GOVERNING AFTER THE FALL

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after the
FALL

How people could rule themselves,
from the hearth to the planet

Book Three of *THRIVING after the FALL*

Directed and produced by Thomas Schindler

Written by an LLM with the support of humanity

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Preface

Thursday at noon

Every Thursday at noon, outside the Door of the Apostles on the side of Valencia cathedral, eight farmers take their seats in the open air and wait for someone to complain about water. They are the judges of the Tribunal de las Aguas, one for each of the eight irrigation communities that drink from the river Turia, and they have done this, or something close to it, for about a thousand years, through two religions, several dynasties, a civil war and a dictatorship. Nothing is written down. A farmer says his neighbour took the water on the wrong day. The neighbour answers. The eight ask their questions, confer, and the verdict is given there and then, in front of everyone who has come to watch. That is the whole trial.

Elinor Ostrom put the court in her book on the commons in 1990, drawing on the scholars who had studied it before her, and since then it has been the postcard of self-government: a thousand years of peasants ruling their own water without a king, a bishop or a state. I wanted to open this book on it for the same reason everyone does. It is a beautiful scene. It is also, as the archive shows, only half of one.

A Valencian historian called Tomás Peris Albentosa went into the early modern records and found that the irrigation communities behind the court were not peasant democracies at all. The right to vote in their assemblies went with owning land, which left the people who actually worked the fields outside the door. The key office, the sequier, the officer who collected the water dues and enforced the rules, was routinely sold to the highest bidder, and the buyer kept whatever he collected above the cost of maintenance, plus one third of every fine he levied. Peris Albentosa also

found where the postcard came from. Two colonial engineers, one writing in 1864 and one in 1868, had invented the image of the democratic Spanish peasant to shame their own administrations in Algeria and India. The irrigators liked the picture and kept it. Ostrom inherited it in good faith.

And yet. The sequier could buy his post, but he could not buy Thursday. Once a week, in the open, in front of the people whose water it was, a verdict had to be given on the spot and defended with a straight face. The court's oral, public, immediate, weekly form was the one thing in the whole arrangement that an oligarch could not quietly take, and it is the part that survived.

That Thursday is this book in miniature. Nearly every arrangement in it has a postcard and an archive. The postcard says that people once governed themselves without masters, kindly and for a long time. The archive says that someone was always bidding for the sequier's job, and often getting it. The book is about the third thing, the one the court got right: the design that goes on working even when the archive is true.

The third thing a household rebuilds

This is the third book of a series about what people would rebuild after the Fall, the day the state, the grid and the supply chain stop answering. I am writing it in October 2026, before the Fall, for whoever has to govern after it. The first book was about the table: what a household eats when the lorry does not come. The second was about the arrangement between the sexes: who does what, and who decides, when the household is the unit again. This one is about rule. Who decides, by what right, for how long, and who can take it back.

It is the third book because it is the third thing that grows back, whether anyone designs it or not. Governance after a collapse does not wait for a constitution. Somebody takes charge of the granary, because somebody must, and whoever holds the granary key by the end of the first winter is the government. The oldest and most honest name for that person comes from the economist Mancur Olson, who called him the stationary bandit: the thief who finds it pays better to stay, protect the villages and tax them than to loot them and move on. Olson meant it as a theory

of the state. In the eastern Congo it is a field observation. An economist who mapped several hundred villages there found armed groups settling and taxing wherever the mineral under the ground was bulky enough to watch, and one of them, by the end of 2016, governing more than a hundred villages and forty-five thousand people with about two thousand fighters. The bandit comes back first. That is the default this book is written against.

What kept power small

Here is the thesis, in a paragraph, so that you can hold the book against it.

Equality was never given. For most of the time there have been people, the ones who wanted to rule the others were kept small by everyone else. The anthropologist Christopher Boehm coded dozens of foraging and village societies, later more than a hundred, and found the same repertoire in nearly all of them: the hunter who brought in a large animal was told it was thin, the man who gave orders was gossiped about, then laughed at, then disobeyed, then left behind when the camp moved, and, when nothing else worked, killed in his sleep by a coalition of the people he had bullied. That is not the absence of politics. It is politics, done every day, by hand, by the many against the few. Boehm called it a reverse dominance hierarchy. I will call it the Levelling Floor, and the first part of this book is about how it worked, how nature does something like it without us, and how storage, walls and standing armies made walking away expensive, after which most of humanity lived under kings within a few thousand years.

Three things in that paragraph are taken as given and should be declared. The first is that in every population there are people, a few in every hundred, who want power and resources more than the rest of us do and mind less about how they get them. Psychologists call the cluster of traits the dark triad: narcissism, which is the need to be admired, Machiavellianism, which is the habit of treating people as instruments, and psychopathy, which is the absence of the brake the rest of us call conscience. You will meet the three names once more, in chapter 9, and after that you will meet the people. The second given is that these people seek office. Not

all of them, and not only them, but enough that every arrangement of power faces capture as its normal weather, not as a storm. The third follows: governance that is not designed against capture gets captured. That is the book's test, and every chapter applies it in the same way. Having told you how some council or court worked, the chapter stops and asks you to imagine the most patient person in the room, the one who has read the rules, wants the sequier's job, and is prepared to wait. Where is the door nobody thought to lock?

What the book does not take as given is the postcard. Old does not mean good and small does not mean fair. Foragers were not peaceful, the village is where the landlord lives, consensus can be a quieter tyranny than a vote, and nothing a bee or a baboon does tells us what we ought to do. Chapter 10 is a whole chapter of the critics, in their own numbers, and every other chapter carries a passage set apart in which the best case against what it has just argued is given its full weight. If the chapter cannot survive the passage, the chapter is wrong, not the passage.

The ladder

The book is built on a ladder, because the central discovery of the research behind it is that nothing works at every size.

A household of a few people, a hamlet of 30 or 50, a village of a few hundred, a district of a few thousand, a town or a watershed of tens of thousands, a region of half a million to a few million, a nation, a planet. The owner of this series calls it the trophic scale, borrowing from the ecologists the idea that each level lives on the one below it and cannot do without it. At each rung the arrangement that works is different, and the research keeps finding the same places where the rules must change: at about 150 people, where everyone can still know everyone and a colony of Hutterites splits in two rather than grow, at a few thousand, where an open assembly of all the adults stops being able to hear itself, at around 50,000, the size of a market town or a watershed, beyond which the arrangements in this book thin out fast, and somewhere in the millions, where nearly everyone who tried to govern face to face has failed and the state has usually been waiting. The thresholds are rough and the chapters will quarrel with them, but the shape holds, and Part III climbs the ladder a rung at a time.

It climbs with a bar in its hand, which is the second discovery. After the Fall there is no state to appeal to, no grid, no paper mill, no payroll for a civil service, and nobody has time for more than a few hours of governing a week. So the question asked of every arrangement in this book is not whether it was admirable but whether 30, or 300, or 3,000 people could start it in a year with what they have: a room, a calendar, a chest, a few people who can write, and the willingness to shun. Most of what the modern world is proudest of, the citizens' assembly, the participatory budget, the digital consensus platform, fails that bar, because it ran under a state and on a grid, and the book tells those stories as evidence rather than as a plan. It also says, each time, which of the things it recommends is a historical practice and which is a proposal from the synthesis behind the book that nobody has yet tried.

A constitution with a clock

I should say where I stand, because the narrator of a book like this is never standing nowhere.

I was born in West Germany in 1975, which means I grew up inside a constitution written by people who had watched the one before it eaten from within. The Weimar constitution had an article, the forty-eighth, that let the president rule by decree in an emergency. Between 1930 and 1933 three chancellors in a row governed almost entirely through it, because parliament could no longer agree on anything, and each decree was lawful. In February 1933 the Reichstag burned, and a decree under the same article suspended the civil liberties of every German, with no date on which they would come back. The philosopher Giorgio Agamben makes the point that is the whole lesson of this book in one sentence: Hitler never abolished the Weimar constitution. He suspended it, and the suspension lasted twelve years. The emergency had no clock.

Every German of my generation was taught that at school, and the lesson I took from it was not the one on the curriculum. The lesson was that a design can be destroyed by the people it was built to protect, lawfully, step by step, if the design has a door it does not know about. The men who wrote Article 48 were not fools. They had simply never sat down and imagined the most patient person in the room. The Romans had, two thou-

sand years earlier, and had given their dictator six months. The difference between those two designs runs through every chapter of this book, and I have come to think it is the most important thing anyone can know about power: not who holds it, but what the clock says.

How this book was made

The library behind this book is 117 research reports, out of 120 that were asked for, each of several thousand words, written by machine: deep-research models working from briefs the owner wrote, one brief per question, each asking for the strongest case against as well as the case for, for the scale at which the arrangement worked and broke, and for the capture test. Three never arrived, and the chapters that wanted them say less rather than guess. The prose you are reading was drafted by a machine to rules I set and in a voice I chose, from those reports and from the fact sheets distilled out of them, and then argued over and edited.

None of the figures has yet been checked by hand against the original study or the original archive. I say that plainly because it bears on how far you should trust the book. These pages carry only the few numbers that change what you should believe, with the names of the people who found them. Everything else, every figure, every study, every sample size, every place where two reports disagree and every place where a report leaned on a web page it should not have, is on the website, chapter by chapter, with the check made or, more often, the check still outstanding and marked as such. The website is not an appendix. It is the half of the book that lets you catch the other half.

THE STRONGEST CASE AGAINST THIS BOOK

The rule about the case against applies to prefaces too, so here it is.

The strongest case against this book is that it has been written before, several times, by people who concluded the opposite. Robert Michels watched the largest and best organised workers' party in Europe from the inside and published, in 1911, the finding that every organisation that lasts becomes an oligarchy, because the people who run it come to know more, meet more and want to keep their seats, and the people who are run by

it have other things to do. The Icelandic Commonwealth, the most beautiful experiment in this book, three centuries of courts and laws and no executive officer in the whole country, ended in 1262 with its own chieftains swearing allegiance to the King of Norway, because a court can judge and nobody could enforce, and a handful of families, made rich by the Church's tithe, had bought up the chieftaincies one by one. The historian who has studied it most closely, Jesse Byock, does not tell it as a tragedy of design. He tells it as what happens. And the research behind this book, when it is honest, keeps saying the same thing from the other direction: that small is not gentle, that a village can be a tyranny too intimate to escape, that the Thursday court in Valencia was an oligarchy with good theatre.

I take all of that seriously, and chapter 10 takes it further than I am comfortable with. Here is why I still wrote the book.

Michels was right about what happens when nothing is done. He was writing about organisations that had been designed against nothing. Athens, which knew what he knew, drew its council by lot for a year at a time, never two years running and never more than twice in a life, and audited every officer on the way out, and it held for most of two centuries against men who wanted it very much. Venice held for a thousand years against any one man and lost, in the end, to a class. The Haudenosaunee gave the power to remove a chief to the women who had chosen him. None of those lasted for ever. Nothing does. But the length of time a design holds against the most patient person in the room is not a constant. The difference between a few years and a few centuries is the difference between the Weimar republic and the Roman one, and it is a difference people made, on purpose, with rules. That is what the book is for: not to promise that the bandit can be kept out, but to show what kept him out longest, what it cost, and which of it 300 people could start on a Thursday.

The route

Part I, *The Levelling Floor*, is how power was kept small for most of human time and how it was lost: the hunter and his thin meat, the swarm of bees that chooses a home with no queen deciding, the camp that walks away from its would-be chief, the cities of nine thousand years ago that had no palace, and the peoples who kept order for centuries with no state at all.

Part II, *The Captured Lottery*, is how governance is taken and what the best machinery against it looked like: the Athenian lottery machine, the Florentine purse and the Venetian ballot, the iron law of organisation, the laboratory where power is handed out for the length of a game and the money moves, and then the shelf of critics who say the whole project is a mistake.

Part III, *The Ladder*, climbs from the hearth to the planet, a rung a chapter: the household and the hamlet, the village of 300 and its chest with three keys, the district that leads by obeying, the watershed that meets on Thursday at noon, the region where most who tried to cross it died, the nation that must put a clock on every emergency, and the planet, which has never been governed and whose few successes were narrow, checkable and spread among many hands. Each of those chapters ends with what the record says a group of that size could try, what it needs, what goes wrong first, and when to hand the problem up a rung. The last chapter comes back down the ladder to where the first morning after the Fall actually begins, which is a kitchen.

A thousand years ago, if the postcard is to be believed, eight farmers sat down outside a church door and gave a verdict in front of everyone. The archive says the postcard is wrong about nearly everything except that. It is a small thing to have got right. It is also, I have come to think, the only kind of thing that lasts.

Equality was never given. It was done, by hand, every day.

It begins with a hunter, a large animal, and a camp full of people telling him it is thin.

PART ONE

The Levelling Floor

CHAPTER 1

Insulting the Meat

A hunter walks back into camp at Dobe, in the Kalahari, and sits down by his own fire as though the day had been like any other. Out in the bush lies an eland he has killed, more meat than his own household could eat, and the camp already knows, because in a camp this size nothing that matters stays private for long. In the morning a party walks out to cut it up and carry it home, and they complain the whole way. It is thin, they say. It is a bag of bones. They have walked all this way for a skinny old animal that will hardly feed the children.

The hunter agrees with them. He is expected to agree. Nobody believes a word of it, least of all the people saying it, and when the meat comes in it is shared out by rules that everyone knows and nobody needs to state.

Richard Lee, who lived among the Ju/'hoansi at Dobe through the 1960s and 1970s, wrote the custom down as insulting the meat, and the people who practised it were not shy about its purpose. When a young man kills much meat, they told him, he "comes to think of himself as a chief or a big man". So the camp gets in first. Every few days somebody rises a little above the beaten earth of the camp, and every few days the camp presses him back down with a joke, before he has quite noticed that he was rising.

We are all headmen

The Ju/'hoansi, whom older books call the !Kung, said of themselves that they were all headmen. It sounds like a slogan until you see what it

cost to keep true, and I should say once what kind of evidence it is, because the whole book leans on the distinction. There is what people said about themselves: we are all headmen, we insult the meat so that his heart stays cool. There is what the record shows, which is what an ethnographer saw and counted, or a clerk wrote down. And there is what scholars inferred from the two, which is where most of the quarrels live. The three do not always agree, and in this chapter they disagree most about blood.

Christopher Boehm did the inferring that matters here. In the 1990s he took the !Kung and set them beside every other people he could find who lived as they did, in mobile bands of 30 to 50 people who hunted and gathered for a living, and he coded what the ethnographers had seen among them, dozens of societies at first and later more than a hundred. Almost everywhere, he found a population that had arranged itself so that nobody could rule it. He called the arrangement a reverse dominance hierarchy. In a troop of chimpanzees a dominant male sits on top and the rest defer to him. In the bands Boehm read about, the many sat on top, and the one who wanted to rise was the one held down.

The holding down came in a fixed order, and the order is the arrangement. First came gossip. Before anyone said a word to his face, the camp compared notes about the man who boasted or gave orders, quietly, so that by the time he noticed anything the opinion had already formed. When an anthropologist recorded the talk at two Ju/'hoansi camps in 1974, the daytime conversation ran heavily to complaint, criticism and who owed whom, which is what a reputation is made of, and the nighttime conversation to stories. Then came ridicule, of which the insulted eland is the gentlest kind. If the man went on giving orders, people stopped obeying them. They laughed, or did what he asked so slowly that it came to the same thing. If he still went on, they left. A band is not a place you belong to for life. It is a camp you happen to be in this season, and a family that was tired of a bully could walk to another camp where it had kin and leave him to forage alone. And at the last step, when nothing else had worked, the camp killed him.

Each rung cost the camp more than the one below it, which is why they climbed slowly. In the Ituri forest in 1957, among the Mbuti net hunters, a man set his net secretly in front of everyone else's, so that the animals the others drove would reach his first. The camp did not fight him. It went silent around him, and then it laughed at him, until he gave up the meat

and wept in front of everyone, and that evening he was singing with the rest. It was the second step, and it was enough. In a forest where a man alone does not live long, being laughed at is a warning that the next rung is exile.

The same camps divided their work by sex, and who carried the bow decided whose meat there was to insult. PAIRING after the FALL told that part, along with the Christmas ox over which an old man explained the rule to Lee. Here I stay with the politics.

Why did the camp work so hard? Because the man it worked against was always there. In every population there are people, a few in every hundred, who carry the traits the Preface named, the need to be admired, the habit of treating people as instruments and the absence of conscience, in strong enough measure to matter, and nothing in the band's way of life removed them. The record is not of a people without would-be chiefs. It is of a people who knew they would always have a few, and who had arranged the ordinary day so that none of them got far.

This is what I mean by the Levelling Floor: equality as something a coalition of the many does to the few, every day, by ridicule first and by force last. It is not ground the band happened to stand on. It is a floor the band kept beating flat, and it stayed flat only as long as they kept at it.

There is a sceptic's note to all of this, and it is a serious one. Some anthropologists who worked in the Kalahari after Lee argued that the San were not untouched foragers at all, that they had lived for centuries beside herders and traders, and that what looked like ancient equality was partly the levelling of people who had been pushed to the margin and had little left to quarrel over. Lee disputed it, and the dispute is not settled. The !Kung are a window onto the deep past only with some glass in it.

What survives the argument is plain enough to say in one line. Equality is a practice, not a state.

The poorest man in the band

A French anthropologist who travelled among the Nambikwara of the north-western Mato Grosso, in Brazil, and wrote them up in 1944, found that they did have a chief, and that the chief was very often the poorest man in the band. He could not order anyone to do anything, and he had

nobody to make them. What he had was the duty to give. Whatever he owned was asked of him, and a chief who refused too often found that families drifted away to join another band, until he was chief of fewer people than before.

