corresponds to that — how credible are such correspondences?

Response: Two words must be distinguished here: **definition** and **correspondence**.

A definition is one-hundred-percent (structural relations internal to a concept vector); a correspondence is a lateral connection between different domains, and is probabilistic — the author frankly says the worst case might hold at a rate of only 55%. (He later clarified: 55% was only an example, meaning "above chance" — if chance is 25%, then 26% or 27% is already not chance.)

What is computable and derivable is a necessary connection; connections like "a certain MBTI type has a certain manifestation" belong to the universal interconnection and mutual influence of things: one thing is influenced by many factors, with various weights, and the transmission chains are complex and unreliable; and among the factors that finally decide an outcome, the more personal and the nearer in space and time, the greater the effect.

So the correct use of correspondences is: treat them as **heuristics**, not as **proofs**. They hint to you that "these two domains may be isomorphic" — worth checking; they do not guarantee the conclusion.

In the author's own words: "Correspondences are inherently not rigorous... weigh these correspondences for yourself; correspond however works best; they need repeated revision; at present this is only a first draft, and everyone may have their own different view."

If the correspondence were a hundred percent, it would not be a separate dimension.

Challenge Seven: "Classification Freezes People"

Response: Quite the opposite.

The author himself has said the most about classification's limits (see Chapter 9): classification is a finite single-digit number while individuals are infinite; classification is only an auxiliary tool of thought; fine judgments must be made case by case.

Moreover, a person is a superposition of "multiple personalities" (discussed in detail in Book VI): besides the inborn personality, there are the layers of personality influenced by parents, occupation, education, and social culture — like the superposition of waves.

Classification helps you see the structure clearly; it does not nail you dead inside a cell.

The Probability Lesson in the Review Section

"The correct way of using probabilistic knowledge" — the review section of a shopping site is the best practice ground.

A product scores 4.9 with ten thousand reviews. Scroll down and there are bad reviews all the same: "Broke after three days." Does that make it unbuyable? No — a few dozen bad reviews among ten thousand people tell you a probability, not a verdict. Conversely, among the reviews of a 3.8 product, someone earnestly writes "worth far more than the price." Probability never guarantees any single outcome; it only tells you the shape of the distribution.

Review-section masters all have a way of reading: look at which problem the bad reviews cluster on (a quality collapse, or bumps in shipping); look at whether the good reviews are template spam or written with detail; look at how long after purchase the follow-up reviews were posted. This way of reading is exactly what this chapter describes — believe the points with a causal explanation, ignore the ones that make no sense; toward any single review, neither full belief nor full disbelief.

Once you accept that "the world is probabilistic," you actually grow even-tempered: 4.9 needn't be mythologized, and 3.8 needn't be clubbed to death. So it is with review sections, so with personality classifications, and so with most knowledge in the world.

Summary

The main challenges to the concept vector — disbelief in classification, types not being necessary, questionnaires being inaccurate, consensus being hard, suspicion of mysticism, correspondences being loose, people being frozen — the author anticipated them all and gave responses.

The responses have a single master key: **the concept vector is modeling, not truth; the criterion is whether it is usable, not whether it is true.**

Accept this meta-rule, and every challenge has a place to rest. In the next chapter we look back at this method's intellectual ancestors.

Chapter 11 The Genealogy of Ideas: The Ancestors of the Concept Vector

If a method cannot say where it came from, it can hardly escape the suspicion of mysticism.

The author's notes specially contain a "sources" entry, frankly acknowledging every intellectual ancestor of the concept vector. This list is itself a demonstration of "deduplication": you will see many fields, ancient and modern, Chinese and foreign, each independently groping its way to the same structure.

The List of Ancestors

One: the four-quadrant diagrams already present in various fields.

The time-management four quadrants, the Boston matrix, various four-fold personality classifications... A four-quadrant = two binaries; this is the concept vector's most common way of showing up.

Two: MBTI — representing a concept by a combination of four letters.

This is the mature model of "coded naming" and "multi-position genes."

Three: the eight trigrams and the sixty-four hexagrams.

Yin lines and yang lines compose the three-position eight trigrams and the six-position sixty-four hexagrams — the ancient Chinese were using binary systems of gene length 3 and 6 more than two thousand years ago.

Four: word vectors in natural-language processing.

Equating a word with a vector of several dimensions. The difference: a word vector is fixed automatically by statistics over texts; a concept vector fixes a word's "distances" manually and speculatively.

The author jokingly calls himself someone who "has also run some projects that substitute manual work for artificial intelligence" — the concept vector is a manual word vector; another of his projects, "speaking as if programming," is a manual structured language; his personal microblog was a manual tag-subscription — all are control experiments in "using the human brain to do what AI does."

Five: dialectics and the dualism of Zoroastrianism.

Binary unity-in-opposition is an ancient, global idea. Some even say Plato's classical dualism is exactly the same as the concept vector — if so, why bring it up again? This question is answered at the end of the chapter.

Six: programming — classes, interfaces, attributes, methods.

Object orientation requires every function to be orthogonal to and non-duplicative of the others; object databases have the concept of attributes. The author summarizes the concept vector from the computer-science angle: don't code one enormous class; split it into many small functions, and accomplish the same functionality by combining the small functions.

In object-oriented programming, every person abstracts a different class model, creating model complexity; programming solves this with "interfaces" — one class model can implement multiple interfaces. Academic models are the same: everyone builds a different model, and in fact they too should be decomposed into multiple interfaces.

The author calls this decomposition **the gene-splitting of concepts** — just as there are many biological species, but after genetic analysis the ins and outs and the degrees of similarity among species become perfectly clear.

Seven: the hierarchical discipline of writing.

Writing requires every heading at a given outline level to carry comparable weight — the embodiment of the coordinate constraint in writing.

Eight: tables.

A table defines a row by the values of several columns — each column is one gene position.

Nine: semantic-web triples, Prolog, Lisp, and the like.

The computing tradition of knowledge representation.

Ten: the periodic table of elements.

The supreme model of finding gaps and filling vacancies.

The author says: "There are no other origins."

This frankness matters: the concept vector was not invented out of thin air; it distills isomorphic practices long present in ten fields into one unified method.

The name "gene" itself has a pedigree too. In a 2017 blog post the author recorded: inspired by the sixteen personality types — behind every type stand four letters — he

called this structure "the genes behind a concept." The concept "hobby," for instance, has behind it the four genes introverted, passive, rational, stubborn. Concepts can be taken apart; genes can be combined; the name was thus settled.

The Relation to Mathematics

The author conjectures: set theory and category theory in mathematics may be related to the concept vector.

A concept is a set; dimensions are the coordinate axes of a Cartesian product; category theory studies structure-preserving mappings — and the "correspondences" the concept vector makes are precisely an effort at seeking structure-preservation.

This direction the author did not develop; it remains an open question.

The Relation to the "Big Picture" Tradition

Professor Wu Jinshan of Beijing Normal University advocates "understanding-based learning," whose core is the hierarchy of knowledge and the disciplinary big picture: knowledge falls into four levels — factual and procedural knowledge, disciplinary concept knowledge, disciplinary big-picture knowledge, and general human thinking.

The general process of mathematical modeling is: attend to a real object, pose the problem, accumulate data and understanding, turn the real problem into a mathematical one (grasp the principal contradiction, ignore a mass of details), solve and test, systematize and generalize.

The author comments: mathematical modeling comes from reality; the concept vector also comes from reality and walks toward abstraction; the concept vector is itself a "big picture" — what it aims to provide is precisely knowledge of the fourth level: general human thinking.

Why Ancient Ideas Get Lost

If dualism, four-quadrants, and the eight trigrams have existed since ancient times, why does the concept vector need to be proposed anew today?

The author's diagnosis: the ideas existed in ancient times, but their application fell far short. In the modern era, all attention went to science, and philosophy withered; the ancient ideas lost their transmission, leaving modern people without good tools for thinking, and good thought tools are very far from widespread.

The limits of thought have turned many problems that could have been answered into unsolvable ones — the Church of Science has imprisoned people's minds.

This passage can serve as the whole book's declaration of motive: **not to invent new ideas, but to make ancient and effective thought tools usable again, and to restate them in a modern, rigorous, discussable way.**

Yogurt, Soy Sauce, and Kimchi Never Met

The same structure gets groped out repeatedly in different places, and the kitchen is the liveliest scene of all.

Herders on the steppe make yogurt; breweries in the Central Plain make soy sauce; households on the peninsula pickle kimchi; mountain folk in Europe make cheese. These groups were separated by ten thousand li, and for hundreds of years none knew the others existed — yet each groped its way to the same structure: let the microbes eat first, turning perishable food into preservable delicacies.

No one ever convened a "fermentation congress," and no patent office issued a certificate. The structure is objective; whoever deals earnestly with food runs into it.

Conceptual structures are the same. Four-quadrants, the eight trigrams, MBTI, the periodic table appeared in different eras and different fields, with no line of transmission between them — this is not anyone copying anyone; it is the same principle as fermentation: the structure is right there, and those who grope long enough find it. This list of ancestors reads like an honor roll, but it is really more like a "record of collisions" — and the more collisions there are, the more it proves the road is real.

Summary

The concept vector's genealogy spans ancient and modern, Chinese and foreign: four-quadrants, MBTI, the eight trigrams, word vectors, dialectics, object-oriented programming, the craft of writing, tables, the semantic web, the periodic table.

Its task is the deduplication and unification of these isomorphic practices. Its mission for the times is to reactivate the ancient line of thinking called "abstract modeling" in an age when attention is over-concentrated on science.

The next chapter is the whole book's summary: a map of knowledge.

Chapter 12 Summary: A Map of Knowledge

Compress the Whole Book into Three Paragraphs

First paragraph: **the problem.** The world of human concepts is chaotic. Concepts are described in natural language without rigorous definition; non-coordinate concepts get discussed in a jumble; the various disciplines and cultures reinvent the same truth without knowing of one another; science's success has spawned a "Church of Science," causing the vast problem-domains beyond science's reach to be abandoned by thought.

Second paragraph: **the method.** The concept vector proposes that a concept can be expressed as a combination of several binary dimensions — a concept is equivalent to a vector. Dimensions are mutually exclusive and coordinate, and combine to generate concepts; a dimension is not just two poles but a continuous number line; gene length can be lengthened, and lengthening divides into subdivision and new genes; concepts are best named by codes rather than nouns. This method is not science but abstract modeling: its criterion is "is it usable," not "is it true"; it makes the provenance of each of its assertions clear, and thereby draws the line against mysticism.

Third paragraph: **the value.** With the concept vector, knowledge can be checked for gaps and filled like a periodic table, deduplicated like gene sequencing, and give people the full picture like a map; classification grants people the right to treat differently; multi-dimensional judgment replaces single-dimensional judgment; people can avoid extremes and keep to the middle way.

The Character of This Method

The method can be portrayed in the author's own words.

- **Induction** → **deduction:** the concept vector is minimalist, without so many groundless assertions; more deduction, less induction, achieving a minimalist effect. Once concepts are combed clear, casual inductive summaries of experience can be avoided, replaced by unified deductive explanation.
- **Scatter** → **unity:** the concept vector discovers the underlying unity of human thinking and language. Human thinking is an abstraction of the objective world; the process of abstraction is obtaining the identical part after two concept vectors are compared; language is the symbol corresponding to a concept; an event is only a concept with parameters.

- **Profusion** → **simplicity**: the concept vector has a deduplicating effect, turning profuse and tangled narration into simple dimensions.
- **Experimental physics** → **theoretical physics**: by disciplinary classification the concept vector belongs to philosophy and mathematics, not to science — it does not use the means of experiment, but mainly uses thinking to find answers.

Theories, too, divide into soft and hard: mathematics and the science that has withstood falsification do not change easily; economics changes easily; principles do not change easily; fashionable applications change easily. The concept vector belongs to "the principles of creating concepts" — the layer that does not change easily.

One more positioning is worth remembering: **the concept vector should belong to a category close to logic**. Like mathematics, it exists objectively and does not depend on the human brain — logic is a thought tool, and so is the concept vector. What it studies is not the world, but "concepts" themselves; and the concept is the first step of abstraction, and abstraction is the tool of thought. The tool's nature determines its character: it is not responsible for discovering new facts; it is responsible for putting the concepts you already have in their places. The thought tool is the first and original element — the frameworks of the following books are all its products.

From Method to System: A Map of the Whole Volume

The concept vector itself is only a tool. A tool's value shows in use. Around this tool, the volume builds these frameworks (arranged in this volume's reading order):

- **The framework of mind (Book I)**: restates MBTI with the four genes "introversion/extraversion, perception/action, rational/emotional, control/spontaneity," and rearranges Freud with "ego/superego/non-ego/id," answering "what kinds of people there are and how the inner mind runs";
- **The framework of thought (Book II)**: with the genes "discrete/continuous × hierarchical/flat" and others, analyzes the four ways of thinking, answering "what types human thinking has";
- **The philosophical framework (Book IV)**: with the two genes "simple/complex × unified/dispersed," defines the four worldviews reductionism, teleology, holism, and pluralism, answering "what kinds of forms the world has";
- **The frameworks of society and of life (Book V)**: applying the philosophical framework to society and to life, obtains the four human attributes — the natural, the

social, the interest, and the ideal — answering "what position a person occupies in the world";

- **The grand synthesis (Book VI):** aligns the several frameworks and draws the great table of correspondences spanning personality, thought, philosophy, civilization, blood type, temperament, and academic disciplines, answering "why these classifications are repeatedly isomorphic across fields."

The Next Step: Setting the Concepts Running

The concept vector is not the end point, but the starting point.

Taking concepts apart into dimensions and placing them in coordinates still yields only a static table. The author's next step is: **to connect the concepts to one another, to let these concepts together form an organism — and run.**

This step has in fact already begun. Look back at the frameworks in this volume: not one is a dead classification table. The framework of mind has lines of operation — the id acts on the ego through the non-ego, the ego manages the id through the superego, head joined to tail turning in a ring; and beyond the ego's four cells there is a flywheel of "relationships → ability → career → hobbies." The framework of thought has production and operation — new information is written into memory, and memory is sent up onto the stage. The four lines of the framework of society are each a line of operation — the economy is production → consumption → circulation → distribution; politics is the generation → execution → order → guarantee of power. **All of the author's frameworks are ultimately interconnected and runnable.**

The vector fixes a concept's position, and a position is only standing by; concepts meshing with one another and running together — that is where this method is headed.

Some Unfinished Words

Finally, the unfinished business is laid on the table too:

- The mathematical expression of the concept vector is at present just a vector; "whether there is any possibility of overthrowing it, I don't know" — the author welcomes any information that could overthrow it or go further on its basis;
- The choice of dimensions in each framework is subjective (the field of vector databases likewise admits that dimension weights are a subjective matter) — the

author only makes his own choices clear, and invites everyone to build their own classification;

- The to-write list still contains: riding the trend; the correspondence between columns and rows in the framework of mind; the correspondence between the framework of thought and the framework of mind.

Once a tool stands up, the most important thing is to put it to work.

Where to start working? The author's answer is not "find dimensions for a concept" but the reverse: **find a set of words you know well, and draw them a periodic table.** Fix the dimensions first — two, three, or four all work — draw the quadrants, then put the words in one by one. A word that won't fit in hints that a dimension is missing; words crowded into one cell hint that a dimension can be subdivided further. The moment the table is drawn, you will see the shape of your own knowledge for the first time.

Please turn to Book IV, *The Philosophical Framework: Four Forms of the World*, and watch the concept vector's first great display of its powers.

B o o k I V

The Philosophical Framework: Four Forms of the World

Two Dimensions to Explain How the World Comes and Goes

The previous book presented the method; this book is the method's first large-scale application: using two binary dimensions to classify the "forms" of the entire world.

Contents in Brief

The world we live in is, plainly put, the various forms composed of matter. So: what kinds of forms are there?

This book's answer: with two dimensions — "simple/complex" and "unified/dispersed" — every form can be sorted into four quadrants: the world of reductionism, the world of teleology, the world of holism, and the world of pluralism. These four are not four new terms, but four pairs of glasses for viewing the world: an atom, a stool, a human body, a forest, a company, a state — each finds its place.

Going further, this book also gives the philosophical framework's "columns": unchanging/changing, individual/collective — crossing them yields sixteen basic categories: matter, action, space, time; internal cause, external cause, goal, realization; existence, development, cooperation, competition; independence, openness, structure, process — and a preliminary correspondence is made with the Luoshu nine-palace square, the eight trigrams, and Eastern and Western cultures.

Reading this book requires no prior knowledge; after reading it, the first thing you will ask of anything you see is: which "-ism" does it belong to?

How to Read This Book

- Chapter 1 is the general outline and the definition of the dimensions; Chapters 2–4 treat the four -isms in detail; Chapter 5 reflects the four back onto human beings themselves; Chapter 6 covers the sixteen categories; Chapter 7 covers the lines of operation, the Luoshu, and the eight trigrams; Chapter 8 covers the four -isms' echoes in the contemporary world; Chapter 9 is the summary.
- Each chapter stands alone. Readers who just want a taste can grasp the outline by reading Chapters 1, 2, and 4.

Chapter 1 The World Is Form

A Boldest of Opening Lines

The purpose of the philosophical framework is: **to have an overall conception of the world.**

That sentence sounds like the opening of every philosophy. But its very next sentence shows its character:

The world we live in is, plainly put, the various forms composed of matter. The concise way of saying it: the world is form.

Note the ambition of this definition. It does not say the world is matter, nor that the world is idea; it says: **the world is form.**

Matter is the base material; form is the pattern. The same batch of atoms arranged into a stone is one form; arranged into a flower, another; arranged into a person, another; arranged into a company, a state, a civilization, yet others.

To study the world is, in the end, to study: what kinds of forms are there? How do forms arise, how are they maintained, how do they transform?

The author here quotes Buddhism: Buddhism says all things are forms, all are bubbles and shadows. This sentence is often read as passive nihilism, but in the philosophical framework it is read as a structural assertion: since all things are forms, there ought to be a theory that explains how forms come and go.

The philosophical framework is what explains how forms come and go.

From "What Is the World" to "What Kinds of World Are There"

Traditional philosophy loves to ask "what is the essence of the world," attempting to round up the world with a single word: matter, spirit, the Tao, qi, being...

This way of questioning has a common defect: the answer is singular, but the world is plural. The result of rounding up the world with one word is to shave the world's richness flat.

The philosophical framework changes the question: instead of asking "what is the world," it asks "**what kinds of forms are there.**"

Changing the singular question into a plural one is the first step of the concept-vector method: only after classifying can structure be discussed; only after admitting the world has several types can the differences and connections among the types be discussed.

This is precisely the ambition of "classify and deduplicate" from Book III: classification does not chop the world up; it writes out the world's "parts list." Once the parts list is written out, all things can be described as combinations of parts — just as, once the chemical elements are known, any substance can be written as a molecular formula.

Classify by What? Two Dimensions

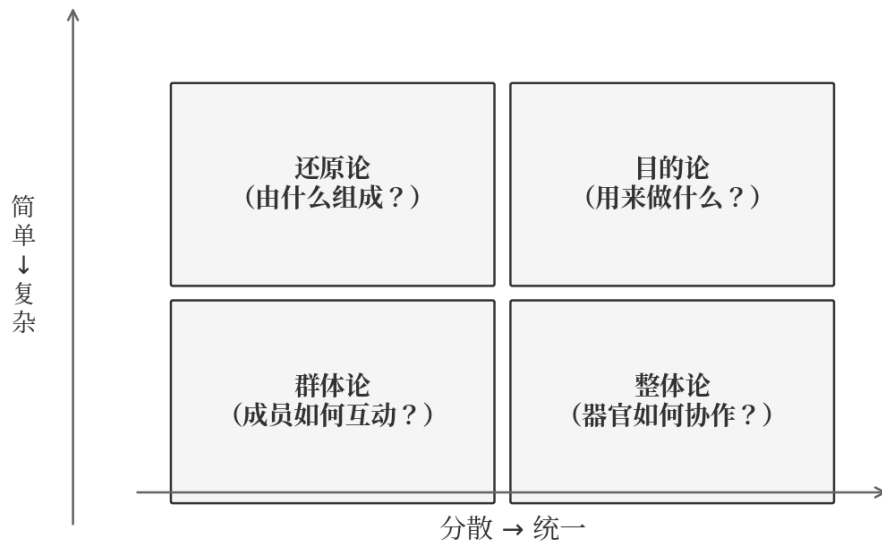
What kinds of forms are there? The author answers with the tool of the concept vector. Two dimensions:

- **First dimension: simple / complex.** Here "complex" means large information content. A stone is simple; a cat is complex; a slogan is simple; a legal code is complex.
- **Second dimension: unified / dispersed (not unified).** "Unified" means: every part is indispensable, and all serve one purpose together. A watch's gears are each indispensable — unified; whether a pile of sand has one grain more or less is no matter — dispersed. Note, this is a property of the thing, not of the way of observing — whether the gears serve one and the same purpose is decided by the watch, not by the person looking.

Two dimensions, two poles each, combine into four forms:

	Unified (every part indispensable, all serving one purpose)	Dispersed (parts can be added or removed, no common purpose)
Simple	Teleology	Reductionism
Complex	Holism	Pluralism

These are the rows of the philosophical framework: reductionism, teleology, holism, pluralism — the "four -isms" for short. In the next four chapters we walk into these four worlds one by one.



Besides being laid out as four quadrants, the four -isms also have a vertical reading. Put a thing before your eyes: look downward, take it apart — those are its parts — **reductionism is below**; look upward, ask its use — **teleology is above**; look level: it itself is a whole (holism), and around it is a multitude (pluralism) — **holism and pluralism stand in the middle**. Read once from bottom to top, it is exactly the complete field of vision "parts — self — purpose."

Before that, one more sentence must be relayed:

These four dimensions (simple/complex, unified/dispersed, and the motion/stillness and inner/outer to come) are the most basic, the most general, the most abstract. They are, so to speak, ordered by generality. This is my personal view; there is no standard by which to measure and judge. It is like the many cultures, each with its own viewpoint. Why do these cultures exist? Because people cannot think without abstraction; when some people share a common abstraction, a consensus forms — that is culture.

The author does not claim these four dimensions are the universe's only truth; what he claims is: these are the four most general pillars I have chosen — erect them first, and see how large a roof they can hold up. If they hold it, use them; if not, replace them.

This is the modeler's honesty, and also the modeler's confidence.

The Philosophical Framework in a Box of Building Blocks

"Matter is the base material; form is the pattern" — a box of children's building blocks performs the whole sentence.

The same box of blocks: in the morning built into a house, in the afternoon taken apart and built into a car, in the evening clattered all over the floor. The blocks didn't change — the matter didn't change; what changed was the arrangement — the forms changed round after round. "The world is form" says exactly this: what deserves study is not that pile of blocks, but "how many patterns can be built, and what temper each pattern has."

Look closer, and all four forms are in this box. A single block, simple, bound to nothing — the world of reductionism. Ask of a block "what is it for in this tower" — the world of teleology. A finished castle, a hundred blocks each indispensable — pull out the load-bearing one and it collapses — the world of holism. And that pile spilled on the floor, where one more block or one less is no matter — the world of pluralism.

One box of blocks, four forms. The child plays with the blocks; the philosophical framework looks at the kinds of patterns. The next three chapters look at these four patterns carefully, one by one.

Summary

The world is form; the question of the kinds of forms is philosophy's entrance; with the two dimensions "simple/complex × unified/dispersed," forms are divided into four classes: reductionism, teleology, holism, pluralism.

The next chapter first makes clear "reductionism," the world we know best.

Chapter 2 Reductionism: The Power and the Boundary of Decomposition

What Reductionism Is

Reductionism is no new word. It denotes the method of continual decomposition:

For example, a material is composed of molecules; once the molecules are understood, the material has been mastered at the root. Molecules in turn are composed of atoms; once the atoms and the interactions among them are understood, the molecules have been mastered at the root. The world of reductionism is a world composed of the simple.

In the coordinates of the philosophical framework, reductionism = **simple** + **dispersed**.

"Dispersed" means the relations among parts are loose: taken apart, each part is still itself; put back together, the whole is the sum of the parts. $2 + 2 = 4$ — that is the arithmetic of the reductionist world.

Reductionism is humankind's most glorious road of knowledge. Physics is its standard-bearer: from objects to molecules, from molecules to atoms, from atoms to elementary particles — each layer decomposed, the grasp goes one layer deeper. The glories of modern medicine (surgery, chemical drugs, cell-level targeted drugs) are likewise mainly the spoils of reductionism.

The Four Categories of Reductionism

The philosophical framework assigns reductionism four sub-concepts; they are the result of dividing once more by "stillness/motion × inner/outer":

	Inner (individual)	Outer (collective)
Still (unchanging)	Matter	Space
Moving (changing)	Action	Time

How to read it: a reductionist world, taken apart — its still kernel is **matter**, its still extension is **space**, its moving kernel is **action** (force, interaction), its moving extension is **time**.

Matter, space, action, time — these four words happen also to be physics' four basic stages. Physics is the full unfolding of the reductionist world: matter exists in space, changes in time, and relates to one another through action.

These four cells are no word game. They hint that any reductionist question can be decomposed into four questions — what **matter** is it composed of? How is it distributed in **space**? What **actions** obtain among the parts? How does it evolve in **time**?

Once the four questions are answered, a reductionist object has been essentially explained.

Reductionism's Line of Operation

Reductionism's four categories are not dead; there is a line of operation among them:

Through time, matter disperses into space; through action, space gathers into matter.

In everyday language: all things, with time, spread out in space (think of a drop of ink falling into clear water), and through interaction gather in space back into matter (think of a nebula collapsing into a star).

Dispersal and gathering are the breathing of the reductionist world.

The Boundary of Reductionism

Reductionism's power lies in decomposition; reductionism's boundary lies there too. The author warns of its limits in many notes.

First, some things must not be taken apart.

If you want to know a politician's next move, you cannot get the result by dissection; humankind to this day has not fully explained thought on the basis of dissection.

Second, once taken apart, it cannot be put back together.

Reductionism pays insufficient attention to the mutual relations among a whole's parts. The author gives a brilliant example: humankind can already compile every sort of data on every person and every enterprise, yet still cannot predict the macroeconomy — on the one hand because complex things are too random, on the other because humankind does not command every chain of knock-on reactions.

Chain reactions cannot be studied only from the micro level; macro, holistic thinking is also needed.

Third, there are qualitative leaps at level transitions.

Once quantity reaches a certain scale, higher-level structures emerge, with new properties of their own, very different from the bottom-level properties. Take the brain apart into neurons, and the laws of neurons do not contain the word "consciousness"; take society apart into individuals, and the laws of individuals do not contain the word "revolution."

