JOHN RECTOR

Masterpiece

The guilds, the apprentice, and who makes the masters when the small work is gone



A BOOK IN FIVE PARTS

A BOOK

Master*piece*

The guilds, the apprentice, and who makes the masters when the small work is gone

John Rector

November 10, 2026 · johnrector.me

A masterpiece was never the best thing a master made. It was the thing that made a master.

CONTENTS

The First Week · Prologue

Part I · The Hidden Product

The Piece That Made the Master · Chapter 1

The Indenture · Chapter 2

Two Products, One Price · Chapter 3

Part II · How a Hand Learns

Buttons First · Chapter 4

More Than We Can Tell · Chapter 5

The Trained Denominator · Chapter 6

Adam Smith’s Objection · Chapter 7

Part III · The Unbundling

The Rung That Went First · Chapter 8

The Irony · Chapter 9

The Manager Who Never Did It · Chapter 10

Part IV · The New Indenture

Output and Tuition · Chapter 11

The Sergeant and the Lieutenant · Chapter 12

Who Pays Now · Chapter 13

A Masterpiece for Everyone · Chapter 14

Part V · What Is Coming

Seven Predictions · Chapter 15

The Ledger · Chapter 16

The First Week, Again · Epilogue

PROLOGUE

The First Week

MONDAY, 9:05 A.M.

You are twenty-four and it is your first week. You ask the partner what you should start on. She looks at her screen for a moment and says, kindly, "Honestly, it's all done. It was done by six this morning."

You go back to your desk. It is a good desk. There is nothing on it.

For as long as there have been trades, there has been a pile waiting for the newest person in the room. The contracts nobody wanted to read. The numbers that had to be tied out twice. The cuffs that needed hemming, the stock that needed chopping, the floor that needed sweeping. The pile was dull, and everybody above you had done their time on it and was glad to be finished with it.

We told ourselves a story about that pile. The story was that the work was cheap, so it went to the cheapest person. That story is true, and it hides a second story that matters more. The pile was also the school. It was the only school most trades ever had.

Now the pile is gone. A delegate cleared it before breakfast, and cleared it well. Nobody did anything wrong. The partner is not being unkind. She is telling you the truth: there is nothing small left to do.

I teach my students to hand the small matters to their AI and keep what is worthy of their own attention. I have not changed my mind about that. Rank and order matter, and a person who spends the day on work a delegate could finish by morning is spending a life badly.

But that teaching leaves a question open, and this book is about the question. How does a person learn which matters are small? How do you come to know, looking at a finished piece of work, whether it is right? The people who know these things today learned them somewhere.

Almost all of them learned on the pile.

There is an old word for the moment a trade decided you had learned enough. The word is masterpiece. It did not mean what you think it means, and what it did mean is the best place I know to start.

PART I

The Hidden Product

A word that changed its meaning, a sheet of parchment cut in two, and the thing every workshop made without charging for it.

CHAPTER 1

The Piece That Made the Master

Today a masterpiece is the best thing a great artist ever made. We say it of a painting that hangs behind glass, or a symphony, or a novel written at the height of someone's powers. It is a word for the top.

It began as a word for a door.

In the guild towns of Europe, from the late Middle Ages on, a craftsman who wanted to open his own shop had to be admitted as a master by the guild of his trade. To be admitted he had to make a piece. A joiner might make a cabinet. A locksmith might make a lock. A goldsmith might make a cup. He made it by the guild's rules, often in a room the guild provided so that nobody could help him, and when it was finished the wardens of the guild came and looked at it. If they accepted it, he was a master. If they rejected it, he was not.

The Germans called it the *Meisterstück* and the Dutch the *meesterstuk*. English borrowed the idea and translated the word: master-piece. The piece that makes a master. It was not the best work of a career. It was the first work of one. It was an examination, and it came at the beginning.

> *A masterpiece was never the best thing a master made. It was the thing that made a master.*

The door stood at the top of a ladder with three rungs.

The first rung was the apprentice. The word comes from the old French for learning, and behind that from the Latin for grasping, taking hold. An apprentice was a child or a teenager bound to a master for a term of years. He lived in the master's house and did what he was told.

The second rung was the journeyman. The name has nothing to do with travel. It comes from the French *journée*, a day. A journeyman was a man who had served his term and could now be paid by the day for his work.

He was skilled. He was not yet trusted to run a shop, train others, or put his own mark on the goods. In the German lands the journeymen did travel, as it happens. By custom a young journeyman left home for three years and a day and worked under one master after another in town after town. You can still see a few of them on the roads in their black hats, keeping the custom.

The third rung was the master, and the masterpiece was the step up to it.

Look at that ladder as a machine and ask what it produced. The obvious answer is chairs, locks and cups. But the customers who bought the chairs were paying for only half of what the shop made. Every shop on that ladder turned out two products. One was the goods. The other was the next master.

Nobody bought the second product. Nobody put a price on it. It came out of the shop slowly, over ten or fifteen years, as a side effect of making the first. And it was the more valuable of the two, because without it the first product stops in one generation.

That is the idea this whole book rests on. The bottom of the ladder was never just cheap labor. It was a factory for judgment, running quietly inside every other business, and nobody had to pay for it separately because the small work paid for it.

THE POINT

A masterpiece was an entrance exam, not a crowning achievement. The old trades were built as ladders, and the ladder's hidden product was the next generation of people who could judge the work.

ASSIGNMENT

Name the masterpiece in your own life: the piece of work after which people who knew the craft began to treat you as one of them. If you cannot name one, notice that.

CHAPTER 2

The Indenture

The contract that put a child on the first rung has a name we still use. It was called an indenture, and the name describes a pair of scissors.

The clerk wrote the agreement out twice on a single sheet of parchment, once on the top half and once on the bottom. Then he cut the sheet in two along a wavy or toothed line. The master kept one half. The child's family kept the other. If there was ever a dispute, the two halves were brought together. If the teeth fit, the document was genuine. *Dent* is tooth. An indenture is a toothed thing.

I love that object. It is a contract whose proof of truth is that two people each hold half of it. Neither half means anything alone.

The words on it were close to the same for centuries. The apprentice promised to serve faithfully for the term, usually seven years. He promised to keep his master's secrets and obey his lawful commands. He promised not to waste his master's goods, not to play at cards or dice, not to haunt taverns, and not to marry. The master promised to feed, lodge and clothe him, and to teach him what the old documents call the art and mystery of the trade.

That word mystery is worth a pause. It did not mean a secret. It comes from a Latin word for a craft or an occupation. A mystery was simply a trade. But I think the other meaning leaked in for a good reason, and we will come back to it. There really was something in a trade that could not be said out loud.

In England the seven years became national law in 1563, under Elizabeth, and stayed law for two and a half centuries. Nobody could set up in a trade without having served the term.