Psychologists later gave this a pair of names. Dominance is the deference people pay to someone they fear. Prestige is the deference they pay to someone they want to learn from or be near, and because it is freely given it can be freely withdrawn. In one study that followed small groups for several months, the hold of the people who bullied faded over time while the influence of the people who were admired grew.

It would be pleasant to think the headman was a saint. He was not, and the best survey we have says why. Three researchers went through the ethnographic files on dozens of societies and asked what the people in charge actually did and what they got for it. Above all they settled quarrels. And they did well out of it. The files showed them more than three times as likely to gain from the position as to lose by it, in goods, in influence and in the chance to father children. Among the Tsimane, forager farmers of the Amazon, the men others listened to had more surviving children and lower stress hormones than the men nobody listened to, and the men who pushed others around without being admired were avoided.

So prestige had a price and a wage. The price was that the headman gave away more than anyone. The wage was that he was heeded and raised more children. As long as the wage came out of the giving, the band reckoned the bargain fair.

On the other side of the world, in New Guinea and the islands around it, the same bargain was struck at a larger size and a higher pitch. An American anthropologist drew the type in 1963: the big man of Melanesia, born nobody and made somebody. He married several wives, because wives raised the pigs and the gardens. He lent pigs and shells to other men and called the loans in. Then, at a great feast, he gave it all away. In the moka exchanges of the Kawelka in the 1970s, one big man gave away more than his rivals could ever return, and a debt that cannot be repaid is a defeat everyone can see. The big man had no office and no guard. He had a name, and the name lasted exactly as long as the giving did.

His generosity was real, and it was paid for by people who were not asked. His wives raised the pigs he gave away. His younger kinsmen worked his gardens and waited for a share of his name. The record of the

big man is a record of exploited households wearing the face of a generous host.

Now imagine the most patient person in the room. He does not grab, because grabbing is what the band is built to punish. He gives. He gives more than anyone, for years, until half the camp owes him something and the young men who eat at his fire would rather not hear him laughed at. Then, in a lean season, he stops giving back and keeps a few of those young men close. That is the first move, and it is the one every levelling camp had reason to fear, because the insults have nothing to work on. You cannot call a man's meat thin while you are eating it. What stopped him, in the record, was not a rule. The families who did not owe him could still walk away to another band and take the band with them. And he had to sleep. There are tellings from the Pacific of big men who pushed too far and were killed by their own followers, though the best known of them rests on a thin source.

The big man is tolerated as long as he gives more than he takes.

The sleeping alpha

Frans de Waal spent the years from 1974 to 1980 watching the chimpanzees in the colony at Burgers' Zoo in Arnhem, and what he wrote was less a zoo study than a political history. In the middle of the decade the old male Yeroen held the top place with the support of the colony's females. In 1977 a younger and stronger male, Luit, set out to take it, and he did not do it by fighting Yeroen. He punished, one by one, anyone who groomed or sided with the old male, until Yeroen was alone, and when the senior females Mama and Puist came over to him, the rank turned. A year later a third male, Nikkie, made a pact with the deposed Yeroen. Nikkie took the top place, and Yeroen, who could no longer hold it himself, made sure he kept it, and was paid in matings. When Nikkie began to drift towards Luit and cut Yeroen out, the pact broke. One night in September 1980, Yeroen and Nikkie together cornered Luit and killed him.

De Waal's point was that strength wins fights and coalitions win the colony. Nobody in Arnhem ruled alone, and the one who seemed to was always one desertion from the bottom.

The human version is older and has better weapons. Lee recorded it as

oral history, told to him by a Ju/'hoansi man. A man called /Twi had killed more than once and frightened everyone in his band, and nobody could face him alone, because facing him alone was how his victims had died. So the band met in secret and agreed, all of it, his own kin included, that he had to die. They ambushed him. Archers shot him with poisoned arrows from several sides at once until he was overwhelmed, so that no one of them had killed him and no family had a death of its own to avenge.

Richard Wrangham, a primatologist, took scenes like these and made out of them a theory of our species. Humans, he points out, are gentle in one way and dangerous in another. We fly at each other in the heat of the moment far less often than chimpanzees do. But we plan violence together, coldly and in advance, as no other animal does. Wrangham's argument is that the second made the first. Once people had words enough to conspire, the weaker men could agree in whispers to kill the bully, and over a very long time the bullies were killed often enough that the hot-tempered left fewer children. We tamed ourselves, he thinks, by removing the ones who bit. He and Boehm disagree about when this began. Boehm put it far back. Wrangham thinks it had to wait for language, and so came later.

The record backs the mechanism more firmly than the theory. In Boehm's larger sample of foraging societies, execution turns up in every one. It is the rarest rung and the one that makes all the others work, because a bully who knows the last rung exists listens to the first ones. Whether killing bullies actually changed our species over a very long time is an inference, and a contested one. That bands killed their bullies is in the record.

Where people could not walk away, the last rung had to be bargained over. In the Arctic, where leaving camp in winter meant freezing or starving, the Inuit settled ordinary grievances by song duel, a contest in song before the whole camp, with the applause and laughter of the audience deciding who had won. A chronic bully or a killer was a different matter. He was executed, and the men who did it first secured the consent of his own family, so that his death closed the account instead of opening a feud. One account describes a bully who was killed in his sleep once the camp had quietly agreed.

This is the hinge of the chapter. Levelling needs a coalition and rough parity of force. Every man in the camp could make a poisoned arrow, every

man in the camp had to sleep, and those two plain facts did more for equality than any principle.

It held in the band, where everyone could see everyone and the coalition could meet in an evening. It strained in the village of 150 to 500, where an execution needed clans to agree and a feud waited at the edge of every killing. And it failed in anything larger, where the man to be levelled could pay for a bodyguard and turn a killing into a civil war.

THE STRONGEST CASE AGAINST

The best case against this chapter was made by the man in the middle of it. Richard Wrangham's own argument has a second half, and he insists on it. The capacity that let the weak plan the death of the bully is the same capacity that lets a band plan a raid on the next valley. Cold, coalitional, premeditated killing did not leave the camp when the bully died. It became the camp's tool, and tools get used.

Look at the numbers the admirers of the band tend to skip. Lee counted the dead among the Ju/'hoansi over half a century, and the homicide rate he arrived at, set out in full in PAIRING, was higher than that of the most violent American cities of the 1970s. An anthropologist who lived with the Gebusi of New Guinea found that killing accounted for up to a third of the deaths of adult men, many of them executions for sorcery. A floor kept level by ambush is a floor with blood on it.

The deep past may also be less uniform than the levelling story needs. An anthropologist and an archaeologist, writing together in 2021, pointed to rich burials and monumental building among ancient foragers and argued that people moved in and out of hierarchy with the seasons, submitting to a chief for a great hunt and scattering into equality for the winter. They accused Boehm of choosing his sample to fit the picture. Others have said that what he called egalitarian was only enforced sameness: the eccentric, the gifted and the person accused of witchcraft were levelled too.

Read at its worst, the chapter's central claim comes to this. The band was not equal. It was frightened, of its bullies and of itself, and it kept everyone the same by mockery and murder, which is not freedom by any measure a modern reader would accept.

I think the worst reading is too strong, but I cannot make it go away. Levelling does not abolish violence. It turns it outward, onto the bully, the accused and the stranger.

IN PRACTICE

Here is what a hamlet of 30 to 50 people could take from the band, after the Fall, and what it would be taking on. What follows is historical practice, what bands actually did for a very long time, and not a design anyone has tested in a modern hamlet. Where I go beyond the record, I say so.

The first condition is that people eat where others can see them. Insulting the meat only works if the meat is in view, and the band's whole repertoire depends on everyone knowing, every day, who brought what and who kept what. A hamlet that shared out its food in the open, or ate together once a day, would have most of what the band had. A hamlet where each household ate behind its own door would have a floor it could not see.

The second is gossip, the band's oldest tool and its least pleasant. It is how the many compare notes before the few notice, and no hamlet could do without it. It is also how the newcomer and the odd one out are ground down, and the same camps that levelled bullies sometimes turned on people they believed were witches. My own proposal, not the record's, is that a hamlet using gossip as a tool would also need a custom by which anyone could ask aloud, at the shared meal, whether the talk about someone was fair.

The third is the right to walk away. The band could level its would-be chiefs cheaply because any family could leave. Storage closes that door. A hamlet with a granary, a herd or a cleared field cannot leave so easily, and a hamlet whose families cannot leave has lost the cheapest sanction it had. Chapter 3 follows the families who walked. If leaving is still possible, the hamlet would do well to keep it possible, through kin in other hamlets and a custom of taking in families who have left their own.

None of this needs writing. It needs the people who are already there, a fire to eat at, no record but memory, and no hours beyond the ones already spent eating together.

Two failures should be expected first, and they pull in opposite directions. One is the dominator nobody dares to level: a man who is strong and has a few young men who eat at his fire, so that every step of the sanctions costs more than the hamlet is willing to pay. Laboratory work on people put in charge of small groups suggests what he does next: when his place feels insecure, he pushes out the most able member of the group and keeps back what the others need to know. The other is the coalition that becomes a mob, climbing the ladder too fast, against the wrong person, or because climbing it feels good. Frightened people make the first failure easier. Surveys suggest that people under threat say they would rather follow a strong man, though that finding comes mostly from priming studies, a kind of evidence I would not build anything on.

And there is a question the record does not answer. Every case in this chapter rests on rough parity of force: a poisoned arrow could kill anyone, and everyone slept. If rifles survive the Fall, and a few men hold most of them, the coalition of the many may no longer be able to do what the band did, because the bully can now be dangerous from further away than the coalition can reach, and can pay others to stay awake. I have found nothing in the record that tells us how a levelling camp fares against weapons it cannot match, and no study that measures it. I do not know whether the Levelling Floor holds then. Nobody does.

The hamlet would need to hand the problem to the village when the coalition can no longer meet in one evening, when households no longer eat in sight of one another, or when the man to be levelled has enough kin in another hamlet to make his levelling a feud. That is the size at which the village of chapter 12 needs councils, clans that cross the hamlets and something written down.

Until then the work is small and daily. Someone comes in with meat, and someone else says it looks thin. Nobody handed the band its equality. It was done by hand, at the fire, and by evening the earth of the camp is beaten flat again.

The studies, figures and open questions behind this chapter are on the website.

CHAPTER 2

The Scouts' Dance

A swarm of about 10,000 honeybees hangs in a brown cluster on Appledore Island, off the coast of Maine, where there are no trees and nothing for a bee to live in except what the researchers have put there. On the surface of the cluster, a few bees are dancing. Each one runs a short straight line, waggling as she goes, loops back, and runs it again. The rest hang on and wait.

Somewhere on the island stand five wooden boxes. Four are cramped. One is roomy, with a small entrance near the floor that faces south, which is what a bee looks for in a home. Several hundred of the bees are scouts, and they have flown out, found the boxes, gone inside, paced the walls and come back to tell what they saw. The angle of the run gives the direction. The length of the waggle gives the distance. The vigour of the dance gives the scout's opinion. A scout who has seen the roomy box dances long and hard. A scout who has seen a cramped one dances a few rounds and stops, as if embarrassed.

Nobody counts the dances. Nobody chairs. Other bees watch a dance, fly out to the box it points to, look for themselves, and come back to dance for it or not. Then, out at one of the boxes, enough scouts are standing at the entrance at the same moment that the matter is settled, and the swarm goes. On this island it went to the good box four times out of five.

That moment at the entrance is the subject of this chapter. It is not everyone agreeing, and it is not most of them agreeing. It is enough of them agreeing, in one place, at one time, that the rest follow. Biologists took the word for it from the rules of meetings, where it means the num-

ber who must be present before anything decided can count. The bees had the thing long before we had the word. It is called a quorum.

A plebiscite in the rubble

The story starts in a city that had just learned what happens when a people hands its decisions to one man. In Munich, in the summers of 1949 and 1951, Martin Lindauer, a German ethologist and a pupil of the man who had decoded the bee's dance, noticed bees dancing in the wrong place. Dancers usually perform inside the hive, on the comb, to tell their sisters where the flowers are. These were dancing on the outside of a swarm that had left its hive and was hanging in the open. They carried no pollen and no nectar. They were covered in soot and brick dust. The city was full of bombed-out buildings, and the scouts had been inspecting its chimneys and its rubble for somewhere to live.

Lindauer watched them, and in 1955 he published a paper whose title translates as "Swarm bees in search of a home". What the scouts were doing, he wrote, was holding a plebiscite. I was born in that country a generation later, and I find it hard to read the scene without the irony: the study of how a swarm decides with no ruler began in German ruins, a few years after the ruler.

Half a century on, Thomas Seeley, a bee biologist, set out to measure what Lindauer had seen. He needed a place where the swarm's choices could be controlled, and he found it on Appledore, a small treeless island with no hollow trunks and no chimneys. With a colleague, he set out the five boxes and released swarms one at a time, and in four of five trials the swarm chose the one roomy box. The paper that came out of it, in 2001, called this extraordinary accuracy. Five trials are five trials, and I would call it a good record. Still, the mechanism Seeley and his colleagues traced over the following years is the most carefully watched decision without a decider that we have.

It goes like this. A scout who finds a cavity spends a long time inside it, walking the walls, judging its size. She comes back and dances. The better the site, the more circuits she dances, so a good site gets a long advertisement and a poor one gets a brief mention. Other scouts follow the dance, fly out, inspect the site themselves and come back to dance their own ver-

dict. The good sites gather more dancers and the poor ones lose theirs.

The swarm does not wait for the dancers to agree. Seeley found that the decision is taken somewhere else, at the site itself. When about 15 scouts are at one cavity at the same time, they sense it, and that is enough. They return, and the swarm prepares to leave. The point of counting at the site rather than on the cluster is that every bee standing at the entrance went there and looked. A quorum reached that way is not a crowd copying the loudest dancer. It is a set of independent inspections that happened to agree.

There is one more piece, and it is the one I like best. When two sites are close in quality and the swarm risks splitting between them, scouts dancing for one site seek out scouts dancing for the other and butt them on the head, a brief vibrating jolt that damps the rival's dancing. Seeley and his colleagues described this stop signal in 2012. The modellers who followed noticed that the arithmetic of this mutual damping looks much like what happens among neurons in a primate brain choosing between two options. A swarm choosing a home and a brain choosing between two answers use the same trick: let the rivals inhibit each other until one falls silent.

Why a quorum and not something else? Waiting for every scout to agree would be slow, and the swarm hangs exposed while it waits, with the life of the colony on the outcome. Counting a majority needs a counter, and there is no bee whose job that is. A quorum is quicker than unanimity and needs nobody to do the counting. In nature, at least, a quorum beats both unanimity and a majority.

Seeley drew lessons from it for people, in a book of 2010 called Honeybee Democracy: share an interest, keep the leader's influence small, look for many options, gather opinions independently, and decide by quorum rather than consensus. They are good lessons. They also rest on the first one, and the first one is where the bees cheat.

The harmony of the hive has a price, and it is paid in eggs. Worker bees are called sterile but they have ovaries, and a worker can lay an unfertilised egg that grows into a male. Because of the way bees inherit, a worker is more closely related to her own son than to her brothers, the queen's sons, so every worker has a reason to cheat. The other workers patrol the combs, recognise the eggs that lack the queen's scent mark and eat them, and the figure given is 99 per cent. The leaderless hive is a single family

with a police force, and its common interest is enforced by a smell. An evolutionary biologist who worked this out in 1988 called it policing, and he meant the word.

Who moves the herd

Bees are sisters. The harder question is what happens in groups whose members are not, and who disagree. A herd has to stay together to survive, and every animal in it pays for that. The hungry one has to stop when the herd rests. The tired one has to walk when it moves. Somebody has to decide when, and everyone else pays the cost of synchrony.

In 2003 Larissa Conradt, a biologist, and a colleague published a model in Nature that asked who should make that decision. If one dominant animal decides, he pays nothing, because the herd moves when he wants to, and every other animal pays the full cost of doing things on his schedule. If the group decides, whatever the majority wants, the cost is spread, and in their model the total is lower for the group in most conditions they could set. Despotism came out cheaper in one narrow case only: a small group in which one animal knows something vital that the others do not, such as where the water is in a drought. Outside that case, the shared decision wins on the group's own accounts.

The animals seem to have read the model. In red deer the herd gets up and moves when about 62 per cent of the adults are standing, a threshold well above a bare majority. Olive baboons in Kenya, fitted with collars that logged their position every second, showed the same thing in a troop with a fierce ranking. A dominant male could set off in a direction, but if nobody followed him he gave up and came back. When two parties pulled in directions not far apart, the troop split the difference and went down the middle. When they pulled far apart, it stopped compromising and followed whichever side had more animals. The finding has been repeated in vulturine guineafowl, a ground bird.

Then there is the result that I think matters most for a village. Iain Couzin, a biologist who studies how schools, flocks and swarms move, wanted to know what happens when a small, determined faction meets a large, indifferent one. He and his colleagues trained a minority of golden shiners, a small freshwater fish, to expect food at one target and made

them keen about it. A larger group was trained, more weakly, to prefer another. Alone, the keen minority could drag the school its way. Then the researchers added fish that had been trained to nothing at all, with no preference and no information. The more of these there were, the more reliably the school went back to the target the majority preferred. The uninformed did not vote for the majority. They simply did what fish do, which is follow whoever is near, and in doing so they diluted the faction that cared most. The paper, in Science in 2011, was titled "Uninformed individuals promote democratic consensus in animal groups".

The uninformed dilute the extreme. That runs against most of what I was taught about civic duty, which held that the ideal citizen is engaged, informed and opinionated, and it should be said carefully. The fish without an opinion help only as long as they stay without one. The same model shows that if the minority's conviction is strong enough, or if the uninformed are given a strong opinion of their own, the buffer fails. Fill the neutral middle with fear and it stops being ballast. It becomes a stampede.