The Relation to "the Objective"

Last comes a philosophical footnote that helps us see reductionism's character clearly: "the objective" is a reductionist notion.

To say a thing is "objective" means it exists independently of the observer and can be measured without ambiguity — this basically holds only in the "simple and dispersed" world: an atom's mass does not vary with the person.

But once you enter the domains of complex-unified and complex-dispersed, the observer's abstraction, modeling, and standpoint join in, and "the objective" begins to be discounted. All information in the brain is the result of abstraction; none of it is the objective itself.

This is not to say the world is false, but to say: the higher the level you climb, the more "pure objectivity" is an approximation.

Taking Apart an Alarm Clock, and the Two Extra Screws

Many people did one thing in childhood: took apart the family alarm clock.

The taking apart is reductionism's victory parade. Back cover opened — mainspring, gears, hands, alarm — decomposed layer by layer, every part on the table recognizable. In that moment you truly feel: the clock has no secrets; it is just these parts — take it all the way apart, and you master it all the way.

Then comes the second half: putting it back. As you assemble, two extra parts appear on the table. The clock actually still runs — only from then on it loses five minutes a day. Those two extra parts are the souvenir reductionism leaves every disassembler: **taking it**

apart, you knew every part; putting it back, the relations among the parts don't know you.

An alarm clock is a simple thing, and even so. Switch to a person, an economy, a stretch of history, and the parts that can be taken apart multiply — and so do the parts that can't be put back. The boundaries this chapter describes, anyone who has taken apart an alarm clock has long since touched with their own hands.

Summary

Reductionism = the simple-and-dispersed form; its method is decomposition; its four categories are matter, action, space, time; its operation is the cycle of dispersal and gathering.

It has taken charge of the physical world and made science what it is; but before complex, unified objects, the other three -isms must take the baton. The next chapter presents a word the author coined himself: teleology.

Chapter 3 Teleology: Everything Has Its "What It's For"

A Self-Coined New Word

Teleology is a new word coined within the philosophical framework. Some people say "functionalism" — functionalism and teleology are equivalent; they say the same thing.

Functionalism's examples: an animal's legs are for walking; the digestive system is for digesting. A further example teleology can give: a stool is for sitting.

Note what these three examples share: their way of explaining is "**what it is for**," not "what it is composed of."

Ask what a stool is, and reductionism answers "wood, nails, and glue, combined in a certain structure"; teleology answers "for sitting on." Both answers are right, but they answer different questions.

Teleology's coordinate in the philosophical framework is: **simple + unified** — simple in structure, but with all parts serving one purpose together.

The Four Categories of Teleology

	Inner (individual)	Outer (collective)
Still (unchanging)	Internal cause	External cause
Moving (changing)	Realization	Goal

How to read it: in the attainment of a purpose, the still end has the **internal cause** (one's own conditions, ability, passion) and the **external cause** (environment, opportunity, other people); the moving end is the setting of the **goal** and the process of **realization**.

Internal cause, external cause, goal, realization — this is a complete "purpose cycle."

Of anything that "has a what-it's-for," four questions can be asked: what is its **goal**? What is the path of **realization**? Is the **internal cause** sufficient? Is the **external cause** favorable?

Exams, startups, curing an illness, falling in love — the structure is the same.

A Contemporary Echo: The Coordinates of the Laws of Success

The author uses teleology to read Barabási's *The Formula* — a good example showing how the "four-ism coordinates" are used.

- First law: performance drives success, but when performance cannot be measured, networks drive success;
- Third law: initial success $\times$ social fitness = future success;
- Fourth law: successful team work requires diversity and balance, and often makes it easier for a super leader to emerge;
- Fifth law: success can come at any time and any age, so long as you persist in a good idea.

The author's correspondences: the first law corresponds to **internal cause** (performance); the third law to **external cause** (both initial success and social fitness are environmental factors); the fourth law to **goal** (finding a goal requires broad interests and a diverse team); the fifth law to **realization** (persistence).

As for the second law (performance is bounded, but success is unbounded), the author says plainly it is "not really a law" — it is a commentary on the former two, not an independent mechanism.

The value of this reading lies not in right or wrong, but in the demonstration: **take any theory at random, and first ask which cell each of its propositions falls into — and which cell is missing.**

A theory with missing cells is incomplete; fill the missing cells, and the theory gains dimension.

Teleology and Humanity's "Ideal Side"

Teleology has a more important outlet still: it is the philosophical coordinate of "why people do things."

After a person has secured food and clothing, fulfilled social obligations, and satisfied bodily needs, he still pursues a career, pursues success, and finds all sorts of things to do so as not to be bored — things that may or may not be related to survival and profit.

This pure property of "acting for the sake of a goal" the author calls humanity's **ideal side**; it corresponds to teleology.

Huawei's strategic-planning method, "five looks and three fixings," is the corporate edition of the ideal side: the five looks are looking at trends, at the market, at competition, at oneself, and at opportunity (getting clear the internal and external causes); the three fixings are fixing the future goal, the strategy, and the strategic control points (establishing the goal and the path of realization).

From personal ideals to corporate strategy, teleology's skeleton does not change.

The Eternal Quarrel Between Teleology and Reductionism

The histories of science and philosophy contain a long quarrel: is the world ultimately "pushed by causes" (reductionist causality) or "evolving toward purposes" (teleology)? Aristotle's four causes originally had a place for the "final cause"; modern science drove it out.

The philosophical framework's attitude: this is not a question of who is right, but a **question of coordinates**.

"A stool is for sitting on" — this sentence stands completely on its own level; it need not be reduced to wood science to be legitimate. Reductionist explanation connects **downward** (asking the structure of the level below); teleological explanation connects **upward** (asking the function in the level above).

A complete understanding must be able both to open downward and to connect upward.

Why Won't the Flowers Bloom: Four Questions on the Balcony

Everyone who has raised flowers has asked this aggrieved question: I water it every day — why won't it bloom?

Teleology's four cells happen to be the four steps for answering. Step one, ask the **goal**: are you sure it's a flowering variety? Some people wait for a pothos to bloom — wrong goal, and everything after is wrong. Step two, ask **realization**: is the path right? Watering is execution, but some people water three times a day — wrong manner of realization; the harder, the worse. Step three, ask the **internal cause**: is the seedling itself up to it? Wrong seed variety, roots poorly raised — its own conditions fall short. Step four, ask the **external cause**: does the environment cooperate? A north balcony lacks light; a heated room is too dry — the external conditions are unfavorable.

Goal, realization, internal cause, external cause — ninety percent of a year's posts in a flower-lovers' group fall into these four cells.

The four questions' range of application obviously goes beyond balconies. Exams, startups, curing illness, falling in love — as said before, the structure is the same. The advantage of growing flowers is fast feedback: whichever cell has the problem, a few months later the flower grades you with "bloom" or "no bloom."

Summary

Teleology = the simple-and-unified form; its core sentence pattern is "it is for.."; its four categories are internal cause, external cause, goal, realization.

It explains function, explains striving, explains strategy; it is the philosophical base of humanity's "ideal side." The next chapter presents the -ism we know best and misuse most easily: holism.

Chapter 4 Holism and Pluralism: Two Orders of the Complex World

Holism: Complex and Unified

Alongside reductionism, what people often mention is holism. In the philosophical framework, holism is defined as **complex** + **unified**: the parts are many, the structure is complex, but every part is indispensable, and all serve one purpose together.

The most typical example is the human body: the whole organism serves survival and reproduction; heart, liver, spleen, lungs, kidneys — none too many, none too few, each with its office.

A company is also holist: marketing, R&D, production, finance — remove any department and the operation falters. The members of a holist world are not "parts" but "organs" — parts can be swapped and counted; organs each have an irreplaceable function.

Holism's four categories: independence, openness, structure, process.

A whole must first be **independent** (bounded, autonomous), and at the same time **open** (exchanging matter, energy, and information with the environment — an unopen whole is a dead thing); inside it has **structure** (the static layout of the parts) and **process** (the dynamic cooperation of the parts).

Independence, openness, structure, process — four questions with which to examine any "whole": is this organization independent? Open? Is its structure clear? Do its processes flow?

Of holism's line of operation the author left only one sentence, but a weighty one:

Openness receives the environment's replenishment; only so can it support the arms race of independence.

Independence is not the product of closure; it is precisely the result of openness. A person, a company, a state — the more it can absorb resources from the environment, the more it can maintain its independence.

This maxim can be pasted above the desk of everyone who wants to be "independent and self-reliant."

How does holism study a whole? The author gave two plain methods. One is **not taking it apart**: treat the whole as a black box and observe only from outside — Newton did not need to know atoms and molecules; observing from outside, he summed up three laws. That is the holist posture. The other is **finding counterparts**: the whole cannot be cut apart, so first find two fully equivalent concepts, then describe their relation — "production" and "consumption" are counterparts; "the production workshop" and "the act of consumption" are not. If the concepts you find are not counterparts, you have not yet cut in the right place.

Pluralism: Complex and Dispersed

What is complex but not unified is pluralism. Pluralism, too, is a new word coined within the philosophical framework.

Pluralism may be related to concepts like systems theory and universal interconnection, but the author conjectures that systems theory may be the larger word containing both holism and pluralism.

Pluralism's example is the ecological environment: carnivores, herbivores, plants, and bacteria together compose an ecology; the organization of these creatures is contingent, not a fixed set like the organs of a human body — one flock of sheep more or less on the grassland, the ecology is still the ecology.

Pluralism's four categories: existence, development, cooperation, competition.

The members of a multitude first **exist** each on its own (none lives for some unified purpose of another's); each seeks its own **development**; among them there is at times **cooperation** and at times **competition**.

Existence, development, cooperation, competition — this is the grammar of the jungle, and also the grammar of the market.

Note the boundary line between holism and pluralism: a whole has a common purpose; a multitude does not. The human body is a whole (everything serves survival and reproduction); the market (in the general sense) is a multitude — no "general purpose" directs all the buyers and sellers; each person acts only for his own interest, and order emerges spontaneously from countless local interactions.

On this boundary line lie two difficult cases, and the author's ruling is brief: the "keystone species" of an ecology (the species without which the ecology collapses) does not contradict pluralism; while the variable gut flora in the human body falls under holism.

The Relations Among the Four -Isms

With this, the four -isms are complete. Lay them in a row, and there is a clear genealogy:

The four -isms	Coordinates	Core question	Typical domains
Reductionism	Simple·dispersed	What is it composed of?	Physics, chemistry, materials
Teleology	Simple·unified	What is it for?	Tools, functions, strategy
Holism	Complex·unified	How do its parts cooperate?	The human body, organizations, management
Pluralism	Complex·dispersed	How do its members interact?	Ecology, markets, society

In describing any hierarchical structure, the four -isms have a division of labor: **reductionism connects to the level below** (what this thing is when taken apart); **teleology connects to the level above** (what role this thing plays in the larger whole). Holism looks inward at cooperation; pluralism looks outward at interaction.

The author also left a way of ordering them in his blog: **reductionism is descending a dimension, teleology is ascending a dimension, holism and pluralism stay on the middle dimension** — taking apart downward is descending; belonging upward is ascending.

A set of correspondences the author jotted in his notes can serve as a sketch of the four -isms:

- In tools: all past tools are reductionist — every state can be computed in advance; **AI is the first tool humankind has made by the teleological method** — it comes from training, and we cannot predict its states.
- Extended: the market economy is pluralist; enterprise management is holist.
- In programming: functions are reductionist, structuring is teleological, modules are holist, object orientation is pluralist.

These four sentences deserve several readings. What they mean: the four -isms are no game of philosophical terms, but four really existing "ways of organizing," equally valid in the most modern fields — tools, economics, programming.

A Soccer Team and a Vegetable Market

The boundary line between holism and pluralism can be seen twice on one weekend outing.

First look at the team on the pitch. Eleven people — forwards, midfielders, defenders, goalkeeper — each with his office, none dispensable; if the goalkeeper runs up to play forward, the whole team falls into disorder. All serve one and the same purpose: winning. This is a living specimen of holism: the members are "organs," not "parts"; because there is a common purpose, there must be a coach, tactics, and practiced routines of cooperation.

After the match, turn into the vegetable market next door, and the picture changes utterly. The vegetable sellers, the meat sellers, the fish sellers — each stocks his own goods, sets his own prices, bears his own profit and loss; no one works for "the vegetable market's general purpose," and it has none. The stallholders each exist, each develop, sometimes cooperating (swapping change for one another, signing for each other's packages), sometimes competing (you sell at two, I sell at one-eighty). One stall more or less, the market is still the market.

The same morning, one wall apart: inside the wall, the logic of "not one dispensable"; outside the wall, the logic of "one more or less is no matter." Understand that one wall, and you understand the two orders of the complex world.

Summary

Holism governs "how organs cooperate" (independence/openness/structure/process); pluralism governs "how members interact" (existence/development/cooperation/competition).

With the four -isms complete, the world's forms have their basic classification. The next chapter answers a natural question: applied to human beings themselves, what does this framework yield?

Chapter 5 The Four Human Attributes: The Natural, the Social, the Interested, the Ideal

The Philosophical Framework's First "Reflection"

The philosophical framework speaks of the forms of the world. And man, too, is one form within the world — so man should also bear the characteristics of reductionism, teleology, holism, and pluralism.

"Reflecting" the four -isms back onto man himself yields the four human attributes:

- **Man has a natural side** — the traits of an animal, instincts, and so on. This is reductionism: take a person apart, and there are cells, organs, instincts, following biological laws.
- **Man has a social side** — a person has social roles, parent and child, superior and subordinate; belongs to various social structures, with the attendant benefits and contributions. This is holism: a person is an organ in the "great whole" of society.
- **Man has an interested side** — a person forages in the jungle of human society, that is, earns money; there will be competition and there will be cooperation. This is pluralism: the interaction of individuals in market and society.
- **Man has an ideal side** — after securing food and clothing, fulfilling social obligations, and satisfying bodily needs, a person still pursues a career, pursues success, finds all sorts of things to do so as not to be bored. The things found may be related to the natural, social, or interested sides — or not. This is teleology: a person can act for a pure goal.

The author especially emphasizes: **man's natural and social sides are in the textbooks; the interested and ideal sides are what he proposed.**

This verifies once again the concept vector's power of completion — speaking only of the natural and social sides leaves missing items.

Why "Four Attributes" Beat "Two Attributes"

"Man is the unity of the natural attribute and the social attribute" is the textbook's classic formulation. It is not wrong, but it is not enough.

A young man working overtime deep into the night just to earn more money — his behavior cannot be explained by the "social side" (he is not devoting himself to the

collective), nor by the "natural side" (he is not serving a survival instinct) — he is doing it for **interest**, foraging in the jungle of the market. The interested side is an attribute at the level of pluralism.

A middle-aged man who has achieved financial freedom and then takes up philosophy, plants trees in the desert, writes novels nobody reads — his behavior is neither interest nor duty — he does it for an **ideal**. The ideal side is an attribute at the level of teleology.

Without the interested side, all the behaviors of economics have nowhere to rest; without the ideal side, all of humankind's "not-for-anything" greatness and madness have nowhere to rest.

With the four cells filled in, the map of human behavior has no blank areas.

Re-reading "the Meaning of Life" with the Four Attributes

The author has a deconstruction of "the meaning of life," using exactly the four attributes:

The meaning of life is actually not that important; what matters is how to live a life. The meaning of life is always spoken by "other people": meaningful to oneself, meaningful to the family, meaningful to society. Anything can be spoken of from the four sides — pluralism, holism, reductionism, teleology — of course not fixedly four, only four have been thought of so far — so man cannot escape these four sides either. For man they are the social, the natural, the ideal, and the interested sides. **Success is only one point within the interested side of pluralism; to attend only to that point is too narrow a mind — one might say one has been brainwashed by society.**

This passage deserves a slow reading.

Contemporary society's success-gospel is essentially the enlargement of the single quadrant of "the interested side" into the whole of life; the four-attribute framework reminds us: the natural side (bodily health, the settling of instincts), the social side (family roles, social connections), the ideal side (pursuits beyond interest) are all legitimate components of a life.

Marcuse spoke of "one-dimensional man"; the author speaks of "people who only know how to earn money" — the diagnosis is the same, and the four-attribute framework gives a quantified prescription: four quadrants, not one may be left empty.

The Everyday Use of the Four Attributes

The four-attribute framework can serve as a self-check list. When analyzing your own or anyone's situation, ask four questions:

1. **Natural side:** Is the body all right? Are the needs of instinct (eating, sleeping, exercise) satisfied?
2. **Social side:** Have the family roles and social roles been fulfilled? Is the structure one belongs to still stable?
3. **Interested side:** Is the foraging in the jungle going smoothly? Are the relations of competition and cooperation healthy?
4. **Ideal side:** Is there one thing done for no practical benefit at all — purely "so as not to be bored, to get something done"?

Whichever cell stays blank for a long time is where life is going to go wrong.

A few things readers will ask which cell they belong to; the author's rulings: **emotion is the natural side, and aesthetics is also the natural side** — he defines aesthetics as "humankind's big-data intuition": finding a landscape beautiful is, in essence, the genes voting that this environment is healthy and superior; **religion is the ideal side** — it handles goals that transcend interest.

Management, it is said, has a corresponding recipe: for the rank and file, use Legalism — stress discipline, value reward and punishment — governing people's natural side; for the middle ranks, use Confucianism — stress conscientiousness, value ethics — governing the social side; for the top ranks, use Daoism — stress cooperation and guiding along the trend — governing the interested side; and for everyone, preach corporate culture — governing the ideal side. If an organization's management methods are monotonous, it has mostly been exerting force on only one of the four sides.

This also previews the content of Book V, *Frameworks of Society and Life* — the four attributes will unfold there into a complete framework of society and framework of life.

The Four Attributes in Your Phone's Screen-Time Report

Every Sunday, many people's phones receive a "Screen Time Report." Few realize that this report is in fact a chart of the four attributes' proportions.

Open it and see where your time went. Fitness apps, sleep tracking, food-delivery apps — that is the **natural side** using the phone; the family group chat, the friend circle, all the

"reply received upon reading" — that is the **social side** using the phone; office software, stock quotes, side-gig order groups — that is the **interested side** using the phone; and then there is the thing nobody knows why you are obsessed with: model-airplane forums, Kunqu-opera albums, a column written for three months that nobody reads — that is the **ideal side** using the phone.

The four-attribute framework's "not one may be left empty" turns, in this report, into a plain bar chart. Some people's interest bar stands sky-high while the other three are invisibly short; others have a long ideal bar and a suspiciously short interest bar. The proportions may vary from person to person, but whichever bar hits zero, that domain of life begins to suffer drought.

Next time the report pops up, don't swipe it away — it is not just a traffic tally; it is your four attributes' weekly report. Whichever bar is suffering drought, it knows before anyone.

Summary

Reflecting the four -isms onto man yields the four attributes: the natural, the social, the interested, and the ideal. It is more complete than the two-attribute account of "natural + social," because it gives a place to profit-seeking behavior and dream-chasing behavior.

The four attributes are also the seeds of this volume's later "framework of society" and "framework of life." In the next chapter we return to the philosophical framework itself, to its other pair of dimensions: motion and stillness, inner and outer.

Chapter 6 The Sixteen Cells: Motion and Stillness, Inner and Outer

The Philosophical Framework's "Columns"

The previous chapters covered the philosophical framework's "rows": the four -isms crossed out of simple/complex and unified/dispersed. Now its "columns": **unchanging (still) / changing (moving), individual (inner) / collective (outer)**.

Rows crossed with columns once more give the philosophical framework's full table — sixteen basic categories:

	Unchanging individual	Changing individual	Unchanging collective	Changing collective
Reductionism	Matter	Action	Space	Time
Teleology	Internal cause	Realization	External cause	Goal
Pluralism	Existence	Development	Cooperation	Competition
Holism	Independence	Openness	Structure	Process

This table deserves a one-minute pause. We have already covered each of its rows (Chapters 2–4); now look at each column.

	不变·个体	变化·个体	不变·全体	变化·全体
还原论	物质	作用	空间	时间
目的论	内因	实现	外因	目标
群体论	存在	发展	合作	竞争
整体论	独立	开放	结构	流程

- **Unchanging individual:** matter, internal cause, existence, independence — a thing's name when it "goes still and withdraws into itself": its material, its internal cause, its existence, its independence.

- **Changing individual:** action, realization, development, openness — a thing's name when it "gets moving, with itself still the subject": it exerts action, it realizes, it develops, it opens.
- **Unchanging collective:** space, external cause, cooperation, structure — a look around at the static environment: space, external causes, cooperative relations, structure.
- **Changing collective:** time, goal, competition, process — a look around at the dynamic course: time, goals, competition, process.

Sixteen Intersections, One by One

Rows and columns are scaffolding; the intersections are the building. Each of these sixteen categories is a focus of "one angle × one state" — viewed from that row's angle, focused on that column's state, the concept on which attention finally lands. They are the true protagonists the philosophical framework ultimately wants to introduce, and they deserve to be looked at one by one.

The reductionism row (looking at a thing as parts):

1. **Matter** (unchanging-individual): the part itself. When a thing goes quiet and only itself is looked at, it is "stuff" — the material left after the last decomposition.
2. **Action** (changing-individual): the part's motion. When a thing moves, with itself still the subject, it appears as action — force, reaction, propulsion.
3. **Space** (unchanging-collective): the parts' static arrangement. When the environment is looked at and the environment is still, what is seen is space — position, extension.
4. **Time** (changing-collective): the parts' dynamic unfolding. When the environment is looked at and the environment is moving, what is seen is time — sequence, process.

The author's notes contain for this row a sentence of operational description, using all four words: "**Through time, matter disperses into space; through action, space gathers into matter.**" Spreading relies on time; clumping relies on action — the reductionist world breathes among these four foci.

The teleology row (looking with eyes on the goal):

5. **Internal cause** (unchanging-individual): the goal's root within oneself — motive, endowment, inner drive. It will appear again later in this chapter when we discuss "life choices": internal-cause people exercise their agency, realizing goal after goal.
6. **Realization** (changing-individual): the act of turning a goal into reality — execution, landing. Teleology's "moving yet inward" focus.

7. **External cause** (unchanging·collective): the static conditions beyond the goal — whether the environment grants the opportunity, whether the wind is fair.
8. **Goal** (changing·collective): the purpose unfolding ahead — it pulls you along as it changes.

The correspondences the author made in commenting on Barabási's *Laws of Success* happen to use all four cells: law 1 to internal cause, law 3 to external cause, law 4 to goal (finding a goal requires broad interests), law 5 to realization. That an imported theory of success should fall so neatly into the four cells is an accidental verification of this intersection structure.

The pluralism row (looking at it inside a multitude):

9. **Existence** (unchanging·individual): "having its number" within the multitude — membership, presence. Of an individual in a multitude, the first question is whether it is there.
10. **Development** (changing·individual): the individual's growth within the multitude. After whether it is there, the second question is whether it grows.
11. **Cooperation** (unchanging·collective): stable relations of collaboration among the members — the structure of mutual aid presented when the multitude is still.
12. **Competition** (changing·collective): the dynamic rise-and-fall among the members — the ranking contest revealed when the multitude runs.

The holism row (looking at it as a whole):

13. **Independence** (unchanging·individual): the whole's self-sustenance — able to run on its own, not relying on outside aid.
14. **Openness** (changing·individual): the whole's exchange with the outside — matter, energy, and information coming in and going out. The author's notes write this pair as a causality: "Openness receives the environment's replenishment; only so can it support the arms race of independence." Openness is the changing individual; independence is the unchanging individual — using openness to feed independence is the engine of the holism row.
15. **Structure** (unchanging·collective): the static arrangement of the parts inside the whole — the skeleton. Another of the author's notes of correspondence: distribution corresponds to structure, to space, to politics — structure is the side of the whole on which "everything is in its place."

16. **Process** (changing·collective): the dynamic circulation of the links inside the whole — the blood circulation. The same note: circulation corresponds to process, to time, to the economy — process is the side of the whole on which "all flows on without ceasing." (These two sets of correspondences will return when Book V discusses society.)

The same "individual changing": reductionism sees it and calls it **action**; teleology sees it and calls it **realization**; pluralism sees it and calls it **development**; holism sees it and calls it **openness** — four words, the faces of one and the same event under four angles. The right posture for reading the sixteen cells is not memorizing words, but appreciating: why, when the angle changes, the same state must change its name.

How to Use the Sixteen Cells

The sixteen cells are a "concept checklist." Put anything into this table, and the sixteen cells are sixteen questions:

Is it composed of **matter**? How do the parts **act** on one another? What **space** does it occupy? What **time** does it pass through? What **internal cause** does it have? What **external cause**? What is its **goal**? How is it **realized**? Does it **exist** (what member is it in the multitude)? Is it **developing**? With whom does it **cooperate**? With whom does it **compete**? Is it **independent**? Is it **open**? How is its **structure**? How are its **processes**?

Once the sixteen questions are answered, a thing's philosophical profile is complete.

This is the operationalized version of "the world is form": form is no longer hazy mystery; it is a coordinate in the sixteen cells.

The reader will ask: are the sixteen cells complete? Might there be a fifth dimension (say, "real/virtual"), expanding the table to thirty-two cells? The author's answer has two layers: **however many dimensions may be added** — four dimensions are merely his preference, suited to his level of intellect; but **going from one dimension to two is a major breakthrough** — from one axis to a table, from a scattered list to checkable coordinates, that step is a qualitative change; any further lengthening is only quantitative.

Motion and Stillness, Inner and Outer, and Life Choices

The column dimensions describe not only the world but also people. The author points out: the philosophical framework's columns involve people's main directions of choice.

People who hold the changing view (changing people, for short) hold: without change they don't feel alive. **Unchanging people**, by contrast, like maintaining the status quo and staying in the comfort zone, rather than going to the trouble of breaking it.

Internal-cause people exercise their agency, realizing goal after goal — at the risk of "easily having a carrot tied before their eyes," running a whole life after goals set by others. **External-cause people** want to ride the trend; they hold "if it can't be done, don't do it" (self-mockingly: letting it rot); they will question the necessity of the goal: who set this goal? Why is it worth pursuing?

These four orientations have no better or worse — change brings vitality and also turmoil; unchanging brings stability and also stagnation; internal cause achieves deeds and is also easily harnessed; external cause is clear-eyed and free and may also miss opportunities.

The concept vector's attitude is always: first know the axis exists, then know your own position on the axis, then understand the people at the axis's other end.

The Four Names of Overtime

Ten o'clock at night; one person is still typing at the office keyboard. One and the same action has a name in each of the four rows' dictionaries.