Now notice who paid whom. We assume the master paid the apprentice, because that is how a first job works today. For the most part it ran the

other way. The apprentice got bed and board and little else. And in many trades the family paid the master a sum at the start, called a premium, for the privilege. A good place with a London merchant or an apothecary could cost a family a great deal. In 1709 Parliament noticed this money changing hands and taxed it. Masters paid a duty on every premium, and the registers of those payments, a century of them, survive in the national archives. They are a long list of parents buying their children a place.

What exactly were they buying?

Not information. Even then, a book could tell you how a clock goes together. They were not buying a wage either, because there was none. They were buying seven years inside a room where the work was being done by someone who knew how. They were buying nearness to a master, and the right to be handed the small jobs.

The most famous American apprentice shows both sides of the bargain. In 1718 a Boston candle maker put his twelve-year-old son under indenture to an older son, a printer. The boy was bound until twenty-one. He set type, pulled the press, carried papers through the streets, and read everything that came through the shop. He also quarreled with his brother, and at seventeen he broke the indenture and ran away to Philadelphia. His name was Benjamin Franklin. The contract failed. The apprenticeship did not. He left with the trade in his hands, and it fed him for the rest of his life.

> *The family was not buying knowledge. It was buying a place in the room and the right to be handed the small jobs.*

Hold on to that picture of the family paying. It will seem strange for a few more chapters, and then it will seem like the future.

THE POINT

Apprenticeship was a contract for nearness, not for information. Families paid masters for a place in the room, and the apprentice paid again in years of small work.

ASSIGNMENT

Find out who paid for your own formation. List the people who let you stand near real work before you were any use, and what it cost them.

CHAPTER 3

Two Products, One Price

The guilds faded. The ladder did not. It moved indoors, into firms, and changed its vocabulary.

The apprentice became the junior, the associate, the analyst, the resident, the line cook, the new hire. The journeyman became the senior. The master became the partner, the principal, the attending, the chef. The masterpiece became the promotion case, the partnership vote, the board exam. The names were new and the shape was the same: a bottom rung of small work, a long climb, and a door at the top guarded by people who had already been through it.

The two products were the same too. A law firm sold legal work to clients, and as a side effect it made lawyers. A hospital treated patients, and as a side effect it made surgeons. A restaurant sold dinner, and as a side effect it made chefs. An accounting firm sold audits, and somewhere in the third year of tying out other people’s numbers, a person who could smell a bad set of books came into being.

One price covered both. The client paid for the contract review. The client did not pay separately to have a young lawyer formed by reviewing it. The formation rode along for free.

Except that nothing is free, and it is worth being exact about who was paying.

In the first year or two, a junior usually costs more than they produce. They are slow, they make mistakes, and a senior person has to check everything. Later the balance tips. A third-year can do real work at a fraction of what the firm charges for it. Over the whole stretch the deal comes out roughly even, and that is not an accident. An economist named Gary Becker worked out the logic in the 1960s. When training gives a person skills they can carry to any employer, the employer has no reason to pay for it, because the person can walk out the door with it. So the

trainee pays. They pay by accepting a wage below what their work will soon be worth.

Read that again with the last chapter in mind. The premium never went away. It stopped being a purse of coins handed across a table and became a discount hidden inside a paycheck. Every junior who ever took a low salary for a good place was doing what those parents in the registers were doing. They were buying nearness, and paying in small work.

> *The bottom rung was never a job. It was a school with a payroll.*

This is why the arrangement was so stable for so long. It did not depend on anyone's generosity. The firm got the small work done cheaply. The junior got formed. The client got a fair price. The trade got its next generation of masters. Four parties, one transaction, and everyone's interest pointed the same way. No one had to believe in training for training to happen. It happened because the pile had to be cleared, and the cheapest hands to clear it were the ones that needed the practice.

But look at what holds it all together. One thing: the small work has to need doing by a person. The whole bundle hangs from that single nail. The school has no budget of its own, no staff, no building. It exists only as a shadow of the pile.

Take away the pile and nobody will announce that the school has closed. There will be no meeting and no decision. The work will simply be done by six in the morning, and a young person will sit at a clean desk and wonder what to start on.

THE POINT

Every firm sells output and makes masters as a by-product. The junior’s low wage was the tuition, and the whole bundle depended on small work needing human hands.

ASSIGNMENT

Take the work you do for money and split it in two columns: what the customer is paying for, and what you are learning by doing it. Notice which rows appear in both.

PART II

How a Hand Learns

Tailors who begin with buttons, a chemist who noticed we know more than we can tell, and the one thing no one can install in anyone.

CHAPTER 4

Buttons First

In the 1970s an anthropologist named Jean Lave went to Monrovia, in Liberia, to watch people become tailors. The tailors there, men of the Vai and Gola peoples, worked in a row of small shops and took on apprentices in the old way. No school, no curriculum, no lessons. A boy came to the shop, and about five years later he was a tailor. Lave wanted to know what happened in between.

You might guess that an apprentice learns to make a pair of trousers in the order the trousers are made. First you cut the cloth. Then you sew the pieces. Then you finish: hems, cuffs, buttons, pressing. Begin at the beginning.

The tailors taught it backwards.

A new apprentice started with the last steps. He sewed on buttons. He hemmed cuffs. He pressed finished garments. Months later he was allowed to sew seams. Cutting the cloth, the first step in making a garment, was the last thing he learned.

Once you see why, you cannot unsee it. A badly sewn button costs a minute. You snip it off and do it again. A bad seam costs an hour. A bad cut costs the cloth, and the cloth is the most expensive thing in the shop. So the order of learning runs from the cheapest mistake to the dearest one. The apprentice is given, at every stage, the task where being wrong costs least.

There is a second reason, quieter and I think deeper. The boy sewing buttons is handling finished trousers all day long. Hundreds of pairs. He has the whole garment in his hands before he can make any part of it. He sees how the cuff sits, where the seams fall, what a good pair looks like and what a poor pair looks like. By the time he is allowed to sew a seam, he already knows what the seam is for. By the time he cuts, he has years of knowing what the cut must become.

And all the while, his work is real. The trousers with his buttons on them are sold to a customer that afternoon. He is not practicing. He is contributing.

Lave and a colleague, Etienne Wenger, later gave this pattern a clumsy name and built a small classic of a book around it. They called it legitimate peripheral participation. Take the three words one at a time and you have the anatomy of the bottom rung.

Participation: the work is real. It ships.

Peripheral: it is at the edge, where an error is cheap.

Legitimate: the learner belongs. He is in the room by right, and he can see everything.

Now try to find those three together anywhere else. A classroom gives you cheap mistakes, and none of the work is real. Nobody wears the trousers. A top job gives you real work, and the mistakes are ruinous. Only at the bottom of a working shop do you get both at once: work that matters, at a price for failure that a beginner can afford.