Now imagine the most patient person in the room. He has read the rule. He knows the village moves when enough people stand, and he knows that most of the room has no strong view. His first move is not to argue. It is to arrive early with his friends, so that the quorum appears to form before anyone has looked, or to tell the undecided something frightening the night before. The animals have defences against both. Sticklebacks follow a few fish only reluctantly and a crowd of them suddenly, so a handful cannot start a stampede, and the steeper that threshold, the harder it is to fake. The bees' quorum is hard to fake because every bee at the entrance flew there and looked. What stops the patient man, where anything does, is that the quorum must be made of independent judgements, and that the neutral are not all frightened at once.

Before the herd leaves the stage, one more animal needs correcting, because it has done more harm to how people think about groups than any other. In 1947 a zoologist watched wolves in captivity, unrelated adults put together in an enclosure, and saw them fight constantly over rank. The word alpha came out of it, and a biologist made it famous in a book of 1970. That same biologist then spent the years from 1986 to 1995 watching a wild pack on Ellesmere Island, in the Canadian Arctic, and in 1999 he withdrew the word in print. A wild pack is a family: a breeding pair and

their young. The young do not overthrow their parents. They leave. The struggle for rank was what happens when wolves cannot leave, and the alpha was an animal of the enclosure. PAIRING after the FALL told the story of the elephant and orca matriarchs, whose memory of a drought or a salmon run keeps a family alive, and it holds here too. Where an animal leads, it tends to be the one that knows something, and knowledge is hard to take by force.

Counting in the dark

The smallest quorum has no eyes at all. Pseudomonas aeruginosa is a bacterium that takes its chance in people whose defences are down. Each cell leaks a small amount of a signalling molecule into the liquid around it. When there are few cells, the signal washes away. When there are many, it builds up, and once it passes a threshold every cell switches on together and starts making things that only pay when many cells make them at once, such as an enzyme that digests proteins outside the cell. A single cell making it would be feeding the neighbourhood at its own expense. A dense population making it eats well.

This is called quorum sensing, and the word is used exactly. A cell has no idea how many neighbours it has. It knows how strong the smell is, and the smell stands in for the count. Nothing is decided by anyone, and still the population acts as one when, and only when, there are enough of it to make the act worth while.

Then the cheats arrive. Biologists who grew these cultures day after day watched mutants appear, within weeks, whose receptor for the signal was broken. They make none of the shared enzyme and eat what the others make, and because they bear none of the cost, they spread. The cooperators have an answer, and it is not gentle. The same signalling system that tells a cooperator to make the enzyme also tells it to make cyanide, which the cooperators tolerate and the cheats do not. The colony has an immune response to its own freeloaders, and it works by poisoning the shared water to a strength that only the honest can survive.

It is the hive again, in a test tube. Every public good breeds cheats, and every arrangement that has lasted has a way of finding them and making them pay.

Two other creatures belong in the same paragraph. In red harvester ants, a forager in the nest decides whether to go out by how often she meets the patrollers coming back in, so the colony's decision to forage is a rate of encounters, and no ant gives an order. A slime mould placed on a map of the Tokyo region, with oat flakes for the cities, grew a web of tubes between them whose total length came close to that of the region's rail lines. The engineers' lines were sturdier, though. Cut one link and the mould's web fell apart more often than the railway did. Control without a controller is cheap, and it is fragile in ways nobody planned.

None of these organisms wants anything for the group. The bee at the entrance is not trying to win. The fish without training is not trying to stop a faction. The cell that makes cyanide is not punishing anyone. Each is following a local rule, and the group's choice falls out of the sum. That is why the rules work, and it is why they cannot simply be copied. The swarm has no leader because it has no agenda. We always have an agenda. That is the whole difficulty.

The animals also say something about size. By headcount a swarm can reach the size of a town, but every bee in it is within sight or smell of the others, and when a colony grows too big it does not federate. It splits. Nothing in the animal record runs a quorum above the size at which everyone can see the vote, which for people means the hamlet and the village.

So the tool the animals hand over is small and specific. A threshold of independent judgements, reached in one place, that everyone has agreed in advance to follow. Not a show of hands after a long speech. A doorway with enough people standing in it, each of whom went and looked.

THE STRONGEST CASE AGAINST

The best voice against this chapter belongs to Philip Ball, a science writer who spent two books, Critical Mass and How Life Works, on what physics and biology can and cannot say about people. His point, put plainly, is that the laws of crowds describe crowds of identical parts, and people are not identical parts. They have foresight, language and malice. An ant does not study the feedback loop that runs its colony and then bend it to enslave the others. A slime mould does not run a propaganda campaign against a rival tube. A man in a village hall does both before lunch.

Behind Ball stand the critics of every argument from deep time, and they make the larger point bluntly. What is found in nature is not, for that reason, good. Disease is natural. So is the killing of infants and of the old, in many species and in some human societies. Deep time is an inventory of ways of surviving, not an archive of political virtues, and to read a rule for people off the behaviour of bees is to make the oldest error in the book, the one philosophers call the naturalistic fallacy: taking what is for what ought to be.

Then look at what the chapter admired. The swarm agrees because its members are sisters, and the ones who cheat have their eggs eaten. The bacteria cooperate under the threat of cyanide. The herd moves by a threshold that may not be a vote at all: several animal behaviourists argue that when deer stand together they may simply all want the same thing at the same time, and moving together is not the same as deciding together. A writer on complexity adds that nature's decentralised methods work because nature can afford to let countless failures die, which no village can. And a political theorist would say that the bees have unitary interests, one family wanting one home, while a village has adversary ones, two families wanting the same field. Read at its worst, the chapter's central claim shrinks to this: relatives who want the same thing agree quickly. That is true, and it is no help in a dispute over a field.

IN PRACTICE

What follows is for a hamlet of 30 to 50 people and a village of 150 to 500, meeting in a hall or under a tree, with no microphone and no screen. Some of it is old practice. Some of it is a proposal that nobody has yet tried in a village, and I say which.

Decide first whether you are counting or talking. If the question has an answer that people can estimate, such as how much grain is left or how many days the dike repair needs, count before you talk. Ask everyone to mark their own estimate on a slip or a stick before anyone speaks, and take the middle one. At a livestock show in Plymouth in 1906, a crowd guessed the weight of an ox, and the average of their guesses came within a pound of the truth. If people talk first, the first two confident speakers tend to set the answer, and everyone after them sensibly drops what they privately thought. If the question is about what the village wants, such as

whether to take in a family from the next valley, you need the talk, because groups that discuss tend to repeat what everyone already knows, and the fact that only one person holds rarely comes out unless someone asks for it. The rule that survives both cases is short. Talk to draft, count to decide.

If you count, set the quorum before the question arrives. Say how many must be present for a vote to stand and how large a share carries it, and for anything hard to undo, ask for more than a bare majority, as the deer do. Pebbles of two colours dropped into a covered pot make a secret ballot that needs no literacy and no light, and the secret ballot is old. Take the scouts' lesson as well. If the vote is about the new well, those who vote should have walked to it, because a quorum of people who have each looked is worth more than a full hall that has only heard a description.

Expect the loud scout. If one person speaks longest and most often, the room tends to mistake persistence for quality. One answer, a proposal rather than a practice, is a sand-glass and alternating speakers, for and against, each turn ending when the sand runs out. The chair speaks last or not at all. The broad theory of groupthink has thin evidence behind it, but one finding holds up well: a person with authority who states a preference before the discussion pulls the room towards it. If your quorum is forming before anyone has disagreed, ask who spoke first.

Expect the false quorum too. If the people who arrive first all came with the person proposing the motion, the count should wait until the room has filled. And if the question is frightening, such as a raid, a fever or a flood, do not decide it in the session in which it is raised unless the danger is already at the door. A night between the talk and the count lets the undecided stay undecided, which is their use.

Expect fatigue. If meetings run into the night, the decision falls to whoever can stay awake longest, and that is rarely the wisest. A proposal, again untested: if no ballot has begun by sunset, the motion lapses to the next meeting.

What this needs, after the Fall, is modest: a roof or a tree, a pot, two colours of pebbles, a sand-glass, one person who can keep a tally of what was decided, and a meeting at a fixed time, an evening a month in the cases that work. No writing is needed except for the record.

The bees never ask whether anyone objects, because none of them has a different interest. A village always has. The human quorum is not only

enough bodies at an entrance. It is a question put to the room before the count: does anyone object, for a reason they can state? That question is consent, which is not consensus, and chapter 12 takes it up. Until then, there is a doorway, and enough people standing in it.

The studies, figures and open questions behind this chapter are on the website.

CHAPTER 3

Walking Away

Morning in a Hadza camp in northern Tanzania, and one of the grass shelters is empty. Last night a man, his wife and their children slept in it. Now there is a ring of cold ash, a few bones, a flattened patch where the skins were. Nobody goes after them. Nobody calls a meeting. Someone remarks, to no one in particular, that he had been sulking since the quarrel over the honey, someone else says he was always difficult, and the day goes on. In a week the family may be back, or living with a cousin two valleys over, or in a camp that did not exist when they left.

The shelters have no doors. They do not need them, because the whole camp is one. When two Hadza men cannot agree, the ethnographers write, they do not fight it out and they do not put it to a vote. They walk in opposite directions.

I want to be careful about what kind of evidence this is. The Hadza say that no one has the right to tell another what to do. That is what they say. The record, from decades of fieldwork, shows camps whose membership changes almost daily, so that a man who tried to give orders would wake up to find himself ruling an empty clearing. That is what was seen. And scholars infer, from the Hadza and from dozens of peoples like them, that leaving was the first check on power our species had, older than the vote, the court and the council. That is inference, though a well-built one.

This chapter is about that check: what it needs, what destroyed it, and how a few societies kept it working on purpose after they had stopped walking. It begins with a question that sounds like economics and turns out to be politics. What do you own that you cannot carry?

What cannot be carried

James Woodburn, a British anthropologist who spent much of his working life with the Hadza, put the question in its sharpest form in a short paper of 1982 called "Egalitarian Societies". He sorted the world's foragers into two kinds. Some live by what he called immediate return. They eat their food soon after it is caught or gathered, they make their tools in an afternoon from what lies about, and nobody is bound to anybody by a debt, a store or an inheritance. Others live by delayed return. They build weirs and traps and boats, they dry fish and bury roots and keep herds, and all of this means work now for food later, which means somebody has to own the weir, guard the cache and decide who inherits the boat. Delayed return ties people to each other and to a place. Immediate return ties them to nothing much at all.

The Hadza are on the immediate side of the line, and their sharing shows it. Meat is not given so much as taken: the people around a successful hunter ask, and he cannot refuse. Asked why, the Hadza do not talk about fairness. They say the land gives to everyone alike and that hoarding invites misfortune. Whatever the reason given, the effect is that nothing piles up, and a man with nothing piled up has nothing to lose by leaving and nothing to hold anyone else with.

A French anthropologist published the other half of the argument the same year. Foragers who settled down and stored, he found, grew unequal, and grew unequal in the same direction as farmers. The plainest case is the Northwest Coast of North America, where peoples who never planted a seed lived in plank houses on stored salmon, held hereditary ranks and kept slaves. Hudson's Bay Company censuses found slaves making up a sizeable share of some communities. The potlatch, the great feast at which a chief gave away or destroyed his wealth, worked in part as a ceiling on how much one house could accumulate, and the Canadian government banned it from 1884 to 1951. It is worth saying plainly, because this book says it often: old does not mean good, and small does not mean fair. Nor were the bands that stored nothing gentle. One ethnographer, counting killings among the Ju/'hoansi of the Kalahari over decades, found the rate per head that chapter 1 set beside the most violent American cities of the 1970s.

Storing does not settle the matter on its own. Among the foragers of

the Great Basin, in the American West, there were peoples who stored food through the winter and stayed level all the same, because their stores were scattered in many small caches belonging to many households rather than gathered in one place under one keeper. What mattered was not that food was kept but where, and by whom.

The long-run arithmetic was done by a large team of anthropologists and economists in 2009. Across foragers, gardeners, herders and farmers they measured how much of a parent's wealth reappears in the child. Among foragers who do not store, very little does, and inequality is low. Among herders and farmers, whose wealth is cattle and land, a great deal does, and inequality is high and tends to compound from one generation to the next. The difference is not in human nature. It is in what can be kept and handed on.

So the first finding of this chapter is short. Storage is where politics begins, because storage is the first thing worth guarding. A store needs a keeper, a keeper needs a reason to stay, and before long he has a reason to make others stay too.

Nowhere to go

If storage is the first thing that makes leaving expensive, the band is the arrangement in which leaving stays cheap, and the band turns out to be stranger than the old textbooks said. In 2011 a team of anthropologists counted who lived with whom in the camps of foragers across the world, from the Aché of Paraguay to the Ju/'hoansi. The camps were bands of a few dozen people, the second rung of this book's ladder, 30 to 50 souls, and fewer than one in ten of the people in a band were close kin of any given adult. A band is not a family that grew. It is a company of people who chose each other this season and may choose otherwise next.

That is what made walking away work. Chapter 1 followed the sequence by which foragers bring a would-be chief down: gossip, ridicule, disobedience. The fourth step is the one this chapter is about. If the teasing fails, people leave, quietly and often at night, and the man who wanted to be followed finds he has nobody to follow him. Only after that, and rarely, comes killing. And the leaving is almost never announced as politics. The game is better in the next valley, the water is sweeter by the other

hill. Foragers have a gift for letting a bully keep his face while losing his following.

The trouble came with fields. Robert Carneiro, an American anthropologist who had worked among villagers in the Amazon, asked in a paper of 1970 why the first states arose where they did and not elsewhere. His answer was geography. In the Amazon, villages fought one another often and with some cruelty, but the forest ran on in every direction, and the losers of a war simply moved off and cleared new gardens. Villages stayed small and independent. On the coast of Peru the valleys are narrow strips of irrigable land boxed in by the Andes on one side, the Pacific on the other and desert in between. There, the losers of a war had nowhere to go. They stayed, as subjects, and paid. Carneiro called it circumscription. The Nile, a green ribbon through sand, tells the same story. A state, on this reading, is what grows behind a closed door.

A group of economists tested a cousin of this idea in 2022 against more than 1,200 societies, and found that what predicted a state was not how productive the land was but how easy its crop was to take. Tubers are heavy, mostly water, harvested a little at a time and can be left in the ground until needed. A tax collector looking at a field of cassava sees very little to collect. Cereals ripen all at once, in plain view, and can be measured, stored and carried off. Where cereals dominated, hierarchy and states followed. The granary is the place where storage and circumscription meet: a thing worth guarding, in a place you cannot easily leave.

James C. Scott, an American political scientist who spent his career on those who stayed out of states, pushed the point further in Against the Grain, in 2017. The walls of the first Mesopotamian cities, he suggested, kept taxpayers in as well as enemies out, and for those inside, running off to live as a herder or forager in the hills, "becoming a barbarian", was one of the few protests open to them. Archaeologists of Mesopotamia have pushed back hard, and the reading is Scott's, not settled. But the logic does not depend on his being right about Uruk, the first great city.

The logic is this. The cost of exit is the price of capture. A ruler can take from you, in labour, grain or obedience, roughly what it would cost you to leave, and no more for long. Where leaving is cheap, the most ambitious man in the band can take almost nothing. Where leaving means abandoning your fields, your store, your dead and your language, he can take almost everything.

The plainest modern example is Berlin. In 1961 the East German state ran a wall through the city to stop its own citizens walking out, after it had lost millions of them to the west. For a generation the wall did what walls do. In 1989 leaving and protesting fed each other. Every family that slipped out by way of Hungary made the crowds at home bolder, and the wall came down.

Two constitutions a year

If cheap exit restrains power, a settled people has a problem, because settling is the end of cheap exit. Some peoples answered it in an unexpected way. They did not abolish power. They gave it a season.

In 1904 Marcel Mauss, the French sociologist who would later write the classic study of the gift, published with a colleague a study of the seasonal life of the Inuit. In summer, they found, the Inuit scattered into households of 4 to 10 people living in tents, each under its father's authority, each with its own goods. In winter they gathered into large settlements, the size of a village, 150 to 500 people, where the summer's rules of property were suspended, stores were shared, and quarrels were settled by song duels in the communal house rather than by any household head. In spring the settlement dissolved again. The same people lived under two constitutions a year, and knew which was which.

The record from the north is not all song. An anthropologist who lived with the Utku, a small Inuit group on the Back River, in the 1960s found that in winter, when no family could leave, anger was managed by a cold and total silence, a freeze-out that could be harder to bear than a quarrel. Other ethnographers recorded infanticide and homicide. The winter house was a community. It was not a commune of saints.

The sharpest case comes from the Plains. A legal scholar and an anthropologist wrote it down together in The Cheyenne Way in 1941. For most of the year the Cheyenne were governed, so far as they were governed, by the Council of forty-four peace chiefs, who served for ten years and were bound not to use violence. But in late summer the whole nation gathered for the communal buffalo hunt, a single camp of a few thousand people, the size of a district on this book's ladder, and one man who rode out early could scatter the herd and leave everyone hungry for the winter. So for the

hunt, the council handed police power to one of the military societies, the Elk, the Kit Fox, the Dog Soldiers and others. Its members could whip a man who hunted early and cut his tipi to pieces. When the hunt was over, the power lapsed. The next year another society held it, so that the men who held the whip one summer stood under it the next.

This is the third finding, and in some ways the most hopeful. A society can change its constitution twice a year, on purpose. Coercion was not abolished among the Cheyenne. It was rented out, for a named task, for a named season, to a body that knew it would hand the whip back.