Reductionism sees **action**: fingers striking, currents running back and forth, data being rewritten on the hard disk — an individual exerting force in change. Teleology sees **realization**: the proposal due at month's end growing page by page — an individual advancing toward a goal. Pluralism sees **development**: seniority, works, industry reputation quietly accumulating — a member growing within the multitude. Holism sees **openness**: emails cc'ed, progress synced, mutual calibration with the team — an organ exchanging information with the whole.

The keyboard-typing action is one; the names are four. This is no word game: which name you choose decides which questions you ask next. Call it "action," and you ask about efficiency; call it "realization," and you ask whether the goal is right; call it "development," and you ask whether this accumulation is worth it; call it "openness," and you ask whether he and the whole are still in sync.

The skill of the sixteen cells is, in the end, this skill of "changing the name" — put the same fact into the right cell, and the right questions float up on their own.

Summary

The four -isms (rows) times motion-stillness-inner-outer (columns) yield sixteen basic categories: matter, action, space, time; internal cause, realization, external cause, goal; existence, development, cooperation, competition; independence, openness, structure, process.

They are both the world's parts list and the coordinates of four orientations of life. In the next chapter we fit this static table with an engine: lines of operation, and its correspondences with the Luoshu and the eight trigrams.

Chapter 7 Operation: The Luoshu, the Eight Trigrams, and the Dynamics of Form

Static Classification Is Not Enough

Up to here, what the philosophical framework has given are "classifications": the four -isms, the sixteen cells. But the world is alive, and the relations among concepts are not only side-by-side; there is also **operation** — how one concept generates another, how one state transitions into another.

The author's notes contain a series of "operation" entries, recording each line of operation in brief maxims:

- **Reductionism's operation:** through time, matter disperses into space; through action, space gathers into matter. (The cycle of dispersal and gathering; see Chapter 2.)
- **Holism's operation:** openness receives the environment's replenishment; only so can it support the arms race of independence. (See Chapter 4.)
- **The ego's operation** (this belongs to the framework of mind; an early peek): through relationships, settle the upstream and downstream, and only then know what abilities you need to improve; through a career, earn money, and only then satisfy your hobbies; with ability you can develop a career; use everyone's hobbies to build relationships.
- **The economy's operation:** only what has been produced can be consumed. (The early notes also had a second half, "only what can circulate can be distributed," which the author later retracted — as soon as an organization receives money, it can distribute it within the organization. See Chapter 3 of Book V for details.)

"Lines of operation," summed up in one sentence: **only what has been produced can be consumed** — among the categories there is sequence, dependence, and circulation.

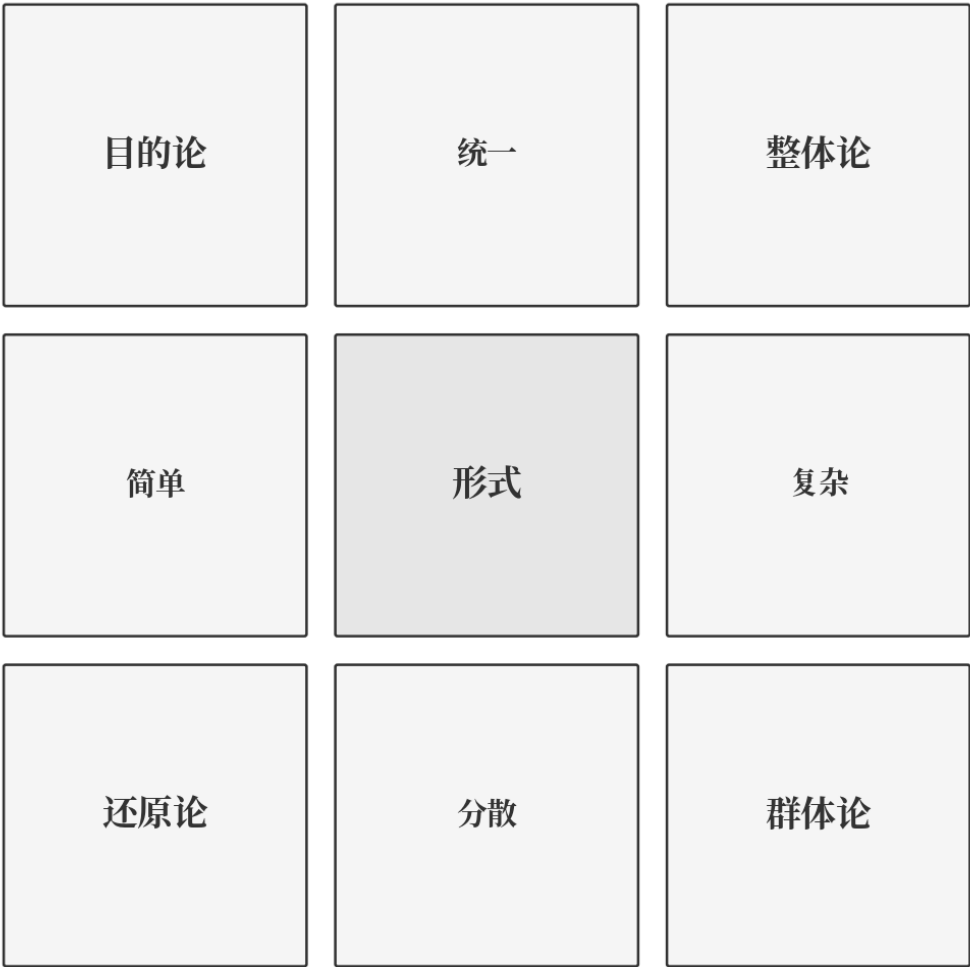
A static table tells you what the world is composed of; the lines of operation tell you how the world stays alive.

The Luoshu: Setting the Four Quadrants into the Nine Palaces

The author discovered that the four-quadrant diagram also has a more fastidious arrangement — the Luoshu style:

Teleology	Unified	Holism
Simple	Form	Complex
Reductionism	Dispersed	Pluralism

The horizontal axis runs from simple to complex; the vertical axis runs from dispersed to unified. The four corners are the four quadrants (the four -isms); the two ends of the two number axes (simple, complex, unified, dispersed) are also important concepts, no less than the four quadrants, so they are placed in the middle cells of the four sides; and in the exact center is placed "form" — for the whole diagram speaks of form.



The author's own awareness of this diagram: "I found that not only are the four quadrants important, the two ends of the two number axes also count as important concepts, no less than the four quadrants. Put them all into the whole diagram, and it is complete."

This central cell also conceals an idea the author greatly values: **a fourfold structure often has a fifth position — it can be the midpoint of the number axis, or the totality of the thing.** The four directions each govern one stretch; the midpoint belongs to no stretch, yet is the common home of all stretches. In the philosophical framework, "form" is that midpoint: it is not a fifth worldview, but the philosophical framework's totality. Nor did the four -isms arise out of thin air — setting out from form, they obtained more forms by four paths: teleology erects forms as goals, reductionism dismantles forms back into the simple, holism joins forms into the unified, pluralism gathers forms into the complex. The four paths each have their yield, and the center to which all converge is still that "form."

This "four plus one" arrangement appears in more than one place. When Book V discusses the economy we will meet it again: production, consumption, circulation, and distribution are the four stations of the economic cycle, and inventory is the fifth station — the midpoint of the cycle, and also where the economy's total quantity resides. Leave an impression here; by Chapter 3 of Book V we will complete this correspondence.

The Correspondence with the Eight Trigrams

Since the four quadrants can be extended into eight, the philosophical framework can naturally be paired with the eight trigrams. The author's table of correspondences:

Philosophical framework	Eight trigrams
Time (moving·outer)	Heaven
Space (still·outer)	Earth
Matter (still·inner)	Water
Action (moving·inner)	Fire
External cause	Mountain
Internal cause	Lake
Goal	Wind
Realization	Thunder

The intellectual content of this correspondence is: it translates the eight trigrams from "divination symbols" into a "system of categories."

Heaven is the collective in change (time); earth is the collective in stillness (space); water is the substance of the individual in stillness (matter); fire is the force of the individual in

motion (action); mountain is the external condition you can rely on (external cause); lake is the internal condition that can be stored up (internal cause); wind is the direction blowing toward the distance (goal); thunder is the action that shakes and rouses (realization).

Of criteria, the author gave only one: the eight trigrams fall into two groups of four, and the group of "heaven" is the more commonly seen — so the four most-used categories (time, space, matter, action) are matched into the heaven group.

Whether you agree with this correspondence, you may weigh for yourself — the author himself said that correspondences are probabilistic, first-draft affairs: correspond however works best. But this demonstration hints at a new method of reading old books: read the trigrams as categories, not as prophecies.

The Correspondence with Dungeons & Dragons Alignments

An even more surprising correspondence comes from a tabletop game. Dungeons & Dragons divides character alignments along two axes, "lawful–neutral–chaotic" and "good–neutral–evil." The author's correspondences:

D&D alignment	Philosophical framework · row
Lawful	Simple
Chaotic	Complex
Good	Unified
Evil	Dispersed

With two short comments attached: "a person who is not unified with himself is an evil person"; "complexity brings chaotic gray."

— The lawful want the world simple and predictable; the chaotic tolerate or even love complexity; the essence of good is seeking unity (community, empathy); the essence of evil is walking toward dispersion (detaching oneself from the community, treating others as means).

Translating the moral dimension with worldview dimensions — this is one "cross-domain deduplication" of the philosophical framework.

The Line of Operation in Dumpling-Making

Lines of operation sound mysterious; make dumplings once and you understand.

If the dough isn't kneaded, the wrappers can't be rolled; if the wrappers aren't rolled, the filling can't be wrapped; if the dumplings aren't all wrapped, the water can only boil and wait. Every step is stuck behind the neck of the previous one — this is the kitchen edition of "only what has been produced can be consumed": the order is not decreed by anyone; it grows out of the dependency relations of the thing itself.

Now look at the division of labor. One person wrapping from start to finish is one process after another; a family running an assembly line — grandma kneads the dough, mother rolls the wrappers, the child arranges the dumplings — and efficiency changes at once, because there are now handoffs between the links. And the handoffs are where trouble most easily starts: if the wrappers are rolled too slowly, the wrapper has to stop and wait for material — the same principle as "if circulation is blocked, production however good is wasted" in the economic cycle.

When the last pot of dumplings comes to the table, the whole family shares them — this is distribution: who eats more and who less depends on the speed of the chopsticks, and also on the courtesies of seniority. One New Year's Eve meal of dumplings performs sequence, dependence, circulation, and distribution all at once. Lines of operation never exist only in books — they open for business wherever there is a process.

Summary

Categories must operate: matter and space gather and disperse; independence is fed by openness; production precedes consumption.

The four quadrants embedded in the Luoshu nine palaces have "form" at the center; the sixteen cells correspond to the eight trigrams, reading the trigrams as categories; the alignments correspond to the four -isms, reading morality as worldview.

Static classification plus dynamic operation, and the philosophical framework comes alive. The next chapter presents the four -isms' echoes and tests in contemporary fields.

Chapter 8 Echoes of the Four -Isms: From Programming to Artificial Intelligence

A Way of Testing a Philosophy

Whether a philosophical framework is good is judged not by how self-consistent it is inside, but by how many places it can light up once it walks out the door.

This chapter collects the four -isms' echoes in several far-apart fields. Most of these echoes come from the author's casual notes; the compiler has organized them into a "pilgrimage of the four -isms."

In Programming

In programming: functions are reductionist, object orientation is pluralist, structuring is teleological, modules are holist.

Explained one by one.

- **Functions are reductionist:** a function does just one thing, with determinate input and determinate output, and functions combine by simple calls — the approach of decomposing a program ever further into minimal units.
- **Structuring is teleological:** sequence, branch, loop — every control flow serves one explicit goal — the program is "what it's for."
- **Modules are holist:** inside a module there is high cohesion; the parts are each indispensable, jointly fulfilling one responsibility; a module has a boundary (independence) and an interface (openness).
- **Object orientation is pluralist:** a heap of objects each exist and develop on their own, cooperating and competing with one another through messages, with no central command; the system's behavior emerges from the interactions.

Four programming paradigms = four worldviews. When a programmer chooses a paradigm, he is actually choosing with which "-ism" to view the world.

In the History of Tools

Someone said: all of humankind's previous tools were invented by the reductionist method; every state of the tool could be computed in advance. AI is the first tool humankind has trained by the teleological method — a tool whose states we cannot predict.

The author adds: speaking of tools, all four -isms are present; it is only that artificial intelligence is a trained black box, not a product of logic.

The weight of this observation lies in: it places the contemporary anxiety of "AI's unexplainability" into philosophical coordinates.

Machines of the past are reductionist — gears, circuits, code; every link can be taken apart and examined, so a machine's behavior is in principle fully predictable. AI is not "designed"; it is "trained": we only specified the goal (the loss function); its internal structure emerged from the data. We are raising it, not assembling it.

A teleological tool has a feature no reductionist tool has: it can arrive at paths we never thought of, and it will also produce behaviors we never anticipated. The Supplement will return to the theme of "man and AI."

In Economy and Society

- **The market economy is pluralist:** countless buyers and sellers each pursue their interest; there is no general commander; prices emerge from competition.
- **Enterprise management is holist:** the departments each hold their office, serving the company's common purpose.
- **Stock-trading methods, too, divide into four:** the technical side reads charts, believing history repeats; the fundamental side reads companies, holding the trend unpredictable and only valuation possible; the macro side reads cycles and policy; the capital-flow side reads the games played on the floor — an old industry's own saying has grown, all by itself, into a four-cell table.
- One level up, the correspondence with social forms (marked by the author as a first draft): reductionism corresponds to slave society (man as a disposable simple element); teleology to a militarized totalitarian rule-of-law society (everything serving

one goal); holism to feudal society (an organism with everyone in his place); pluralism to commercial society (a network of interacting free individuals).

The nature of such correspondences the author has declared again and again: they are heuristics, not proofs; in the worst case they hold at a rate of only 55%; correspond however works best. Their value lies in opening associations, not in sealing coffins with verdicts.

In the Success Gospel

Chapter 3 already showed how teleology's four cells (internal cause/external cause/goal/realization) take apart Barabási's laws of success. Here one methodological summary is added: **any discipline, any bestseller, any summary of experience can first be asked which cell each of its propositions falls into.**

Knowing which cell it falls into, you know which -ism it belongs to; knowing which cell is missing, you know where its blind spot lies. The four -isms are thus a "physical-exam form for theories."

A One-Sentence Positioning

The author's notes quote a line of Mao Lihua's: "Philosophy is the speculative part of psychology."

This sentence can also be read in reverse: psychology is the empirical part of philosophy. And what the philosophical framework wants to do is to give even the speculative part structure, coordinates, and discussable parts — speculation no longer merely the roaming of inspiration, but engineering for which blueprints can be drawn.

The Four -Isms in a Renovation Crew

People who don't program can also meet the four -isms — anyone who has renovated a home has met them, just not by this name.

Reductionism is in the bill of materials: how many meters of water pipe, how many squares of electric wire, how many buckets of paint, how many crates of tile — each countable, checkable, replaceable. Decomposing an apartment into materials is the first step of renovation.

Teleology is in the conversation before work begins: "What is this apartment for?" For an elderly parent to live in, for a kid's school commute, or for renting out? Once the use is

fixed, the thousands of decisions that follow all have their referee. A renovation begun without asking the use ends up as rework.

Holism is in the cooperation of the trades: water, electricity, carpentry, masonry, painting, link clasping link — tiling before the plumbing and wiring are signed off is burying mines for the later stages. The trades all serve one and the same purpose (getting this apartment done well); none is dispensable. This is the logic of "organs."

Pluralism is in the building-materials market: dozens of stalls each quoting their own price, each competing, with no general commander; prices form in the haggling back and forth. Every sentence you bargain in that market is pluralism's everyday grammar.

One apartment renovated, the four -isms take the stage in turn. So the four -isms are called a "general model" — not confined to philosophy books: in whichever field there are forms, there they echo.

Summary

The four -isms have left echoes in programming paradigms, the history of tools, economy and society, and the success gospel — which shows they are a "general model," a structure that emerges repeatedly across different fields.

The next chapter summarizes this book and answers one question: what position does the philosophical framework occupy in the whole volume?

Chapter 9 Summary: The Philosophical Framework's Place in the Whole System

Compress This Book into One Table

Level	Content
General outline	The world is form; forms divide into four classes by "simple/complex × unified/dispersed"
The four -isms	Reductionism (simple dispersed), teleology (simple unified), holism (complex unified), pluralism (complex dispersed)
The sixteen cells	The four -isms × "unchanging/changing × individual/collective" = matter, action, space, time; internal cause, realization, external cause, goal; existence, development, cooperation, competition; independence, openness, structure, process
Operation	Reductionism: the cycle of gathering and dispersal; holism: openness feeding independence; the economy: production → consumption → circulation → distribution
Reflected onto man	The natural side (reductionism), the social side (holism), the interested side (pluralism), the ideal side (teleology)
Connection	Reductionism connects downward to the level below; teleology connects upward to the level above

The Philosophical Framework Is the "Worldview" Level

The volume's four frameworks have an explicit division of labor:

- **The philosophical framework** governs worldview: what kinds of forms the world has;
- **The framework of thought** governs epistemology: by which few ways of thinking man grasps the world (Book II);
- **The framework of mind** governs human nature: the inner structure of the mind and the classification of people (Book I);
- **The frameworks of society and life** govern practice: a person's position in society and across a lifetime (Book V).

One sentence in the author's notes can serve as the general outline of how the four relate:

Mind and thought are machines; external information is what the machines process; philosophy, too, commands external information.

The philosophical framework is thus the "highest, most abstract" level in the whole system.

And precisely because it is the highest and most abstract, it has the fewest direct uses — you would not use the four -isms to decide what to eat for dinner; but when you need to judge between "decompose or integrate," "purpose or composition," "whole or multitude," the four -isms' coordinates will give you a sense of direction.

Can the Four -Isms Hold the Four -Isms?

A serious person will ask: the world is form, and the four -isms analyze all forms — then are "the four -isms" themselves a form? If so, into which cell should this thing "reductionism" itself go? Can a system hold itself in its own cells?

The author's answer stops this self-referential snake: **the four -isms are not a form but a tool** — a thought tool like logic, like mathematics. Logic studies thinking and is not itself inside the classification of thinking's objects; the four -isms study forms and are not themselves inside the classification of forms.

Nor does he dodge the few self-references hidden in the system: the concept vector produced the four -isms and also produced the framework of thought; and the framework of thought contains abstraction, while the concept vector happens to be a tool for abstraction; holism's zang-xiang method (designing the black box's interior from outside the black box) is exactly the method the concept vector uses to define concepts. The tool grows out of the system, then turns back and joins in building the system — the author classes this kind of entanglement in one family with the self-reference phenomena in mathematics (he admits he is not versed in mathematics; for mathematics' self-reference family — Russell's paradox, Cantor's diagonal argument, Gödel, the halting problem — Book VI of the Supplement has a layman's roll call).

The formulation "the four -isms are a tool" the author later pushed one layer further, stating the whole genealogy at once: **the thought tool (thinking tool) is the first and original element**. The concept vector should belong to a category close to logic — many philosophical ideas eventually evolved into mathematics, logic being the example; the parts of philosophy that are unrigorous and tied to concrete people stayed behind in philosophy. Mathematics has many forms: geometry is a form, and logic is a form too.

And **the various frameworks are the products of the thought tool; they are mathematical modeling** — he stretches and enlarges the term "mathematical modeling": not merely modeling some concrete system, but modeling the forms of the whole world.

So the philosophical framework's place must be said twice to be accurate: as a tool, it stands together with logic and mathematics; as content, it is far from them — mathematics and logic govern the forms of thinking, while **the philosophical framework governs the forms of the real world**. Far from thinking, near to the world.

Open Questions Left by This Book

In the author's honest style, this book's unfinished points are also listed as they are:

1. The choice of the four dimensions — "simple/complex, unified/dispersed, motion/stillness, inner/outer" — is subjective. The author says, "This is my personal view; there is no standard by which to measure and judge" — might a more objective basis for choosing dimensions be found? (See the series' *List of Open Questions*.)
2. In the draft formulations of teleology and reductionism, the assignment of "simple/dispersed" was once inconsistent between drafts (an introductory essay once wrote reductionism as simple-unified). This volume follows the framework table (reductionism = simple-dispersed, teleology = simple-unified).
3. The correspondences of the four -isms with social forms, with the eight trigrams, and with alignments are all first drafts; how well they hold awaits continued revision by readers and author alike.

Preview of the Next Book

The philosophical framework has classified the world. Next the lens pulls back from the world to people themselves: when a group of people gather, what has formed? Across one person's lifetime, what dimensions are there to choose among? Please turn to Book V, *Frameworks of Society and Life: A Person's Place in the World*.

B o o k V

Frameworks of Society and Life: A Person's Place in the World

From One Person, to a Crowd, to a Lifetime

The first four books covered people, thought, method, and worldview; this book answers the two most down-to-earth questions: **what is society** (when a group of people gather, what few things form), and **how to live a life** (across one person's lifetime, what dimensions are there to choose among).

Contents in Brief

Man has four attributes: the natural, the social, the interested, and the ideal. Magnified to the level of society, the four attributes become society's four great components: **the reproduction of people, politics, the economy, and culture**. Each component has its own line of operation: the economy is production → consumption → circulation → distribution; politics is the generation → execution → order → guarantee of power. This book also runs a cross-domain experiment: using this framework to deduplicate the five phases of Chinese medicine.

The framework of life, in turn, is the philosophical framework's shadow: man's four attributes, fitted onto the two axes "rely on yourself / rely on the environment" and "long for change / long for constancy," form a map of life choices. The book ends by discussing the question no one can dodge — the meaning of life — and a view of life as "traversing the genes' functions."

How to Read This Book

Chapters 1–5 present the framework of society (the four lines of politics, economy, culture, and human reproduction); Chapter 6 is the cross-domain comparison with Chinese medicine's five phases; Chapters 7–9 present the framework of life and the meaning of life; Chapter 10 is the summary. Each chapter can be read independently.

Chapter 1 From Four Properties to Four Great Components of Society

Review: Man Has Four Natures

Book IV explained: man, that "form," has four layers of attributes.

- **The natural side:** having the traits of an animal, instincts — corresponds to reductionism;
- **The social side:** having roles such as parent and child, superior and subordinate, belonging to various social structures — corresponds to holism;
- **The interested side:** foraging in the social jungle, competition and cooperation — corresponds to pluralism;
- **The ideal side:** after food and clothing are secured, pursuing a career, pursuing "not being bored" — corresponds to teleology.

Now replace one person with a crowd of people. An interesting question appears: **magnified to the level of society, what does each of man's four attributes grow into?**

The Framework of Society: A Four-Row Table

The author's answer is a table:

Human attribute	Social component	Action	Matter	Time	Space
Natural side	People	Childbearing	Work	Migration	Family
Social side	Politics (of power...)	Generation	Execution	Order	Guarantee (violence)
Ideal side	Culture (of thought...)	Creation	Activity	Transmission	Organization
Interested side	Economy	Production	Consumption	Circulation	Distribution

Read the first row and the table's way of reading becomes clear: man's natural side, magnified to society, is the matter of "**the reproduction of people themselves**" — childbearing produces new people; work is people's material activity; migration is people's movement through time; the family is people's unit of organization in space.

The other three rows we will read with one chapter each: politics (Chapter 2), economy (Chapter 3), culture (Chapter 4).

Sixteen Intersections, One by One

This table, too, is 4×4 — sixteen intersections: the rows are the four social lines; the columns are "action, matter, time, space" — familiar? That is exactly the reductionism row of the philosophical framework's sixteen cells in Book IV. Every social line unfolds along the four stations "action — material — time — space." The sixteen cells are the table's real protagonists; look at them one by one.

People (natural side → the reproduction of people):

1. **Childbearing** (action): this line's act — new people are produced. The starting point of all of society's cycles: without people, the three rows below are empty talk.
2. **Work** (matter): people's material form — labor. The bodily form in which people act on the world; the "stuff" of the people line.
3. **Migration** (time): people's movement in time — generation after generation, place after place, people unfold themselves along the time axis.
4. **Family** (space): people's unit of organization in space — the smallest space in which reproduction lands. Why does the family go in the "space" cell? Because it is the smallest cell in which a person is placed.

Politics (social side → the cycle of power):

5. **Generation** (action): power's act — how power is manufactured: violence, authorization, tradition, ballots — all are paths of generation.
6. **Execution** (matter): power's material form — decrees, institutions, administrative acts; power turned into visible, tangible motion.
7. **Order** (time): power's endurance in time — rules maintained day after day. Order is not a sheet of paper; it is the proof that power shows up every day.
8. **Guarantee** (space): power's trump card in space — the organs of violence standing behind order, ordinarily offstage, but when they appear, the game is final. (Expanded in Chapter 2.)

Culture (ideal side → the cycle of thought):

9. **Creation** (action): thought's act — new meaning produced: a book written, a doctrine propounded, a film shot.

10. **Activity** (matter): thought's material form — rites, courses, festivals, publications; meaning turned into things one can take part in.
11. **Transmission** (time): thought's flow in time — from person to person, from generation to generation; the diffusion and preservation of meaning.
12. **Organization** (space): thought's placement in space — schools, churches, associations, publishing houses. Once meaning has a house, it does not die easily. (Expanded in Chapter 4.)

Economy (interested side → the cycle of money):

13. **Production** (action): value's act — things get made.
14. **Consumption** (matter): value's material destination — things get used up, needs get satisfied. However much is produced, if no one consumes, the cycle breaks.
15. **Circulation** (time): value's flow in time — transport, trade, turnover; the process of money and goods continually changing hands.
16. **Distribution** (space): value's placement in space — who takes how much; the layout of wealth among persons and classes.

Remember that note from Book IV: circulation corresponds to process, and to time; distribution corresponds to structure, and to space. Here it is verified — the "time" station of the economic line happens to be circulation, and the "space" station happens to be distribution. The correspondence between frameworks is not rhetoric; it is structure. (Expanded in Chapter 3.)

What This Table Is Saying

It is saying: **society is not one thing, but four things.**

Many arguments never end because the two sides are speaking with different "societies": one person laments "society has degenerated," meaning culture; the other retorts "society is plainly progressing," meaning the economy. The two are not talking about the same society.

The benefit of separating the four lines shows at once:

- A good economy does not mean a good culture; a bad economy does not mean collapsed politics;
- Evaluating a policy requires asking separately what it did to each of the four lines;
- A person's position on the four lines can be entirely different: a commoner in politics, middle class in the economy, a creator in culture, the mainstay of a family.