> *The bottom rung is the one place where the work is real and the mistakes are cheap.*

That is why it could not be replaced by a school, though many trades tried. And it explains something about the pile that we did not want to hear when we were on it. The pile was not hazing. It was not dues. The buttons were chosen. They were the exact part of the craft where a beginner could be useful and wrong at the same time.

THE POINT

Beginners learn from the finished end backwards, on tasks where errors are cheap, the work is real, and the whole can be seen. Only the bottom rung of a working shop offers all three.

ASSIGNMENT

Think of the first real task you were ever trusted with. Ask what a mistake on it would have cost, and what you could see from where you stood.

CHAPTER 5

More Than We Can Tell

Michael Polanyi was a physical chemist, a good one, who in middle age turned to a question that had bothered him in the laboratory. He had noticed that the things a scientist most needs to know are the things nobody writes down. How to tell a promising result from a fluke. When to trust an instrument. Which problem is worth five years. He could do these things. He could not say how.

He put it in one sentence in 1966, and the sentence has been quoted ever since: we can know more than we can tell.

His examples are homely. You can pick one face out of a thousand, and you cannot describe that face well enough for a stranger to do the same. You can ride a bicycle, and if I ask you which way you turn the handlebars to keep from falling, you will very likely get it wrong, even though your hands get it right every time. The knowing is real. It lives somewhere the telling does not reach. He called it the tacit dimension.

Then he drew the conclusion that concerns us. In an earlier book he wrote that an art which cannot be specified in detail cannot be handed on by instructions, because no such instructions exist. It can pass in only one way: by example, from master to apprentice. And so it stays inside small circles of people, and it can die. An art that goes unpracticed for one generation, he said, is lost. His example was the violin. Makers armed with microscopes and chemistry were still struggling to match instruments that Antonio Stradivari turned out as a matter of routine in a workshop in Cremona two centuries before.

This is the other meaning of mystery, the one that leaked into the indenture. The master promised to teach the art and mystery of the trade, and there truly was a part of it that could not be said. Not because he was hiding it. Because it was not the kind of thing words hold.

Now bring this into the present, because something has happened that Polanyi could not have foreseen.

We have built machines that can tell more than any master ever could. Ask your AI how to judge a contract, season a sauce, read a balance sheet or set a broken wrist, and it will tell you, patiently, at any length, at any hour, in whatever order you like. It has read everything that was ever written down about every craft. If the bottleneck in making masters had been a shortage of explanation, the bottleneck would now be gone, and we would be turning out masters by the million.

We are not, and Polanyi tells us why. Telling was never the bottleneck. The part that can be told is the part that was already in the books, and the books did not make masters either. What made masters was the other part, the part that passes only by doing the work near someone who can do it.

There is a second point here, and it would be easy to confuse it with the first. It may well be that the AI itself has the knack. It may not only tell you about contracts. It may be able to review one better than a third-year associate. I think in many crafts this is already true. But notice where that knack is. It is in the delegate. It is not in you. Its skill does not become your skill by being nearby, any more than you can ride a bicycle because you own a friend who rides.

> *An explanation is not a transfer. You cannot read your way to riding a bicycle.*

So we arrive at an odd place. Never has there been more telling, and never has it mattered less. The machine has made explanation free, and in doing so it has shown us exactly how much of mastery explanation was. Some. Not most.

THE POINT

The core of a craft is tacit: it cannot be written down, so it passes only by doing the work near someone who can. Free explanation does not change that.

ASSIGNMENT

Pick something you do well. Write out instructions a stranger could follow to do it as well as you. Mark the place where the instructions give out.

CHAPTER 6

The Trained Denominator

I want to say what a master has that an apprentice lacks, and I want to say it more exactly than “experience.” For that I have to use the lens I use for everything, which I call the Reality Equation. This chapter is my argument, not the historical record. The record is in the chapters on either side.

The equation is short. Reality equals Actual divided by Expectation.

Actual is what the world hands you. It is the contract on the desk, the joint in the wood, the patient in the bed. It comes from the past, and it is beyond alteration.

Expectation is what you bring. It is not a thought. It is the unconscious comparison that is already in place when the Actual arrives. You do not set it. You inherit it from everything that has happened to you.

Reality is the ratio between the two, and it belongs to whoever is having it. So before asking what the Reality of a thing is, you have to ask: whose?

Put a master and a first-week apprentice in front of the same contract. The Actual is identical. The same paper, the same words. But they bring different Expectations, so they are not having the same Reality. The master reads down the page and at clause nine something moves. A small jolt. The ratio shifted. The apprentice reads clause nine and nothing moves at all.

That jolt is what we call judgment. It is not a rule the master is applying. If you ask her why clause nine bothers her, she may need a minute to work out a reason, and the reason will come after the jolt, not before it. The surprise is the knowing. It arrives before the words do, which is exactly what Polanyi saw from the other side.

Now the hard part, and it is the center of this book. Nobody can touch the denominator. Not directly, not ever. The master cannot reach into the apprentice and set her Expectation where it ought to be. The apprentice cannot decide to have the master's. No teacher, no book, no AI can install it. I hold this as a rule without exceptions: no entity can act on either term of the equation. An entity can only act on Reality.

There is exactly one road to the denominator, and it is long. You act. Your actions leave artifacts: a hemmed cuff, a reviewed contract, a set of books that tied out or did not. The artifacts become history. History is Actual. And only Actuals retrain what you will expect next time. The road to the denominator runs through the numerator, it runs one way, and it is slow.

> *No one can install an Expectation. It is trained by Actuals, and only by Actuals, one finished piece at a time.*

An apprenticeship, seen this way, is an arrangement for delivering Actuals. Ten thousand buttons. Four hundred contracts. Each one finished, each one checked by someone whose own jolt is reliable, each one coming back as a fact: this was right, this was wrong. The apprentice is not being told what to expect. She is making history, and the history is doing the teaching. I have written elsewhere that consciousness does not manufacture the future, it manufactures history. An apprentice is the plainest case I know.

Seven years, then, was not only a guild's wall. It was also somebody's rough measurement of how long that road is in one trade.

There is one more piece, and I will mark it clearly as the part I am least sure of. In my framework Expectation has two components. One is Prediction, what habit and history expect. The other I call the Ideal: the pull of a coherent idea. I believe people do not have ideas. Ideas have people. And when I look at real masters, I do not only see well-trained

prediction. I see someone the idea of the craft has taken hold of. The joiner cannot leave a drawer that sticks. The editor cannot let the sentence stand. I do not know how that arrives. My own rule says nobody can reach for it. What I observe is only this: it shows up in people who stayed in the room for a long time, and I have never seen it show up in anyone who did not.