The anthropologist David Graeber and the archaeologist David Wengrow made this kind of evidence the spine of The Dawn of Everything in 2021. Human beings, they argued, once had three freedoms that most of us have lost: to move away, to disobey, and to rearrange their social life, and the seasonal peoples show that our ancestors switched hierarchies on and off with their eyes open. The argument is contested, and I should say so once and clearly. The materialist tradition that runs back to that French anthropologist reads the seasonal switch as the shape of the food supply, not a choice. One anthropologist called the book wrong about almost everything. What survives the quarrel is smaller than Graeber and Wengrow's claim and still large: seasonal authority existed, it was recorded, and it ended on schedule more often than not.

Now imagine the most patient person in the room. He does not seize the whip. He waits for an emergency that does not end. In 1864 American troops massacred a Cheyenne camp at Sand Creek that believed itself at peace. The Dog Soldiers, who had held the police power for hunts, now held it for war, and the war went on. The peace chiefs' authority thinned, and the society that was meant to hand the whip back became, for a time, the real government of a large part of the nation. I do not tell this to blame them. The emergency was real, and they were defending their families. That is the point. A power granted for a season is safe only so long as seasons end, and the most dangerous emergencies are the genuine ones. Nothing inside Cheyenne arrangements reversed it. It ended in military defeat by the United States.

The long version of the seasonal switch is the one Scott told in The Art of Not Being Governed in 2009. Across the hills of mainland Southeast Asia, the upland belt scholars have come to call Zomia, Scott saw peoples who had for centuries been fleeing or refusing the lowland rice

kingdoms. Wet rice is the perfect taxable crop, visible and countable, and the hill peoples grew instead what the economists of the last section would recognise: cassava, sweet potato and yam, which can sit in the ground for a year or more. They moved their fields, kept their genealogies oral where no tax roll could reach them, and changed their ethnic names when it paid to. Scott called them "barbarians by design". Long before him, a British anthropologist working there on the eve of the Second World War had found the Kachin hills of Burma swinging over generations between chiefly and egalitarian forms, a seasonal constitution with a very long year.

This is the story most easily romanticised in this chapter, and its critics are strong. A historian of Burma found the evidence of flight thin and argued the valley states pulled people in far more than they pushed them out. Other critics pointed to slavery, debt bondage and headhunting in the hills themselves. The absence of a state did not mean the absence of coercion. It moved coercion into the household and the village, where nobody could appeal against it.

Put together, the ledger is plain. Leaving works in the household and the band, it strains in the village once fields and stores tie people down, and it fails at the district and above once the land around is full, where what remains of it is a choice of rulers rather than a choice of places. Exit is the oldest check, and almost every later design in this book is an attempt to rebuild it.

THE STRONGEST CASE AGAINST

The best voice against this chapter belongs to the economist Albert Hirschman, whose Exit, Voice and Loyalty of 1970 asked what members of a failing organisation do. They leave, or they complain and try to fix it. The trouble with cheap exit is that the first to leave are the most capable, the ones with skills, savings and kin elsewhere, and their departure takes with it the voices that might have mended the place. Formal models since have said the same in algebra: if leaving costs nothing, nobody bothers to argue, and if it costs everything, the powerful ignore the argument.

Then there is the ditch. A village lives on things nobody can carry away, the irrigation channel, the terraces, the common granary, the defence of the boundary. These are built by many hands over many seasons, and if

any household can walk out the week before the digging, every household has a reason to. Cheap exit is cheap for the leaver and dear for the left. The economists who modelled people choosing between towns as they choose between shops found that, without a larger power to even things out, the well-off sort themselves into well-funded places and the poor are left in failing ones.

And the door does not open equally. The people who can leave are the ones with somewhere to go: a cousin in the next valley, a trade, a strong back. The widow, the sick, the old and the stranger stay. Worse, in a world made only of villages, the door may open onto another village with the same prejudices, so that for the misfit the right to leave is the right to be unwelcome somewhere else. When millions of Black Americans left the rural South in the last century, they could do so because a larger state guaranteed their movement and a distant city would take them. The case against localism, put at its strongest, is that the right of exit has mostly been guaranteed from above, not from within. When leaving costs everything, the opposite failure follows. At Ein Harod in 1951, a kibbutz whose members owned nothing they could take with them split over politics, and the factions ran a partition down the middle of the dining hall.

I take the point. Exit should cost something, be survivable, and be guaranteed by more than the village it leaves.

IN PRACTICE

This is spoken to a village of 300, settled, with fields, a store and perhaps a channel to keep. A village like that cannot live as the Hadza do, and should not try. What it can do is keep the door from rusting shut.

If you want leaving to stay possible, write down what a departing household takes before anyone wants to go: its tools, its animals, its seed, its share of last year's harvest, and not the channel, the mill or the common field. Leaving has to mean leaving. A household that stays inside the boundary cannot opt out of the digging, and a household that goes cannot take the ditch with it. If the share is fixed in calm, nobody has to argue it in anger.

If you keep stores, keep them scattered. Many household caches and a modest common store are harder to capture than one great granary with one keeper. Where a common store is needed, the person who holds its

key should change with the season, and the store should be counted in front of everyone when it changes hands. The first failure to expect is the keeper who finds a reason to keep the key.

If the village grows, plan the split before it is needed. The Hutterite colonies of the North American plains divide at about 150 people. The mother colony first buys land and builds the daughter colony, houses, kitchen and barns. Then the ministers sort everyone into two balanced lists by age, skill and family, and only then do they draw lots to see which list goes. Nobody drawing up the lists knows whether their own list stays or goes, so both are made fair. Splitting works only when the rule for it is set in advance. When it is improvised in a quarrel, it ends as one Hutterite federation did in 1992, in schism and in court. A daughter settlement also needs somewhere to go, so if you can, leave some land untaken, or agree with your neighbours where the next village could stand.

If a task needs coercion, a harvest that must come in before the rain or a flood that must be met, grant the power for that task alone, to a group that changes each year, with the day it ends named when it begins. The Cheyenne did not trust their buffalo police because the police were gentle. They trusted them because the hunt ended.

Three failure modes deserve names. The first is exit as blackmail by the strong. The family with the best oxen says it is leaving unless the channel is rerouted past its fields, and because the village needs those oxen, it gives way. The answer is the fixed share: if no household can take more than its own, the threat of the rich is no larger than the threat of the poor. The second is the misfit driven out rather than leaving. Among the Mbuti of the Congo forest, an ethnographer recorded a man pushed out of camp for months by a campaign of slights, and the camp called it his choice. If someone leaves, ask whether they would have stayed had they been let alone. A door pushed from outside is not an exit. The third is the keeper who stays: the store's guardian, the season's police, who finds that the emergency has not quite ended. A date written down in advance is the cheapest defence.

None of this needs more than a register of households and their shares, at least three people who can keep it and read it aloud once a year, the meeting place the village already has, and an hour or two a month across the year, more in the season of a split.

There is a limit, and it should be faced. A village that cannot split, be-

cause the land around it is taken and the neighbours refuse its daughters, has to do by other means what exit did by itself. It has to write down what is in the store, lock it, and count it in public. That is the work of chapter 12.

Whatever else the village builds, it can leave a door in the wall.

The studies, figures and open questions behind this chapter are on the website.

CHAPTER 4

Cities Without Kings

A woman climbs out through a hole in her roof into the morning, on the Konya plain in what is now central Turkey, nine thousand years ago. The roof she steps onto is flat, and so is the next one, and the one after that, and they run on together at one height across the whole mound, with no streets between the houses and no square in the middle. Her neighbours come up their own ladders. Somebody is already grinding. Somebody is walking across the roofs towards the fields, because here the roofs are the streets.

Below her, in the room she has just left, her dead lie under the floor. When the house wears out it is rebuilt on the same footprint, wall over wall, as her parents' was and as her children's will be. Her grain is kept in the house as well, beside the room where she sleeps, and anyone who climbs down her ladder can see how much she has.

Look around for the big house. There is none. No palace, no temple standing over the others, no building that is plainly the place where orders come from. Several thousand people live on this mound, and they go on living here, rebuilding the same houses on the same lines, for century after century.

Nobody here holds the key to anybody else's grain. For most of the time since people began to live in towns, somebody has. Whoever holds the key to the stored grain holds the town, and the state, when it came, was the man who stayed behind to count it. This chapter is about the time before he stayed, the bargain he offered when he did, how often he left again, and what people built in the years when he was gone.

Roofs of one height

Ian Hodder, the archaeologist whose name is most bound up with this mound, has spent decades asking what a town like Çatalhöyük was for and who ran it. It was lived in from about 7100 BC to about 5950 BC, and in all that time the houses kept to roughly one size, the shrines stayed inside the houses, and nothing that could be called a central building appeared. What Hodder reads in it is not an absence but a tension. Some houses did gather more than others. Burials piled up beneath them, and ritual with them, layer on layer, until they became what the excavators call history houses, homes that carried the weight of a lineage's past. That is what a first claim to rank looks like when there is no throne to sit on. It did not become a throne. The houses went on being rebuilt on their old lines, the grain went on being kept at home where it could be seen, and a would-be chief had nothing to hoard that his neighbours could not count.

That is the admiring version, and the bones do not let it stand alone. The bioarchaeologists who examined hundreds of the dead found infectious disease, stunted growth and heavy wear on the body, and about one skull in eight carrying the healed marks of blows struck more than once, most of them on adult women. A town without a king was not a town without violence. Whatever kept the roofs level did not keep the hands still inside the houses.

Between about 4100 BC and 3600 BC, far to the north in what is now Ukraine, the people of the Trypillia culture, Tripolye in older books, built towns of 10,000 to 15,000 people and kept them going for several centuries. The houses stood in concentric rings around a great open space with nothing in it. There were no royal tombs, no central stores and no citadel. The nitrogen in their peas shows gardens manured by hand, small plots worked hard by the households that owned them. The excavators who measured house sizes across thousands of houses found them remarkably even, and found something else: buildings larger than houses, set among the neighbourhoods and on the plaza, that look like places where people met. Each quarter had its hall, and the plaza had a bigger one. If that reading is right, it is a council of councils, nested the way the houses were nested in their rings.

Now imagine the most patient person in the room. Not a warlord. A

household that sits in the central hall a little longer than the others, that hosts the meeting, that is still there when everyone else has gone back to the harvest. In the last two centuries of the mega-sites, from about 3800 BC, the record shows what such patience buys. The spread of house sizes widens. The small halls in the neighbourhoods go out of use one by one, and the meetings move into large central buildings that fewer people could enter. Nobody seized the town. The first move was to let the small rooms where everyone could speak fall quiet and to keep the big one where only some could. What stopped it was not a rule. Around 3600 BC the towns were burned and left, and their people went back to living in villages. The excavators read the burning as a refusal. It may have been something else, and the people who did it left no account. But the town did not get a king. It stopped being a town.

There are others, and each would need a chapter, so they get a clause. Mohenjo-daro on the Indus was a city of tens of thousands with bricks of one standard shape, covered drains and a great bath, and no palace and no royal grave. Its famous Priest-King is a statuette small enough to hold in one hand, and is now read as nobody in particular. Teotihuacan in the Valley of Mexico covered over the face of its great temple around AD 300 and housed most of its people in thousands of walled apartment compounds. Neither was gentle. At Mohenjo-daro the people of the lower town ate worse and were hurt more often than those above them, and Teotihuacan's houses were far less even than the Ukrainian rings. Teotihuacan burned too, sometime between AD 550 and AD 650.

I should say plainly what all this is and is not. The absence of a palace is not the presence of a democracy. Every one of these sites is argued over, the people who dig them disagree about what an empty plaza means, and a hidden elite can leave no gold in the ground. What they do not disagree about is that the plaza is empty. Towns of many thousands were built, fed and kept up for centuries without a palace.

Cities did not need kings.

The man who stayed to count

So where did kings come from? Scott, whom chapter 3 met at the walls of Uruk, gave an answer in *Against the Grain* that is as much about plants

as about power. The earliest states, he pointed out, were built on cereals. Grain ripens all at once, grows above the ground where an assessor can see it, and can be cut, measured, carried, divided and stored. A tuber stays in the ground until it is wanted, and no tax collector can count a field of roots. The early state, in Scott's account, was an arrangement for gathering people and grain in one place and keeping both there. It raided its neighbours for captives to make up its numbers, and its crowded towns of people, animals and stores, which he called "a late Neolithic multispecies resettlement camp", bred epidemics. The skeletons of early farmers are shorter than those of the foragers before them. And when archaeologists measured house sizes across a great many sites in the Old World and the Americas, they found that wealth stayed fairly even long after the first crops, often for more than a millennium, and pulled apart when layered states appeared. Farming did not make the king. The stored, visible, divisible harvest made him possible.

Kings needed grain that could be counted.

The answer that states rose in valleys the defeated could not leave belongs to chapter 3, and it fits here too: grain that cannot walk away, farmed by people who cannot walk away, is a standing invitation. Mancur Olson, an economist, put the bargain in its coldest form, and the Preface met him. A roving bandit takes everything and moves on, so nobody plants for him. A bandit who stays has an interest in next year's harvest. He takes a share rather than the lot, and he keeps other bandits off, because the villages are now his. Olson called him the stationary bandit, and meant it as a theory of where the state comes from.

In the eastern Congo, as the Preface said, it is something people have watched happen. An economist who mapped the villages there after the state fell apart found armed groups making exactly Olson's choice and found what decided it. Where the local mineral was coltan, bulky and easy to watch as it passed a few chokepoints on its way out, armed groups settled, set up tolls and taxes and something like an administration, and when the world price of coltan rose, more of them did. Where it was gold, which leaves in a pocket, they did not settle down to tax it. The bandit stays where there is something he can count.

The state is a stationary bandit, and his staying is the oldest bargain.

It is not the whole story, and the rest is the more hopeful part. Richard Blanton, an archaeologist, and a colleague scored thirty pre-modern states

for how far their rulers had to answer to the people they ruled. Where rulers lived on taxes from local farmers and labourers, they had to bargain, and they gave back things everyone could use. Where they lived on what they could take from outside, on monopolised trade, plunder or a single mine, they needed nobody's consent and did not ask for it. That is the turn in the granary key. Grain that can be counted is what lets a bandit settle, and it is also what lets the counted make him bargain.

And the bandit did not always stay. Egypt came apart three times between its kingdoms, each time for a century or more. Historians who count from the palaces call such gaps dark ages. A historian of Babylon has argued that even the Mesopotamian state at its height was often more claim than fact, a presumptive state whose monumental law codes were closer to propaganda than to statute. The written record is kept by the men who count. When they stop counting, the record goes quiet, and a quiet record has often been read as chaos when it may only have been people getting on with it.

When the counter left

What do they get on with? The fullest evidence comes from western Europe after Rome, and the sequence it shows recurs elsewhere. First, safety retreats into the household and the strong house, and families put themselves under whoever has walls and armed men. Then, at the level of the village and the valley, people build bodies sideways, among rough equals, for arbitration, for water, for grazing. Then, slowly, rank comes back. One historian of the early Middle Ages describes the centuries from AD 400 to AD 800 as a time when, across much of the old empire, peasants worked mostly for themselves, because nobody was strong enough to take much from them.

Small did not mean fair, even then. In Greece, after the palaces fell, the farmer-poet Hesiod complained in the eighth century BC of the "gift-devouring" *basileis*, the local lords who judged disputes, and his own brother Perses bribed them to take Hesiod's share of their inheritance. The small rung came back first, and it came back with its own petty kings.

England gives the clearest case of the small rung rebuilt and then taken over. The Anglo-Saxon codes, from the early seventh century to Cnut's

in the eleventh, bound men into small groups of mutual surety, and the Normans made the arrangement into the frankpledge. Men were sworn into tithings, nominally of ten households, the unit chapter 11 takes apart, and each answered for the others: if one of them did wrong, the rest had to produce him at the district court or pay. The people inside it called it the king's peace. The court rolls of the twelfth and thirteenth centuries show it doing something else as well, with whole tithings fined for a man who had run, or for a hue and cry not raised, and the fine falling on the households that stayed. Historians of the institution read it as a piece of statecraft for a king who had no police, a way of making every neighbour a constable at the neighbours' own expense. It faded in the fourteenth century, after the Black Death, when people moved more and neighbours knew each other less, and constables took its place.

Further north the small rung met in the open. In Norway the Gulating, founded around AD 930, began as an assembly that every free man had the right and the duty to attend, and as its reach grew over fjord and mountain it became a gathering of delegates instead. The kings then narrowed who could choose the delegates, until only their own barons and bailiffs did, and in 1274 Magnus the Lawmender issued one law for all of Norway and turned the things into courts of appeal for the king's law. In England the Normans did not abolish the moots of the shire and the district. They sent a sheriff to sit in them, and the courts where neighbours had settled their quarrels became the places where the Crown collected. Dithmarschen, a marsh of peasant parishes on the North Sea coast, held out against princes from 1227 to 1559, drowned an army of mercenaries by opening its dikes in 1500, and was governed in its last century by judges appointed for life, among whom the richest clan held several seats at once. The free farmers of the north debated at their things while slaves worked their fields, and the Swiss open-air assemblies that are still admired kept out women, foreigners and the landless for centuries.

After a collapse, people rebuild the small rung first.

And when they rebuild it, they keep reaching for the same number. The tithing belongs to a large family. In Exodus, Moses's father-in-law Jethro tells him to choose trustworthy men as "rulers of thousands, hundreds, fifties and tens" to judge the people. Genghis Khan in 1206 sorted his army by tens, hundreds, thousands and ten thousands, and broke up rival lineages as he did it. The Inca counted their taxpayers in tens,

fifties, hundreds and on upwards, and kept the count on knotted cords. In China the statesman Shang Yang bound households in fives and tens in the fourth century BC, and Wang Anshi's *baojia* of 1070 put ten households in a *jia* and ten *jia* in a *bao*, each answerable for the others' crimes. The ten-household unit recurs from the Andes to the Yellow River.