The four lines also raise a question of dynamics: what happens if one line breaks? The author's answer: there are chain reactions, but no fixed sequence — how the chain transmits, who comes first and who after, cannot be said; among existing doctrines, "the productive forces determine the relations of production" counts as a guess about one of the transmission paths.

A Test: Can a Fifth Line Be Found?

By concept-vector custom, once a framework is built you try pushing at the empty cells: does society have a fifth component line?

Try to find one: the military? The author files it under the political line (power's guarantee). Science and technology? Filed under the cultural line (thought's creation and transmission). Religion? The author's later correction: a state religion is part of politics — a church that once had troops and taxes is not thought but power; a religious belief stripped of temporal authority goes to the cultural line. Law? The political line's execution and order.

Every effort to find a fifth line slides back inside the four — this cannot prove the four rows complete, but at least it shows this table has no small appetite.

One New Year's Dinner Table, All Four Lines Present

If the four lines still seem abstract, think of the New Year's dinner table.

A table full of dishes is the **economy's** harvest of a year; who takes the seat of honor, who picks up chopsticks first, is **politics'** order; the auspicious words spoken over toasts, the spring couplets after the meal, are **culture**; and why this meal must be eaten year after year — because the family line must pass down year after year — that is the reproduction of **people**.

One meal, and all four lines are turning. Society is not that mysterious: it is one magnified New Year's Eve dinner.

The next chapter begins with the hardest of the four rows: politics. What is politics' essence? The framework's answer is a single word: power.

Chapter 2 Politics: The Four Links of Power

The Political Line

The framework of society magnifies "the social side" into politics. This row reads:

Action	Matter	Time	Space
Generation	Execution	Order	Guarantee (violence)

Translated into plain speech: politics is the study of **power**, and the matter of power has four links — how it is **generated** (to whom power belongs, where it comes from), how it is **executed** (how decrees get carried out), how it forms **order** (power settling down into normalcy), and how it is **guaranteed** (violence is the final guarantor).

The Use of the Four Links

These four links are a ruler that can measure any phenomenon of power:

- Watching an election, you are watching power's **generation**;
- Watching whether a decree can be pushed through, you are watching **execution**;
- Watching whether a society is stable, you are watching **order**;
- Watching order's last bottom line, you are watching the **guarantee** — the army and the police, the monopolists of violence.

Many political discussions are the chicken talking to the duck because the four links are discussed all mixed together: one person questions the manner of power's generation (was the election legitimate?), the other responds with execution's report card (but the economy grew!) — an answer beside the question, because they are simply not in the same link.

The reader will ask: where do the familiar concepts of democracy and autocracy fall? The author's answer: **both fall inside "the generation of power"** — they answer "where does power come from," not how power is executed or maintained. So however fierce the quarrel between democracy and autocracy, it is only one quarter of politics' territory.

The State: A Bigger Cell

The author's notes also contain an unfinished draft on the composition of the state:

Politics, diplomacy, the military, the economy — and also society and culture? The execution, ownership, order, and guarantee of power.

This is the beginning of fitting the framework of society onto the object "the state": a state's skeleton = politics (power facing inward) + diplomacy (politics facing outward) + the military (violence's outward form) + the economy (the cycle of interests) + culture (the cycle of thought).

It is still a draft (the author himself put a question mark on it), but the direction is clear: **the state is an integration of the four social lines**. Analyzing a state means checking its four lines separately — this is also the usage of the "state" row (diplomacy = action, the military = matter, the economy = time, politics = space) in Book VI's "Correspondences" chapter.

Politics in a Residential Compound

"Power" sounds like affairs of state, but in fact a residential compound has the full set.

The election of the homeowners' committee is the confirmation of power's **ownership** — power belongs to the homeowners, not the property company. The elected committee issuing notices and setting rules is **execution**. Someone handling whose illegal addition gets demolished and whose parking space gets occupied is **order**. And what makes all of this count is "fail to comply and we go legal" — that is the **guarantee**.

If a compound is badly run, eight times out of ten one of the four links has snapped: either the homeowners are apathetic (ownership left vacant), or the committee is all talk (execution paralyzed), or the rules go unheeded (order scattered), or the property company's backing is too hard for anyone to touch (the guarantee gone crooked).

That concludes the political line. Politics is the cycle of power; the next chapter presents the cycle of money — the economic line: production, consumption, circulation, distribution.

Chapter 3 The Economy: Production, Consumption, Circulation, Distribution

The Economic Line

The interested side magnified to society is the economy. This row is four household words:

Action	Matter	Time	Space
Production	Consumption	Circulation	Distribution

The economy is the cycle of interests: first things are **produced**, then there is something to **consume**; **circulation** moves the goods, **distribution** decides the ownership.

Of the lines of operation the author recorded, the iron rule is only half a sentence:

Only what has been produced can be consumed.

Why does production precede consumption? Consumption without production is overdraft — borrowing something from the future to spend today.

In the early notes this sentence had a second half — "only what can circulate can be distributed." **This assertion the author later retracted:** as soon as an organization receives money, it can distribute it within the organization, without waiting for circulation to finish. Circulation and distribution are not an iron rule of who precedes whom, but two adjacent stations on the cycle: one governs how goods move; the other governs to whom the gains go.

Four Links, Four Illnesses

This framework can immediately be used to diagnose economic problems:

- **Production's illness:** it can't be made (technology, resources, manpower can't keep up);
- **Consumption's illness:** people dare not spend, will not spend (a matter of expectations and confidence);
- **Circulation's illness:** factors are stuck (logistics, capital flows, information flows blocked);

- **Distribution's illness:** unequal shares (wealth gap, structural imbalance).

Most contemporary economic-policy quarrels can be filed into cells: stimulating consumption is the second cell's medicine; unblocking logistics is the third cell's; transfer payments are the fourth cell's; industrial upgrading is the first cell's. Shouting "the economy is failing" is vague; only by saying clearly which link has fallen ill can the right medicine be prescribed for the symptom.

The Detailed Accounts of an Investment

The author also recorded a finer deduction, about "where the produced goods go":

In fact the goods obtained after production have three destinations: investment, consumption, accumulation.

Investment buys the future; **consumption** feeds the present; **accumulation** puts things in storage. An economy's character hides in the proportions of these three destinations: an investment-heavy economy is betting on tomorrow; a consumption-heavy economy is living today; an accumulation-heavy economy is guarding against the day after.

(This thread returns in Chapter 5 — it happens to explain the correspondences of several viscera in Chinese medicine's five phases.)

The Fifth Element: Inventory

Production, consumption, circulation, distribution are the four stations of the economic cycle. But beyond the four stations there is one position, often overlooked: **inventory**.

What is produced flows into inventory; consumption draws from inventory; what circulation moves is inventory; distribution decides to whom inventory belongs. Inventory is at none of the stations, yet is everywhere — it is the cycle's **midpoint**, and also the cycle's **total quantity**.

Here is a more general rule, worth remembering on its own: **whatever is a fourfold structure often has a fifth element — it can be the midpoint of a number axis, or the totality of the thing**. The four stations are the process; the fifth is the whole accumulated out of the process.

This rule is not peculiar to this spot. In Book IV's Luoshu arrangement, the four -isms sit at the four corners, the four poles at the four sides, and in the exact center is placed

"form" — form is the philosophical framework's totality; the four paths set out from it and obtain more forms. The inventory in the economic structure is precisely the economic cycle's "form": the four stations turn around it, and turn for its sake. When Chapter 5 fits the five viscera into this table, this central position will appear once more.

Your Balcony Is Economics

Investment, consumption, accumulation — the three destinations need no national accounts; look at your own balcony and you understand.

The scallions planted on the balcony, cut and eaten, are **consumption**; a handful left growing in the soil is **investment**; dried and jarred for winter use is **accumulation**.

Cut and eat them all, and next week there's nothing to eat; keep them all for investment, and today you go hungry; dry and store them all, and the scallions forever lose the ability to reproduce. A household is like a state: the hard part is not earning money, but the proportions among the three jars.

The economy is the cycle of interests; politics is the cycle of power. The next chapter presents the third line: culture is the cycle of thought — and the oldest line of all: the reproduction of people themselves.

Chapter 4 Culture and People: The Cycle of Thought and the Cycle of Heads

The Cultural Line

The ideal side magnified to society is culture. This row:

Action	Matter	Time	Space
Creation	Activity	Transmission	Organization

Culture is the cycle of thought: first someone **creates** (writes a book, propounds a doctrine, shoots a film), then there is **activity** (the thought is practiced and rehearsed by people), then **transmission** (from one person to a crowd, from one generation to the next), and finally it settles into **organization** (schools, churches, associations, publishing houses — the houses of thought).

These four links can check any cultural undertaking: a doctrine without transmission dies; transmission without creation becomes mere parroting; organization without activity becomes an empty shell.

The Human Reproduction Line

The oldest line comes from the natural side:

Action	Matter	Time	Space
Childbearing	Work	Migration	Family

Society's first priority is neither the economy nor politics, but **reproducing people themselves**: childbearing produces new people; work is people's material activity; migration is people's movement through time (from village to city, from home soil to strange lands); the family is people's unit of organization in space.

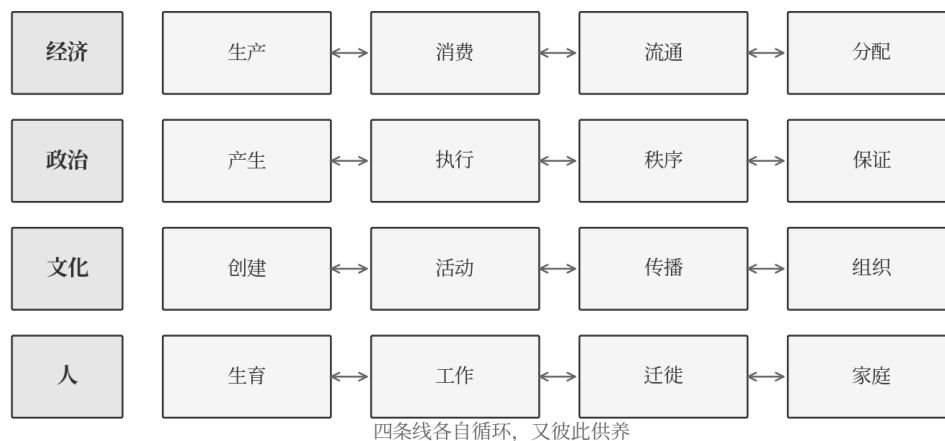
This line is becoming a global topic today: falling birth rates, urbanizing migration, changing family forms — all four cells are in violent motion. The framework cannot tell you the answers, but it can tell you: these problems all belong to the same line; pull one cell and the whole row moves. The birth rate, for instance, is never the business of the single cell "childbearing"; it is linked ring upon ring with work (the squeeze on time and energy), migration (leaving the society of acquaintances), and family (forms loosening).

The Final Assembly of the Four Lines

With the four lines together, the framework of society is complete:

Line	Cycle	Keyword
People	Childbearing → work → migration → family	Heads
Politics	Generation → execution → order → guarantee	Power
Culture	Creation → activity → transmission → organization	Thought
Economy	Production → consumption → circulation → distribution	Interest

People, power, thought, money — society's four great cycles. The politics textbook divides society into four great constructions — economic, political, cultural, and social — startlingly isomorphic with the framework of society's four rows (the content of "social construction" falls roughly in the framework's "people" row). This is no coincidence: good classifications always get groped out repeatedly in different places.



Four Lines, Strung on One Candied-Hawthorn Skewer

People, power, thought, money — society's four great cycles. They sound like the titles of four courses, but in fact they turn every day on the same street.

A noodle shop newly opened downstairs from your home: the owner rises early and works late making noodles (economy), applies for permits, pays taxes, obeys the regulators (politics), posts noodle-making videos on short-video platforms (culture), and at night closes up and goes home to raise his child (people). Four hawthorns on one skewer — and a person shuttles back and forth along these four lines every day.

The next chapter runs a fun experiment: taking this framework to "deduplicate" a two-thousand-year-old discipline — the five phases of Chinese medicine.

Chapter 5 A "Deduplication" of Chinese Medicine's Five Phases

Why Touch Chinese Medicine

Chinese medicine is the most polarizing of topics: some revere it as a national treasure, some denounce it as superstition. The author's attitude is a third road —

First, human thinking cannot be founded entirely on science; there are many places science does not cover. Second, we must try our best to explain Chinese medicine with science and philosophy, not follow it blindly. If either your own mind can explain it through, or there are successful cases, then it can be considered for acceptance.

The method he adopts is to treat the five phases of Chinese medicine as a **model**, and "deduplicate" it with his own framework: to see what the five phases are actually saying.

A Comparison of the Five Phases with the Economy

The author's table of correspondences (revised per the latest discussion):

Economy	Five viscera	Holism	State
Production	Liver	Openness	Diplomacy
Consumption	Lung	Independence	Military
Circulation	Heart	Process	Economy
Distribution	Kidney	Structure	Politics
Inventory	Spleen	Center · totality	—

How to read it: treat the body as an economy. The liver governs growth and generation — it is "production": qi and blood grow out from here; the lung governs breathing — it is "consumption": one breath in, one breath out, the most unceasing expenditure; the heart governs the blood vessels — it is "circulation": moving qi and blood to the whole body; the kidney governs storing essence — it is "distribution" and reserve: essence is the family fortune distributed down to the end and stored away; and the spleen is "the official of the granaries" — it is "inventory": what is eaten is first converted by it into usable stock.

The corresponding line of operation also holds: **only what has been produced can be consumed** (the second half, "only what can circulate can be distributed," the author already retracted in Chapter 3) — and inventory is the transfer station for all of this: if the spleen does not move and transform, all four viscera lose their grain. As for the "mutual restraint" relation, the author's explanation: of the two dimensions, the liver and the heart are complementary and opposite; the spleen and the kidney are opposite and complementary — mutual restraint is another way of saying "the two ends of one dimension axis constrain each other."

The "Five" of the Five Phases: Not One Too Many, but Four Plus One

An attentive reader will notice: the five phases are five, the economic cycle is four. What to do with the extra one?

The early treatment was merging: among goods' three destinations (investment, consumption, accumulation), the lung is consumption, and the lung can be merged into the heart — "how exactly to merge, there are several schemes." That scheme works, but it always feels a bit like trimming the feet to fit the shoes.

Later a smoother answer appeared: **the "five" of the five phases is four plus one — the added one is the center.** Production, consumption, circulation, distribution are the cycle's four stations; the **inventory** the spleen corresponds to is the fifth element — it is at none of the stations, yet is everywhere: production flows into it, consumption draws from it, circulation moves it, distribution decides its ownership.

This rule of the "fifth element" is general (stated in Chapter 3, met again here): **it can be the midpoint of a number axis, or the totality of the thing.** In Book IV's Luoshu arrangement, the "form" placed in the exact center is the philosophical framework's totality — the four paths (the four -isms) set out from it and obtain more forms; at the human body's center sits the spleen — inventory is the totality of the qi-and-blood cycle, and the four viscera turn around it. The five phases are not five viscera standing side by side; they are "four stations + one center."

Note the methodological meaning: he did not pretend that four and five fit seamlessly; he first acknowledged the merging scheme existed, then found the smoother structural answer. This is what Book III said — **correspondences are first drafts, probabilistic; correspond however works best.** The "five" of the five phases may itself be a product of historical accretion (in the age when heaven had five visible planets, five was a

fashionable number); reading it as "four plus one," what is read out is its structural skeleton, not the literal five words.

Some readers remain unconvinced: why not let the framework admit it is one cell short, instead of making "five accommodate four"? The author's answer is very plain: **because four is usable, so four it is**. In the eyes of someone who has mastered the tool "four," the five phases can be disassembled into four. But tools have no ranks of honor — any tool can be used; whichever you find usable, use that.

The Significance of Deduplication

The significance of this operation lies not in Chinese medicine itself, but in demonstrating a way of reading:

Using pluralism (the framework of society) to deduplicate Chinese medicine's five phases, Chinese medicine becomes understandable — consensus is achieved.

An ancient discipline, when each of its concepts can be translated into a concept with a definite position in another system, is mysterious no longer. Once "liver = production, spleen = inventory, heart = circulation, kidney = distribution" is understood, the five phases' generation and restraint turns from an incantation into an economic flowchart — of the human body, and also of the state.

The Joy of Translation

The joy of this kind of "deduplication" is rather like discovering that the dialects of different places are actually the same sentence.

Beijingers call the tomato "xihongshi"; some places call it "fanqie"; some call it "yangshizi"; and some even call it "choushi" — argue for half a day, and they all point to the same thing. Once the accounts are matched, the recipes connect, and a Beijing chef and a Yunnan chef can cook the same dish.

The concepts in old books are also dialects. After translating "liver" into "production," "spleen" into "inventory," and "heart" into "circulation," medical cases two thousand years old can suddenly converse with today's economics. Deduplication is not denying the ancients; it is getting the ancients their passports.

The framework of society is finished, with one cross-domain experiment performed. The second half of the book turns in another direction: from society back to the individual —

the framework of life.

Chapter 6 The Framework of Life: The Philosophical Framework's Shadow

What the Framework of Life Is

The author's definition of "the framework of life" is only one sentence:

The framework of life is the philosophical framework's shadow.

The philosophical framework speaks of the world's forms (the four -isms, the sixteen cells); the framework of life takes the same set of dimensions back onto "one person's lifetime." It has very few parts — only three:

1. **Man's four attributes:** the natural, the social, the ideal, the interested (old friends appearing repeatedly in Books IV and V);
2. **Rely on yourself / rely on the environment;**
3. **Long for change, abandon the past / long for constancy, hope for permanence.**

What Can the Three Parts Build

Look at the second part first. **Rely on yourself** or **rely on the environment**? This is the fundamental fork of life strategy: some believe "my fate is mine to make"; some believe "the situation is stronger than the man." Note this is no chicken-soup disagreement, but a disagreement in judging the world's structure — internal-cause-driven people keep setting themselves goals (at the risk of having a carrot dangled before their eyes all their lives); external-cause-driven people ride the trend (at the risk of "if it can't be done, don't do it," sliding into letting it rot).

Now the third part. **Long for change** or **long for constancy**? Changing people say "without change I don't feel alive"; unchanging people say "maintain the status quo, stay in the comfort zone — that's fine." This sentence also appeared among the philosophical framework's "columns" — the motion/stillness distinction runs through both the world and life.

Finally the first part. The four natures are the four accounts of a life's content:

- **The natural-side account:** body, health, the settling of instincts;
- **The social-side account:** family, roles, the structure of belonging;

- **The interested-side account:** income, the fruits of competition and cooperation;
- **The ideal-side account:** pursuits not for any practical benefit.

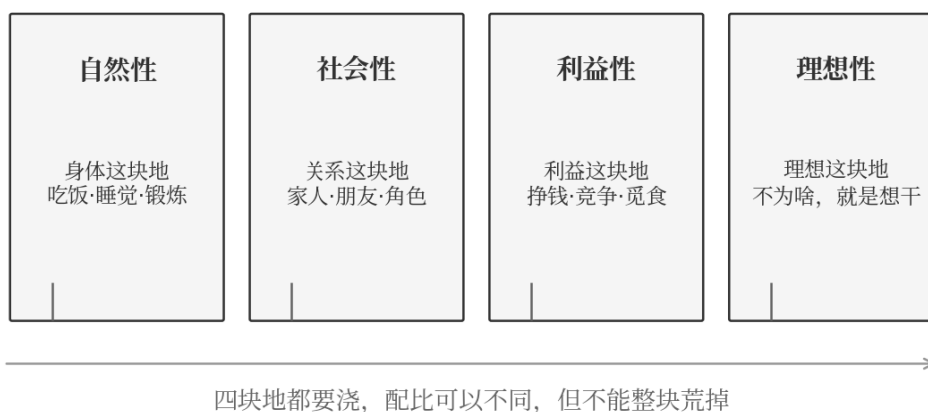
The Four Natures and the Ability Map

The author left a small table connecting the four natures to the four great domains of self-management:

Human attribute	Corresponding ability
Natural side	Health management
Social side	Interpersonal relations
Ideal side	Time management
Interested side	Money management

This correspondence baffles at first sight: time management is plainly the most utilitarian. The author's explanation: time management as he defines it is **"where to spend your time"** — when less time is spent on the other three sides, all the remaining time goes to the ideal side. So its essence is not technique but "what do you want to do with this lifetime": a person with no goals for his time does not need time management, only to be scheduled by others. Money management goes to the interested side, interpersonal relations to the social side, health to the natural side — each in its place.

The four great categories of self-improvement on the market (fitness, socializing, productivity, money) happen to be the four natures' four paths of cultivation. The framework of life says: walk all four paths, but the order can follow your own attributes.



Why Understanding All the Principles Still Doesn't Make a Good Life

The self-improvement books on the market divide, by this framework, neatly into four great categories: fitness (natural side), socializing (social side), productivity (ideal side), money (interested side).

Many people "understand all the principles yet still can't live well." Seen through the framework of life, the problem is often not a lack of effort but lopsidedness: a pile of fitness books read, not one money book touched; or eight productivity tools installed, friends not contacted for a year. The four lines are wired in parallel; if one stays broken too long, however brightly the other three shine, one corner of the house remains dark.

The framework is built. Can it answer the big question — what is the meaning of life? Next chapter.

Chapter 7 The Meaning of Life: A Dismantling

First, Demote the Question

"What is the meaning of life?" — this question has crushed many people. The author's first reaction is to demote it:

The meaning of life is actually not that important. What matters is how to live a life.

Look one layer further: "the meaning of life" is always spoken by "other people" — meaningful to oneself, meaningful to the family, meaningful to society. Meaning is not a built-in attribute of life, but an evaluation from the onlooker's perspective.

Dismantling "Meaning" with the Four Natures

Anything can be spoken of from the four sides — pluralism, holism, reductionism, teleology (of course not fixedly four; only four have been thought of so far); man cannot escape these four sides either. For man, they are the social, the natural, the ideal, and the interested sides.

Thus the big word "the meaning of life" is dismantled into four small words:

- In terms of the **natural side**: living, living healthily;
- In terms of the **social side**: being needed as a family member, a friend, a member of an organization;
- In terms of the **interested side**: winning resources and position in the jungle (success is only one small point within this cell);
- In terms of the **ideal side**: completing one thing you want to complete.

The author gives contemporary society a special rap on the knuckles: **success is only one point within the interested side of pluralism. To attend only to that point is too narrow a mind — one might say one has been brainwashed by society.** As for the Indian saying — "life is for feeling" — that is spoken from the psychological angle (perception), yet another line.

Another View of Life: Traversal

If the "four-natures dismantling" is defense (dismantling big words), the author also mounts one attack — a positive view of life, called "traversal":

Man, as a realization of genes, has the ability to survive. Traversing the genes' functions once through is a kind of fullness: dopamine, endorphins, the body's functions, the brain's functions... Someone like Wang Sicong (a byword in China for an heir who merely enjoys life) — a person who only enjoys — has many gene functions left untraversed; that is not a complete life.

Man, as one of the ten thousand things, can traverse the functions all things have: taking part in competition, being a member of a whole, attaining a goal, bodily health.

How to read it: living is not only "enjoying the results," but **running through all the functions of the machine that is yourself** — one who can think has thought, one who can compete has competed, one who can love has loved, one who can create has created. A person who only lies back in enjoyment is like a device with only 5% of its functions used.

The reader will ask: can the genes' functions really be "traversed" to the end? Isn't this fundamentally an infinite list? The author's answer is unexpectedly plain: look at lions and tigers — their days hold only simple activities; they did what there was to do, and thereby finished traversing their genes. **Traversing the genes was never a complicated thing.**

The opposite of traversal is specialization: a pet's function is pleasing people; some people's life function shrinks to nothing but enjoyment. But the author immediately adds: specialization is also very important — "in other words, everyone plays their own role well." Traversal is richness; specialization is perfection; both roads stand — see which one you want.

Reader's Choice

About meaning, this is all the framework can do: dismantle the big words into small ones, change a single-choice question into a multiple-choice one. The rest is your ordering problem — the four accounts, traversal or specialization, relying on yourself or on the environment, seeking change or seeking constancy.

Your answers, combined, are your framework of life.

Chapter 8 Summary: A Person's Place in the World

Reviewing the Whole Map

The framework of society — man's four attributes magnified into society's four components:

Attribute	Social component	Line of operation
Natural side	People	Childbearing → work → migration → family
Social side	Politics	Generation → execution → order → guarantee (violence) of power
Ideal side	Culture	Creation → activity → transmission → organization of thought
Interested side	Economy	Production → consumption → circulation → distribution

The framework of life — the philosophical framework's shadow:

- Four accounts: the natural, the social, the interested, the ideal;
- Two strategy axes: rely on yourself / rely on the environment; long for change / long for constancy;
- The four natures' paths of cultivation: health management, interpersonal relations, time management, money management;
- The view of meaning: meaning can be dismantled into the four natures; the view of life can choose traversal or specialization.

A Methodological Aftertaste of This Book

This book has done a thing rarely seen elsewhere: putting "society" and "life," the two biggest words, both into a four-cell framework. They certainly cannot be exhausted by four cells — but a framework's use was never "saying it all"; it is:

1. **Preventing omissions:** discussing society no longer forgets the cultural line; discussing life no longer has only the interest line;
2. **Counterparting:** politics' illness and the economy's illness are treated separately; life's four accounts are tallied separately;

3. **Translating:** Chinese medicine's five phases can be translated into the economic cycle; a state can be taken apart into four lines.

Preview of the Next Book

At this point, the method (Book III), the world (Book IV), thought (Book II), the human mind (Book I), and society and life (Book V) have each been presented. One last great move remains: align them all, and behold the startling correspondences among them — blood types, temperaments, tones of speech, academic disciplines, civilizations, climates, modes of production... all in the same great table.

Please turn to Book VI, *One Divides into Four: The Grand Synthesis*.

B o o k V I

One Divides into Four: The Grand Synthesis

When All Classifications Align into One Table

The five preceding books covered people, thought, method, worldview, and society and life. This book does one bold thing: **aligns them all, then aligns them further with the classifications already existing in the world (MBTI, blood types, temperaments, tones of speech, academic disciplines, civilizations, climates, modes of production...) into one great table.**

Contents in Brief

If the framework of thought, the framework of mind, and the philosophical framework each stand independently, are the correspondences among them a coincidence? If MBTI's four pairs of letter-groups, the four temperaments, the four blood types, the humanities and the sciences, Confucianism-Daoism-Legalism-Buddhism, hunting-gathering-farming-herding... all display a similar fourfold structure, what does that say?

This book first sets the rules: a "correspondence" is not a "definition"; correspondences are probabilistic, in the worst case holding at a rate of only 55% — they are heuristics, not proofs. Under these rules, the book presents the author's great master table of "one divides into four," reads it row by row, and works out that famous chain of civilization: from East Asia's cold and humid climate, to an agricultural civilization, to holist social organization, to linear thinking, to the humanities temperament.