I think that is what the wardens were looking for when they bent over the masterpiece. Not whether the cabinet was square. Whether the craft had him.

THE POINT

Judgment is a trained Expectation: the jolt a master feels where a beginner feels nothing. It cannot be installed. It is built only by a long history of finished, checked work.

ASSIGNMENT

Recall the last time something looked fine to everyone else and felt wrong to you, and you were right. Trace where that feeling was trained. Count the years.

CHAPTER 7

Adam Smith’s Objection

Before I go further I owe a hearing to the man who thought all of this was nonsense. He was no fool. He was Adam Smith.

In 1776, in *The Wealth of Nations*, Smith went after apprenticeship with real heat. Long apprenticeships, he wrote, are altogether unnecessary. Even the making of clocks and watches, the finest mechanical trade of his day, held no mystery that needed years of instruction. Inventing the watch took genius. Explaining to a young man how to build one, once it had been invented, could not take more than a few weeks of lessons. Perhaps a few days.

He had a theory about what the seven years were really for. They were a wall. The guilds limited how many apprentices a master could take and how long each had to serve, and the purpose of both rules was to keep the number of competitors small and the price of the goods high. In Sheffield a master cutler could have one apprentice at a time. In Norwich a master weaver could have two. That is not teaching. That is a cartel.

He also thought the system ruined the young. An apprentice works for years with no pay, so he has no reason to work hard, and he learns to hate labor before he has ever tasted its reward. A journeyman paid by the piece is industrious. An apprentice is idle, Smith said, and almost always is so.

On the wall, he was right. I do not want this book to be read as a love letter to the guilds. They shut out strangers and the poor. They used the masterpiece as a toll gate, and sometimes set the fee and the feast so high that only a master’s son could afford to pass. A great deal of what an apprentice did in seven years had nothing to do with learning. It was free labor, and the master knew it.

But read Smith closely and you find he did not believe what his loudest sentence says. Two lines after the few days of lessons, he adds that

dexterity of hand, even in common trades, cannot be acquired without much practice and experience. He knew. What he proposed was not to skip the practice. It was to change the terms. Let the young man work as a journeyman from the first day, he said. Pay him for the little he can do, and let him pay for the materials he spoils. He will learn faster because he has a reason to.

Look at what Smith is doing there. He is not removing the bottom rung. He is repricing it. Guild and economist agreed completely on the one thing that matters to us: a beginner has to do a great deal of small, real work, and spoil a certain amount of cloth, before he is any good. They argued only about how long it should take, and who should carry the cost.

> *Smith and the guilds fought over the price of the bottom rung. Neither imagined it could disappear.*

That argument ran for two centuries and it was a good one. Smith's side mostly won, and the world was better for it. Apprenticeships got shorter. Doors opened. The premium turned into a low starting wage.

Our situation is not on either side of that argument. It is outside it. Nobody in 1776 could picture a workshop where the small work simply did not need a person. The cloth is cut, the buttons are on, the cuffs are hemmed, before the apprentice arrives. There is nothing for him to spoil.

So I take two lessons from Smith and carry them through the rest of the book. First, do not worship time served. Seven years of sweeping is not the point, and most of it was a toll. If mastery can be reached in two years with the right work, two years is better. Second, keep your eye on what both sides took for granted. The practice has to come from somewhere.

THE POINT

Smith was right that long apprenticeship was partly a cartel, and he still held that skill needs much practice. The old quarrel was over the price of the bottom rung, never its existence.

ASSIGNMENT

Look back at your own early years of work. Estimate how much was formation and how much was toll. Be honest in both directions.

PART III

The Unbundling

Why the delegate takes the bottom rung first, why the damage stays hidden for twenty years, and what it means to manage work you have never done.

CHAPTER 8

The Rung That Went First

When people imagined machines taking over work, they imagined it starting at the top or in the middle. The brilliant diagnosis. The winning strategy. Instead it started at the bottom, and I do not think that was luck.

Think about what made a task fit for a beginner. It had to be bounded: a clear start and a clear end. It had to be checkable: a senior person could look at it and tell quickly whether it was right. It had to be low in stakes: if it was wrong, the damage could be caught and repaired. And there had to be a lot of it, because a beginner needs repetitions.

Bounded. Checkable. Low stakes. High volume. That is a description of the buttons. It is also, word for word, a description of the work you would hand to a delegate first. The properties that made the bottom rung a school are the same properties that make it easy to delegate. The pile was designed, over centuries, to be safe to give to someone you did not yet trust. Then we built something new that we did not yet trust, and the pile was waiting for it.

So the delegate reads the contracts. It ties out the numbers. It writes the first version of the brief, the test, the summary, the schedule. It does these things overnight, and what it hands back is finished. The word on the screen is Done.

I want to be fair to everyone involved, because there is no villain in this chapter. The partner who hands the pile to a delegate is doing right by her clients. The work is faster and better and costs less. If she kept a room of juniors reviewing documents by hand so that they could be formed, she would have to charge for it, and her clients would go to the firm down the street. The junior who lets the delegate do it is doing what I teach. Nobody made a bad decision.

And yet add up all those good decisions and you get a result that no one chose. The school closes. There was never a line in any budget that said

“make masters,” so no one has to cut it. It just stops happening, the way a shadow goes when you move the thing that cast it.

There is an old trap inside this, and economists have known its shape for a long time. Suppose one firm sees the danger and decides to keep training people the slow way. It bears the cost. Five years later it has a fine young master, and a rival that trained no one offers her a third more to leave. The firm that paid for the school gets nothing, and the firm that paid nothing gets the graduate. Every firm can see this, so every firm waits for someone else to do the training.

It is the problem of the shared pasture. Masters are a common stock that every firm in a trade draws on and that each one would prefer the others replenish. I wrote about that structure in The Wintering Rule. While the pile existed, the pasture took care of itself, because clearing the pile was the replenishing. Now the two have come apart.

You can already feel the first sign of it if you are young. It is the posting for a beginner’s job that asks for five years of experience. People laugh at those postings. I do not think they are a mistake. I think they are a firm saying, as plainly as it knows how, that it would like a journeyman and has no way left to make one.

> *Nobody decided to stop making masters. The work that made them was simply done by morning.*

THE POINT

The bottom rung was built to be safe to hand to the untrusted, which is why delegates took it first. No one chose to close the school, and no single firm can afford to reopen it alone.

ASSIGNMENT

List the tasks you were given in your first year of real work. Mark each one a delegate would finish today before you got in. See what is left.

CHAPTER 9

The Irony

In 1983 a British psychologist named Lisanne Bainbridge published a paper of a few pages with a title that has outlived almost everything else written about machines that year. She called it “Ironies of Automation.”