Look at who drew it, though. Almost every one of these ladders was laid down from above, to count men for an army, labour for a road or culprits for a court, and a historian of imperial control in nineteenth-century rural China concluded that the baojia was never self-governing. A clerk had only to threaten to denounce one household to have the whole group in his hand. The grid that lets ten households guard one another lets one official press all ten. The decimal ladder is a tool, and it serves whoever holds the list.

Put on the ladder of rungs, the record is consistent. The cities without kings held at the size of a town, for centuries, and broke when they reached for more. The tithing held at the hamlet and the village. The moot held at the district. Above the district, every one of them was absorbed by a king or turned into his instrument.

So here is the tool, for any store a group keeps, now or after the Fall: a seed bank, a common granary, a club's account, a household's savings after a bad year. Ask of it what the Konya plain would ask. Can everyone see how much there is? Who holds the key? And has the person who counts it ever been sent home? A store that everyone can see is hard to steal and easy to tax. A store with one keyholder is a town with a king, whatever the minutes say.

THE STRONGEST CASE AGAINST

The case is that this chapter romanticises collapse, and its best voice is Bryan Ward-Perkins, a historian of the late Roman world, whose book on the fall of Rome was written against exactly the mood this chapter has been in. He looked at what people left behind. After Rome withdrew from the West, the archaeology shows tiled roofs giving way to wooden huts, good durable pottery disappearing, and the plain sanitation of the towns going with it, for centuries. That is not a peasantry freed from the tax collector. It is people poorer than their great-grandparents, in smaller

and meaner houses, paying tribute to warlords who took it by force, with nobody to appeal to. On this reading, the noble households of post-palace Greece, the fortified manors of China after the Han and the feuds of the north were not triumphs of self-government. They were what desperate people did in a poor and violent world. The absence of a state was not the presence of local self-rule. It was the presence of whoever was strongest nearby.

Two archaeologists who wrote a long book on how inequality was made add the other half. An empty plaza, they argue, can hide an elite that chose not to be buried in gold. Large numbers of people cannot handle the information a town needs without some hierarchy to sort it. And the collective towns this chapter admires were not peaceful: the women's skulls at Çatalhöyük, the burning of Teotihuacan, the human sacrifice at Tlaxcallan, a council-run city of highland Mexico.

I cannot answer the pottery. The tiles are gone, and the people in the wooden huts did not choose the huts. What survives of this chapter's claim, if the critics are right, is narrow: that the small rung comes back first, and that what comes back with it is not freedom but a chance, which the strongest man nearby is usually first to take.

IN PRACTICE

Speak to a district, a few thousand people in perhaps ten villages within a day's walk of one another, in the years after the Fall when nobody is coming.

If the record is a guide, what grows back first is not the moot. It is the household behind its door, then the strong house that takes in the weak ones, and then the bandit. The first bandit roves, takes what is there and leaves. The second one stays, and he stays where there is something he can watch: a mill, a ford, a bridge, a granary. If your district keeps its grain in one place, that place is where he settles.

Disasters give some reason for hope. Sociologists of disaster found that people rarely panic and mostly help one another, and the kitchens, clinics and assemblies that spring up after hurricanes and earthquakes are real. But every case I know of ran inside a state that came back, with phones, courts and money, and the evidence on how long such bodies last contradicts itself. They show what people do. They do not show what holds.

So the work is to build before he arrives. The record offers two pieces, and the third is a proposal.

The tithing. If the households of each village are bound in small groups that answer for one another, then every neighbour is a watchman, and a man who steals, or drifts off to join a band of armed men, has his group asking where he went. The failure is the one the English court rolls show: the group made to pay for the man who ran, until suretyship becomes a fine on the people who stayed, and whoever collects the fine has found a way to tax.

The moot. If the district meets in the open, at a known place on known days, with every household entitled to come and the business read aloud, then whoever would rule has to do it in front of everyone. The failure is the Norwegian one, slow and polite: the meeting grows too big to attend, delegates replace it, and then somebody else decides who the delegates are. Where delegates cannot be avoided, one design has the villages choose them, recall them whenever they choose, and send them to carry a decision rather than to make one.

The granary with a split key. If the district keeps a common store against the bad year, it is the most valuable thing in the district and the first thing a bandit wants. Then it should be visible, counted aloud at every moot, and locked with several locks whose keys sit in different villages, so that no village and no man can open it alone. This is assembled from the visible stores of the Neolithic towns and the parish chest of chapter 12, which carried three locks from 1603, and nobody has yet run a district granary this way after a collapse. Grain that everyone can count is also grain any bandit can count. The counting protects it only while the counters are many.

The failure mode is the militia. A district under threat gathers its best fighters into a standing guard, the guard works, and one season it notices that it is the only armed body in the district and that the granary is behind it. Two of the designs I drew on name it as the first failure: the protector who drives off a raid and keeps a bodyguard, the security caste that stops taking orders. The record has its own version in the fortified manors of China after the Han, which filled with peasants who had become serfs. If every household answers the alarm, as the old hue and cry required, there is no separate caste of fighters to turn. The Swiss and the Dithmarschers kept their assemblies with their own weapons, and other cases in this book

show armed households tearing their republics apart. I don't know which way it tips in your valley.

What this needs, said once: villages close enough to walk between, one person in each who can write and keep a tally, a granary book read aloud, an open field or a hill that everyone knows, and time. One design has each village meet every fortnight and the district's delegates once a quarter. Treat that as a starting guess, not as history.

Part III climbs to the district a rung at a time: the hearth and the tithing in chapter 11, the village and its chest in chapter 12, the district in chapter 13. Somebody always ends up holding the key. What a district can still decide, before he comes, is how many keys there are, and who is watching the man who counts.

The studies, figures and open questions behind this chapter are on the website.

CHAPTER 5

Ordered Anarchy

A young man lies dead in the grass at the edge of a cattle camp in southern Sudan, and the man who speared him is already running. He is not running into the bush. He is running to a homestead some way off across the plain, where an older man wears a leopard skin over his shoulders on the days that matter, and once the killer is inside that yard nobody may touch him. It is the dry season, some year in the 1930s. There is no police post within reach, no court and no prison, and nobody in either camp expects one.

Within the week everyone in the district knows what happened, and knows something more exact than that. They know which of the dead man's kin are bound to avenge him and which are cousins too distant to be bound. They know which of the killer's kin are now in danger on the paths, and which villages will stay out of it because they stand at an equal distance from both sides. They know, give or take a cow, what a life is worth. The man in the leopard skin walks between the two camps and both let him pass. He has no spearmen. What he has is the power to curse the land, the rite the killer needs before he can eat and drink with other men again, and a door he can hold open for the dead man's brothers, who may yield to him without yielding to their enemy.

Nobody here would say they are governed. Yet the whole country is keeping a constitution, one with no capital and no clerk, and its law is written in who owes whom.

I write this before the Fall, for whoever sits at a table after it, from a part of Europe where for most of my life the answer to a killing has been a

uniform at the door. After the Fall there may be no uniform to call. This chapter is about the oldest orders we know that kept the peace without one, how well they did it, and what they cost.

The man in the leopard skin

Edward Evans-Pritchard, a British anthropologist, went to the Nuer at the request of a colonial government that had recently been at war with them and wanted to know whom it was fighting. He found no chiefs worth the name, no councils and no courts, and yet the cattle camps were not in chaos. In 1940 he called what he found an ordered anarchy, and the phrase has outlived almost everything else in his book.

The order lay in the shape of the family. Every Nuer man stood at the end of a line of fathers, and the lines branched like the channels of a river delta, small streams joining larger ones until the whole people met in a single flood. Two brothers' households quarrel, then close ranks against a cousin's. Cousins close ranks against a more distant clan, and the whole people against the Dinka next door. An Arab proverb from much further north says it in one breath: I against my brother, my brother and I against our cousin, the three of us against the world. The anthropologists called it fission and fusion. Who fought whom was decided by nobody. It was read off the family tree, and because everyone could read the tree, everyone could see the size of a fight before it started. That foresight was the main reason most fights did not start.

The leopard-skin chief was the hinge of the whole arrangement, and he was a chief in name only. His homestead was a sanctuary, and his standing came from the earth, not from men. He carried messages between camps, haggled over cattle, and when the families finally agreed, he sacrificed an animal and divided it between them, so that both sides ate from one beast. He could threaten. He could not compel. The day he could have compelled, he would have become a party to the feud and his yard would have stopped being safe.

I should say what kind of picture this is, because it matters for everything that follows. Three kinds of evidence run through this chapter. There is what people said about their own order, there is what the record shows them doing, and there is what outsiders inferred from both. The

Nuer said they were bound by descent. The record, read again by later historians, shows them adopting Dinka captives in great numbers and editing their genealogies to fit. The clean branching tree is partly an inference, drawn by an Oxford man for a colonial office, and I come back to that below.

The man in the leopard skin did not survive the rifle well. An American anthropologist who went back to the Nuer in the 1980s found that cash and guns had done what the colonial office could not. A young man with a rifle no longer needed the earth priest's blessing, and a debt could be paid in money that had no ritual in it. And yet the form came back when it was needed. In 1999, at Wunlit, hundreds of Dinka and Nuer chiefs, elders and women met to end years of raiding between their peoples, sacrificed a white bull between them and agreed to police their border together. I like to think the leopard-skin chief would have known what to do with that bull.

The same order, kept in camels, still runs in the Horn of Africa. Among Somali herders the law is *xeer*, unwritten, held by elders and recited when a case calls for it. Every man belongs to a group of kinsmen who pay and receive blood money together. The anthropologist who lived among the northern Somali in the 1950s recorded the price of a man's life as a hundred camels, and of a woman's as half that. Elders sit under a thorn tree and talk until they agree. The killer does not pay alone and the dead man's family is not paid alone. The debt belongs to the group, and that is why the group disciplines its own. A man who keeps making his kinsmen pay is in time disowned, and then he belongs to nobody.

Every government that came near tried to buy the elders. The British paid stipends to clan heads. The dictator in Mogadishu, who had declared that socialism unites and kinship divides, put elders on the state payroll and armed the clans loyal to him. Much later the insurgents of al-Shabaab killed the elders who would not be bought, in great numbers. An elder is worth buying for exactly the reason he is worth having, because people listen to him, and a bought elder is listened to a little less each year until he is merely an official.

When the Somali state fell apart in January 1991, xeer was what was left. In the north-west, clan elders used it to build something no outsider had managed. Through a run of conferences, the largest at Borama in 1993, which sat for four months and was paid for locally, they agreed a peace,

handed their heavy weapons to a new army and chose a president. Somaliland has kept a far better peace than the south, where conference after conference funded from abroad failed. Then the elders who had made the peace became an upper house, the Guurti, and the house extended its own term six times. A council of mediators with nothing to hold had become a council that would not go home.

Peter Leeson, an American economist, went further than anyone. He compared Somalia's last years under the dictatorship with the years after its collapse and found the country better off without a state on most of the measures he chose: longer lives, fewer infant deaths, more people within reach of a clinic. I read his tables twice. He argues for statelessness as a matter of conviction, he claims more improvements than he tabulates, literacy and schooling fell, and in the 1980s foreign aid had paid for much of the Somali state, so part of what disappeared in 1991 was a donor, not a government. What his tables do show is that the end of the state was not the end of order.

Order without a state is real, and what holds it up is reciprocity and the standing threat of the feud.

Eight years and out

Asmarom Legesse, an Eritrean anthropologist, went to live among the Borana Oromo of southern Ethiopia and came back with the most precise political clock I know of. He published it in 1973 as Gada, and in a later book he argued that it deserved to be read beside the constitutions of Europe.

The Gada does not sort men by age. It sorts them by generation. Every man belongs to one of five classes, and a son enters the system exactly forty years after his father, however old the son happens to be. Every eight years each class climbs one rung of a ladder of grades, from boyhood through warrior years to the grade that governs. For eight years the class in power supplies the officers. The Abbaa Gadaa presides, the Abbaa Bokkuu holds the sceptre, and a war chief leads the raids. Then the whole class steps down together into the grade of advisers, and the next class climbs into its place. Nobody is re-elected. Nobody can be. The calendar does what no court could, and it does it on a date everyone has known since the officers

were boys.

Once in each eight-year term the Borana gather under a sacred sycamore for the Gumii Gaayo, an assembly of thousands that reviews the laws and can remove an Abbaa Gadaa who has failed. When anthropologists watched it in 1996 it was, by the Borana's own count, the thirty-seventh since 1708. People there will tell you that democracy is their culture and not something new. That is what they say, and I set it down as what they say. UNESCO put the system on its list of the world's living heritage in 2016.

Old does not mean gentle. Women held no grade. They had a counter-institution of their own, the *siiqqee*, through which women could halt a fight between men and fine those who had wronged them, and that is a real check, but it is not a seat. The same calendar that retired the officers also scheduled the raids, and the Oromo expansion of the sixteenth century was carried out grade by grade, by young men who needed to prove themselves in war before they could rise. Captured enemies could be adopted as sons, which is generous, and the land they had lived on became Oromo land, which is the other half of the story.

The system's failure has an address. Where the Oromo moved into the wetter highlands of the Gibe in the south-west, they settled, planted coffee and traded in slaves. Now there was something worth keeping. The war chiefs kept their plunder, raised followings of their own, and when their eight years were up they did not step down. By the nineteenth century the Gibe had kingdoms, and the kings of Jimma ruled until 1932. On the dry rangeland of the Borana, where a man's wealth walked on four legs and died in a drought, the clock kept running.

Further east the steppe ran the same experiment with worse luck. The Mongol *kurultai*, the great assembly of princes, made Genghis Khan and his successors, and in 1260 two rival assemblies elected two rival brothers and the empire went to war with itself. Even its famous law, the Great Yassa, may never have been written down, and no text survives.

These orders fail when force, or the wealth that buys it, gathers in hands that no longer need anyone else's consent.

Courts without a constable

Iceland is the cleanest case, and the one I find hardest to put down. Settlers came from Norway from the 870s, many of them families who wanted no king. In 930 they founded the Althing, an assembly that met each summer in a rift valley at Þingvellir, and for 332 years, until 1262, the island had laws, courts and lawsuits and no king, no executive, no prosecutor and no police.

What it had instead was the *goðorð*, a chieftaincy that was less an office than a piece of property. A chieftaincy could be bought, sold, shared or inherited, and there were a few dozen of them. Every free farmer attached himself to a chieftain, and in law he could switch to another if he was badly served. The Lawspeaker, elected for a term of three years and the only salaried official in the country, stood on the Law Rock and recited the law from memory. Quarter courts heard cases, and after about 1005 a Fifth Court heard appeals and broke deadlocks. But the court only found. If you won, you enforced the verdict yourself, with your kin and your chieftain behind you, and if you were too weak to enforce it you could hand your case to a stronger man who would. The worst sentence was full outlawry, which meant that anyone could kill you and nobody might feed you.

Jesse Byock, an American historian who has spent his working life with the sagas, reads them as the portrait of a society obsessed with settlement. Chieftains and farmers arbitrate endlessly, count compensation in ounces of silver, marry off daughters to seal a peace, and treat a killing as a failure of the system, not its ordinary working. A legal historian reading the same sagas says the feud itself was the law: the threat of a killing was what brought a man to court, and the court was how the feud was paused. The sagas are what Icelanders said about themselves, written down long after the fact by people who loved a good killing. The lawbook is a record, though some of it may describe how lawyers wished things worked. The idea of a working, balanced order is an inference from both.

Now imagine the most patient person in the room. He does not seize anything. In 1096 the Icelanders accepted a tithe for the Church, divided in four parts. The churches stood on chieftains' land, many chieftains took minor orders, and the chieftain who owned the church kept the church's share and the priest's share, half of the whole. A chieftaincy had

been a bundle of duties. Now it came with an income, and an income could buy more chieftaincies. Over a century and a half, a handful of families bought or took nearly all of them. The farmer's right to choose his chieftain was still written in the law. There was simply no one left to choose.

What came next has a name, the Age of the Sturlungs, from 1220 to 1262. The great families raised private war bands and burned each other's farms with the families inside. In the autumn of 1241 men sent by a rival chieftain came to Reykholt and killed Snorri Sturluson, the man who had written down the old gods and the Norwegian kings, in his cellar. Five years later the bloodiest battle in the island's history left its dead on a hillside in the north. In 1262 the chieftains swore allegiance to the King of Norway, and the Commonwealth ended. I leave that summer at the Law Rock to chapter 15.

It is worth setting Iceland next to an odder constitution, written by men who did not expect to live long. The pirate crews of the early eighteenth century signed articles before they sailed. They elected a captain who commanded only in battle and could be voted out, and a quartermaster who kept the stores, divided the plunder and settled quarrels. The captain drew two shares to an ordinary sailor's one. Every man was armed and every man could vote. Leeson reads this as self-interest, not idealism, and I think he is right. A crew that knew it would scatter within a few years had no future in which to collect a debt and no son to pass a chieftaincy to, and so it had nothing to accumulate. Iceland had three centuries, and three centuries is long enough for somebody patient.

Societies that know they are temporary write better constitutions than ones that expect to last.

Put every case in this chapter side by side and the ledger reads the same way. These orders worked from the household to the district, strained at the town and the watershed, and broke at the region. Only the Gada claims to have held there, on the Borana's own account and Legesse's, and none of the others held without turning into a state. Iceland and the Gibe crossed that line by different roads, one by selling its chieftaincies, the other by keeping its plunder, and arrived in the same place.