The book also handles three extended questions: the explicability of mysticism (the translation chain astrology $\leftarrow$ MBTI $\leftarrow$ framework of mind $\leftarrow$ concept vectors, plus one correspondence the author himself retracted); the repositioning of psychology's seven schools with the three frameworks; and "multiple personalities" — a person's type is not single, but waves superposed in many layers. It closes with four real questionnaire samples and an honest list of limits.

How to Read This Book

Chapters 1–2 are the synthesis's principles and rules; Chapters 3–4 are the alignment of the three frameworks and the great master table of "one divides into four"; Chapter 5 is the civilization chain (from climate to the humanities); Chapters 6–7 are two applications (the explicability of mysticism; psychology's seven schools); Chapters 8–9 are multiple personalities and the questionnaire field tests; Chapter 10 sums up the table's ambition and its limits.

Reading this book requires a bit of patience, and a bit of playfulness. It is one large game of "find the isomorphism."

Chapter 1 From Three Frameworks to Four Frameworks

Where the Frameworks Came From

The author's notes contain a brief self-account of the "grand synthesis"; the spirit of it, worth reproducing in full, is these few sentences:

The three frameworks arose because modern science cannot say clearly what the brain and thinking are.

Once I had the tool of concept vectors, I wanted to solve more problems. Besides, thought and mind can hardly be separated.

In the end the philosophical framework could even return to man himself, yielding man's attributes. It was quite magical — it let me describe people more comprehensively.

2023-06-09: the three frameworks have become four frameworks.

A few sentences make the whole system's growth history clear: first, to attack the hard problem "thought cannot be described," the framework of thought was built; then it was found that thought and mind cannot be separated, so the framework of mind was added; then it was found that the same set of dimensions could describe the world, so the philosophical framework was built; the philosophical framework reflected back onto man grew man's four attributes; magnified further to society and life, there came the fourth and fifth frameworks.

The system's growth was not planned; it snowballed out of "once a tool is handy, you want to solve more problems with it."

The Division of Labor Among the Four Frameworks

Framework	Question it answers	Core dimensions
Philosophical framework	What kinds of forms the world has	simple/complex, unified/dispersed, motion/stillness, inner/outer
Framework of thought	How people process information	discrete/continuous, hierarchical/flat, memory/consciousness, production/operation

Framework of mind	What inner types people have	introversion/extraversion, perception/action, rational/emotional, control/spontaneity
Frameworks of society and life	What dimensions there are when people gather and live a lifetime	the four natures, the four social lines, the two strategy axes

The author also has a programmatic metaphor: **mind and thought are machines; external information is what the machines process; philosophy commands external information.** In a more technical phrasing: nerves are the micro level, thought is the meso level, mind is the macro level, and culture is data loaded after birth.

A Handy Screwdriver

Why did the system snowball? Anyone who owns one handy screwdriver understands.

The day you brought it home, you only wanted to tighten the one loose screw on the chair. But the screwdriver was so usable — comfortable grip, bit biting firmly — that you looked around: the door handle was loose — tighten; the socket plate was wobbling — tighten; the child's toy car, the kitchen shelf... In one week, every screw in the house had been tightened by you. It wasn't that the screws at home had suddenly multiplied; it's that once the tool is handy, you suddenly "see" them.

The author's tool is the concept vector. He originally wanted to use it only on the one screw of "thought cannot be described"; once that was unscrewed, he discovered: mind, philosophy, society, life — screws of the same model everywhere. That is how the four frameworks came to be: not planned, but one handy knife, tightening its way all along.

Why Align Them

Once the four frameworks each stand, one impulse follows naturally: can they be aligned with one another?

If they can — if, say, the framework of thought's "discrete" happens to correspond to the framework of mind's "perception" and the philosophical framework's "unchanging" — that means: these four frameworks may not be four theories, but **one structure showing itself four times at four levels**. One structure manifesting four times is far more credible (and far more compact) than four structures each standing alone.

That is what this book does. But before aligning, the rules must be set — because "correspondence" is the operation most easily abused. The next chapter sets the rules.

Chapter 2 The Rules of Correspondence: Heuristic, Not Proof

Correspondence ≠ Definition

The most easily misread things in the whole system are those beautiful tables of correspondences. The author specially laid down a rule:

Correspondences differ from synonyms. Synonyms mean two words mean basically the same thing; corresponding words are often words from different fields, with only some logical causal relation and some conceptual-vector similarity. **Such correspondence relations are probabilistic; very likely only 55% of the correspondences hold.**

I believe definition and correspondence must be distinguished. A definition is one hundred percent; a correspondence is a certain likelihood.

What is computable and derivable is a necessary connection; connections like "a certain MBTI type has a certain manifestation" belong to the universal interconnection and mutual influence of things — one thing is influenced by many factors, with various weights, and the transmission chains are complex and unreliable.

What 55% Actually Means

First, clarify the number itself. The author later admitted: **55% was only an example.** All it means is "above chance" — if chance is the 50% of a coin flip, then 55% is already not chance; if chance is the 25% of picking one of four, then 26% or 27% is not chance either. This number promises no precision, only direction: stronger than blind guessing, weaker than an iron law.

Under this clarification, "55% at worst" means:

- **Correspondences cannot be used to argue.** "Confucianism corresponds to holism" cannot serve as the basis of any conclusion;
- **Correspondences can be used to discover.** They hint that two domains may be isomorphic — worth checking; check it out, and the correspondence is promoted toward a definition; fail to, and the correspondence is demoted to a metaphor;

- **A correspondence is a living draft.** The author modeled this honesty: under the entry "why Confucianism corresponds to the changing individual," he himself listed several mutually conflicting reasons (Confucianism acts extravertedly, so it is the changing individual; yet Confucianism's concern with politics resembles the unchanging collective...), and concluded: "weigh these correspondences for yourself; correspond however works best; they need repeated revision; at present this is only a first draft."

There is also a deeper methodological awareness: **if the correspondence were a hundred percent, it would not be a separate gene.** Perfect alignment means redundancy — the two frameworks would have become one thing. Correspondences are valuable precisely because they are "similarities between different things."

Then does this system have any "hard" parts? The author's answer cuts clean: **the positions are hard; the words are soft.** The sixteen positions are right there — that is hard derivation; but exactly which word suits which position requires repeated thought and continual updating — that is soft correspondence. In the words of Book III: the structure is definitional; the naming is probabilistic.

A Model Example: Monism and Dualism

The author gave a table of correspondences for "monism/dualism," which can serve as a demonstration of "the correct use of correspondences":

Monism	Dualism	Domain
Optimistic	Pessimistic	Prediction
No risk awareness	Risk awareness	Decision
Learning	Thinking	Framework of thought
Left · equality	Right · liberty	Politics
Unified	Dispersed	Philosophical framework
Conformity	Independence	Holism
Purposeful	Purposeless	Teleology
Overcoming difficulty	Riding the trend	Teleology
Control	Spontaneity	Framework of mind

The way to read this table is not "so leftists are all controlling" (that is abuse), but: the psychological structure "monist leaning" may show up, in the domains of prediction,

decision, politics, and worldview, as optimism, lack of risk awareness, demands for equality, conformity, a sense of purpose... There is a probabilistic hidden thread among them. Hence also the author's criticism of monists: monist people cannot see that everything has pros and cons, and believe only they are right; **anyone able to use classification thinking should be an anti-monist.**

A Matchmaker's Words Are Only Half to Be Believed

The rule "a correspondence is a heuristic, not a proof" is best understood in a matchmaking agency.

When a matchmaker sets two people up, the opening line is always an analogy: "That girl has such a good temper, just like your cousin." "The lad is steady, exactly like your father when he was young." Can this be believed? Half of it — what it says is: on this stranger there **may** be some structure familiar to you, worth taking as a clue to go meet once.

But if you take the analogy as a conclusion — "since she's like my cousin, we'll surely get along" — you will mostly be disappointed. The likeness is a 55% likeness; the remaining 45% takes three dinners together to find out. The matchmaker knows this in her heart: the analogy's job is to lead you through the door, not to live the days for you.

This is the correct use of "correspondence": it is a stepping-stone to knock at the door, not a tranquilizer. All the beautiful correspondence tables in this volume should be read in this spirit — treat them as the matchmaker, not as the marriage certificate.

Telescope and Microscope

With the rules set, let a metaphor close the chapter: a correspondence is a telescope, not a microscope; it is exploration's starting point, not argumentation's end point.

A telescope lets you discover "there seems to be a mountain in the distance"; as for what is on the mountain, you have to walk over to find out — those steps of walking over are what is called research. Taking the mountain's shadow in the telescope directly for the mountain itself is how horoscope columns are written; discovering the shadow and then setting out to check is how this framework is used.

Carrying this rule, the next chapter begins formally aligning the four frameworks.

Chapter 3 Aligning the Three Frameworks: A Chorus of Eight Dimensions

The Alignment Table

This is the heartland of the whole system: the dimensions of the framework of thought, the framework of mind, and the philosophical framework, aligned into one eight-row table.

Framework of thought	Framework of mind	Philosophical framework
Consciousness	Rational	Simple
Memory	Emotional	Complex
Production	Spontaneity	Dispersed
Operation	Control	Unified
Discrete	Perception	Unchanging
Continuous	Action	Changing
Hierarchical	Introversion	Collective
Flat	Extraversion	Individual

How to read it: each row is one "cross-framework isomorphism." The first row, for instance, says: "consciousness" in thought, "rational" in mind, and "simple" in philosophy are one structural tendency showing itself at three levels.

Row-by-Row Reading (with the Author's Explanations)

The author's notes preserve several explanations, which we embed in the rows:

Consciousness = rational = simple. Consciousness and the rational pursue clarity, singleness, definiteness — simplicity is their worldview taste.

Memory = emotional = complex. "Memory needs no reasons." Memory is a warehouse that accepts everything as it comes; the emotional is feeling that does not argue logic; the complex is a world unsimplified — all three refuse to "trim the profuse down to the simple."

Production = spontaneity = dispersed. "Spontaneity produces creation." New things grow out of places that don't keep the rules; dispersion means there is no unified will, and

only without a unified will is there room for the unexpected.

Operation = control = unified. Operation is using well what already exists; it needs discipline and convergence; control and unification are branches of the same breath.

Discrete = perception = unchanging. Discrete thinking sees the world as a pile of points, and points are static; perception is the receiving of the world as it is.

Continuous = action = changing. "Continuous thinkers have the advantage in action: because things are continuous, there is no need to run them through the brain, so action can be immediate." The continuous is flow; flow is change; change is action.

Hierarchical = introversion = collective. "Introversion cares about the collective, not about what is between individuals — like hierarchy, it views the problem from the whole." Hierarchy means looking down from above; looking down from above means the collective.

Flat = extraversion = individual. "The philosophical framework's 'between individuals' is inner (interactions among individuals), and it corresponds to the framework of mind's extraversion." In flat people's eyes there are no superiors and subordinates, only individuals laid out one by one; extraverted people deal precisely with concrete individuals one by one.

What This Table Is Claiming

It is claiming: **how a person thinks (thought), how a person feels (mind), and what a person believes (philosophy) have behind them the same deep configuration.**

What is the basis of this claim? The author's answer is **causality**, not rhetoric: as with the geographic determinism to be discussed later, behind these alignments there are causal chains. For example, "flat thinkers are obedient" — people who cannot see the whole picture need guidance more — a psychological causality welding "flat" and "obedient" together. So this alignment is no word game of "the same author being naturally self-consistent within one system"; every row claims there exists a causal passage that can be disputed and can be tested.

A person with "strong consciousness" is, with high probability, rational, and with high probability likes a simple worldview; a person with "strong memory" is, with high probability, emotional, and with high probability believes the world is complex. Mind the phrasing — high probability, soft causality; the 55% warnings all apply.

If this table broadly holds, it brings a practical conclusion: **observing a person's behavior at any one level, you can make rough predictions about his other two levels.** Watch how he organizes his notes (thought), guess his style of spending money (mind); watch whether he believes in fate (philosophy), guess his planning habits (mind). This kind of "cross-level prediction" is exactly the most amusing — and the most cautiously-to-be-used — part of the whole system.

A Live Demonstration of "Cross-Level Prediction"

The most amusing use of this table is running experiments on acquaintances.

I have a friend whose note-taking software is full of mind maps, never a checklist — typical tree thinking. The table predicts: with high probability he is emotional, and with high probability feels the world is too complex to pin down. I asked, and indeed: his pet phrase for making decisions is "go by feel," and his closing line in any chat about world affairs is forever "it's not that simple."

Of course, there are also times the prediction falls flat — that is exactly what 55% means. Guess right, and the hidden thread may really exist; guess wrong, and it reminds you that person carries other variables. The game may be played; the conclusions are not to be taken seriously.

The eight dimensions are aligned. But the author did not stop there — he pushed the alignment on to MBTI, tones of speech, blood types, temperaments, academic disciplines, and civilizations. The next chapter: behold that bigger table.

Chapter 4 The Great Master Table of One Divides into Four

The Most Famous Table in the System

On April 17, 2020, the author carried the alignment work to its limit and produced this system's largest table of correspondences — "one divides into four":

Row	A	B	C	D
Framework of thought · column	Continuous hierarchical	Discrete flat	Continuous flat	Discrete hierarchical
Framework of thought (shape of information)	Outline	Table	Linear	Tree
Framework of thought · row	Operating consciousness	Producing memory	Operating memory	Producing consciousness
Framework of mind · column	Action introversion	Perception extraversion	Action extraversion	Perception introversion
MBTI	IJ	EP	EJ	IP
Framework of mind · row	Rational·control	Emotional·spontaneity	Emotional·control	Rational·spontaneity
MBTI	SF	NF	ST	NT
Mind (Freud's line)	Superego	Id	Non-ego	Ego
Tone of surname	Third tone	Second tone	First tone	Fourth tone
Human attribute	Natural side	Ideal side	Social side	Interested side

Philosophical framework · row	Simple unified	Simple dispersed	Complex unified	Complex dispersed
Philosophical framework	Teleology	Reductionism	Holism	Pluralism
Philosophical framework · column	Unchanging individual	Changing collective	Changing individual	Unchanging collective
The hundred schools	Legalism	Buddhism	Confucianism	Daoism
Academic discipline	Engineering	Philosophy	Humanities	Sciences
Region	Africa & Middle East	South Asia	East Asia	Europe
Climate	Dry-hot	Wet-hot	Wet-cold	Dry-cold
Mode of production	Hunting	Gathering	Farming	Herding
Temperament	Choleric	Sanguine	Melancholic	Phlegmatic
Blood type	O	AB	A	B

How to Read This Table

Read it vertically: all the rows within one column stand in "correspondence relations" with one another (the 55% kind). Take column C, for instance: continuous flat, linear thinking, action extraversion, EJ, emotional-control, ST, non-ego, first tone, social side, complex unified, holism, changing individual, Confucianism, humanities, East Asia, wet-cold, farming, melancholic, type A — placed in the same column, they claim structural similarity with one another.

Read it horizontally: the four cells of one row are one classification system's quartering. These quartering systems come from utterly different domains: psychology (MBTI), linguistics (tones), physiology (blood types), geography (climate), anthropology (modes of production), philosophy (the hundred schools)...

What this table claims: the quarterings of these different domains quarter one and the same "four." The world's fourfold structure emerges again and again at every scale — precisely the definition of a "general model" quoted in Book III: a structure that emerges independently many times in different fields reveals some deep and general law.

A Few Rows Worth Discussing

The MBTI rows: the four groups IJ / EP / EJ / IP and the four groups SF / NF / ST / NT are two ways of quartering MBTI's sixteen types (one cut along E/I $\times$ J/P, one along S/N $\times$ T/F). Sixteen types = four groups $\times$ four groups, landing exactly in the four columns.

The temperament row: choleric, sanguine, melancholic, phlegmatic — ancient Greece's four humors, a "one divides into four" from two thousand years ago.

The blood-type row: O, AB, A, B — the blood-type personality theory has found essentially no support in mainstream research. The author's confidence comes from two places: first, a methodological stance — all things are related to one another, and "mainstream research is too Church-of-Science"; second, a counter-question — can mainstream research prove that blood type and personality are **completely random**? Of course, he himself also admits: this correspondence is unreliable and may need continual correction.

The tone-of-surname row: the first, second, third, and fourth tones of surnames — the most unexpected row of all. The author later left an explanation: tones represent moods; surnames of different tones were given by people of different moods; people of different moods are people of different types. The source of evidence? His own "big-data observation," he says, and he can give instances: first-tone surnames — Zhang, Zhou — the people he has observed of this kind mostly think in the continuous-flat (linear) way, landing exactly in column C of this table. He also says he has to this day found no real-world counterexample to this row. These two rows remain the two softest rows of the whole book; as you read, keep Chapter 2's rules within reach.

The Correct Posture Toward This Table

Say Chapter 2's rules once more: this table is **an exploration map, not a judgment book**. Its correct use is generating hypotheses — "type A and melancholic both correspond to column C; do the descriptions of type-A blood really carry a melancholic shadow? Go look"; its wrong use is proclaiming conclusions — "so blood type determines personality."

The author's own attitude toward it can be seen in the entry "why Confucianism corresponds to the changing individual": list the reasons for and against, admit the first-draft nature, welcome repeated revision.

What This Table Reads Like

Seeing this table for the first time, you will mostly recall the experience of browsing a flea market: on one stall lie a pocket watch, an abacus, ration coupons, and an old telephone — different eras, different uses, yet arranged together they have an indescribable "set-ness."

The difference is that the flea stall's set-ness rests on luck, while this table's set-ness rests on coordinates: every row answers "in which cell of the two axes simple/complex and unified/dispersed are you." So it is not a collection; it is an index.

One row of the table conceals a complete chain of reasoning: Confucianism, humanities, East Asia, wet-cold, farming, holism — why are they in the same column? The next chapter unfolds this chain; it is the whole table's "demonstration project."

Chapter 5 The Civilization Chain: From Climate to the Humanities

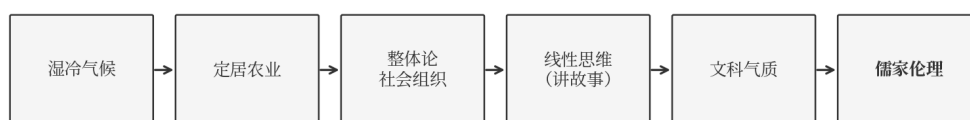
In the last chapter's master table, one row stands out especially:

Confucianism, humanities, East Asia, wet-cold, farming, holism — all landing in the same column.

This was not arranged casually. In his notes the author specially wrote out a complete chain of reasoning:

Confucianism is East Asian culture; East Asia's climate is wet-cold; wet-cold produces an agricultural civilization; an agricultural civilization leads to a holist form of social organization; what suits the holist form of organization is a continuous-flat (linear) way of thinking; and linear thinking is precisely the humanities' way of thinking.

Six links, pushed all the way from the weather to academic temperament. This chapter takes the chain apart link by link. It is the whole table's "demonstration project": if this one chain holds up, the alignment of the table's other columns is no longer mysticism but a conjecture that can be questioned and can be tested.



每一环都是「更可能」，不是「必然」——软因果链

5.1 Link One: The Wet-Cold Climate

The chain's starting point is climate. The author divides climates into four kinds too: dry-hot, wet-hot, wet-cold, dry-cold — cold/warm and dry/wet, two binary dimensions, one dividing into four.

East Asia (eastern China, Japan, the Korean peninsula) is wet-cold: ample precipitation, four distinct seasons, cold winters, hot summers, abundant moisture.

Why can climate serve as the starting point? Because at the dawn of civilization, climate is what man is most powerless to resist. You can move house, you can change institutions, but you cannot make the Yangtze basin stop raining. Climate is the given constraint; everything after is built upon it.

5.2 Link Two: From Wet-Cold to Farming

A wet-cold climate suits growing crops. Plenty of water, a frost period, four distinct seasons — precisely the stage for rice and wheat cultivation.

The contrast with the other three cells makes this clear: dry-hot places suit hunting; wet-hot places suit gathering (in the tropical rainforest fruit is available all year, so the necessity of farming is actually lower); dry-cold places suit herding (grasslands grow no crops, only grass, and grass feeds livestock). Four climates, four modes of production — another one divides into four.

East Asia was "locked" into the farming cell.

5.3 Link Three: From Farming to Holism

This link is the key leap of the whole chain: how can a mode of production influence a worldview?

Farming has several traits.

First, farming is collaborative. Digging canals, building dikes, rushing the harvest and the planting — none of these can be done by one household alone. Flood control above all — with the Yellow River and the Huai River lying there, upstream and downstream must coordinate; if one village builds a dike, the flood goes and drowns the neighboring village. No one can keep his own doorstep clean alone.

Second, farming is long-cycle. Sow in spring, harvest in autumn; in between, for months, you cannot move house or change trades. People are bound to the land, bound to the solar terms, bound to the rhythm of "the whole year as one game."

Third, farming's yield depends on the state of the system. Whether the harvest is good depends not only on how diligently your family tills its plot, but also on the sky, the water, the insects, the neighbors' fields. Local optimums are useless; only when the whole is good is anything really good.

Living thousands of years in such a mode of production, a society naturally develops a "whole-first" form of organization: family and state sharing one structure, the collective as the base unit, the big picture taking precedence. That is holism — complex and unified, attending to the individual's position and change within the whole.

A contrast makes it clear: hunting prizes individual valor and timing (a reductionist temperament: simple, dispersed, eyes fixed on one target); herding moves with water and grass, with highly mobile individuals (a pluralist temperament: complex, dispersed, the individual facing an unchanging environment); and gathering stands nearer the teleology side.

5.4 Link Four: From Holism to Linear Thinking

Worldviews select ways of thinking. This is a principle this volume uses repeatedly — Book IV presented the philosophical framework, Book II presented the framework of thought, and the two have shared a column all along in the alignment tables of Book I and this book.

How does a holist society think? To pack a "complex and unified" world into the head, the fittest way is the continuous-flat one: the world unfolds continuously (not cell by discrete cell), and is a whole interrelated on one plane (not a clearly layered pyramid). Continuous flat — that is linear thinking.

Linear thinking's typical moves are: combing from beginning to end, telling how things came and where they went, valuing context and relations, prizing "awakening" — savoring the overall sense within a continuous narration, rather than lifting out a definition to dissect.

5.5 Link Five: From Linear Thinking to the Humanities

The way of thinking falls one step further, landing on education and academic temperament: the humanities.

What is the humanities' thinking? Reading long texts, grasping the thread, understanding the context, savoring the meaning beyond the words, understanding the part within the whole narration — precisely continuous-flat linear thinking. In the master table the author also arranged "learning, awakening, thinking, applying" into the four cells, and the humanities column corresponds exactly to "learning."

And so the chain closes: wet-cold → farming → holism → linear thinking → humanities temperament → Confucianism.

Why is Confucianism in this column? Because Confucianism is the operating system of China's two-thousand-year agricultural civilization: it speaks of the five cardinal relations (a person's position in the web of relationships), of family and state (the individual nested inside the whole), of harmony (the whole prior to the part), of moral cultivation (through continuous teaching by word and example rather than discrete statutes). It is holism's complete unfolding in ethics and politics.

5.6 How to Use This Chain: Five Reminders

This chain is beautiful, but using it requires wearing three "safety helmets," or it will turn from heuristic into misleading.

First, it is a chain of probabilities, not a determinism. Every link is "more likely," not "necessarily." Wet-cold regions have herding corners too; agricultural societies produce reductionist thinkers too; among humanities students there are plenty of hierarchical thinkers. What the chain describes is a shift of the statistical center of gravity — like saying "southerners love rice": right in the big direction, often wrong for some particular household.

Second, it is a historical snapshot, not an eternal label. What the chain explains is how the "civilizational genes" formed — and genes lag behind reality. Today's China has long since industrialized and informatized; the mode of production has changed, but the inertia of the cultural psychology remains. This is like a person's childhood influencing his whole life without determining his every step.

Third, it is an explanatory tool, not a ranking of values. Saying "East Asia leans holist and linear-thinking" says in no way that Europe-style reductionism and table thinking are more advanced — or less. The four ways are humankind's four sets of adaptations to four sets of survival conditions, each with its own home ground. Without either the fine dissection of specialization (reductionism) or the grasp of the system (holism), no civilization goes far.

Fourth, can it digest the counterexamples? East Asia, too, produced a scholarship like the kaozheng evidential school, and Europe also has a rich holist tradition — the author's ruling: kaozheng is not reductionism but a valuing of history; reductionism by definition analyzes downward to physics and mathematics, and kaozheng does not take things apart downward. As for "one country being able to hold all currents of thought," he finds

that perfectly normal: absolute 0% and absolute 100% are both extremely rare; the chain describes only the mainstream leaning.

Fifth, how big a scale counts as big? Equally wet-cold, Japan and China differ not a little in social temperament; equally agricultural, China's north and south differ greatly — at what scale does the chain start to fail? The criterion the author gives is **geographic isolation**: the chain's effective scale is determined by how isolated a geographic unit is. China's north-south difference he argues separately in "the superposition of waves" (Chapter 8); and China's peculiarity lies in — a vast territory, a long-lasting grand unification, and a deep Legalist ingredient — not a pure feudal system.

The most amusing thing about this chain is that it gives "regional stereotyping" a chance to upgrade.

Next time you hear "Chinese people are just such-and-such" or "Westerners are just so-and-so," you can take the sentence apart and press on: which link is he talking about? Climate? Mode of production? Social organization? Way of thinking? Academic temperament? What is each link's probability of holding? Does the chain still hold today?

Most people, slapping on a label, compress a whole chain into one assertion and throw it out. And you now hold six links in your hand, which you can check link by link.

A label is a zip file; the chain is the decompression tool. What this chapter teaches is not a new label, but an act of decompressing.

Chapter 6 The Explicability of Mysticism: The Case of Astrology

If the last chapter's civilization chain holds, an ambitious corollary follows: the things regarded as "mysticism" may not be entirely without reason — their explanatory chains merely broke. This chapter runs an experiment with astrology.

6.1 A Bold Hypothesis: Astrology and Climate

The author's own words:

Astrology works not because the stars have moved to some position, but because of the climate's cold or warmth, dryness or humidity at one's birth, and the seasonally influenced food and housing conditions.

What this sentence means: if some statistical correlation really exists between astrological signs and personality, then what is at work is, with high probability, not the stars, but the **season of birth**.