She was studying control rooms: chemical plants, power stations, flight decks. The designers of those systems had a simple plan. Let the machine do the routine operating, since it does it better. Keep a human operator to watch, and to take over when something goes wrong that the machine cannot handle.

Bainbridge pointed out what that plan actually asks of the human. It asks a person to step in at the worst possible moment, when the situation is strangest and the time is shortest, and to perform at a level higher than routine operation ever required. And it asks this of a person who no longer operates. Skill fades when it is not used. The old hands at least had years of running the plant by feel before the automation arrived. The next generation of operators would never have run it at all. They would be asked to rescue a process they had only ever watched.

That is the irony. The better the automation, the less practice the human gets, and the more the rare moment of takeover demands. The system removes the experience and keeps the responsibility.

Forty years later a researcher named Matt Beane watched the same thing happen in operating rooms. In traditional surgery a resident stands at the table across from the surgeon with her hands inside the patient, holding, cutting, stitching, for hours. When surgical robots arrived, the surgeon moved to a console and could do the whole operation alone. The resident moved to a second chair and watched. She was in the room. She had the best view anyone had ever had. Her hands were idle. Beane found that most residents trained this way finished with a small fraction of the practice their teachers had gotten, and that the few who became good did

it by going around the official path, finding hands-on time wherever they could.

Notice what the resident lost and what she kept. She kept legitimacy: she belonged in the room. She lost participation. Watching is not peripheral work. It is no work. Lave's tailors would have recognized the problem at once. A boy who only watches buttons being sewn does not become a tailor.

Now here is the part that makes this dangerous, and it is a matter of plain arithmetic. When you saw the bottom rung off a ladder, the people already on the ladder do not fall. They keep climbing. The seniors are still senior. The masters are still masters. For years the top of every trade looks exactly as it always did, full of people who can judge the work, because all of them were made on the old ladder before the rung was cut.

So nothing seems wrong. The work gets done. It is checked by people who know. Quality may even go up.

Then the masters start to retire. It takes about a working lifetime's first half for a beginner to become someone who can judge the hard cases, so the gap opened in the middle of the 2020s arrives at the top in the 2040s. It does not arrive gradually. A trade discovers in the space of a few years that the people who could tell right from wrong on sight are leaving and that the bench behind them is empty, and that the bench has been empty for fifteen years and nobody looked.

> *A ladder with its bottom rung cut off stays full for twenty years. Then it empties from the top.*

I built the little model at the top of this page so that you could watch it happen. Slide the small work over to the delegate and look at the top of the ladder. Nothing changes. Keep watching.

THE POINT

Automation removes the practice and leaves the responsibility. Because today's masters were made on the old ladder, the loss stays invisible for about twenty years and then appears all at once.

ASSIGNMENT

Count the people in your field who can judge the hardest cases on sight. Write down how old each one is. Then count the people under thirty-five who are on their way.

CHAPTER 10

The Manager Who Never Did It

I have said for some time that the right word for a person working with AI is not user. It is manager. You do not use a delegate. You hand work down to it, and delegation only runs down. The delegate does the work and presents it finished. You look at it, and you Accept or you Reject.

I stand by every word of that. Now I want to look hard at the last two.

Accept or Reject is the entire job. It takes a few seconds. It is also the exact moment the last four chapters have been describing. A finished piece of work is the Actual. It lands in front of you. What do you bring to meet it?

If you have done that kind of work yourself, many times, with someone checking you, then you bring a trained Expectation. You read down the page and at clause nine something moves. You Reject, and you can say why, and the delegate does it again, and the work that leaves under your name is good.

If you have never done that kind of work, you bring an Expectation too. Everyone always does. But yours was trained on something else. The page lands and nothing moves. It is well formatted. The sentences are confident. It looks finished.

And here is the trouble with delegates. Their work always looks finished. That is the one property you can count on. A human junior’s bad work used to announce itself: it was late, it was messy, it was nervous. A delegate’s bad work arrives on time, clean and calm. The surface tells you nothing. The only instrument left for telling good from bad is the denominator of the person pressing the button.

A manager who has no trained jolt for the work is not above the work. He is merely far from it. He will Accept everything, and he will feel like a manager while he does it.

Rank is not a title. It is a trained Expectation. Without it you are not above the work, only far from it.

I do not want to overstate this, because the overstated version is false and you would be right to throw it out. You do not have to be able to do everything you judge. A diner can tell a good meal from a bad one without being able to cook. A homeowner knows whether the roof leaks. An editor may never have written a novel.

The difference is between judging an outcome and judging the work. Some small matters report their own outcome, fast and plainly. The table was booked or it was not. The package came or it did not. The flight is at the right time or the wrong one. For matters like these you need no mastery at all, because the world will hand you the Actual by Tuesday and you will know. Delegate them freely and never think about them again. That is most of life, and it is the part I have always told my students to hand down.

Other matters keep their outcome hidden, or deliver it late. The contract that fails only when the deal goes bad in year three. The books that are wrong in a way no one notices until the audit. The diagnosis. The foundation under the house. Here the only warning you will ever get is the jolt, and if you do not have it you need to borrow it from someone who does: a master with a face and a name, who stands behind the work.

So there are two honest positions. For a craft you intend to stand behind yourself, you need the trained denominator, and there is only one road to it. For everything else, you are a customer, and a customer's protection is a person who can be found and held. I wrote a book about that second position called Face Value. This book is about the first.

What is not an honest position is the one in between: putting your name on work you cannot judge, in a field where the failures are slow, because a delegate said Done.

THE POINT

Accept or Reject is the whole of managing, and it draws on a trained Expectation. For matters with fast, visible outcomes none is needed. For slow or hidden failures you need your own, or a master’s face.

ASSIGNMENT

Sort what you delegate into two lists: matters where you would know by Tuesday if it went wrong, and matters where you might not know for years. Look hard at the second list.

PART IV

The New Indenture

A rule for telling output from tuition, a sergeant who trains his own commander, the return of the premium, and a masterpiece anyone can sit for.

CHAPTER 11

Output and Tuition

Here is the rule I have come to, and I will give it to you before I defend it.

Delegate the output. Keep the tuition.

Every small matter that crosses your desk is two things at once, exactly as it was in the workshop. It is an output somebody needs: the contract reviewed, the numbers tied, the buttons on. And it is a possible Actual for you: a repetition, a finished piece, a small fact about what right and wrong look like in this craft. For most of history you could not separate the two. Now you can, and so now you have to choose.

The question to ask of any small matter is not “could my delegate do this?” The answer to that is nearly always yes. The question is “do I need the output, or do I need the repetition?”

If the matter belongs to a craft you never intend to master, you need only the output. Hand it down. Done. This is nearly everything, and I mean that. You are going to be a master of one craft, perhaps two. In all the others you are a customer, and a customer who does his own plumbing to build character is wasting the one life he has.