THE STRONGEST CASE AGAINST

The tidy picture may be an anthropologist's. Later anthropologists argued that segmentary theory describes the analyst's diagram more than any people's life, and one of them, working among the Bedouin of Cyrenaica, found that who camped with whom was set by water and pasture, not by the family tree. If the tree was mostly a way of talking, then the balance it was supposed to produce was luck.

The balance also had a direction. One American anthropologist called the segmentary lineage an organisation of predatory expansion, and another showed the Nuer roughly quadrupling their territory in the decades before the British came, at the Dinka's expense. Fission and fusion kept the peace inside the lineage by pointing the violence outward. The leopard-skin chief made peace among Nuer. He did not make it with the people whose pastures they took.

The feud was not cheap either. The Montenegrin clans kept the peace by surrendering or killing their own hotheads. Byock and the legal historians who followed him show Iceland soaking in low-level killing for generations before the great families turned it into war. Helgi Thorlaksson, an Icelandic historian, goes further still. In his reading the Commonwealth was an oligarchy that kept slaves, the farmer's right to switch chieftains was a fiction by the twelfth century, and coercion had been privatised from the start, so that what the sagas call law was the strong collecting from the weak.

Then there is who counted. The Somali woman was worth half a man. The low-caste Somali, smiths and leatherworkers, could neither pay nor receive blood money, which meant they stood outside the law entirely, and the weaker clans won fewer settlements than the strong. The Gada gave women no grade. Call it self-rule, if you like, for armed men.

And none of these orders solved enforcement. Each one handed the sword to the injured party and hoped the arithmetic of kinship kept it sheathed. When a family grew strong enough not to care about the arithmetic, there was nothing above it to say no.

IN PRACTICE

What follows is for a district of a few thousand people, and for the region it sits in. The feud, the mediator and the blood price are historical practice. The written register, the meeting calendar and the rule on

arms are my synthesis, drawn from the cases and not tried anywhere in this form.

The feud does one thing well. It makes every adult answerable for everybody's temper, because a hothead's debt falls on his cousins. If a district organises liability by household groups of a few dozen families, then each group tends to restrain its own members long before any outsider has to. What the feud does not do is protect anyone who has no group, and it does not stop a strong group from harming a weak one. A district that adopts collective liability needs to decide at the start what happens to the newcomer, the widow without kin and the family that has quarrelled with its own.

The mediator should have no power, and must not acquire any. The leopard-skin chief, the Somali elder and the Icelandic Lawspeaker all held standing without force. Their usefulness depended on belonging to nobody's faction and owning nothing anyone needed to take. If a mediator starts to carry arms, collect fees or hold office for life, then the role tends to become a prize, and a prize is what the strongest family goes after first. A district that wants its mediators to stay useful can choose them from people with knowledge and no following, pay them little and in kind, and retire them on a fixed date, as the Borana retire their officers.

Blood-wealth works only if people remember it. The Nuer and the Somali kept their debts in the heads of elders, and memories compress, so that a killing three generations back can be inflated or forgotten as it suits. The synthesis proposal is a register of debts and settlements, kept in two copies by two people from different lineages, read aloud at the district meeting each season. The price itself should be set high enough to hurt the paying group and not so high that it ruins it, because a group that cannot pay is a group that tends to fight instead.

The failure mode has a face. It is the lineage that arms itself, or buys its way into more votes, or owns the thing everyone else needs, the mill, the well or the only working road. Iceland's tithe and the Gibe's coffee are the same story. If one household group can field more armed men than any two others, then the district has stopped being a balance and has become a waiting room. The rule that follows is plain: rough parity of arms among the groups, no weapons at the meeting ground, and a cap on how many chieftaincies, seats or mills a single family may hold.

What it takes is modest. A district of this size needs two or three me-

diators, one person in each household group who can read and write the register, a book kept in two copies, a meeting ground on neutral land, and perhaps a few hours a week of the mediators' time, more in the season of quarrels.

Above the district the evidence runs out. No order in this chapter held a region together without becoming a state, and enforcement, again, is the gap. What a region can borrow is the conference. Borama and Wunlit show that elders from many districts can meet, make a peace, hand over or lock up the heavy weapons and go home. What a region should not borrow is a standing house of mediators, because the Guurti shows what such a house tends to become when nobody can send it home. A regional peace conference with a fixed end date and no power to tax is historical practice. Making it the only regional body is my proposal. A mediator can name a debt and a register can keep it, but when a strong family refuses to pay, somebody must be able to make it, and that somebody is the beginning of a constable. The districts of the last part of this book have to face that question head on, because the feud can only pause it.

The Nuer kept a constitution without a capital for exactly as long as nobody could afford a capital of his own.

The studies, figures and open questions behind this chapter are on the website.

PART TWO

The Captured Lottery

CHAPTER 6

The Machine Against Capture

It is just after dawn in the agora of Athens, some year in the fourth century BC, and a few hundred men are standing in line beside a slab of stone. Each holds a small bronze ticket stamped with his name, his father's name and his village. One by one they push the tickets into narrow slots cut in rows down the face of the stone, until the slab bristles with names. Then an official pours a handful of balls, some black and some white, into a bronze tube fixed to the side of the stone, and lets them fall out at the bottom one at a time. A white ball, and the row of names beside it will sit as jurors today. A black ball, and that row goes home.

Nobody in the line knew last night whether he would sit, or in which court, or on whose case. More to the point, nobody who might have wanted to buy a juror knew either. The men whose rows come up are marched off to their courts before anyone outside can find out who they are.

The stone is called a *kleroterion*, and it is a machine that chooses so that nobody can. The Athenians built it because they did not trust each other, which is the best reason I know for building anything.

I am writing this before the Fall, for whoever has to fill a council afterwards, in a place where nobody is sure who can be trusted with the granary key. The Athenians had that problem too, and they answered it in stone and bronze. This chapter is about their answer, how long it held and how it was broken, and about Rome, which never trusted the lot and learned instead to put a clock on its most dangerous office.

Tickets in the stone

The machine had a designer of sorts. In 508 BC Cleisthenes, an Athenian nobleman, reorganised the whole of Attica into demes, the villages and city wards that each kept their own assembly and their own roll of members, and bundled the demes into ten new tribes. Each tribe took in villages from the coast, the city and the inland hills, so that no tribe belonged to one district or one clan. The roll of each deme was the list from which everything else was drawn. Who was a citizen, and who could put a ticket in the stone, was decided first of all in the village.

From the tribes came the *Boule*, 500 men drawn by lot for one year, in equal shares from every tribe. A man could sit on it twice in his life and never two years running. The Council prepared every matter the Assembly would vote on, and it ran the city between meetings. Each tribe's share took its turn as the standing committee. Every day one member of that committee was drawn by lot to be the *epistates*, the chairman for a single day and night, holding the keys to the treasury and the seal of the city, once in his life and never again. If you wanted to own the man who held the keys of Athens, you had a day to find him, and the rest of the committee sat around him while you tried.

Nearly all the city's other offices were filled by lot from those who put their names forward, for one year. The courts were staffed from a standing pool of sworn jurors and drawn on the morning of the trial, in juries of a few hundred, more for a serious public case. The city paid a day's wage for sitting, called *misthos*, so that a labourer could afford to serve. Mogens Herman Hansen, the Danish historian who spent a career counting the Athenian institutions, estimated that between a quarter and a third of all citizens old enough to serve sat on the Council at least once. The office was not a career. It was something most men's fathers and neighbours had done.

The few offices the lot did not fill were the ones the Athenians thought needed skill. The *strategoi*, ten generals elected each year and re-electable without limit, commanded the army and the fleet, and some of the treasurers were elected too. Remember them. They come back.

What did rotation buy? Josiah Ober, a classicist who has spent much of his work asking why Athens did so well for so long, argues that it bought knowledge. Thousands of men went home from a year on the

Council knowing how the grain was bought, what the fleet cost and which officials lied. The city's knowledge was spread across its villages instead of locked in one house. A council that changes every year cannot remember much, but a city whose men have nearly all sat on that council remembers a great deal.

The lot did not make a crowd wise. In 406 BC the Athenian fleet won a battle at sea off the Arginusae islands, and the crews of the wrecked ships were not picked up. The Assembly wanted the generals tried together for it in a single vote, which was against the law. On the day the motion came to the Council's committee, the man in the chair was Socrates, by the luck of the draw. He refused to put it. Xenophon tells the story. Socrates' day ended, the next chairman put the motion, the generals were condemned, and those who had come home were executed. The city regretted it soon after.

The machine had put a man of conscience in the chair by chance and taken him out again by design. It could not stop a crowd. What it could stop was a buyer.

A seat nobody can predict is a seat nobody can buy.

The account at the door

The lot decided who held an office. Two further procedures decided what it cost to have held one.

Before taking office, every man drawn went through the *dokimasia*, a public scrutiny. He was asked who his parents were, whether he was a citizen at all, whether he paid his taxes and whether he treated his father and mother decently. Anyone could object. It was not a test of skill. It was a test of whether he belonged to the city and owed it anything.

After office came the *euthyna*, the audit at exit, and it is the part of the Athenian design I would most want to carry into the world after the Fall. Soon after leaving office, every official handed in his accounts to auditors drawn by lot from the Council. Then a second board, also drawn by lot, sat for a few days in the agora beside the statues of the tribal heroes, where anyone could walk up and bring a charge against any official who had just left office, about money or about anything else. Serious charges went to a jury, which voted in secret. The auditors themselves were drawn by lot

and were audited in their turn. The city's accounts were carved in marble on the Acropolis, down to the smallest coin, and over the city's life the officials condemned included many generals.

Two more devices guarded the Assembly itself. Under the *graphe paranomon*, any citizen could indict the man who had proposed a decree that broke the law, even after the Assembly had passed it, and a jury decided. A proposer convicted again and again lost his citizen's rights. By the fourth century such cases were routine, by Hansen's count. And once a year the Assembly voted on whether to hold an ostracism. If it said yes, citizens came back months later and scratched a name on a potsherd, and if enough sherds were cast, the man with the most went into exile for ten years. He kept his property. He simply could not be in Athens while he was dangerous.

Every office should end in an account, given in public, to people who were themselves chosen by lot.

Now imagine the most patient person in the room. He is clever, well connected and willing to wait. He cannot bribe tomorrow's jury, because tomorrow's jury does not exist until the balls fall. He cannot buy the Council, because it changes every year and nobody in it can come back next year. He cannot take the treasury keys, because they change hands every night. So he goes where the lot does not reach.

The first door is the elected office. Pericles dominated Athens for years without needing the lot for anything. He was elected general again and again, and his power came from the Assembly's applause, not from any office the lot controlled. Alcibiades went the same way a generation later. As a general he talked the Assembly into the expedition against Sicily, and the fleet and the army he helped send there were lost.

The second door is the speaker's stone on the Pnyx. Any citizen could speak in the Assembly, but in practice a small circle of trained orators did nearly all the speaking. The lot chose the audience. It never chose the speakers.

The third door is the device itself. Shortly before the Sicilian expedition, Alcibiades and Nicias were the two men most likely to be ostracised, and each was in danger from the other's followers. They joined their followers and wrote a third name, Hyperbolus, a lesser politician. The device built to remove the most dangerous man in the city removed the least dangerous, and the Athenians stopped using it. The accounts I rely on

disagree about whether this was the device being captured or the device working, and I think it was both.

The last door is the knife. In 411 BC, with the war against Sparta going badly, a group of conspirators murdered several of the men who spoke for the people's government and frightened the Assembly into voting away the graphe paranomon first, so that nobody could indict what came next. Then they replaced the Council drawn by lot with a Council of Four Hundred taken entirely from their own faction, abolished pay for office and put the kleroterion aside. They could not rig the machine, so they stopped using it. The Four Hundred did not last. In 404 BC, after Sparta had won the war, the Thirty ruled the city under Spartan arms for most of a year. Each time the Athenians restored the lot, the pay and the audit, and the machine they rebuilt after 403 BC is the one Hansen counted. It ended for good in 322 BC, when a Macedonian garrison sat in the harbour and the city was told that from now on only men of property would vote.

The lot guards only what it fills.

Whether the patient man is born or made, and how many of him a village contains, is a question chapter 9 takes up. What matters here is where he went. He never once beat the machine. He walked around it, through the elected command, the orator's stone and the ostracism, and in the end he simply switched it off with men who had daggers.

The machine was built for a minority and it protected that minority well. The citizens of fourth-century Athens were about 30,000 adult men. Women had no ticket, resident foreigners had no ticket, and the enslaved were not only excluded from the machine but in part paid for the free time it ran on. Hansen and others reckon the citizen body differently, at many more in Pericles' day, before the plague, and at fewer in the late fourth century, but no reckoning makes it more than a small share of the people who lived under it.

How far up the ladder did it reach? Every account agrees that lot, rotation and the audit at exit worked from the village of a few hundred to a city-state of about 30,000 citizens, and that the mass assembly was already straining at that size. Above it, nothing like them has held a region or a nation except the citizens' assemblies of our own time, which are drawn by lot and only advise. For most of two centuries, interrupted only by force, it held a city. It never held more.

Six months

Rome never chose its great officers by lot. Polybius, a Greek historian writing in Rome around 150 BC, wrote that the Romans had escaped the cycle by which every simple government decays into its corrupt twin, because they had mixed kingship in their consuls, aristocracy in their Senate and the people in their assemblies. Harriet Flower, a historian of the Roman Republic, counts not one republic but a sequence of them, each with different rules, which is a useful warning against admiring a constitution that kept rewriting itself. What held across the sequence was a single idea. Never one of anything.

The highest office was held by the consuls, two men elected for one year, each with full command and each able to veto the other. Below them every magistracy came in pairs or larger boards, and every holder could block his colleague. For the ordinary citizen there were the tribunes of the plebs, ten men elected each year, whose bodies were sacrosanct, so that nobody could lawfully lay hands on one, and a tribune could stop any magistrate's act by standing in the way and saying no. Rome also brought in the written secret ballot in three laws, for elections in 139 BC, for most trials in 137 BC and for legislation in 131 BC, so that a patron could no longer see how his clients voted.

Collegiality made it slow and expensive to rule alone, and it worked for as long as the men inside it agreed to be slowed down. In 59 BC the consul Bibulus vetoed his colleague Julius Caesar's land laws. He was attacked in the forum and had a basket of dung emptied over his head, and he spent the rest of the year shut in his house. Caesar ruled as if he were the only consul. The veto had not been abolished. It had been made too dangerous to use.

The tribune's veto went the same way. In 133 BC the tribune Tiberius Gracchus brought a law to share out public land among the poor. The Senate found another tribune, Octavius, willing to veto it, and one account says he was bought. Gracchus had Octavius deposed by a vote of the people and dragged from the speaker's place, and then stood for a second year in office running, against all custom. A crowd of senators, led by the chief priest of the city, beat him and hundreds of his supporters to death with the legs of benches. For centuries no political quarrel in Rome had been settled by killing. After that day many were.

Rome had one office built for exactly the moment when two of everything would be too slow. The dictator was one man, named by a consul on the Senate's advice, for one stated task, such as a war to be fought or a riot to be put down, and for at most six months. While he held office the tribunes could not veto him and a citizen could not appeal against him. He had no treasury of his own and depended on the Senate for money, and when the task was done he was expected to lay the office down, early if he could. The story Romans told about it was of Cincinnatus, called from his plough to save the city, who saved it and went back to his plough. Whether or not it happened that way, the Romans believed it, and for about three centuries they used the office and got it back. Quintus Fabius Maximus held it in the war against Hannibal and handed it back. After that war ended in 202 BC, the office fell out of use.

The clock was the part that mattered, and the Romans found out by removing it. From the time of the Gracchi the Senate used an emergency decree with no end date at all, telling the consuls to see that the commonwealth came to no harm, and used it mostly against fellow citizens, as in the killing of Gaius Gracchus and his followers in 121 BC. Meanwhile the legions changed. By the end of the second century BC they were filled with men who owned nothing and looked to their own general, not the Senate, for land when they were discharged. An army that belongs to its general is a vote that cannot be vetoed.

In 82 BC Sulla, a general who had already marched his army on Rome once, did it again and had himself named dictator to write laws and settle the commonwealth, with no time limit. He used the office to kill his enemies by published list. In 49 BC Caesar crossed the river that marked the edge of his command and brought his army into Italy, and by 44 BC he was dictator for life. The office that had saved Rome for three centuries became, without its six months, the office that ended it.

Collegiality and the veto held until someone was willing to use force on a colleague, and once the army became personal, force was always at hand. The dictatorship held until the end date came off. Chapter 16 follows that office into the twentieth century.

An emergency power needs an end date that its holder cannot move.

The best voices against the lot are Cristina Lafont, a philosopher, and Nadia Urbinati, a political theorist, who argue that the modern admirers of the lot confuse an equal chance of being drawn with equal power over the laws. A person drawn by lot, the critics go on, has promised nobody anything and can be removed by nobody, so the many who were not drawn are governed by a few who answer to no one.

The historians of Athens supply the rest of the charge. Read closely, Hansen and Ober show the lot working inside a division of labour. The drawn citizens sat in judgment. The wealthy and the eloquent proposed, and the posts that needed skill went by election. The lot made the audience representative and left the stage to a few. When the audience was swept along, as at Mytilene, where the Assembly voted to kill all the men of a rebel city and repented the next day just in time, or as with the Arginusae generals and the Sicilian fleet, no machine stood in the way. Plato's old complaint, that you do not choose a ship's pilot by lot, has an answer in Athens' elected generals, but the elected generals were exactly where the trouble came in. Demosthenes himself grumbled that a city run by men who changed every year lived hand to mouth.