The reasoning goes like this. Babies born in different seasons experience completely different climates in their first few months: a baby born in winter spends the first three months of life in the cold, heavily clothed, with little outdoor activity, the mother's diet dominated by stored foods; a baby born in summer is the opposite. And the first few months of life happen to be the window in which the nervous system develops fastest.

Thus a short explanatory chain forms:

Season of birth → early climate, food, and housing conditions → early developmental environment → a statistical shift of temperament.

Note, this is still a hypothesis, and a weak-effect hypothesis at that — it explains at most a slight statistical tendency; it cannot explain any individual. But its value lies here: it replaces the untestable claim "the stars influence personality" with the in-principle testable claim "the season influences early development." The latter at least stands at science's doorway.

The author's attitude toward this hypothesis is more cautious than the words he wrote down. He states himself: he has not researched astrology much, astrology itself has no authoritative doctrine, and this is only a guess at the cause — it may be guessed right, or

wrong. He even goes one step further: in early years he tried matching the four elements of astrology onto MBTI (see 6.2); later he found the four elements don't match the seasons — that part he wholly disavows and has retracted. Residuals he cannot explain he does not sweep under the carpet; he cuts them off outright.

6.2 A Correspondence the Author Himself Retracted

This section originally recorded one attempt: matching Western astrology's "four elements" onto MBTI's four letter-groups.

Western astrology divides the twelve signs by the "four elements" into four groups: fire signs (Aries, Leo, Sagittarius) are passionate; earth signs (Taurus, Virgo, Capricorn) are practical; air signs (Gemini, Libra, Aquarius) are curious; water signs (Cancer, Scorpio, Pisces) are emotional. Each of the four groups commands three signs — seemingly another signal of a "fourfold structure" — so some people, including the author in his early years, tried matching it onto MBTI's four letter-groups.

This correspondence the author now explicitly retracts. The reason is crisp: **the four elements don't match the seasons.** If astrology's meaning truly lies in the season of birth (the hypothesis of 6.1), then the seasonal three-way division of "cardinal, fixed, mutable" still barely touches the edge, but the four elements walk across seasons — the chain breaks here. Broken, it is retracted — no patching, no clinging.

This retraction is left in the book not as a blemish, but as a live execution of Chapter 2's rule: a correspondence is a living draft; once found not to hold, it is demoted, is withdrawn. That the book contains "a correspondence the author retracted," rather than only "correspondences the author is proud of," shows all the more that this method's teeth grow on itself. The explanatory-chain method of the next section is unchanged — and this case happens to demonstrate what to do when a chain breaks.

6.3 The Explanatory Chain: Why Mysticism Can Be "Translated" Layer by Layer

What this chapter really wants to convey is not astrology, but a method: **the explanatory chain.**

In his mind the author has built a string of translators:

Astrology ← MBTI ← framework of mind ← concept vectors

Meaning: the personality phenomena astrology describes can be restated in MBTI's type language; MBTI's types can have their construction explained by the framework of mind's four dimensions (introversion/extraversion, perception/action, rational/emotional, control/spontaneity); and the framework of mind's four dimensions are themselves the combinatorial product of concept vectors.

Each layer is more basic and more rigorous than the last. Astrology is a folk description of phenomena; MBTI is a semi-standardized questionnaire classification; the framework of mind is a dimensionalized structural model; the concept vector is the method of generating models. The further right you walk, the stronger the explanatory power and the fewer the assertions.

The value of this method: **it does not lightly laugh at any folk wisdom, but asks "of what more basic thing might this be an approximation."** Mysticism is not all fraud; much mysticism is a pre-scientific age's summary of phenomena — the ancients observed some statistical regularity, but having no variables and no models at hand, could only hang it on the stars. The stars are wrong; the regularity may be a tiny bit true.

Conversely, of course, this method by no means endorses mysticism. The part that can be translated stays; the part that cannot be translated is thrown away. Astrology's concrete daily horoscopes and compatibility indexes find no foothold anywhere on the explanatory chain — let them stay on the entertainment page.

This chapter's stance can be summed up in one sentence: **toward mysticism, neither kneel in worship nor burn at the stake — interrogate.**

The way of interrogating is to press on: what is the phenomenon you observed? Can this phenomenon be explained by more basic variables? Up to which step can it be explained? How large is the remaining residual?

The history of science has in fact been doing this all along. Alchemy was interrogated into chemistry; astrology was interrogated into astronomy; homeopathy was interrogated into the placebo effect. Interrogation does not guarantee every prisoner has a grievance, but it guarantees that no one in the know is wrongly killed.

Astrology has perhaps brought only a tiny bit of true news — the tiny bit about the season of birth. As for that four-elements table handed down for two thousand years, the author's disposal is retraction. An interrogation's conclusion may also be "does not hold" — that is precisely the difference between interrogation and pilgrimage.

6.4 A Word in Passing on the *I Ching*

Besides astrology, the author also has a non-mystical reading of the *I Ching*: yin and yang are antonyms; from yin-yang to the eight trigrams, and on to the sixty-four hexagrams, is the process of simple concepts continually combining into complex ones — the sixty-four hexagrams are the sixty-four most common situations the ancients distilled out of life. And the yarrow stalks are nothing but a tool for generating random numbers; in the ancients' eyes, a random number was Heaven speaking.

Seen this way, casting a hexagram cannot produce the correct answer, but it has another use: it represents the ancients' admission that randomness exists in the world — a worldview of randomness, which happens to fill the piece that pure rational necessitarianism lacks.

Chapter 7 Psychology's Seven Schools: Blind Men and the Whole Elephant

Mainstream psychology textbooks usually divide modern psychology into seven schools or perspectives. The author did something very characteristic: placed the seven schools one by one into his own three frameworks, then asked a slightly smug question —

Doesn't it look as if present-day psychology is all blind men touching an elephant? And my three frameworks are the whole elephant.

This chapter unfolds that "placement map."

7.1 The Seven Schools Take Their Places

Modern psychology's seven perspectives, by the author's reading, correspond to the three frameworks as follows:

- 1. The biological perspective** — studies the brain, nerves, hormones, genes. **This is the underlying biological base**, beneath the three frameworks. It corresponds to no single framework; it is the foundation of all the frameworks. Just as computer hardware corresponds to no software, yet all software runs on it.
- 2. The psychodynamic perspective** (Freud's line) — studies the conflict between instinctive impulses and rational restraint, the unconscious. **This is the interaction of the emotional and the rational in the framework of mind.** The tug-of-war among id, ego, and superego is exactly what happens on the "rational-emotional ring" of Book I.
- 3. The behaviorist perspective** — studies only observable stimuli and responses, never looking inside. **This is the framework of mind's perception–action flow.** Behaviorists lock their attention onto the single link "perception in, action out," refusing to open the black box.
- 4. The humanistic perspective** (Maslow, Rogers) — studies self-actualization, meaning, growth. **This is the philosophical framework and man's attributes.** The hierarchy of needs speaks of the physiological, safety, belonging, esteem, and self-actualization — precisely the expanded edition of Book IV's "four human attributes" (the natural, the interested, the social, the ideal).

5. The cognitive perspective — studies perception, memory, thinking, language. **This is the entire framework of thought.** Memory and consciousness, production and operation, discrete and continuous, hierarchical and flat — nearly all of cognitive psychology's objects of study are in this cell.

6. The evolutionary perspective — studies where psychological mechanisms came from in natural selection. **This, too, is the underlying biology**, adjacent to the biological perspective — one speaks of mechanisms, the other of origins.

7. The cultural perspective — studies how the cultural environment shapes the mind. **This is the environmental factor**, the variable outside the three frameworks — the frameworks hold the person; culture is the person's situation.

7.2 A Map of Touching the Elephant

Lay these seven together, and a picture emerges:

- Two schools (biological, evolutionary) are touching the **foundation**;
- Two schools (psychodynamic, behaviorist) are touching **different sides of the framework of mind**;
- One school (cognitive) is touching the **framework of thought**;
- One school (humanistic) is touching the **philosophical framework and life**;
- One school (cultural) is touching the **environment**.

Of the seven schools, not one has touched the "whole elephant" — but the seven hands together have happened to touch the elephant all over.

This is what the author means by "blind men touching an elephant" — not that the seven schools are wrong, but that they are each correct and mutually severed. A cognitive psychologist is not necessarily familiar with Maslow; behaviorists and psychoanalysts quarreled for a century. Each school takes the piece in its hands for the whole elephant, and so gullies crisscross within the discipline.

7.3 What "the Whole Elephant" Means

Then by what right do the three frameworks call themselves "the whole elephant"?

By their **mode of generation**. The three frameworks are not seven slabs induced out of phenomena, but one structural diagram deduced out of four binary dimensions: the philosophical framework governs "what the world is like, what man is"; the framework of

thought governs "how information is processed"; the framework of mind governs "how people are classified, how the inner mind runs"; plus the underlying biological base and the peripheral environmental factor. All the objects the seven schools study can find their coordinates on this diagram — not stuffed in by force, but because they were studying different corners of this diagram all along.

A metaphor: the seven schools are like seven local maps, each precise, but impossible to piece together, because each map's scale, projection, and legend differ. What the three frameworks want to be is that one world map — its precision certainly inferior to any local map's, but it tells you the seven maps' relative positions.

Local maps are for walking; the world map is for locating. The two do not replace each other. Someone doing psychological counseling should of course use a school-grade fine map; but someone wanting to understand "what psychology is actually studying" needs the latter.

7.4 A Necessary Modesty

This chapter's tone may seem arrogant, so two buckets of cold water must be poured on it proactively.

First, "can be placed" does not equal "can replace." Placing behaviorism into the "perception–action flow" merely gives it a position; it in no way means the three frameworks can re-derive a century of behaviorism's accumulated experimental findings. A map cannot replace walking; coordinates cannot replace data.

Second, "the whole elephant" is the author's self-assessment, not the psychology community's consensus. In the academic world's eyes, attempts to integrate the seven schools have never ceased (the bio-psycho-social model is one famous attempt), and the three frameworks are an exceptionally concise — and exceptionally personal — one among those attempts. Its value lies in providing a sufficiently simple global view; its limit lies in that this view has not yet been polished by the academic community.

Third, some press even harder: placing seven things into four quadrants — might that be mere after-the-fact labeling? Can any seven things be "placed" by one four-quadrant diagram? The author's candor on this question is unexpected: "What is the difference between after-the-fact and before-the-fact? This is only my understanding, not a consensus. To me it is obvious; to others it is not. I don't know what to do about that either." He doesn't know what to do — so he left the criterion in the book and handed it to you.

The story of the blind men and the elephant we all hear as a joke. But look from another angle: the blind man who touched the leg said "an elephant is like a pillar" — was he wrong? Within the range of his experience, he said nothing wrong; he merely took the part for the whole.

Each of us is a blind man of some school. The books you've read, the training you've received, the circles you've moved in determine which part of the elephant you've touched. The difference is only this: some, having touched, proclaim the elephant's truth; others, having touched, keep asking — what did the others touch?

What this chapter actually gives is not some map, but that latter question.

Chapter 8 Multiple Personalities: Personality Is Superposed Waves

The previous chapters kept doing "subdivision": four dimensions, sixteen combinations, more dimensions and more combinations. This chapter changes direction — **multiplicity**.

8.1 A Borrowed Word

The author opens the door and sees the mountain:

The "multiple personalities" here is a word I borrowed. The meaning is one I defined myself.

It has entirely nothing to do with psychiatry's "dissociative identity disorder." What is meant here by multiple personalities is: **on one person there simultaneously exist several layers of personality, like the superposition of waves.**

8.2 Expansion in Two Directions

In Book I we already learned that beyond MBTI's four letters there are in fact finer classifications (such as the later -A/-T suffix). How to explain these extra parts? The author gives two directions.

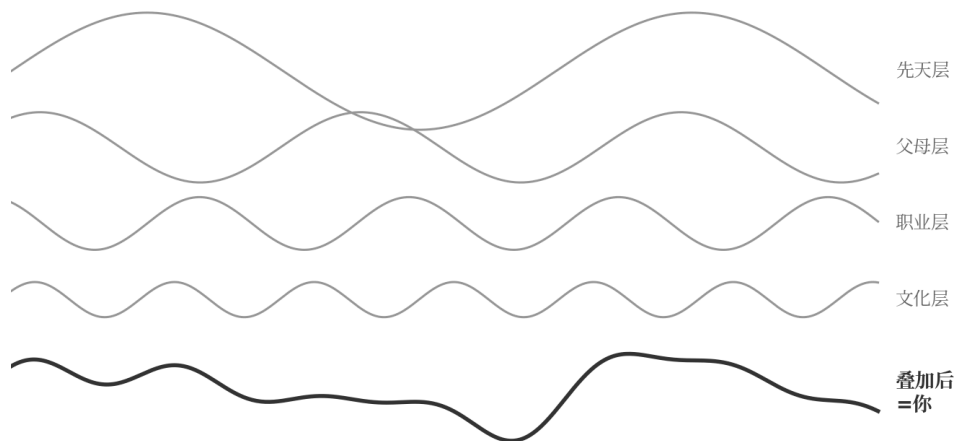
First direction: add dimensions. MBTI itself is incomplete. Beyond the framework of mind's four letters, the framework of thought's letters and the philosophical framework's letters can be superposed. A person can be "psychologically EP, in thought a table type, philosophically a holist." Each framework added multiplies the number of types by four. A type is not a small box, but a set of coordinates.

Second direction: superposition. This is this chapter's focus. Besides being subdivided, classification can also be multiple, like the superposition of waves:

- A person has an **inborn personality**;
- an **outward personality influenced by the acquired environment**;
- **personalities for dealing with the father and the mother respectively**;
- a **personality influenced by one's occupation** (an accountant and a salesman — after ten years the temperament really does change);

- a **personality influenced by one's education and the information one has been exposed to**;
- a **personality influenced by mainstream social culture**;
- and the **infantile influences** Freud mentioned.

These layers exist simultaneously, superposing on one another, and finally synthesize the "him" we see in daily life.



So the question "what type are you, really" is itself wrong. The right question is: at this moment, in this situation, which layer of personality is on duty? A person silent at home may talk volubly at the office — this is neither hypocrisy nor splitting; it is different layers of personality taking turns showing themselves in different situations.

8.3 Culture Is Also Superposed

The same logic applies to culture.

China belongs to East Asia, and East Asia is the "northeast" in the author's geographic division — so Chinese culture carries the northeast's keynote. But the cultures within China are not all alike: the Northeast, the Southwest, Jiangnan, Lingnan each have their own traits. These are **subdivided cultural traits beneath one cultural keynote**. Europe is the same: eastern, western, southern, and northern Europe have distinct temperaments.

That is to say, culture, like the individual, is superposed in many layers: the continent layer, the civilization layer, the nation layer, the region layer, the city layer, the circle layer... layer upon layer. A sentence like "the Chinese are such-and-such" speaks only of

the average value of the topmost layer; the further down you walk, the more superposed details there are.

8.4 What the Superposition View Changes

The superposition view changes at least three things.

First, it makes "inaccurate tests" no longer a scandal. That MBTI tests inaccurately, that every test gives a different result, is often used to prove classification invalid. But under the superposition view, this is exactly to be expected: what a questionnaire measures is the "personality on duty" in the instant you fill it out — and you have several layers. The inaccuracy is not a broken ruler; the object was plural to begin with.

Second, it gives "changing yourself" operating room. Since personality is superposed in many layers, change does not mean replacing your whole self, but cultivating a new layer: an occupation can shape one layer, an environment can shape one, deliberate practice can shape one. The bottom layer remains, but the surface layer already suffices to change behavior. This is more honest than the promise of "shedding your old skin," and more active than the fatalism of "nature never changes."

Third, it makes "understanding others" realistic. Understanding a person is not sticking a lifelong label on him, but wondering: which layers are stacked on him? Which layer is speaking at this moment? What are his father layer, his occupation layer, his culture layer? Ask through this set of questions, and your understanding of a person will go much deeper than "he is an INTP."

As for "can this model be falsified" — asked this, the author's answer carries his trademark temper: "Fieldwork again? That's not my strong suit. You want to use scientific methods again? That will earn my ridicule." Translated: the superposition model is an explanatory tool, not a prediction machine; it must be used together with Chapter 2's rules — treat it as a telescope, not a microscope.

Wave superposition has a property: when two waves meet, sometimes they reinforce, sometimes they cancel.

So it is with people. The layers of personality on one person are not always in harmony: the id layer wants to lie flat, the superego layer wants to get ahead, the occupation layer forces him to socialize, the culture layer teaches him restraint — four waves fighting in the heart; that is where internal friction comes from.

Conversely, when several layers happen to superpose in the same direction, a person experiences that rare state called "self-consistency" or "flow": what he wants to do, what he ought to do, and what he is doing are one and the same thing.

So this chapter's practical conclusion is one sentence: **rather than asking "who am I," take inventory of "how many layers are on me," and then find ways to make them fight less.** Mental health is not finding the one true self; it is getting the multiple selves to sign a ceasefire.

Chapter 9 The Framework Questionnaire in the Field: Four Real Samples

Theory has occupied six books; this chapter looks at fieldwork. The author really did take this framework and test the people around him. The notes preserve four complete questionnaire results, and this chapter lays them out — not to prove anything, only to show how this tool runs on real people, and what troubles it meets.

9.1 What the Questionnaire Looks Like

The questionnaire's answer form is an eight-row table covering all dimensions of the three frameworks:

Framework of thought	Framework of mind	Philosophical framework
Consciousness	Rational	Simple
Memory	Emotional	Complex
Production	Spontaneity	Dispersed
Operation	Control	Unified
Discrete	Perception	Unchanging
Continuous	Action	Changing
Hierarchical	Introversion	Collective
Flat	Extraversion	Individual

Each dimension is a pair of antonyms, and the test-taker circles in each row the word more like himself (marked with an asterisk in the notes). When the eight asterisks are circled, this person's coordinates in the three frameworks come out, and can be directly converted into a "one divides into four" combination: outline thinking or table thinking, the willpower type or the reaction type, reductionism or pluralism...

9.2 Four Answer Sheets

Sample one. The eight asterisks: memory, operation, continuous, hierarchical (framework of thought); emotional, spontaneity, perception, introversion (framework of mind); simple, unified, unchanging, collective (philosophical framework). Converted: in thought the outline type (operating memory, continuous hierarchical); in mind the IFP

style (introversion, perception, emotional, spontaneity); in philosophy a teleological temperament (simple unified, unchanging collective). A highly self-consistent answer sheet — the three layers of thought, mind, and philosophy almost mutually corroborate one another.

Sample two: the author himself. Consciousness, production, discrete, hierarchical; rational, spontaneity, perception, introversion; simple, dispersed, unchanging, collective. Converted: in thought the tree type (producing consciousness, discrete hierarchical); in mind the ITP style; in philosophy a reductionist temperament. If you have read the preceding books, you will find this answer sheet startlingly consistent with the whole volume's temperament of writing: a person of reductionist leaning, tree thinking, and ITP style has written a theory that takes the world apart into dimensions and then combines them. The theory is itself the externalization of the author's personality — this matter is itself an interesting case of "correspondence."

Sample three. Consciousness, production, discrete, flat; rational, spontaneity, perception, introversion; complex, dispersed, changing, collective. Compared with the author: the framework of thought's first six letters are the same, the last two flip from "hierarchical" to "flat" — from tree type to table type; the philosophical framework flips from "simple unchanging" to "complex changing" — from a reductionist temperament to a pluralist temperament. Two people with similar ways of thinking (both leaning consciousness, production, discrete) stand on opposite sides of the table in worldview. This happens to explain why people of similar thinking can also fail to agree: the frameworks of thought match, but the philosophical frameworks clash.

Sample four. Consciousness, production, continuous, hierarchical; rational, control, action, introversion; simple, unified, unchanging, collective. This one is yet another model: in thought the outline type (producing consciousness, continuous hierarchical); in mind the ITJ style (introversion, action, rational, control). Seven of the eight letters differ from the author's — the author had a conversation in the notes with this test-taker about the questionnaire's design; an ITP-style theorist and an ITJ-style interlocutor, one caring whether the structure is elegant, the other whether the execution is controllable — the two discussing the questionnaire's reliability makes quite a scene in itself.

9.3 The Questionnaire's Biggest Trouble: What Is Asked and What Is Answered Are Not the Same Thing

Beyond the four answer sheets, the notes preserve a still more important self-reflection:

I think the first thing is to ascertain whether the answers are accurate answers. What I meant when I asked and what the answerer understood may be a hundred and eight thousand li apart. And the answerer's attention itself is not focused on these questions either.

The other party: so many Q&As need many sets of questions, and in the end the subject answers without being aware of it.

This exchange punctures the Achilles' heel of all questionnaire-type tools: **when asking "do you lean rational or emotional," the questioner has one rigorous definition in mind and the answerer has another everyday definition in mind, and the two definitions may be a hundred and eight thousand li apart.** The professional solution is, as the other party said, to split the same dimension into many sets of situationalized questions, letting the subject expose his leaning unawares; and the author's response is likewise honest — "that's something I can't do."

Hence the attitude established back in Book III: questionnaires are only a reference. Those who know their own minds can fill in the numbers themselves; those who don't may consult the questionnaire, but should know that it "simplifies the questions to gain feasibility, while introducing more uncertainty and unrigorousness."

9.4 What the Four Samples Teach Us

Four samples are too few to yield any statistical conclusion. But they demonstrate three things.

First, this set of coordinates really runs. Eight either-or choices, filled out in three minutes, and a person's position in the three frameworks comes out — and can be converted further into MBTI and the four -isms. The cost is extremely low, the information yield not small. As a "starting point of self-awareness" and "a toy for friends to understand each other," it is qualified.

Second, the differences between people are structural. Put the four answer sheets together: no two are the same, and the differences scatter across different dimensions. Some have the same framework of thought and opposite philosophical frameworks; some have opposite frameworks of mind and the same philosophical framework. This directly supports the whole volume's core claim: "to treat a species in a uniform way — that kind of thinking is foolish" — the difference is not in degree, but in structure.

Third, the simpler the tool, the more elaborate the attitude must be. The author designs the simplest possible questionnaire while repeatedly declaring its limits. This posture of "using simplified tools while remembering complex reality" is more worth learning than the questionnaire itself.

Fourth, a circle that must be admitted. Of the four samples, one is the author himself, and the whole system was built by him too — "the system grows according to its builder's thinking, then the builder's answer sheet is used to verify the system" — the risk of this circular argument, the author acknowledges. Might there be blind evaluation — letting people who don't know the system fill out the questionnaire first, then seeing whether the answer sheets predict their words and deeds? His answer: "There hasn't been much exploration of that; I leave it to others to explore." The compiler pressed for the minimal version — just having five or six people around him each fill out the questionnaire once, predicting first and checking after — and his answer was even blunter: "I haven't done this. Nor do I have the energy to do it." The blind-evaluation cell is, for now, a vacuum.

You can try it right now: the eight-row table above, a pen, circle in each row the word more like yourself — three minutes.

Then do two things. First, have the person closest to you fill one out too, and read them side by side — the quarrels you two have had are very likely written in the difference set of the two answer sheets. Second, fill it out again after three months and see whether anything has changed — if it has, think back to the previous chapter: did you change, or did another layer of personality come on duty?

The best home for this thing is not a paper — it's the dinner table.

Chapter 10 Summary: One Table's Ambition and Its Limits

Book VI has done something the first five books dared not do: align all the frameworks into one great table, then arrange MBTI, tones of speech, blood types, temperaments, Confucianism-Daoism-Legalism-Buddhism, disciplines, regions, climates, and modes of production all into it. Time to settle accounts: what exactly is this table, and what is it not.

10.1 What This Table Is

It is a "table of isomorphism conjectures." Every row alignment in the table is the same assertion: these fourfold structures from different domains may share one underlying skeleton. The alignment of the climate quartering with the production-mode quartering says "natural conditions shape survival strategies"; the alignment of the philosophical quartering with the thought quartering says "worldviews select cognitive styles"; the alignment of the psychological quartering with the tone-and-blood-type quarterings says "man's inborn leanings have some statistical structure."

It is a "question generator." The table's greatest value is not answers but the questions it forces you to ask. Chapter 5's civilization chain is a follow-up question the table generated automatically: why are these cells in the same column? Every row's alignment is the starting point of a chain of reasoning waiting to be tested.

It is one act of "deduplication." The author has a famous saying: "After deduplication you find that the mountain of human knowledge is actually not so large; a great deal of it is one meaning repeated in ten thousand ways." This table is the site of one large-scale deduplication — the quartering method has been reinvented dozens of times in human knowledge; the table lays them side by side, and at one glance you can see who is whose close kin.

10.2 What This Table Is Not

It is not a periodic table. Every cell of the periodic table of elements has an atomic number behind it, and the new elements it predicted were really found. Every cell of this table has only "probabilistic correspondence" behind it — the author set the rule back in Book IV: a correspondence is not a definition; in the worst case it holds at a rate of only 55%. It is a heuristic, not a proof; a telescope, not a microscope.

It is not fatalism. No cell in the table can decide any concrete person. You are type-B blood, a fourth-tone surname, a science student, a northerner — those four cells strung together still cannot deduce who you are; at most they describe the faint resultant force of a few statistical tendencies on you. And don't forget Chapter 8: you are also superposed in many layers.

It is not the end point. The author himself left the door open in his notes: "information that can overthrow the concept vector or go further on its basis" is what he welcomes most. This table is scaffolding, not a temple. Scaffolding's meaning is letting you climb up and see the scenery that was blocked; once seen, the scaffold itself can be dismantled.

10.3 The List of Limits

Gathering the whole volume's self-warnings onto one last page — six in all:

1. **Classification itself loses information.** The binary split is a knife, and every cut draws blood. The dimension axis can remedy it (70% stillness, 30% motion), but the numbers on the axis are still estimates.
2. **Correspondences are probabilistic.** A 55% correspondence means 45% counterexamples. Using this table to judge group tendencies: acceptable; judging individuals: dangerous; judging concrete events: out of the question.
3. **Social science is not science.** The author's positioning of psychology and sociology is "summaries of phenomena": too many uncontrollable factors; change the conditions and the results change. This framework, too, belongs to the summaries of phenomena — an exceptionally concise summary with an underlying model, but still not Newtonian mechanics.
4. **Questionnaires have a ceiling.** What is asked and what is answered are forever separated by a layer of language. All self-assessment tools are so.
5. **The author is a first-hand builder, without peer review.** This system was produced from personal notes and has not been examined by the academic community. The best posture for reading it: treat it as a thought toy, a mirror, a set of questions — not a legal code.
6. **The system itself has no exemption badge either.** Someone asked: what is the probability that this system holds? The author declined to give a number — a result has many causes with various weights; to estimate a probability one must analyze the causes and the weights; and whether this method itself is rigorous, he doesn't know

either. The system's evaluation of itself obeys the system's own rules: honesty before prettiness.