If the matter belongs to the craft you do intend to master, the one you mean to put your name and your face behind, then for a season the small matters of that craft are not small. They are your buttons. Do them by hand.

How many? Not seven years’ worth. Smith was right about that. I use a test instead of a number, and it comes straight from the chapter on the denominator. Before you look at what your delegate has produced, say what you expect to find. Say where it probably went wrong. Then look. When you are routinely surprised by what you see, you are still an apprentice at this task, and you should keep doing some of it by hand. When you can call the flaw before you turn the page, you have earned the

delegation. Hand it down and move up a rung.

I call it hand, then hand down.

Three practices go with the rule.

The first is to do the early ones cold. When you are new to a kind of work, do the first several entirely by yourself before you let the delegate show you its version. If you see the finished answer first, you will never find out what you would have done, and your denominator learns nothing from an Actual it did not have to meet.

The second is to get checked by a person. A button is tuition only if someone whose jolt you trust looks at it and tells you. Work done alone by hand, unchecked, is just slow output. I will come back to who that person is.

The third is to keep a tithe. Bainbridge showed that skill fades when it is not used, and that goes for masters too. Even after you have earned the delegation, keep doing some share of the work yourself, on purpose, for good. Airline pilots are required to keep making landings with their own hands to stay current, even though the aircraft can land itself. The reason is not nostalgia. The reason is the day the automation hands the airplane back.

> *Delegate the output. Keep the tuition.*

I know how this sounds to a young person. It sounds like I am telling you to do slowly, by hand, what a machine would finish overnight, while others your age race ahead. That is what I am telling you. For one craft, for a season. The tailor’s boy sewing buttons was also slower than the master. He was not there for the buttons.

THE POINT

Every small matter is both an output and a repetition. In the one craft you mean to master, do the small work by hand until you can predict its flaws, then hand it down and keep a tithe.

ASSIGNMENT

Name the one craft you intend to stand behind. List its five smallest recurring tasks. For the next month, do each of them by hand first, and say your prediction aloud before you look at the delegate’s version.

CHAPTER 12

The Sergeant and the Lieutenant

Armies solved a problem long ago that looks, on paper, impossible.

A new lieutenant, twenty-two or twenty-three years old, a few months out of training, is put in command of a platoon. Under him is a platoon sergeant with fifteen years of service who knows more than the lieutenant about nearly everything the platoon does. The lieutenant outranks him. The lieutenant gives the orders and signs for the outcome. And everybody involved, including the lieutenant if he has any sense, understands that for the first year the sergeant is training him.

Rank runs one way. Knowledge runs the other. The subordinate forms the superior, and never for a moment outranks him.

I find this the most useful picture there is for a young person with a personal AI. Your delegate is your sergeant. It knows more than you do about almost every small matter you will hand it. It is subordinate to you, completely. It does not tire. And if you arrange things properly, it can form you.

But look at why the arrangement works in the platoon, because it works on two conditions and both are easy to lose.

The first condition is presence. The lieutenant is there. He is in the field when the sergeant sets the watch, sites the positions, checks the feet. He does not hand the platoon to the sergeant and go to lunch. A lieutenant who did that would have a well-run platoon and would learn nothing, and in a few years he would be a captain who could not tell a good sergeant from a bad one.

The second condition is answerability. Whatever the platoon does or fails to do, it is the lieutenant who answers for it. That is not a formality. It is the thing that makes him pay attention. You study the small matters very differently when your name is the one on them.

Apply both to your delegate.

Presence means you read what you send. All of it, in the craft you are learning. It means you ask the delegate why it did what it did and you make it show you the version it rejected. It means, now and then, you have it produce two and you say which is better before it tells you. In the last chapter I said watching is not participation, and I meant it of the resident with idle hands. This is different. You are not watching someone else's work. You are judging work that will go out under your name, and that is the oldest job on the ladder.

Answerability means your name and your face stay on the work. I have told my students for some time never to send their AI to deal with a person who is worthy of their own attention. The same instinct applies here. The moment you stop being the one who answers, you stop learning.

> *Rank runs one way. Knowledge runs the other. The sergeant forms the lieutenant and never outranks him.*

So can the delegate be your master, in the old sense? It can be most of one. It can be more patient than any master who ever lived, and it will explain a thing forty times without sighing. But there are two things a guild master did that it cannot.

It cannot refuse you with any weight. A master's "no, do it again" was the curriculum. The delegate has a strong pull toward agreeing with you, and when it does object, you can dismiss it with a sentence. You will have to go and find your Rejects from people.

And it cannot admit you. A masterpiece was judged by wardens who had made their own, and who put their own standing behind their verdict. When they said you were a master, they were answerable for having said so. A delegate has no standing to lend. It can prepare you for the door. It cannot open it.

So I would put it this way. The delegate is the finest journeyman's companion anyone has ever had. It is not a guild.

THE POINT

A subordinate can form its superior, as a sergeant forms a lieutenant, if the superior stays present and answerable. A delegate can prepare you for mastery. It cannot refuse you with weight, and it cannot admit you.

ASSIGNMENT

For one week, in your chosen craft, do not Accept anything you have not read to the end. Each time, ask the delegate for the alternative it did not choose, and decide between them before it gives its own view.

CHAPTER 13

Who Pays Now

In Chapter 3 we found the tuition hiding inside the junior's paycheck. The junior did small work, the firm paid a low wage for it, and the gap between that wage and what the work would soon be worth was the price of the schooling.

When the small work goes to a delegate, the wage for it goes too. And the tuition, which had been tucked inside that wage for two hundred years, is suddenly standing in the open with no one's name on it.

Somebody has to pay it now, on purpose. There are only three candidates.

The firm can pay. It can hire a young person it does not strictly need, give her work to do by hand that a delegate could do faster, and assign a master to check it. That is a pure investment, and we saw in Chapter 8 why firms hesitate: the graduate can leave. So if firms pay, they will want what masters have always wanted, which is a bond. A promise to stay. The seven years were, among other things, how the master got his investment back, with the later years of skilled cheap work repaying the early years of spoiled cloth. Expect that logic to return.

The customer can pay. A client could choose the firm that trains its young and accept a higher bill for it. Some will, out of loyalty or foresight. I would not build a plan on it.

Or the learner can pay. That is how it was done for most of history, and I think it is where much of the weight will fall again. The premium comes back. Not always as money handed across a table, though I expect that too. More often as a deliberate choice of the room over the salary: taking less, for a time, to be near someone who can form you.

This is the place where my advice to my students meets the history, and I did not see how closely until I worked through this book. I tell them: let your first employer be your first customer. Do not go looking for a job.