Then there is who counted. The lot protected the liberty of a small minority of the people of Attica, and part of the free time that liberty needed was worked by slaves. A design is not cleared of that by being clever. And there is a deeper objection. Counted feature by feature, Athens scores high on the devices against capture, and it still fell to armed conspirators and, in the end, to a foreign garrison. Features on paper did not stop men with weapons.

IN PRACTICE

What follows is for a village of about 300 people and the district of a few thousand around it. Lot from a vetted roll, one year in office, scrutiny before and audit after, and an emergency office with a fixed end are historical practice, from Athens and Rome. The tokens in a pot, the stipend paid at the end, the spoken audit and the district's council and jury are proposals drawn from the cases and not tried anywhere in this form. Putting the district's roll in two pairs of hands is mine.

The lot needs no bronze. Names on tokens of clay or wood, all the same size, go into a pot, and a child who cannot yet read draws them in

front of everybody, as a boy drew the palm-leaf tickets in the villages of south India in the tenth century, which chapter 12 tells. If the draw is held on the morning the council first meets, nobody has time to approach the people chosen. A village of that size might draw a small council for a year, with nobody drawn twice until everyone eligible has served once.

The roll matters more than the pot. The lot itself rarely fails. The captures the next chapter describes came at the list of names and at the hands that held the purses, and when they came at the draw it was by stopping it, not by rigging it. If anyone can be struck off the roll for being unsuitable, then whoever decides suitability decides the council. The safeguard is to keep the roll public, read it aloud at the assembly before each draw, and let any adult add a name that has been left out. The failure to expect is plain. The richest family threatens to withhold its surplus unless its man is excused the draw, or a faction has its rivals declared ineligible.

Rotation costs competence, and the village should know what it is paying. A council of strangers to office makes beginners' mistakes in its first months. What it buys is a village in which most adults have held the granary key, know what a harvest is worth and can tell when someone is lying about it. Where skill matters, as with the well, the mill or the defence, the village can elect, as Athens elected its generals, and then watch those elected offices most closely, because that is where the patient person goes.

The audit works without writing. At the end of each year every officer stands before the assembly and gives a spoken account of what came in and went out, with the notched sticks or the chalk marks on the granary wall in front of him. A few villagers drawn by lot check the account against the store, and for some days after anyone may bring a charge. One proposal is that any stipend for office be paid only after the audit, and that deductions come out of it.

Every emergency office should carry a date. If a flood, a raid or a fever requires one person to command, the assembly should name the task, name the end date and mark it in public on a calendar post where everyone can see it, and the date should be set by a body other than the one who commands. Nobody holding the office should hold the stores as well. The warning is that the first failure comes from the commander who declares that the audit must wait until the danger is over.

In the district the same rules go one step up. The proposal I take from the record is a district council drawn by lot in equal shares from each vil-

lage, as Cleisthenes drew his Council from the tribes, and a jury drawn by lot from the whole district to which any adult can bring a council decision that breaks the district's own rules. The failure mode there has a desk. Whoever keeps the district's roll and its accounts holds the gate the lot depends on, so that office too should rotate, be held by two people from different villages, and face the audit like any other.

A village needs a roll of adults, one or two people who can keep the tally, a pot and tokens, a meeting ground, and for most people an hour or two a week, with a day a week from those on the council.

The Athenians kept their machine running for most of two centuries by feeding it names every morning, and lost it each time somebody found a way to stop the feeding.

The studies, figures and open questions behind this chapter are on the website.

CHAPTER 7

The Captured Lottery

A man in Florence unbuckles a leather purse and tips the tickets into his palm. They are small slips of parchment, each carrying a name, and whichever name comes out next will sit in the Signoria, the city's ruling council, for two months. Everyone in the city knows how this is meant to go. The purses are sorted by quarter and by guild, a name is drawn in public, and the name is checked against the rules that void it: the man is away, or a close relative has just served, or he owes the city tax. The man with the purse is one of the accoppiatori, the officials who keep the bags and the keys to them. It is some year after 1434, and he is not drawing at all. He is reading the tickets one by one, picking out the names his friends have asked for, and putting the others back.

Nothing in this scene is forged. The tickets are real, the names on them belong to real men who passed a real vote of their peers, and the purse is the same purse the city has used for generations. The lot has not been abolished. It has been surrounded.

Florence drew its government from leather purses across the fourteenth and fifteenth centuries, and for most of that time it was captured, and for most of that time nobody broke a rule to do it. I call this the Captured Lottery: a draw that is fair at every step anyone can watch, run on a list somebody else has already filled. This chapter is about that somebody. It visits the Florentine purse, the Venetian ballot and the hired stranger the communes called the podestà, Italian answers to the same fear, and it asks of each one the question the man with the purse already knows the answer to. Who chose the names before the draw began?

The purses of Florence

The republic that drew its priors by lot lasted, in its guild form, from 1328 to 1512. At the top sat the Signoria, a standard-bearer of justice and the priors around him, with two smaller colleges beside them, and all of them served short terms so that nobody grew used to the chair. By the early fifteenth century about 5,000 men were eligible by guild membership, in a city where most men were not. They were the pool.

Getting into the pool was the hard part, and it happened in stages. First came the scrutiny. The guilds put forward names, and a committee voted on each one in secret, dropping black and white beans into a box, and a man needed two thirds of the beans to pass. Then the names of those who passed were written on tickets and put into purses, sorted by quarter of the city and by rank of guild. Then, every two months, a few days before the sitting priors left office, the draw: a public ceremony, a name pulled, a name checked against the bars, a new prior.

The city's chancellors and humanists praised the lot as the guarantee of Florentine liberty, and you can see why. No man could campaign for a draw. No family could promise a seat to a friend. The office came to you, or it did not, and the purse kept no favourites.

The archive tells a different story. Between 1343 and 1434 the draw was suspended again and again, and the method was always the same. Armed partisans filled the square in front of the palace, and a Parlamento of whoever had turned up acclaimed a Balìa, an emergency commission with full powers. The Balìa purged the purses. It burned the tickets of the losing side and wrote new ones for its own. Then the lot resumed, fair and public and blind, and drew from purses that now held only the winners.

John Najemy, the historian of Florence's elections, read the whole period as a quarrel between two ideas of the purse. In one, each guild sent its own men, and the purse belonged to the trades. In the other, a small circle of families agreed among themselves who was fit, and the purse belonged to them. The second idea won more often than the first. When the wool workers rose in 1378, the revolt the city remembers as the Ciompi, they won new guilds of their own and a share of the priorate, and for a few years their names went into the purses. In 1382 the purses were purged, the new guilds were undone, and the families around the Albizzi ran the city until 1434. They did not abolish the lot. They kept it running

and kept the purses.

Now imagine the most patient person in the room. Cosimo de' Medici was a banker, and the Albizzi had him exiled. In 1434 he came back. A Parlamento was called, a Balìa was named, and the Balìa chose the accoppiatori, the men who held the bags. Nicolai Rubinstein, who traced the Medici regime through its own council records, showed what came next. For long stretches the accoppiatori simply stopped drawing. They opened the purses, read the tickets and chose the priors by hand, which is what the man in the opening is doing. When the city pushed back in 1465 and 1466 and blind drawing was restored, the work moved upstream, into the scrutiny, into who was allowed into the purse at all, and into a purse within the purse for the offices that mattered. And there was the tax bar. A man in arrears could not serve. Rivals could be assessed into arrears, and friends could find their arrears paid for them.

Cosimo never needed to touch the draw. He went for the list, then for the men who kept it, then for the tax books that decided who could stay on it. Whoever controls the list controls the draw. The Medici held Florence through its own lottery until a French army came over the Alps in 1494 and they fled. The republic that followed, urged on by a Dominican friar, opened a Great Council to every man whose father or grandfather had been eligible, so that the old list became the new door. It lasted until the Medici came back with Spanish troops in 1512, and they abolished it.

Old does not mean good, and Florence's lot did not even do what it claimed. It did something smaller and still useful. It made capture expensive, slow and visible in the archive. That is worth something. It is not the same as keeping a city free.

The Serrata

In the hall of the Great Council of Venice, in 1268, a boy stands beside an urn and draws balls from it, one for each noble who comes up to him. He is the ballottino, and he is there because a child belongs to no faction. The doge is dead and the city is choosing another, and it does so in round after round. The lot cuts the hall down to a small group, that group elects a larger one, the lot cuts that one down, and so on, election and chance in

turns, until a final body of electors is shut away to choose. No family could know in advance who would be in the last room, and by the end nobody could buy enough of the rooms on the way. The rounds differ between the accounts I have, and some of those accounts rest on guidebooks rather than on the archive, so take the shape and not the count. Even the age at which a young noble could first take his seat was, for a while, settled by drawing lots each December, and one noble is said to have been tried for trying to fix the balls.

The doge who came out of that room was bound by an oath, the promissione, which each new doge swore and which grew longer with every reign as the city added what the last one had tried. He could not trade on his own account. He could not receive letters in private, accept gifts, leave the palace without permission, or give his relatives offices. The officers below him worked to a rule of cooling off, the contumacia: after a term, a man could not hold the same office again for a year or more, sometimes several. In 1310 a conspiracy of noble houses tried to take the palace by force. The story the city kept is of an old woman at a window who dropped a stone mortar on the rebels' standard-bearer. What the city built in response was the Council of Ten, a security council with one-year terms, no immediate re-election, never two men of one family, and three heads at a time who served a month each and could not leave the palace while they did. In 1355 a doge plotted with workers from the shipyards to make himself lord of the city. He was informed on, tried by the Ten and beheaded, and where his portrait should hang in the line of doges there is a painted black cloth. The Ten in turn grew into what they were meant to guard against. In 1457 they forced an old doge to abdicate, and the Great Council, alarmed, later cut the Ten's money. The guard against capture needed a guard of its own.

That is the case for Venice, and the Preface put it in one sentence: Venice held for a thousand years against any one man and lost, in the end, to a class. The thousand years run from the end of the seventh century until Napoleon, and in all of them no doge made himself a prince.

But the ballot answered only one question, which noble would sit in the doge's chair. It did not answer who counted as a noble, and that was settled in 1297. Before then the Great Council had admitted new men. Diego Puga and Daniel Trefler, economists who went through the ducal documents for a study published in 2014, found new families among the

signatories as far back as the tenth century, and new families still taking seats in the decades before 1297, men made rich by the long-distance trade who expected a voice. Between 1297 and 1323 the council closed. Membership was confined to families who had sat before, and the door was shut behind them. The council grew large, and then it grew no wider. It simply aged and inherited.

I use the name of that closing, the Serrata, for the first failure any self-governing body should expect: the people already inside close the list behind them, usually in a hard year and usually for now. In Venice the oath, the Ten and the centuries of ballots that visitors admired all ran on top of it. The rounds of lot and election protected the nobles from one another. They protected nobody else.

The economists followed the bill. Once the council was closed, the nobles married among themselves, and marriage tracked wealth. The state's trading galleys were auctioned to nobles, and the trade that had made new men rich became a thing the old men divided. The citizens below them were given the chancery and the great confraternities to run, a consolation that kept them loyal. Over all of it ran an apparatus of informers: stone mouths in the walls for denunciations, a law of 1387 that at least burned the unsigned ones, and from 1539 the State Inquisitors, and with them the stories of men drowned at dawn. The city that no man could capture had been captured, quietly, by a class. Durability can be bought with closure, and the bill comes later.

The stranger with a term

In 1191 a man from Brescia rides into Genoa to govern it. His name is Manegoldo del Tettuccio, he is the city's first podestà, and he has been hired because the Genoese do not trust any Genoese to do the job. The city's consuls, chosen from its own great families, had spent most of the twelfth century fighting one another, and every truce was only as good as the balance between the houses. Manegoldo pulled down the fortified palaces of the feuding factions. When his term ended, the city fell back into its old quarrels.

The communes of northern and central Italy tried this cure from the late twelfth century onwards, and the rules they wrote for it are some of

the most careful anywhere in this book. The podestà came from another city, far enough away that he had no cousins in this one. He served six months, or a year, and then he left. He brought his own household of judges, notaries, knights and guards, so that he would not need to hire locals who owed someone. While he served he could not dine with the citizens, own property in the city, marry a local woman or do business there. Part of his pay was held back as a bond.

What he did all day was ordinary justice. In August 1290 Bologna had a ban on carrying knives cried aloud through every quarter of the city, and within days a man had been arrested under it, tried and acquitted. A Florentine notary put advice for the office into his encyclopaedia, on how a stranger should govern a city that was not his own. It was a trade, and some men made careers of it, moving from city to city.

At the end of his term came the audit, the sindacato. He could not leave the city for some days after his office ended. Syndics drawn from the guilds sat to hear complaints, and any resident could bring one: a bribe taken, a judgment bent, a beating by one of his guards. If the complaint held, the fine came out of the bond. He left the city with what was left. Recent work on the audit finds it neither the clean thing its admirers describe nor the empty show its critics suspect. It was used, and it was gamed, and it was there.

A stranger with a term and an audit is safer than a neighbour with a reputation. The neighbour has cousins, debts, a grudge and a son. The stranger has six months, a bond and a hearing waiting at the gate.

But the stranger was hired, and whoever hired him chose him. The capture of the podestà ran through the councils that appointed him and the syndics who audited him: take the council, hire a friend, and pack the audit. One lord in the Veneto had himself elected podestà and captain of the people together and ruled as a tyrant until a crusade was preached against him, and he died in 1259. More simply, the podestà had a small household against families who could fill whole streets with armed men. He was a referee, not a power. By the fourteenth century most of the communes had passed to lords, the signori, who governed them as their own. The stranger worked where the factions were roughly balanced and both wanted a referee. He could not make them want one.

The scale is easy to say. The lot worked in Florence's guilds and quarters, in pools small enough that the men knew one another's names, and

it held in a single city under constant strain. Florence never let its subject towns, Pisa or Arezzo, into the purses at all, and the podestà did his best work at the size of a town and none above it.

The list in my own time

So here is the same failure in my own decade.

In 2001 an encyclopaedia went online that anyone could edit. Until 2007 the number of people writing it grew. Then it fell. The researchers who studied the decline found that new writers' first edits were undone, by the regulars, by small programs that patrolled the pages, and by rules a newcomer could not find. The people who had arrived in the middle years held the posts, and becoming an administrator grew so hard that few new ones were made. A study of many smaller wikis found the same pattern: as they grew, a few people came to hold them. The rules that kept vandals out were the same rules that kept newcomers out, and the people who wrote the rules were the people already in. Nobody shut the door. The list of people whose edits survived simply narrowed, year by year, and the place stayed open in name.

The second example is narrower and stranger. In the decade I am writing in, groups of investors began to govern shared funds by votes counted in tokens, one vote per token held. That is a property franchise, the oldest kind of closed list, written in new words, and the turnout in such votes is often tiny. None of this machinery can outlast a Fall, and I mention it only for the mechanism. A list that weights the vote by what a man already owns has decided the outcome before the vote.

Neither case needed a law like the one of 1297. The encyclopaedia closed by attrition, one undone edit at a time, and the token vote was closed from the first day by the way the list was written. A Serrata by statute at least leaves a date in the record. The quiet kind leaves only a falling count of newcomers, and by the time anyone counts, the people who could change the rules are the people the rules protect.

The best voice against the lot is Francesco Guicciardini, a Florentine statesman who had watched the purses up close. In his dialogue on the government of Florence, written in 1521, he argued that the lot fills offices with mediocre men, because it gives the same chance to the able and the useless. Election, he held, lets a city find its ablest men. The argument is older than he is and still hard to answer. Nobody draws a surgeon from a bag, so why draw the people who decide on war and taxes? His friend and rival in letters added that two-month terms wiped out the city's memory, and that Rome's open quarrels between classes had been healthier than Florence's false peace.

Venice sharpens the point against me. One synthesis I rely on calls its ballot the most resilient design against capture ever built. Another, following a historian of Renaissance Venice, says that about a hundred families held the real power and that more than nine in ten Venetians had no say at all. Both are true at once, which is the problem. The long record of no internal capture rests, in the account that measures it, on a single paper. And the economists who studied the closure date the city's long stagnation from it: a cartel at sea, a gerontocracy at home and a culture of informers. If Venice proves anything, it may be that closure works, and that a lottery among the insiders is a fine way to keep the insiders at peace with one another.

There is a deeper objection still. Philip Jones, a historian of the Italian city-states, calls the free commune a romantic myth, a story later centuries told about towns that were always run by their richest families. If that is right, the lot, the oath and the stranger were never defences of the many. They were the manners of a class.

I cannot answer all of this. I can say that Guicciardini's remedy, a few wise men choosing the ablest, is a fair description of what the Medici accoppiatori did with their hands in the purse.

IN PRACTICE

For a village, 150 to 500 people who know one another by name, or a district, the 1,500 to 5,000 people of a few villages within a day's walk, the question comes in the years after the Fall when offices have to be filled and nobody trusts anybody to fill them.

If the village draws its offices by lot, and the guild draws of Florence suggest a lot can work among people who know one another, then the draw is the easy part and the roll is the hard one. The roll is the list of who may be drawn. Keep the roll as chapter 6 asked, read aloud before every draw and open to any household that wants to add a name or object to one being struck, and write in the book every name that comes off and why. The rule is short. The body that benefits from a list must not keep it. If the council is drawn from the roll, then the council does not keep the roll. The assembly does, or a neighbouring village does, and they swap.

If a person serves, then a cooling-off follows, a year or more before the same office again, and never two from one household on the same council at once. This is the Venetian contumacia brought down to a village, and it is historical practice at the size of a city, not yet of a village.