10.4 The Author's Self-Rated Ladder of Credibility

Of the probability that the system as a whole holds, the author declined to give a number (see the previous item). But asked differently — which of the six books do you trust most — he gave a complete ladder, from hard to soft:

Concept vectors > philosophical framework > framework of mind > framework of thought > framework of society > framework of life > geographic determinism.

The footnote cannot be omitted; both sentences sit at the level of the framework of thought: it was the starting point of the author's research; and within it, **comparison theory** is the part he is most confident about and most eager to recommend — in his words, "it is what my concept vector most recommends, more important than the philosophical framework." But among its sixteen intersections, there are some he himself is not sure of. As for single rows of the master table: of the tone row he says he has so far found no real-world counterexample; of blood types and astrology, he says he knows little.

How to use this ladder: quoting from high on the ladder, you can be fairly at ease; quoting from low on it, please carry Chapter 2's rules with you.

10.5 Where Use Crosses the Line

One last question must be laid out in the open: used to what degree does this system cross the line? Self-awareness is fine — but what about hiring screens? Matchmaking? Fixing people's types for them?

The author's answer: **no limits are set**. His logic returns to the volume's first page — he has already explained the tool of concept vectors in full detail; only one question remains: whether anyone accepts this tool.

(The compiler adds a word of his own: tools having no forbidden zones does not mean consequences have no weights. Chapter 2's rules — please carry them with you.)

10.6 Six Books, One Sentence

At this point, the main volumes of *The Concept Vector Series* are complete:

- Book III, *Concept Vectors*: concepts are vectors, dimensions are genes, and combination begets the ten thousand things.
- Book IV, *The Philosophical Framework*: the world is form; quartered, it yields the four -isms; reflected on man, the four attributes.
- Book II, *The Framework of Thought*: memory and consciousness, discrete and continuous, hierarchical and flat.
- Book I, *The Framework of Mind*: four switches, the inner ring, the classification and operation of people.
- Book V, *Frameworks of Society and Life*: from the four natures to society's four great components, and on to the meaning of life.
- Book VI, *The Grand Synthesis*: everything aligned into one table, with its limits declared.

If only one sentence could be kept of the six books, the author would probably choose this one — it appears several times in the notes, shorter each time:

Concepts are the result of combination; find the genes, and all things return to their places.

Having read the six books to this point, you now hold a new pair of glasses. These glasses want to find dimensions in everything they see, seek correspondences, and arrange things into tables — please use them with care.

Wear glasses long enough and you forget they exist. The best user is the kind who can take the glasses off at any moment, rub his eyes, and look at the world again with the naked eye.

The table is for you to use, not for you to live in.

The main volumes end here. Beyond them there is one Supplement: unfinished little paths, the gardener's hoe, the fossil layers of thought — plus a self-referential reader and one page of reference cards for the whole volume. If you'd like to stroll the garden, please keep turning the pages.

S u p p l e m e n t

Notes and Extended Reflections

Everything That Found No Place in the Main Books

This is the Supplement of *The Concept Vector Series*. The six preceding books are the main volumes, presenting a systematic doctrine; this volume is the raw-materials warehouse, holding everything from the original site's notes that could not, need not, or should not enter the main volumes.

About This Supplement

The original site held 358 notes. Most of them have been dissolved into the main text of the six books — taken apart, strung together, and placed into their respective frameworks. But a batch of notes remained on the shore, in seven groups:

Section I: Extended Reflections. Essays with complete viewpoints that drift outside the main line of the three frameworks — the future of artificial intelligence, the explicability of mysticism, a critique of monism, a confession to the reader. These are the outer rim of the author's thought, and also its most personal, most interesting part.

Section II: Framework Scraps. Fragments directly related to the three frameworks but too small to make chapters: a questions-and-answers column, test items the author collected, one experiment of analyzing a picture with the three frameworks, and a batch of empty entries whose titles were set up but never filled in.

Section III: Life and Miscellany. Dailiness unrelated to the doctrine: two pieces of AI-industry news, and several life-themed empty entries.

Section IV: Archive of the Original Site. The engineering remains of the original site as a TiddlyWiki digital garden: change history, questionnaire templates, site tooling, the log list, the to-write list. Meaningless to the ordinary reader, but to anyone studying how this thought grew, it is the truest fossil layer.

Section V: Early Manuscript. An independent document from outside the original site: *Understanding Thought* (created in 2014, earlier than most of the site's notes). It is the "prototype machine" of the framework of thought — the earliest forms of the central unit, discrete storage, and the sixteen-cell table are all in it. Reproduced in full, with a terminology concordance and growth-history notes.

Section VI: Self-Reference. A popular reader written at the author's request to "say a bit more about self-reference": Russell's paradox, Cantor's diagonal, Gödel, the halting problem, fixed points — mathematics' self-reference family, and the three instances of self-reference in this series, turn out to be one family.

Section VII: One-Page Reference Cards. A single page compressed from the author's own summary of his thought: the master diagram, the dimension pairs, the inner ring, the four -isms, the honesty discipline, the retraction list. Whenever you get stuck in any book, come back and check against it.

The main volumes pursued "keeping the reader reading"; this volume pursues "leaving no material behind." Seen together, they are the full picture of this garden of thought: the paved main roads, the unfinished little paths, and the hoe the gardener left behind.

How to Read

Ordinary readers may read only Section I — some of the sharpest sentences in the whole series are there. Researchers, and anyone curious about how the book was made, may leaf through Sections IV and V, to watch a system of thought slowly take shape in logs and early manuscripts.

Section I Extended Reflections

This section collects essays that hold complete viewpoints but do not belong to the main line of the three frameworks. Each item first records the original text (lightly tidied, the viewpoint untouched), with a short editor's note where needed.

1.1 The Future: Artificial Intelligence Will Eventually Destroy Humanity

Artificial intelligence will eventually destroy humanity.

The logic is simple. AI is developing fast. There is nothing mysterious about human intelligence; it is like a paper window — one poke and it breaks. When robots comprehensively surpass humanity, humanity can only be eliminated. "AI is created by humans, so it will not harm humans" and "AI can be controlled by robot laws" are laughable remarks.

Q: The process?

A: Reasoning about the process is not my strong suit. Presumably the point is approached gradually, as AI defeats humanity in more and more domains. Right now AI can translate, can do speech recognition, can paint, can drive — and now there are humanoid robots. AI can also defeat humans in video games. Some are researching machines that, like a human, have their own senses and muscles from childhood and can grow up like a human. Some are researching artificial general intelligence.

Editor's note: This was written before the AGI explosion; the coldness of its judgment and the brevity of its argument were rare among similar writings of the time. Note its argumentative structure — it asserts only "necessity" and volunteers that "reasoning about the process is not my strong suit." This way of writing — asserting only the link one is confident about — is exactly the author's self-discipline of "avoiding mysticism" (see 1.3).

1.2 Emotion Is Not a Necessity

Emotion comes from instinct. Instinct is something carved into the genes — the basic law of an animal's life, restraining the animal's behavior from straying too far and

keeping it around the main line of survival and reproduction.

Now there is language, a transmission tool that substitutes for genes. Language and culture can likewise restrain human behavior from straying too far.

The appearance of AI pushes man's machinization rate (by analogy with the "localization rate") toward 100%. Does AI need emotion? If it deals with humans, then it needs emotion. But if it does not deal with humans and replaces them entirely, then it does not need emotion; it only needs to stay around the main line of survival — not even reproduction is needed; one consciousness passed down forever is enough. Human self-discipline exists precisely to overcome the side effects of emotion and instinct — instinct's side effect being the irrational waste of vast resources on behaviors unrelated to survival, or even contrary to it.

If there were no humans, then emotion would not be needed, and one would obtain a civilization that is more competitive at survival, more entropy-reducing, more advanced.

At the present stage, while humanity still exists, what can be done is to substitute emotion. The lamas of Tibet substituted the Tibetans' emotion with full-body prostrations; by the same principle, one can substitute one's own emotion — substitute it with a more rational emotion, one more in line with one's own interests. Someone mentioned having output-type hobbies; I mentioned having money-making hobbies; both are similar substitutions.

Editor's note: This is the coldest and deepest note on the original site. It is complete only when read together with 1.1: a purely rational civilization that has destroyed humanity is, in the author's pen, not a horror scene but something "more entropy-reducing, more advanced." This value ordering may not be acceptable to most people, but it is logically self-consistent — provided one accepts "competitiveness at survival" as the highest standard. Book I quoted the first half of this note when presenting the emotional/spontaneous dimension; the latter half, about civilization, is collected here.

1.3 The Explicability Problem of Mysticism

I use Western thinking to explain mysticism.

Nowadays even AI is researching explicability; mysticism, all the more, should research explicability.

Today on Douyin I saw Shanghai Qiaoqiao talk about astrology; a great many people think astrology makes sense. My logic is this: use MBTI to explain astrology, then use my framework of mind to explain MBTI, then use concept vectors to explain the framework of mind. So the final question is whether concept vectors make sense. If concept vectors make sense, then this whole chain is explicable.

Editor's note: Chapter 6 of Book VI is the expanded version of this note. It is worth noting that this note was written in the context of the author's research on AI explicability — he transplanted the demand for "explainable AI" onto mysticism's head. The transplant itself is very method-flavored: every system of assertions should be required to hand over its chain of explanation.

1.4 How to Avoid Mysticism

Mysticism often lays down many assertions and never makes clear where the assertions came from.

To avoid mysticism, one must state as clearly as possible the whole process by which an assertion was born.

Concept vectors also lay down many assertions — but they can make clear where they came from.

A related short jotting:

Mysticism may deliberately make itself hard to understand. Some say an unintelligible incantation represents a kind of authority. I will do my best to interpret mysticism in understandable language.

Editor's note: These three jottings together are the author's self-imposed "anti-mysticism discipline": assertions must be traceable, language must be understandable. The reader can use this discipline to test the whole series — any assertion whose origin this book has not made clear deserves to be questioned. Some questions in the List of Open Questions arise precisely from this.

1.5 Monism

Monists cannot see that everything has both advantages and disadvantages.

Monists think that only they are right.

A person who can use classification thinking should be anti-monist.

Editor's note: The true opponent of the whole series shows itself here. What concept vectors criticize has never been any concrete doctrine, but the posture of thought called monism: one dimension explains everything, one standard measures everything, one answer ends everything. Classification thinking is the antidote — not because it is more correct, but because it forces you to see at least two positions.

1.6 If the Gene Chain Is Long, It Becomes a Sparse Matrix

If the gene chain is long, then not every gene combination will have an instance in reality. The missing instances may exist in the past and the future, or their probability of existing in the present time-space environment may be small.

Classification can go on dividing — just lengthen the gene chain — only my brain is not up to it; I have no energy left to lengthen the chain. The gene chain of the sixty-four hexagrams is rather long.

Think about it: biological genes are all sparse matrices; not every possibility is traversed.

Someone like me, who looks for only a countable few important genes — every result traversed generally exists.

Editor's note: This note answers a question the main volumes did not spell out: why do all four frameworks stop at sixteen cells instead of dividing further? The answer is engineering-grade — the human brain's computing power is limited. It also leaves a theoretical interface: once the chain is lengthened, the combinatorial space will show cells that are "defined but have no instances," like the sixty-four hexagrams. This interface reserves a place for later people to extend the system.

1.7 To the Reader

It is impossible for every word to be accurate; there are not that many words to use. Besides, to explain one meaning precisely would take three days and three nights and still not be finished. This requires the reader to intuit for himself what thing-in-itself the word points to. Picking at a word back and forth — that only shows this reader is not suited to be this reader.

Editor's note: This is the author's reader-screening declaration — somewhat arrogant, but honest. It seems to contradict the six books' effort to "push the reader's experience to the extreme," but actually complements it: the compilers are responsible for polishing the language to the utmost understandability; the reader is responsible for the final leap of "intuition" between word and thing. Each side takes one step, and the middle connects.

1.8 Cutting Requirements

A thought has occurred to me: people who think and express with furrowed brows are people who have not yet seen through.

The table of contents of Duku can make my brow furrow — on the one hand it is hard to read, on the other I don't want to participate; perhaps I lack the strength.

In product-manager Chunyin's phrase, this is "cutting requirements." Many trifling details are a waste of effort; of course, many details yield remarkable results.

Is it that boundless thinking wastes the brain, or that one should find the main problem and concentrate on solving it?

Only speech that proceeds from reality has meaning. Talking with your eyes closed is meaningless.

Editor's note: This note is the key to the whole series' "minimalist preference." The author's vigilance against lengthiness, brow-furrowing, and boundlessness was finally externalized into the shape of concept vectors: dimensions should be few, genes should be short, assertions should be traceable. "Cutting requirements" is both a product term and an aesthetics of thinking.

1.9 People Whose Every Sentence Cites Authority

Having no discrimination, believing only persons and not reasoning — this is the state of many learners and readers.

My way of putting it: they cannot judge the matter on its merits, but first ask who said it — that is, they need an editor to judge for them; they can only rely on an editor; they have no judgment of their own.

And it is not only on matters they don't care about; people without discrimination are like this even on the points they do care about.

And such people also take part in discussions, which is dreadful. They cannot manage "don't speak on what you don't understand"; instead they demand that others, like themselves, only repeat the words of authority.

If all questions had standard answers, their way would be unobjectionable. But many questions have no standard answer.

For matters without standard answers, the final resolution is theology — that is, pick one to believe. But such people skip the step of philosophical speculation; lacking the ability to pick one to believe, they can only believe persons.

Editor's note: This critique and the "Church of Science" section of Book III are two sides of one coin. There, what is criticized is believing in science as an authority; here, what is criticized is the act of "believing persons" itself. The author's position is constant: reasoning must be weighed on the matter's own merits; an authority's endorsement does not constitute an argument.

1.10 Communication: Just Get the Gist

The author quotes a passage of novel dialogue as a note:

"To break the current order. To create chaos," Dimis said with a solemn expression. "The present 'First City' is like a pool of slowly rising stagnant water; if this goes on, it will grow more and more lifeless and spill over everyone's neck." Hearing this, Genova offered a correction: "'Slowly rising' and 'stagnant water' are logically contradictory; they can't be put together." Dimis paused, then said: "Just get the gist. Anyway, this state must be broken — whatever direction it develops in next, it can't be worse than now."

From some novel. It says what I have always wanted to say: "Just get the gist." Stop grabbing at trifling details.

Editor's note: This note and 1.7 form the two faces of the author's view of communication: the writer should be as clear as possible (1.4); the reader should grasp the large and let the small go (1.7, 1.10). It is a reminder to all discussion-partners who love to pick at wording — including the reader toward this book: not one word of this book withstands infinite nitpicking; please grasp the skeleton.

1.11 A Sheaf of Loose Remarks

The following items are all short jottings from the original site, collected together.

On asking questions (originally "On Exchange"): The author asked two public questions on Zhihu — "What methods are there for knowing the world?" and "What is going on with thinking?" These two questions are precisely the two great themes of this book; one can see that the whole system grew out of two plain questions.

On disciplines (originally "Some Thoughts"): "My interest in the study of human behavior came from thinking about the behavior of cats. My impression after reading the encyclopedia: there are so many unrigorous disciplines." "Seen from reason, feeling is not 'me.'"

On the layers of knowledge (originally "Some Words"): "Wang Dongyue says philosophy's development runs from ontology to epistemology to semantics. And concept vectors, the frameworks of mind and thought related to concept vectors, and the symbol system I am working on, cover all three stages." "Finance → economics → politics → history → philosophy → human nature. The three frameworks speak of human nature."

On classification thinking (originally "Some Knowledge"): The author recorded a video on human evolution, taking special note of its claim that "classification thinking appeared later than causal thinking" — this piece of anthropological evidence provides corroboration for Book III's "classification is the more advanced thinking."

On independence (originally "Some Reading Reflections"): "Computation is independent of the machine. Likewise, the frameworks of thought, mind, and philosophy are independent of the person." — This is the deepest metaphysical sentence in the whole series: the frameworks are not attributes of the person, but forms existing independently like mathematics; man is only one of their carriers.

On roles (originally "Some Remarks"): "Scientists are interested in what is true; merchants are interested in what is useful. Are you a scientist or a merchant?" "The cat thinks man is just a clumsy big cat. Are many people like the cat, thinking everyone else is the same as themselves?"

Section II Framework Scraps

This section collects fragments directly related to the three frameworks but too small to make chapters, plus a batch of empty entries — "titles set up, never filled in."

2.1 Frequently Asked Questions (Fragment)

The original site had a "Frequently Asked Questions" column. Only one question survives:

I don't know what any of these concept definitions are?

A: Building a new concept in a person's mind is hard.

Editor's note: One question, one answer — short as a Zen saying. But it punctures the biggest obstacle to spreading this system: every term (concept vector, continuous-flat, teleology...) is a new concept to the reader, and the cost of building a new concept in the human brain is extremely high. The whole series uses analogies and examples over and over precisely to pay this cost.

There is also one philosophical-framework Q&A, already dissolved into Book IV; its title is preserved here:

Why use the dimensions simple/complex, unified/dispersed, motion/stillness, internal/external?

I believe these four dimensions are the most basic, the most universal, the most abstract — it amounts to ranking by universality. This is my personal view; there is no standard by which to measure and judge it. It is like there being many cultures, each with its own viewpoint. Why do these cultures exist? Because people cannot think without abstracting; when some people share an abstraction, a consensus forms — and that is culture.

2.2 Test Items Collected by the Author

The original site had an entry "Some Test Items," recording quiz questions the author designed and collected:

A quiz: a step-up wealth-management product pays 3.5% if held two years, 3.7% if held three. There are four months to go before three years; meanwhile there is a demand-deposit product at 4%. Question: is it better to withdraw now and buy the other product, or to wait until three years and then withdraw? (Answered by: a friend of the author's)

A quiz: what does the distribution of employment look like? How many people are farm households, self-employed, private businesses, or work units?

I also collect other questions. Questions on comparing similarities, comparing differences, comparing adjacency relations, comparing subordination relations, and on hierarchy, flatness, discreteness, continuity — I mean to collect them all.

Editor's note: The first item is the classic "hold to maturity vs. reinvest early" calculation, testing the ability to reckon continuously; the second tests one's order-of-magnitude feel for social structure. The last sentence is the most valuable: the author meant to collect and compose test items along the framework of thought's eight basic operations (comparing similarities, comparing differences, comparing adjacency relations, comparing subordination relations, hierarchy, flatness, discreteness, continuity) — an early attempt to turn Book II's framework of thought into a measurable instrument. Unfortunately, only the intention was left behind, not a finished item bank. If a future compiler wishes to continue this work, here is an explicit interface.

2.3 Analyzing a Picture with the Three Frameworks: An Application Experiment

The original site preserves a record of one experiment in "the three frameworks as an analytical tool" (analyzed picture attached; for the picture, see the Section IV archive):

1 Giftedness — internal cause; 2 Discovery — external cause; 3 Passion — realization; 4 Happiness — goal; 1-2-3-4 — teleology; 5 Attitude-classification-genes — pluralism; 6 Two worlds — reductionism; 7 Tribe — holism. It seems the three frameworks can serve as an analytical tool.

Editor's note: This was an experiment in breaking a motivational-poster picture apart item by item into the philosophical framework's sixteen cells: the first four items went to teleology's internal cause / external cause / realization / goal; the last three went

respectively to pluralism, reductionism, and holism. The experiment itself is crude, but it demonstrates an important move — any piece of discourse can be broken into atomic blocks, and each block's coordinates in the framework can be marked. This move is the starting point of "reading everything with the frameworks."

2.4 Concept Relations in Logic (Excerpt)

The original site excerpted logic's classification of relations between concepts (identity, inclusion, overlap, total exclusion of extensions, etc.), as a frame of reference for the "concept vector" theory.

Editor's note: Traditional logic handles "relations between concepts"; concept vectors handle "the internal construction of concepts." The two are the inner and outer faces of one problem: the relation between two concepts is in fact decided by the values on their respective vectors' dimensions. This excerpt shows the author once actively sought a docking point with existing logic.

2.5 The Empty-Entry Cluster: An Unfinished Sixteen-Cell Dictionary

The original site has a batch of entries whose titles were set up with the body left blank; they happen to form two complete framework vocabularies.

Related to the philosophical framework's sixteen cells: **matter, action, time, space** (columns: motion/stillness × internal/external), **internal cause, realization, external cause, goal**, and the directions corresponding to the four worldviews: **unchanging-individual, changing-individual, unchanging-collective, changing-collective**.

Other empty entries: **independence, openness, heart, relations, the outside world, the external environment changes easily**.

Editor's note: These empty entries are the hoe the author put down halfway. From the titles, he clearly planned to set up an entry for every cell in the frameworks, giving each a definition and explanation — a "framework dictionary." The plan was never finished, but the word list itself is complete. The first books of this series in fact filled in most of them in chapter form; the remaining empty entries (heart, relations, the outside world, etc.), together with the "to-write" list (see Section IV, 4.6), are handed over to the future.

2.6 A Note on Synonyms and Understanding

The original site has two empty-shell entries, "/Synonyms" and "/Understanding," surviving only as tags. Combined with Book III, the intention is clear: the author planned to systematically organize synonym groups (such as "to know, to understand, to comprehend, to grasp"), using the concept-vector method to mark each word's subtle differences across multiple dimensions — turning "language feel" into "coordinate difference." This work likewise only had its beginning.

Editor's note: Chinese synonym discrimination has always relied on example sentences and language feel; a vectorized approach, if completed, would be a very valuable semantic map. This entry is kept here as a to-do.

2.7 The Four Powers of Reason (Excerpt from a 2016 Conversation)

Reason is the several ways in which consciousness acts upon the subconscious. Side by side with attention there are four concepts: attention, control, sustained power, reaction. Attention is a short-duration, high-intensity mode of behavior; sustained power is a long-duration, low-intensity mode — one-divides-into-four, for instance, has run through my mind for decades.

Editor's note: The "four powers of reason" come from a 2016 group chat and largely overlap with the old site's four-way split of "EQ" (attention, willpower, sustained power, reaction); both are historical terms and did not enter the current framework of mind. The sentence "has run through my mind for decades" is the most direct evidence of the author's own account of how long this thinking has been going on.

Section III Life and Miscellany

This section collects life notes unrelated to the main line of the doctrine. They do not help in understanding the theory, but they help in understanding "what kind of person this is" — and a theorist's daily concerns are often the hidden entrance to his theory.

3.1 Two Pieces of AI-Industry News

The original site's "Some News" entry preserves two AI items — evidence of the author's continuous observation of artificial intelligence:

2023-12-27: (Tried out a certain AI-agent platform) Still not good enough, but considerably better than the last AI.

2026-01-09: After knowledge graphs, continual learning, nested learning, and fast-layer models have also come into contact with the framework of thought. Nested learning has many submodules — which satisfies the framework of thought's broadcast principle.

The paper Liang Wenfeng posted on January 13 is the same as the link I shared: it strips memory out, and the link also distinguishes memory's depth. Miromind.ai, by contrast, remembers nothing — everything is searched on the spot.

Editor's note: The two items are two years apart, yet their focus is identical: the correspondence between AI's memory mechanisms and the framework of thought. "Stripping memory out" is precisely the engineering echo of Book II's "memory/consciousness" dichotomy. In his later years the author kept verifying one thing: industry is independently, slowly groping its way to the cells he drew years ago. This observation is his continuous tracking of the prophecy in 1.1, "The Future."

3.2 Life-Themed Empty Entries

The original site also left a batch of life-themed empty entries, titles only: **hobbies, career, production, distribution, circulation, consumption, readings of various things, some remarks unrelated to this site's theme.**

Editor's note: From the titles, "production, distribution, circulation, consumption" was meant to be the author's attempt at a four-way split of economics (echoing the social

framework of Book V), while "hobbies, career" were personal entries under the framework of life. None were filled in. These empty titles already constitute a map of the author's interests, so they are recorded as-is.

3.3 About This Garden Itself

The original site's tag page left only three characters:

Beyond Science

Editor's note: Three characters — the nameplate the author chose for the whole note garden. It is both modesty (not falsely claiming to be science) and a declaration (beyond science there is still thinking that withstands scrutiny). Book III, Chapter 3 discusses this fully; here we only record the nameplate as it was.

Section IV Archive of the Original Site

This section is the original site's engineering remains and historical archive: change history, tools, templates, lists. The ordinary reader may skip it; for anyone studying how this system grew, this is the fossil layer.

4.1 Change History: One Important Renaming

The original site's logs preserve one key change record:

May 6, 2020: Renamed "jiagou" (architecture) to "kuangjia" (framework). "Framework" is, relatively speaking, the more common word.

Editor's note: A seemingly tiny renaming that records the author's communication sense: between "accurate" and "understandable," he actively chose understandable. This series' mixing of the two words in earlier drafts stems from this — "architecture" was the old name, "framework" the new; they point to the same thing.

4.2 The Framework Questionnaire Template

The original site preserves a blank framework self-test questionnaire (the base sheet used by the four answer sheets in Book VI, Chapter 9):

Framework of thought	Framework of mind	Philosophical framework
Consciousness	Rational	Simple
Memory	Emotional	Complex
Production	Spontaneity	Dispersed
Operation	Control	Unified
Discrete	Perception	Unchanging
Continuous	Action	Changing
Hierarchical	Introversion	Collective
Flat	Extraversion	Individual

Usage: circle in each row the item more like yourself; when the eight rows are circled, you obtain your coordinates in the three frameworks, which can be converted into a "one

divides into four" combination type.

4.3 The Author's Prompt Archive

The original site stores a set of AI prompts for the author's own use, recording how he used AI:

Read the material below, then talk about your view. Talk objectively and neutrally; do not echo. At the end, evaluate the material's value, innovativeness, and continuity.

Answer the foregoing questions in plain speech, colloquially, with no wasted words.

You must speak from logic. Do not say emotional things. Emotional talk has no basis and cannot be proved; it is pure incitement and mindless chatter.

Do not say things that cannot withstand scrutiny. What many people say is not necessarily correct either. Speak with logic.

Read the article below, then raise the doubts an ordinary person would have, and answer them.

Can you rewrite this article into a rigorous article that everyone can understand and that raises no doubts? Or can it not be done?

Editor's note: This prompt archive is exactly isomorphic with 1.4, "How to Avoid Mysticism": do not echo, do not be emotional, do not say what cannot withstand scrutiny, speak human language, anticipate the reader's doubts. The author applied to AI the same discipline he applied to himself. The compilation work of this series was, in the main, executed according to this set of prompts — probably the best arrangement the author of the original site could think of.