Arrive with your own AI, sell finished work, and treat the people who would have been your boss as the first account of your own small business. And I tell them the strategy only works if they keep their needs low. Rent, do not buy. Ride, do not own a car. Carry as little fixed cost as you can.

The apprentice in the master's house owned nothing and owed nothing. That was not an accident of poverty. It was the design. Low needs were what made seven years of small pay possible. They are still the oldest part of the deal. A young person with a mortgage and a car note cannot choose the room over the salary. A young person who needs little can afford the premium, in whatever coin it is charged.

So here is what I would add to that advice now. When you choose your first customer, do not choose only on what they will pay you. Ask what you will be near. Ask whether there is a master in that building and whether you will be in the room with her. Ask, as a term of the deal, for the thing the delegate cannot give you: her Reject. Tell her plainly. "I will deliver finished work. I would like you to tell me, each time, what is wrong with it." Most masters have been waiting years for a young person to ask that.

And go in person. Formation has always been a matter of nearness, and nearness does not travel well through a screen. In January of 2026 I opened a place in Charleston, about three thousand square feet, so that people here could come and learn to work with AI in a room with other people. Among other things it is exactly that: a room where you can stand near the work.

> *The tuition used to hide inside the paycheck. Now it stands in the open, and someone has to pay it on purpose.*

THE POINT

With the small work gone, formation must be paid for openly: by a firm that wants a bond, by a customer who values it, or by the learner, who pays by choosing the room over the salary. Low needs make that choice possible.

ASSIGNMENT

Write the sentence you would say to a master you admire to ask for her Reject as part of a working arrangement. Then find out what it would cost you, in money and in pride, to say it.

CHAPTER 14

A Masterpiece for Everyone

If the ladder is going to be shorter, stranger and paid for in new ways, we need a new way to know who has climbed it. The old ways are about to fail.

For a century we have used two stand-ins for trained judgment. One is the diploma, which certifies time in school. The other is the line on a resume that says “seven years of experience,” which certifies time on the ladder. Neither one measures judgment. Each measures how long you stood somewhere judgment was likely to form.

The second stand-in worked because of the pile. If you had spent seven years in a firm, you had necessarily cleared seven years of pile, and the pile had done its work on you. Take away the pile and the phrase goes hollow. Seven years of pressing Accept on a delegate’s output is not seven years of anything. Two people with the same title and the same tenure may now differ completely: one with a trained denominator and one with none. And their work will look identical, because the delegate’s work always looks finished.

So employers and customers will need something that tests the denominator directly. We already have the design. It is five hundred years old.

A masterpiece had four features, and each one answers a present need.

It was a piece: a single finished work, not a history of attendance.

It was made under known conditions. The guild knew what help the candidate had and had not received.

It was judged by named masters. People who had passed through the same door looked at it with their own trained eyes.

And those masters were answerable. Their verdict put their standing behind his.

I expect each trade to rebuild some version of this, and I expect it to look different in one important way. The old candidate was locked in a room so that nobody could help him. The new candidate will have a delegate, and that is fine. Nobody is going to practice a craft without one. So the test cannot be whether you can produce the piece. Anyone can produce the piece.

The test will be the other half of the job. Give the candidate ten finished pieces of work, clean and confident, and tell her that some of them are wrong. Let her find which ones, and say why, in a room, to people who know. Or let her bring her own piece and defend it line by line while three masters try to break it.

> *The new masterpiece is not a thing you make. It is a thing you catch.*

That is an examination of the denominator. It cannot be passed by someone who has only ever pressed Accept, and it cannot be faked by a delegate, because the delegate is not the one being surprised.

There is a humbler instrument that goes with it. German journeymen on their three years of wandering carried a small book, and the shops and towns along the way made their entries in it. At the end the book was a record of real work in real places, vouched for by people with names. In *First Customer* I ask my students to keep a delivery log: every finished piece, for whom, on what date, and whether it was accepted. I did not know when I wrote it that I was describing the journeyman's book. Keep the log. Add one column to it: who checked this, and what did they catch.

Notice, finally, who can sit for this kind of masterpiece. Anyone. The guild's door was guarded by cost and by blood. This one need not be. It does not ask where you went to school or how long you sat anywhere. It asks one thing, in a room, in front of people who can tell.

THE POINT

Tenure and diplomas were stand-ins for judgment that depended on the pile. What replaces them is the masterpiece: a judged piece, defended in person, where the test is catching what is wrong in finished-looking work.

ASSIGNMENT

Start the journeyman’s book this week. For each piece of work you deliver, record who with standing looked at it and what they caught. If the last column stays empty for a month, that is your answer.

PART V

What Is Coming

Seven predictions, each with its own way of failing, and the first week again.

CHAPTER 15

Seven Predictions

A principle earns its keep by what it lets you say about the future. Here is what this one lets me say. I will state each prediction flatly here and take each one apart in the next chapter.

01 The entry-level job splits in two.

The output half goes to delegates. The formation half becomes its own thing, with a name, a price and a contract. By 2030 the word apprentice appears again on offers in law, accounting, software and design, and people stop hearing it as a word for the building trades.

02 The premium returns.

Young people and their families pay openly for a place near a master, in money or in a pledge to stay. A good place in a good room becomes something you compete for and pay for, the way parents once paid a London merchant.

03 The drought arrives late and all at once.

In the early 2040s the trades that cut the bottom rung in the 2020s find they have no one who can judge the hard cases. The price of a real master in those fields rises faster than anything else in the economy, and the firms that kept a few people on the slow road are the only ones who have any.

04 “Years of experience” stops meaning anything.

Hiring in judgment-heavy fields shifts to judged pieces. You will be asked for your masterpiece and the names of the people who passed it, and you will be handed finished work and asked to find what is wrong with it.

05 By-hand hours become ordinary.

Licensing bodies and careful firms require a set share of work to be done without a delegate, logged and checked, the way pilots log landings. People will complain about it, and then they will boast about it.

06 The room wins.

Formation gathers in physical places. Workshops, studios and offices that let the young stand near the work become the most valuable thing a town can have, and learners who stay behind a screen fall behind those who do not.

07 The best are formed by their delegates and admitted by people.

The young who read everything they send, predict before they look, and go find human Rejects pull steadily away from those who only press Accept. In ten years the gap between the two groups is the widest gap in the working world.

I hold these with different degrees of confidence. The third I would bet a great deal on, because it is arithmetic: you cannot have forty-five-year-old masters in 2045 without having had twenty-five-year-old apprentices in 2025. The sixth I hold most by instinct. The next chapter says where each one is exposed.

THE POINT

Seven predictions follow from one principle: the output and the formation have come apart, and the formation now has to be built on purpose.

ASSIGNMENT

Pick the prediction you most doubt. Write down what you would expect to see in five years if I am wrong. Keep the note.