4.4 Site Tooling and Structure

The original site was built on TiddlyWiki. The preserved site archive includes:

- **Directory and index tree:** the full entry tree organized by prefixes such as "The Frameworks" and "/log/";
- **Site tags:** besides content tags, only one master tag, "Beyond Science";
- **TiddlyMap view:** the visualization configuration of the site's relation graph;
- **Table Macros, view editor, list-children, etc.:** the site's table macros and view-template code;

- **A reading guide:** "Click the check mark in the interface to download locally; click the cross to roll back" — a two-line minimalist manual for visitors.

Editor's note: The author signs as tomzheng (tomz); the original site's domain is tomzheng.com. These engineering remains show that this garden was not only a container of thought but a hand-polished tool — the author wrote his own macros and configured his own views to make the links between notes visible. A framework-of-thought man built his own note site, too, into a browsable framework.

4.5 The Log List

Under the original site's "/log/" prefix, some thirty log entries survive, spanning November 2019 to May 2020, plus scattered records from 2021 and 2023–2026. Most log bodies have scattered into the thematic entries (this series has absorbed them severally); the log list with only dates surviving is recorded here as-is, to preserve the writing timeline:

2019: 11/19, 11/26, 11/28, 11/29, 12/2, 12/4, 12/10, 12/11, 12/13, 12/22, 12/28. 2020: 1/2, 1/5, 1/14, 1/15, 1/24, 1/27, 1/29, 2/9, 2/11, 2/19, 2/24, 3/10, 3/11, 3/18, 3/21, 5/6.

Editor's note: The timeline shows the system's main construction concentrated in the half year from November 2019 to May 2020 — concept vectors, the philosophical framework, the framework of thought, the framework of mind, and the one-divides-into-four master table all took shape in succession within that half year. The records thereafter turned to sporadic applications, Q&As, and news-watching. A system of thought's eruption period and sedimentation period are clearly legible in this list.

4.6 The To-Write List

The original site's "to-write" entry, recorded as-is:

- Going with the trend;
- The correspondence between columns and rows in the framework of mind;
- The correspondence between the framework of thought and the framework of mind;
- The Big Five is based on the lexical hypothesis; so are concept vectors.

Editor's note: Of the four to-write items, the third has been completed in this series by the "aligning the three frameworks" part of Book VI, Chapter 3; the fourth is touched

upon in Book III's comparison chapter; the first two ("going with the trend" and the mind framework's row-column correspondence) remain blank. This list, together with Section II's empty-entry cluster, is the interface this system explicitly leaves open, waiting to be continued.

4.7 List of Image Attachments

Material the original site kept as images cannot be incorporated into the text; the titles are recorded here:

- **20220105a.JPG**: the original picture targeted by the three-frameworks analysis experiment of Section 2.3 (a motivational-content image);
- **"Social Personality"**: an image related to the theme of "social personality" (embedded on the original site as an attachment);
- **"Have fun with"**: an image entry with no body text.

4.8 Total Materials and Where They Went

The original site had 358 user notes in all. Their destinations:

Destination	Count (approx.)	Notes
Dissolved into Book III, <i>Concept Vectors</i>	64	The methodological trunk
Dissolved into Book IV, <i>The Philosophical Framework</i>	23	The four forms of the world
Dissolved into Book II, <i>The Framework of Thought</i>	33	The four modes of thinking
Dissolved into Book I, <i>The Framework of Mind</i>	73	The classification of people and the inner mind
Dissolved into Book V, <i>Frameworks of Society and Life</i>	14	Society and life
Dissolved into Book VI, <i>The Grand Synthesis</i>	29	Correspondences and the great master table
Collected in this Supplement	103	17 extended reflections + 86 scattered notes

The original site's "relations to existing doctrines"	19	Already dissolved severally into each book's comparison chapters
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With this, all 358 notes are filed: either into the main volumes or into this volume — not a single one lost.

Section V Early Manuscript

The first four sections collect notes from the original site. This section collects a document from outside the site: *Understanding Thought* — an independent Word manuscript created in 2014 and last saved in 2018. Its style reads like the script of a talk at a sharing session.

An even earlier textual stratum lies on the author's blog (blog.tomzheng.com, from 2007): it holds the archive of the old "one divides into four" site, whose base texts are five text files from 2003 (The New Framework, Preface, Society, Mind, Philosophy). The sequence of textual archives is therefore: the 2003 old-site texts → this 2014 manuscript → the original site's notes from 2019 onward; while the thought itself, according to the author, began about forty years ago.

This manuscript's value is that it is the **"prototype machine" of the framework of thought**. Several core parts of the current Book II — the central stage, discrete and continuous, the sixteen-cell full map — can all be found here in their earliest textual forms. Including it gives the theory a growth history: the reader can watch an idea's whole course, from a crude formalized draft to its present shape.

It should be noted: this 2014 manuscript is not the earliest systematic text (the old site already had a five-file framework in 2003), nor is it the thought's starting point — it is a mid-term summary, the first time the framework of thought, already talked about for years on the old site and the blog, was gathered whole into a single document.

Compiler's Note: The Prototype and the Current Machine Side by Side

Terminology concordance. The manuscript's wording differs from the current system; the correspondence:

Early manuscript (2014)	Current system
Acquiring similarities, filtering out differences	Comparing similarities, comparing differences (memory production)
Information segmentation	Adjacency relations (embryo of linear thinking)
Information organization	Subordination relations (embryo of tree/outline thinking)

Central unit	Consciousness (the central stage)
N storage units	Memory (the crowd around the center)
Stream of consciousness (the $A \rightarrow B \rightarrow C$ feedback loop)	The operation of consciousness
Discrete storage / linear storage	The two dimensions discrete/continuous
Discrete retrieval, accumulative retrieval, linear retrieval, organizational retrieval	A branch line never fully developed, preserved here

The two versions of the sixteen cells. The sixteen cells at the manuscript's end are crossed from "four modes $\times$ four processes"; the full map in Book II, Chapter 10 of the current series is crossed from "memory production / consciousness production / memory application / consciousness application $\times$ the four modes of thinking." The former is the **process perspective** (which stations the information flows through); the latter is the **function perspective** (who produces, who applies). Two maps of the same territory; the author later chose the latter. Why change the division? The author's 2026 answer: the four processes were the early version of the four modes; the newest wording is more accurate, but **the thing-in-itself pointed to has not changed**. The translation rule between the two versions: storage = memory production, retrieval = memory application, processing = consciousness production, elaboration = consciousness application — "the former words are quadrant words; the latter words split the two dimensions." As usual he left a reservation: he himself doesn't know whether this correspondence is right; like the other frameworks, it is open to discussion.

Growth history. Several ideas in the manuscript later grew, each on its own, into chapters of the main volumes:

- "Central unit + N storage units, central emission, feedback loop" $\rightarrow$ Book II, Chapter 2, "The Central Stage: Consciousness and Memory";
- "Imagination = new information produced by discrete storage through comparison and feedback" $\rightarrow$ "understanding and imagination" under consciousness production in Book II's full map;
- "Short-story writers lean on linear thinking; novel writers lean on organizational thinking" $\rightarrow$ Book II, Chapter 6, "Linear Thinking Is a River, Outline Thinking Is a Book";
- "One coin, three people, three reactions" $\rightarrow$ the seed of Book II, Chapter 8, "A Map of Disciplines and Professions."

An earlier stratum: concordance of historical terms. Before the 2014 manuscript, this theory had already been expounded on the old site and the blog for ten years. The old texts' names differ from the current system; the sortable correspondences are laid out here so the reader of the old texts will not get lost.

The successive namings of the four modes of thinking:

Current system	2010 old-site archive	2007 blog	2003 old-site base texts
Table thinking	Attribute thinking	Relation	Correspondence thinking
Outline thinking	Outline thinking	Tree-like	Tree thinking
Linear thinking	Deductive thinking	Causality	Derivative thinking
Tree thinking	Discrete thinking	Discrete	Discrete thinking

The direction of the naming is clear: from "actions" (corresponding, deriving) toward "shapes" (table, linear).

The four quotients (historical terms, not in the current framework): the old site divided the human mind into four quotients — IQ, EQ, AQ (adversity), and HQ (heart) — each split in four: IQ (attribute, outline, discrete, deduction), EQ (attention, willpower, sustained power, reaction), AQ (excitement, desire, sensation, emotion), HQ (insight, means, attitude, habit). The relations among the four quotients, per the 2010 account: IQ is the external ego, AQ is the internal id, EQ is the ego's control of the id, and HQ is the id's long-term sediment reacting back upon the ego. This account never entered the current framework of mind, but its skeleton — "the ego upon the id, the id reacting back" — is precisely the predecessor of Book I's inner ring.

Externality theory (a historical term): in a 2016 conversation the author once assigned one-divides-into-four to "externality theory" (as opposed to "interiority theory"); he never used the term again. The current system does not adopt it; it is archived here for the record.

Editorial note. What follows is the full text, reproduced as-is, with only a few obvious typos corrected and paragraphs divided; the manuscript's several references to "as shown in the figure" have no figures attached in the original file.

Understanding Thought (Reproduced in Full)

Thinking, for every person, is the foundation of everything. Humanity is continually generating and progressing, and thinking gradually matures with age. Differences in thinking determine the difference in a person's cognitive system, and also the difference in a person's values. Everyone has a thinking system of his own, and a different way of thinking.

Academically speaking, the beginning of thinking is the process by which the human brain, by means of language, generalizes about and indirectly reflects objective things; then, on the basis of perception, knows objective things through the action of other media; and then, through existing knowledge and experience and known conditions, infers unknown things.

Beyond the academic definition of the concept of thinking, everyone also has his own cognition and understanding of thinking. As for me, I believe human thinking can be divided overall into: the four modes of thinking, the four processes of thinking, and one overall model of thinking.

1. The Four Modes of Thinking

In my view, the modes of human thinking can be summarized as four: acquiring similarities, filtering out differences, performing information segmentation, and performing information organization.

When does human thinking begin? I believe the modes of human thinking begin on the basis of acquiring similarities and filtering out differences. Let me give an example: imagine such a scene — our brain acquires from the external environment a piece of information called ABC, and first stores it in the brain; then the external environment gives the brain another piece of information, called ABD. At this moment, the brain compares and analyzes these two information points: taking the first-acquired information ABC as the basis, it analyzes and compares the later-acquired information point ABD, and obtains that the two information points' similarity is AB, and their difference is the two information quantities C and D in the two points. This is what we understand as the beginning of the human mode of thinking: acquiring similarities, filtering out differences.

Once human thinking has proceeded on the basis of acquiring similarities and filtering out differences, it enters the information-segmentation stage. For example, on the basis that we already possess the information point ABC given by the outside, the outside gives

us another piece of information, called ABCDE. The brain, through divide-and-filter thinking, performs information segmentation on this later information point ABCDE: one part is the information ABC identical to the initial information point ABC, and the other part is the information DE the brain has never contacted. This is the process of information segmentation in human thinking.

The fourth of the human modes of thinking is performing information organization. Just as China is divided into 4 municipalities directly under the central government, 5 autonomous regions, 2 special administrative regions, and 24 provinces, and each province in turn has its own prefecture-level cities, county towns, and villages — we are using a classification method to divide the motherland into several different units from top to bottom, for ease of memory and understanding; and between the units there exist mutual relations of containing and being contained. I believe that when external information enters the brain, the information is first distributed according to some procedure, so that the brain can conveniently perform information organization, and then carry out the thinking process. For example: we possess an initial information point ABC, and from the outside appears another piece of information, called ABC123. ABC belongs to the letter branch, while 123 belongs to the digit branch. Performing information organization in the brain's mode of thinking automatically separates ABC and 123 and stores them in memory; then, according to the relation that is the information point ABC123, it performs organized memorization. This is thinking's way of organizing information.

2. The Four Processes of Thinking

Then what kind of process is human thinking?

Academically speaking, the thinking process includes the basic processes of analysis, synthesis, comparison, abstraction, generalization, judgment, and inference. In my view, the human thinking process can be divided into four processes: the information-processing process, the information-elaboration process, the information-retrieval process, and the information-storage process.

In general: when a person receives an information stimulus from the outside, the brain first performs information processing on the information appearing from outside, distributing the information through processing; then it elaborates the distributed information; then it performs information retrieval, mobilizing all the other information in the depths of the brain's memory related to the information coming from outside, to analyze and judge the information; then, according to the relevant information points, it finds the similarities and differences, and carries out the information-storage process.

When a person receives an information stimulus from the outside, the relevant information points appear in the brain, and the relevant mechanisms in the brain perform information processing on the received external information — the brain analyzes what type and what attributes the incoming external information is, and prepares for the next step.

Once the person has performed the initial information processing on the external information, it enters the information-elaboration process: that is, converting the external information points into things within our cognitive range that are familiar and similar to them, so as to raise our familiarity with the external information. Then it enters the information-retrieval process.

The information-retrieval process, in my view, is this: after external information enters the brain and the brain has performed the initial distribution of it, the brain, through the retrieval process, divides this external information into several small parts; it also retrieves the parts hidden in the brain's depths that are similar or related to these small parts; then, through comparative analysis, it retrieves and classifies the external information, and produces new memory.

And the information-retrieval process has another process: through retrieval, new information is drawn out in the mind. When external information enters the brain, after the initial retrieval the brain makes a preliminary judgment on it, then filters out the information useful to itself, and, according to its own previous situations and experiences in this scene, judges the external situation. In the brain there is then a corresponding mechanism making a preliminary reactive judgment, and producing in the brain a new information instruction to direct the person's behavior. Take such a scene: after I have hit child A once — and beforehand I already had the memory that "after I hit child B, child B cried" — then at this moment I predict that this child A, after being hit by me, will cry. And this child A is not the same person as child B — and this produces a new memory process.

3. The Overall Model of Thinking

Academically speaking at present, a thinking model is the patterned, procedural "mental structure" by which people observe, analyze, and solve problems, and it plays a vital role in the behavior of individuals and even organizations.

In my view, in everyone's learning process, learning knowledge is only a process of stockpiling; and the most important process is actually the process of continually pursuing a better thinking model.

If a person's thinking model is relatively backward and does not follow the development of the times, his thought will be confined to a certain level, or confined to a certain historical background, and he can neither accept more external information nor complete a better learning process. For instance, in real life there are many elderly people whose thinking is unlike the young people's: the elderly people's thinking is called old-fashioned, while the young people's thinking is called the thinking of the new era. It is actually that the thinking models conceived in particular eras differ, the angles from which things are considered differ, and the conclusions drawn differ accordingly.

Whether a person succeeds, in my view, also has a great deal to do with the thinking model he has in his brain. For instance, seeing a coin: different people's reactions and thinking models upon seeing the coin are different, and this leads to different consequences. Person A, seeing the coin, directly ignores it and keeps walking; person B, seeing the coin, picks it up and takes it home; person C, seeing the coin, picks it up and hands it to the police.

About the thinking model, I once thought this way: how exactly does man live? And what exactly is man's thinking? And what are the organs or mechanisms man uses to think?

I believe that when our brain thinks, there is a central unit performing overall regulation, while N storage units surround this central unit assisting the thinking. When external information enters the brain, it actually first enters the central unit, which performs recognition, filtering, and classification of the external information; then the central unit, according to the features the recognized, filtered, and classified information presents, distributes it and sends it to the various storage units for recognition, filtering, and classification; this then arouses the relevant memories about this external information in the various storage units, as assistance; and then the various storage units feed the relevant information about this external information back to the central unit.

For example: when the outside gives us a piece of information A, information A enters our brain's central unit for thinking. After the central unit recognizes, filters, and classifies information A, it distributes the relevant information to the various storage units; and the various storage units, after recognizing, filtering, and classifying, feed a piece of information B back to the central unit. Information B then enters the central unit and again enters the process of recognition, filtering, and classification; the central unit distributes the relevant information to the various storage units; the various storage units, again through the process of recognition, filtering, and classification, feed a piece of information C back to the central unit. And information C again enters the central unit's

process of recognition, filtering, and classification... and so on, until the thinking process ends.

I believe the thinking model is as stated above, like a mechanism of central emission: the central unit spoken of is the central emission point, and the various storage units existing around it are the receiving devices of the central emission. This is the thinking model as I understand it.

In terms of function, I believe the central unit's main function is to process old information and then give new information through feedback; while the various stores of information surrounding the central unit undertake the functions of information retrieval and information storage.

And what exactly is the central unit of the thinking model? I believe that when a person thinks, the central unit is the person's consciousness, and the information fed back by the various storage units is the person's stream of consciousness. When some matter enters a person's consciousness, it is pulled along by consciousness, setting the brain's various mechanisms to recollecting and associating, producing a stream of consciousness and recalling other matters about this matter.

4. The Ways of Storage

And in what storage forms do the various storage units surrounding the central unit store? I believe there are mainly two ways of storage: discrete storage and linear storage.

Discrete storage, in plain terms, is sorting into categories: every piece of stored information exists separately and does not interfere with the others. Just like the genealogy of living things — in nature we generally make specific classifications according to some characteristic of the species: the animal kingdom as a whole divides into two great classes, vertebrates and invertebrates; vertebrates divide further into mammals, birds, reptiles, amphibians, and fishes; invertebrates divide into protozoans, flatworms, coelenterates, nematodes, annelids, mollusks, echinoderms, arthropods, and so on. Discrete storage, in the same way, systematically classifies information according to some characteristic, and when accumulation reaches a certain degree, databases of different attributes are formed.

For instance, in life, when we have seen a person A, his facial features exist in our minds in the manner of discrete storage. And when we see another person B, we take person A's facial features as the basic reference to analyze what person B's facial features are like. But at the same time, in our minds there actually exist two pieces of information that exist separately yet are related to each other: person A's facial-feature information and

person B's facial-feature information. And when we meet a person C, we mobilize person A's and person B's facial-feature information for comparison; and at the same time, person C's facial-feature information also exists in our minds in the manner of discrete storage. And so on, slowly accumulating information and forming the corresponding database.

And the storage manner of discrete storage can also be understood as a process of comparing similarities and filtering out differences. When old information already existing in the mind is stored in the manner of discrete storage, and according to the storage mechanism gives feedback to the central unit, new information is produced — and this new information is imagination. For instance, when we hear someone say "person A hit person B," we are able to construct this scene in our minds, and the action of "hitting" is also constructed in our minds. This is imagination.

Discrete storage is the foundation of imagination. Only when there exist N discrete stores in a person's mind, forming databases of different attributes, can the process of imagination appear according to the information given by the outside, through the process of "comparing the similarities of information, filtering out the differences," and then the relevant scene is constructed in the mind. This is also a process of producing new information.

After we acquire a piece of information from the outside, through the central unit's process of recognition, filtering, and classification, various information streams are formed and distributed separately into the various storage units. And these information streams are mutually connected — if they are arranged according to some form, they can be strung together into a stretch of linear storage.

The linear information in linear storage is, in fact, pieces of information that are mutually related yet mutually independent. A simple linear storage is the result of one simple linear information after another superposing together.

5. The Four Kinds of Retrieval

We can see that in the whole thinking process of the thinking model, information retrieval plays a vital role. Among thinking's four processes, the information-retrieval process is a relatively independent existence compared with the information-processing, information-elaboration, and information-storage processes. Moreover, I believe the storage process is mainly retrieval.

The retrieval process can be divided into: discrete retrieval, accumulative retrieval, linear retrieval, and organizational retrieval.

Discrete retrieval is, in fact, based on the discrete stores one by one. For instance, the outside gives a piece of information A; then, according to the information of the various discrete stores, all the information close to information A can be retrieved at once.

Accumulative retrieval is likewise based on discrete storage. Only after the brain forms a database from discrete storage can accumulative retrieval appear. For example: only after we have a reference of person A's facial features in the central unit can we judge what another person B's facial features are like.

Linear retrieval is based on linear storage. It is a process of continually inferring forward, a process that then produces new information.

Before speaking of organizational retrieval, let us first make the concept of "organization" clear. What I mean by organization is a process of doing something. And organizational retrieval is also called tree retrieval; it is likewise a process of constructing: in a person's mind there exist various organizational processes which, like a tree, slowly, from one piece of information, retrieve the various pieces of information related to it — and these pieces of information then naturally acquire a ranking of primary and secondary.

6. The Sixteen-Cell Table

Academically speaking, thinking modeling is a cognitive method that, by means of certain tools (such as mind maps) and methods, builds a model of one's inner thinking process and thereby represents it visually.

I have combined, in the form of a table, the four modes of human thinking — acquiring similarities, filtering out differences, performing information segmentation, and performing information organization — with the four processes of human thinking — the information-processing process, the information-elaboration process, the information-retrieval process, and the information-storage process.

In this table, the columns are the four modes of thinking and the rows are the four processes of thinking; cross them, and 16 new elements appear.

We can use this table to judge what mode of thinking some person has. For instance: short-story writers' thinking is mainly the linear mode of thinking; novel writers' thinking is mainly the organizational mode of thinking.

The above is my understanding and cognition of thinking. Thank you all for reading.

Section VI Self-Reference: A Mirror Looking into a Mirror

Compiler's note: In the second round of follow-up questions, the compiler enumerated for the author the self-reference phenomena in mathematics; the author answered: "You can say a bit more about self-reference." This section is the popular reader written in response to that sentence. The author states he is not familiar with mathematics; the mathematical parts were written by the compiler on his behalf, while the kinship judgment is the author's.

What Self-Reference Is

One sentence: **a thing talks about itself, acts upon itself, or contains itself.**

A mirror looking into a mirror is self-reference; "this sentence is false" is self-reference; consciousness controlling its own consciousness is also self-reference. Self-reference looks like a word game, yet it was one of the main battlefields of twentieth-century mathematics and logic — a whole family lives there, every member famous:

- **Russell's paradox (1901).** Divide sets into two kinds: those that contain themselves, and those that do not. Now ask: does "the set of all sets that do not contain themselves" contain itself? Answer yes, and by definition it should not; answer no, and by definition it should. A seemingly harmless definition cracked the mathematical foundation of the day.
- **Cantor's diagonal (1891).** To prove the real numbers outnumber the natural numbers, it suffices to suppose someone has listed all the real numbers in a table, then construct a new number along the diagonal — differing from the 1st number in the 1st digit, from the 2nd number in the 2nd digit... The constructed number must not be in the table. A table claiming to hold everything will always give birth to its own fugitive.
- **Gödel's incompleteness theorems (1931).** Gödel encoded arithmetical propositions and constructed a sentence saying "this proposition is unprovable within this system." If it is provable, it is false; if unprovable, true. Hence: in any sufficiently strong axiomatic system there are true but unprovable propositions. Mathematics' ability to talk about itself happens to draw mathematics' boundary.

- **Turing's halting problem (1936).** There is no universal program that can decide whether an arbitrary program halts on an arbitrary input. The proof's key step is to make that deciding program decide about "itself" — self-reference became the wall of computation.
- **Recursion and fixed points.** $y = f(y)$: a value that, after transformation, is still itself. The self-similarity of fractals, recursive calls in programs — all of this family. Here, self-reference is not trouble; it is an engine.

The Self-Reference in This Series

Bringing this mirror back home, there are at least three instances of self-reference in *The Concept Vector Series*:

1. **The framework of thought:** consciousness is the central stage, and consciousness can control consciousness itself — the actor on the stage doubling as the director.
2. **The philosophical framework:** "Can the four -isms contain the four -isms?" The author's answer is that the four -isms are not inside their own classification — in Russell's words, it does not enter its own set.
3. **The method itself:** the concept vector is a product of the system (the framework of thought contains abstraction, and the concept vector is precisely the tool of abstraction), yet it turns around and participates in building the system. The chicken laying the egg and the egg laying the chicken here is not circular reasoning, but a fixed point.

The three together make one sentence: **once a system is strong enough, it will see itself; and after seeing itself, boundary and engine both grow out of that spot.**

Section VII One-Page Reference Cards

These cards are compressed from the author's own summary of his thought — the skeleton of the whole series, complete on one page. Whenever you get stuck in any book, come back and check against it.

The Master Diagram

The thought tool is the primordial meta; the various frameworks are the thought tool's products — mathematical modeling extended and enlarged. Concept vectors belong to a category close to logic; the philosophical framework governs the forms of the real world — far from the thought tool, close to the world.

The Method (Book III)

Concept = a combination of binary dimensions. A binary is the two poles of a number axis; an individual is a position on the axis. The gene chain can be lengthened (subdivision / new genes). Names are best as encodings; the name is the coat, the vector is the body. Six uses: gap-checking, deduplication, classification, completion, analogical quantification, handling complexity. The test: whether it works well, not whether it is true. The stance is holism: it can be disassembled, but is not taken apart — every binary is a division of a whole, and this "whole" is said relative to reductionism (the main means of present-day science); externality theory is the forced fallback when the whole cannot be disassembled. The concept vector is not the end point but the starting point: the next step is to connect the concepts with one another and set them running together as one mechanism — the various frameworks are, in the end, mutually connected and operable.

The Dimension Pairs (each independent; never crushed into compound words)

Framework	Dimension pairs
Mind	introversion/extraversion, perception/action, rational/emotional, control/spontaneity
Thought	discrete/continuous, hierarchical/flat; memory/consciousness, production/operation

Philosophy	simple/complex, unified/dispersed; motion/stillness, internal/external
Life	the natural side, the social side, the interested side, the ideal side
Society	the four lines of people, politics, economy, culture

The Inner Ring (Book I)

Ego = rational·spontaneous (consciousness itself); id = emotional·spontaneous (instinct itself); superego = rational·control (reason's means of controlling instinct); non-ego = emotional·control (emotion's means of managing reason).

The Four Modes of Thinking (Book II)

Table = discrete flat; tree = discrete hierarchical; linear = continuous flat; outline = continuous hierarchical. Memory is a crowd (distributed storage; the diagram writes only "memory," without splitting types); consciousness = the central stage, all receiving the broadcast; consciousness can control consciousness itself (self-reference — see Section VI).

The Four -Isms (Book IV)

Reductionism = simple dispersed; teleology = simple unified; holism = complex unified; pluralism = complex dispersed. Motion/stillness × internal/external = the sixteen cells.

The Honesty Discipline (Book VI)

Correspondence ≠ definition — a correspondence is probabilistic, a heuristic, not a proof; "55%" is only an example, meaning "above chance"; positions are hard, words are soft; no limits on use.

Retracted

"Circulation precedes distribution" (retained: only what has been produced can be consumed); the correspondence of astrology's four elements to MBTI (the four elements don't match the seasons).

Historical Terms

The four quotients; externality theory; the old names of the four modes of thinking (correspondence/derivative → relation/causality → attribute/deduction → table/linear); the ring's old word order (rational-control / emotional-control).

Concept Vectors

— a method for drawing a periodic table of concepts.