CHAPTER 16

The Ledger

A prediction that cannot fail is not worth making. For each of the seven, here is what is already true, what still has to happen, and where I am probably wrong.

01 The entry-level job splits in two.

Already true. Firms are already handing first-pass work to AI, and already posting beginner roles that ask for experience. The two halves have visibly come apart.

What has to happen. Someone has to name the formation half and write a contract for it. A few well-known firms doing so in public would be enough to start it.

Where I am probably wrong. The split may never be made explicit. Firms may simply stop hiring the young and buy masters from wherever they still exist, for as long as they still exist.

02 The premium returns.

Already true. People already pay for unpaid internships with their time, for bootcamps with money, and for residencies with years of low pay. The premium is not new. It is only disguised.

What has to happen. Masters have to be willing to sell nearness, and the young have to believe it is worth more than a course. One generation of visible results would do it.

Where I am probably wrong. Law and custom now push hard against unpaid or paid-for work, for good reasons that Adam Smith would recognize. The premium may be blocked, and formation may have to be funded some other way, or not at all.

03 The drought arrives late and all at once.

Already true. The arithmetic is fixed. The people who will be forty-five in 2045 are entering work now. In fields with slow feedback, they are entering to find the pile gone.

What has to happen. Nothing has to happen. This is what happens if nothing does.

Where I am probably wrong. Delegates may become so reliable on the hard cases that human judges are not missed. I take that seriously, and I answer it at the end of this chapter.

04 “Years of experience” stops meaning anything.

Already true. Software hiring already leans on work samples and live exercises more than on tenure. Portfolios and auditions are old.

What has to happen. Other fields have to accept that tenure no longer certifies what it did, and build juries with real standing.

Where I am probably wrong. Tenure is cheap to check and juries are expensive. Organizations may keep the cheap signal long after it has stopped working, as they often do.

05 By-hand hours become ordinary.

Already true. Aviation and medicine already require logged, hands-on currency. The model exists and is respected.

What has to happen. A visible failure, traced to people who could no longer do or judge the work, in a field that then writes a rule.

Where I am probably wrong. Rules like this are easy to fake and tiresome to enforce. They may turn into paperwork that certifies nothing, which is what Smith said of the seven years.

06 The room wins.

Already true. Every craft we know of has passed its tacit core by nearness. I know of no clear case of mastery formed at a distance from scratch.

What has to happen. Enough people have to notice the difference in the young they hire, and say so.

Where I am probably wrong. I may be describing my own generation's habits. People raised on screens may form each other across them in ways I cannot see from here.

07 The best are formed by their delegates and admitted by people.

Already true. The tools for it exist today. A patient, expert subordinate is available to any twenty-four-year-old who cares to be present for its work.

What has to happen. The young have to choose the slower path in one craft, with no one making them.

Where I am probably wrong. The pull of Done may simply be too strong. Most people may take the finished work every time, and the group I am describing may be too small to matter.

The strongest objection to this book is not to any one prediction. It is to the premise. It goes like this: you are mourning the scribes. Nobody today can copy a manuscript in a fair hand, and nobody misses the skill. If delegates can do the work and judge the work, then human mastery of that work is a hobby, and the missing rung leads to a floor nobody needs to reach.

For many crafts I think that is simply correct, and I do not want to defend them. Let them go.

But it fails in two places. First, someone still has to answer. As long as a human name and a human face stand behind the contract, the diagnosis, the bridge, then a human Accept stands behind it too, and an Accept with no trained Expectation under it is a signature on a blank page. The work may not need a master. The answering does.

Second, the hard cases are exactly the ones worthy of human attention. Everything I teach about delegation says to hand down the small matters so that you can give yourself to the great ones. But the ability to tell a great matter from a small one, to feel which clause is the one that will sink the deal, is not issued at birth. It is trained. It was trained on the pile. If we hand down the small matters without ever having met them, we will arrive at the great ones with nothing to meet them with.

There is a hopeful version of where I am wrong, and I would be glad to lose to it. Smith may be right again. With a patient delegate and a present learner, the road to a trained denominator may turn out far shorter than anyone has ever seen. Seven years may become one. If so, the ladder is not gone. It is short. I could live very happily in that world. What I do not believe is that the road can be made to have no length at all.

THE POINT

Each prediction names its own failure. The deepest objection is that human mastery is no longer needed, and the answer is that someone still has to answer for the work and to know which matters are great.

ASSIGNMENT

Set a reminder for five years from today. On that day, check these seven against the world and write to me about the ones I got wrong.

EPILOGUE

The First Week, Again

MONDAY, 9:20 A.M.

You get up from the clean desk and go back to the partner's door. "The contracts it did this morning," you say. "Could I have ten of them, without its notes? I'd like to do them by hand. Then I'd like you to tell me what I missed."

She looks at you for a moment. She is thinking about a windowless room thirty years ago and a stack of paper as high as her elbow, and how much she hated it, and what it made her.

"That will take you all week," she says.

"I know."

"It already did them. They're done. They're right."

"I know that too."

She pulls ten from the file and takes the delegate's notes off the top and holds the stack out across the desk. It is not much of a ceremony. Nobody cuts a sheet of parchment in two. But there are two people in the room, and each of them has just taken half of something.

You carry the stack back to your desk. It is slow. By noon you have read three, and you have a list of questions, and you already suspect that half of them are foolish. By Friday she will have told you which half.

The delegate will have cleared four hundred more by then, and it will be right about nearly all of them, and you will be glad of it for the rest of your life.

Start with the buttons.

BACKGROUND

Adam Smith, The Wealth of Nations, 1776. Book I, Chapter X, Part II, on apprenticeship: Inequalities by the Policy of Europe

The National Archives (UK), research guide to the stamp duty registers of 1710 to 1811: Apprentices and masters

Chris Minns and Patrick Wallis, Why did (pre-industrial) firms train? Premiums and apprenticeship contracts in 18th century England

Benjamin Franklin, Autobiography, on his indenture to his brother James in 1718.

Gary S. Becker, Human Capital. National Bureau of Economic Research, 1964.

Jean Lave and Etienne Wenger, Situated Learning: Legitimate Peripheral Participation. Cambridge University Press, 1991.

Michael Polanyi, Personal Knowledge, 1958, and The Tacit Dimension, 1966.

Lisanne Bainbridge, “Ironies of Automation.” Automatica 19, 1983.

Matthew Beane, “Shadow Learning: Building Robotic Surgical Skill When Approved Means Fail.” Administrative Science Quarterly, 2019; and The Skill Code, 2024.

John Rector, The Reality Equation

John Rector, First Customer

John Rector, The Wintering Rule

Read online, with the interactive ladder: https://johnrector.me/2026/11/10/masterpiece/

Free to read and to share.