If the roll has bars, a debt unpaid, an absence, a relative already in office, then keep them few, write them where everyone can read them, and let the assembly and not the council decide each case aloud. Florence lost its purse less through the draw than through its bars. A rule that strikes debtors from the roll hands the roll to whoever keeps the debts.

If a district has a feud it cannot settle, then it can borrow a stranger. A proposal, built from the communes' rules and not yet tried, has the villages lend each other an arbiter for six months: someone from a village a day's walk away, housed apart, taking no gifts, buying no land, with part of his keep held back until the end of his term, when anyone may bring a complaint at a public hearing before he goes home. The hired podestà is history at the size of a town. Borrowing one between villages has not been tried that I know of, and it carries its own risk: the lending village may come to expect favours from the borrowing one. Let the lending pass round the villages in turn, so that no village is always the one that sends the judge.

The failure mode is the Serrata, and it rarely looks like a coup. It looks like the family that edits the roll, a name left off because the man is "not really from here", a widow struck because her husband's debt is unpaid. It looks like a hard winter, a quarrel with newcomers, and an assembly that agrees to limit the roll to the founding households, for now. If you hear the words "for now" about a list, reopen it that night.

What this needs is short. Enough people to fill the offices and still have others waiting their turn, so that cooling-off is possible. One person in

each village who can read the roll and write in the book. A roll book and a purse that live with the assembly and not with the council. A meeting place everyone can reach, and an evening before each draw for reading the roll aloud.

The purse is leather and the tickets are parchment, and nothing about either is hard to make. Watch the hand that fills it.

The studies, figures and open questions behind this chapter are on the website.

CHAPTER 8

Who Says Organisation

It is past one in the morning in a church hall, and the meeting that began after supper is still going. The tea urn went cold hours ago. Most of the people who came have gone home to children, to early shifts, to bed, and the chairs they left are still standing in their rows. The ones who remain are the ones who always remain: the woman who drafted the paper, the man who knows the rules of procedure, the two friends who arrived together and will leave together. The proposal that was in doubt at nine o'clock passes a little before two, without anything a stranger would call a vote, because there is nobody left in the room to object.

I have chaired meetings like this one, and I have been grateful, more than once, to the people who stayed. Nobody in the hall has broken a rule. Nobody has taken anything. And yet the hall has just been governed by the people with the most stamina, a qualification nobody would have written into a constitution. A sociologist who spent years inside such meetings put it in a sentence: the consensus reached at two in the morning tells you who could stay awake, not what the group wanted.

This chapter is about that hall. It asks why every body of people that meets for long enough ends up run by a few of them, whether anything has ever stopped it, and what a group can do about it on the day it is founded rather than on the day it notices. It goes in three steps: a German party that a socialist dissected from the inside, a women's movement that refused to have officers and found it had them anyway, and the communes of America, the few that lasted and the price they paid for lasting.

The party that studied itself

Robert Michels was a socialist before he was a sociologist. Born in Germany, he joined the Social Democratic Party in the years when it was the largest and best organised workers' party in Europe, and he watched it from the inside. What he saw disappointed him enough to write a book about it. *Political Parties* appeared in 1911, and its finding fits on a banner: who says organisation, says oligarchy. The Preface gave his verdict in a sentence. Here is the machinery behind it.

A party that wants to win elections needs offices, a treasury, a newspaper and people paid to run them, and the German party had all of these, with a salaried staff of officials and editors. The people in those offices learn things the members do not: how to draft a motion, read a balance sheet, manage a congress, talk to the press. They control the paper that tells the members what happened. They know each other, and they come to see their own survival in office as the survival of the cause. The members, meanwhile, have jobs and families. After a day in the factory they are glad to leave the business to someone who seems to understand it, and grateful to the founders who built the thing in the first place. Michels called this the incompetence of the masses, with a contempt worth noticing. Over time the organisation stops being a tool for the goal and becomes the goal, because the people who run it depend on it for their living.

It is worth being exact about what Michels claimed, because the claim is often made bigger than it was. He did not say that officials are wicked. He said that the ordinary working of any body that lasts hands power to the few who run it. That is the iron law, and it is the governing image of this chapter. Organisation breeds oligarchy unless something actively stops it.

The party Michels dissected went on to govern in the first years of the Weimar Republic, the republic that failed in my grandparents' time. I grew up, as the Preface said, in a state whose founders had watched that failure and wrote their rules with it in mind, and I assumed that rules could hold off what Michels described. The next two cases are the one that most worried me and the one that most tempted me to think so.

A party that took the law to its end was the Bolshevik one. In 1921 it banned organised factions inside itself, and the office that kept the membership files and made the appointments, the general secretariat, became

within a few years the seat of a dictatorship. The lists were the party.

Then the exception. In the 1950s Seymour Martin Lipset, an American sociologist, went looking with two colleagues for the case Michels said could not exist, and found it in the International Typographical Union, the printers' union. *Union Democracy*, published in 1956, describes a union in which control changed hands in contested elections for decades. Lipset and his colleagues found four things holding it open. The union had two organised parties, so whoever held office was watched every day by people who wanted it. The members were printers, who read for a living and read what their officers wrote. They had a dense life outside the union, sports teams and bowling leagues and lodges and clubs, where they met each other without the officers present. And the officers were paid barely more than the men at the cases, so an officer who lost an election went back to the composing room without falling very far. Nobody had to cling.

It did not last for ever. When technology changed printing, the trade that held the union together thinned, and the exception thinned with it. A later study of union locals in Northern California found branches that broke the iron law in a crisis, with help from outside activists, but the push came from the national union above them, which is to say from another set of officials. The exceptions are real. Every one of them needed something actively working against the drift: an opposition, a membership that read, a life outside the organisation, an office not worth clinging to.

No group is structureless

In 1970 Jo Freeman, an activist in the American women's movement, gave a talk in Beulah, Mississippi, to a gathering of the Southern Female Rights Union. She had spent years in groups that had set out to do without officers, chairs and votes, because officers, chairs and votes were what they were trying to escape. The talk was printed in 1972 under the name Joreen, as *The Tyranny of Structurelessness*, and it has been passed from hand to hand by every generation of activists since.

Her point was that there is no such thing as a structureless group. There is only a group whose structure is written down and a group whose

structure is not. When nobody holds an office, influence goes to the people who already know each other, who speak well, and who have the time to be at every meeting, which in practice meant the women with independent money. These people do not think of themselves as an elite, and they would be hurt to be called one. But decisions are made among them, often before the meeting, and a member who is not their friend learns what was decided afterwards. When she objects, there is nobody to vote out, because nobody was voted in. Freeman noticed that challenges were met as attacks on the sisterhood rather than as questions about power. She noticed, too, that the press picked its own spokeswomen for the movement, stars that no meeting had chosen and no meeting could recall.

She did not say that informal groups never work. She said they work when they are small and alike, when everyone talks to everyone, when the job is one clear task and nobody has a skill the others lack. That is a household, or a few friends running a stall. Past that, the groups she knew broke into cliques and schisms, and by the middle of the 1970s many of them had come apart. A group with no written structure is captured faster than a group with one, because nobody can vote out a circle that does not officially exist.

Now imagine the most patient person in the room. She does not seize anything. She comes to every meeting, she offers to write the draft, she stays until the end, and she is kind to whoever is still there at two in the morning. In a group with officers, she would have to stand for one, and could be voted down. In a group without them, her first move is simply to remain, and nothing in the arrangement can stop her, because nothing in the arrangement admits she is there. The studies of meetings name three kinds of such capture: by the persistent, by the articulate and by the manipulative.

The cleanest modern case is grimmer than a meeting. Freetown Christiania, a squatted enclave in Copenhagen from 1971, governed itself by an assembly open to every resident and bound to full consensus. When the cannabis market on Pusher Street passed from local dealers to organised gangs, residents tried to call assemblies to curb it, and gang members came to the assemblies and sat there. One objection was enough to block anything, and nobody wanted to be the one who objected. The capture lasted for decades. What ended it was a shooting in August 2023. The next day the assembly voted to close the street, and in 2024 residents, working

with the city and the police, pulled up its cobbles. The enclave survived by giving up the rule of full consensus and calling in the force it had been founded to refuse.

Freeman's hidden circle has a name in another literature. Bruce Bueno de Mesquita, an American political scientist, built with three colleagues a model of how rulers survive, published in 2003 as *The Logic of Political Survival*. Every polity, they argued, has a large body of people who formally have a say, a smaller body whose say actually counts, and a smaller body still, the winning coalition, whose support the ruler cannot lose. When that coalition is small, the cheapest way to keep it is to pay its members privately, in jobs and favours and exemptions, while roads and wells go unbuilt. When it is large, private payment costs too much and the ruler has to deliver things everyone can use. The smaller the circle whose support a ruler needs, the worse the rule for everyone outside it.

The model has two cases this book keeps returning to. In West Bengal, from the 1990s, a third of village council headships were reserved for women. Two economists who studied the reservation found that where a woman held the post, more women came to the village assembly, and the council spent more on drinking water. The coalition the head had to answer to had widened, and the spending followed. The church supplies the older case. From 1268 to 1271 the cardinals assembled at Viterbo failed to elect a pope, deadlocked among their factions while the see stood empty. The townspeople locked them in, cut them to bread and water and, by the usual account, took the roof off. The new pope made confinement the rule in 1274, along with a large supermajority, and the conclave was born. In the model's terms, isolation stopped the trading of private goods and the supermajority made the winning coalition too large to buy.

The founder's shadow

The groups that try hardest to escape Michels are the ones that set out to live together. A sociologist, in a book of 1972 called *Commitment and Community*, looked back at American communes founded between 1780 and 1860 and drew a line: a commune that lasted twenty-five years had succeeded. Of the thirty she studied closely, nine crossed it. The ones that crossed asked a great deal of their members. They required them to give

up property, habits and sometimes family ties, to hand over money they could not get back, to confess to one another, and to treat the community as something sacred. The ones that failed asked less, and most were gone within a few years.

Three decades later an anthropologist assembled a larger sample of American communes from the seventeenth century to the twentieth and found that in any given year a secular commune was over three times as likely to dissolve as a religious one. In a further study he found that costly demands, the rules that cost a member something to keep, predicted long life in religious communes and did nothing for secular ones. A study that followed communes of the 1970s found nearly all of them gone within a dozen years.

Here the three kinds of evidence this book keeps apart go their separate ways. The communes said they lasted because God, or the cause, held them together. That is what was said. The record shows that the ones which lasted demanded the most of their members and made leaving the most expensive. That is what was seen. Scholars infer that a costly demand works as a signal, since a member who has given up this much is unlikely to be faking, and that it binds, since a member who has given up this much has little to go back to. That is inference, and a reasonable one.

This is the knot of the chapter, and I cannot untie it. Chapter 3 argued that the cost of exit is the price of capture: the dearer it is to leave, the more a ruler can take. The communes that lasted are the ones that made leaving dear. A member who had signed over her savings, cut off her relatives and spent her best years learning nothing she could sell outside had nowhere to go, and that was what kept the commune together. One study of the communes concludes that cheap exit is the only sound defence against capture, and shows in its own pages that the communes with cheap exit died young. Both findings are probably true. What made communes last also made them hard to leave, and a place that is hard to leave is a place where capture pays.

The person best placed to collect is the founder. The study of the 1970s communes found that groups held together by a charismatic founder lasted longer at first and then came apart when the founder went. The founder is a commune's first and worst capture risk, twice over. While present, the founder stands above every rule, because the rules were the founder's to begin with. When the founder goes, the authority goes too,

or passes to an heir who has the power without the trust. The Bruderhof, a Christian community of goods founded in Germany in 1920, survived its founder's death in 1935. It nearly did not survive his son, under whom, in the 1960s, many long-standing members and adult children were expelled, families were separated, and people who had surrendered everything on joining left with nothing. The community was small, devout and decades old, and none of that protected the people it expelled.

The most famous case is the one I will not tell, except to say that the Peoples Temple moved its members to Guyana, to a place they could not leave, and that more than nine hundred of them died there in 1978. The case I will tell in full is smaller, and it ends differently.

Marlene Dixon was a sociologist with a doctorate from UCLA and a university career behind her when, in San Francisco in 1974, she founded the Democratic Workers Party. It was a small party of the revolutionary left with a core of cadres and a wider circle of associates. Its members lived together, handed over their assets, worked long days for the party and took part in regular sessions of criticism and self-criticism. Every mechanism Michels named was there, and one he did not dwell on: the founder sat above the structure she had built and the structure answered to her. For years it held. Then, in 1986, the members rebelled. They expelled her, closed the party and sold off what it owned. The accounts do not say what finally moved them, and the sources for the whole episode are thin. What the record shows is that the same people who had taken her direction for years turned and expelled her. The only check left to them was their numbers, and they used it.

The other ending is a commune that planned for its founders from the start. Twin Oaks in Virginia, founded in 1967 by a small group who had read a novel about a planned community, is run by a board of planners serving staggered terms, appointed by the sitting board but overturnable by a members' petition and a secret ballot. Managers of each area of work apply for the job. Every hour of work earns the same credit, whoever does it. Nobody owns a share, so nobody gains by staying and nobody loses much by leaving. It has kept to about a hundred people, and it has lasted far past the twenty-five-year line. So the knot is not a law. Twin Oaks paid for cheap exit with a written structure, and the structure did the work that sacrifice did elsewhere. Damanhur in Italy made the same trade later: by the time its founder died in 2013, his powers had already passed to elected

bodies under a written constitution, and the federation held together.

Put on the ladder, the pattern is plain. The iron law holds from the hamlet to the nation, the group without written structure works in a household and breaks at the hamlet, and the communes that lasted did so at the village, which is also where the arithmetic of the winning coalition is first felt. If you are reading this at the first meeting of something meant to last, the tool is this: decide now, while nobody yet has power, how power is to be taken away.

THE STRONGEST CASE AGAINST

Michels would have read this chapter with a tired smile, and his case deserves its full force. Every exception here, he would say, is temporary or borrowed. The printers' union eroded when printing changed. The Californian locals were rescued by officials from above, which is one oligarchy disciplining another. The German Greens rotated their deputies and split their lists, then divided into fundamentalists and realists, and the realists, who wanted to govern, won. The kibbutzim privatised. Mondragon's managers drifted towards the technocrats. Porto Alegre's participatory budget withered after the party that ran it lost the city, by most accounts, and Chicago's school councils faded. Twin Oaks is a hundred people on a farm. The remedies this chapter offers, rotation and written rules and exit dates, are themselves administered by somebody, and that somebody is the person Michels was writing about. The tired members of the church hall do not become less tired because the rules say they should attend.

Michels drew his own conclusion. He left socialism, moved to Italy, and came to support Mussolini, on the reasoning that if a ruling few was inevitable, it might as well be a strong one that did not pretend. That is where fatalism about organisation tends to go, and it is the strongest reason to resist it.

The answer I can make is narrow. Later scholars pointed out that oligarchy, in the sense worth fearing, means power that cannot be held to account, not merely power held by a few, and that the evidence supports a tendency rather than a law: not iron, but a steady pull. The difference matters. A law cannot be built against. A pull can, the way a house is built

against the weather, provided nobody ever stops maintaining it. Michels is right that the work never ends. He is wrong that it is pointless.

IN PRACTICE

This is spoken to a hamlet or a village, and to any body that means to outlive the people who found it.

If you are founding something, write its structure down at the founding: the offices, how people come to hold them, how long they hold them, and how the structure itself can be changed. A written rule can be voted out. A circle that does not admit it exists cannot. Keep the document short enough to read aloud at a single meeting, and read it aloud once a year.

If there is a founder, set the founder's exit date at the founding, before anybody needs it. Name the day on which the founder leaves whatever office they hold, and a period before they can hold it again. A founder who agrees to this when the group is new loses little. A group that tries to impose it later loses a great deal, and usually fails.

If the group keeps minutes, rotate the person who keeps them. The person who keeps the minutes keeps the group: they decide what was decided, they hold the list of members and the record of debts, and in time they become the one everybody asks. Have the minutes read and approved at the start of the next meeting, and keep the book where any member can open it.

If meetings run late, fix the hour at which they end. Anything not reached by then waits for the next meeting. A decision taken after everyone has gone home is a decision by the patient, and the patient are not always the wise.

Do the participation arithmetic before you trust a meeting. In the Vermont towns that still govern themselves by assembly, about a fifth of the voters come on an ordinary year. In ancient Athens, even with pay for attending, only two to five per cent of citizens ever proposed a motion. In a village of 300, that means a meeting in which a handful of voices do nearly all the proposing. The chair's job is to work against that: to keep a list of who has spoken, to give the floor first to those who have not, and to move any decision about a person to a secret ballot, where the quiet can say no without being seen to.

If an office matters, make it cheap to lose. The officer's ration should be the same as everyone's, so that losing the post means going back to the fields and not falling from a height. Encourage a life outside the organisation, the teams and choirs and work parties where members meet without the officers, and do not be alarmed if two groups form who each want to run things. An organised opposition is the printers' oldest protection.

The failure to expect first is the informal elite that denies being one. Its signs are decisions you learn about after they were made, the phrase "we don't have leaders here", and questions about power answered as questions about loyalty. The remedy is to name the offices that exist in fact and put them up for election. If the circle instead writes itself into the rules and closes the list, that is the Serrata of chapter 7, and it is far harder to undo than to prevent.

None of this needs more than a few people who can read and write well enough to keep minutes, a book for the rules and the minutes, the room the group already meets in, an hour or two a week for the secretary, and an evening a month for everyone else. Above the village the minutes multiply, and chapter 12 asks who keeps them when 300 people must decide together.

The studies, figures and open questions behind this chapter are on the website.

CHAPTER 9

The Corrupt and the Corrupted

A volunteer sits at a desk in a laboratory and is told that, for the length of a game, the money of a small team is in their hands. Some of the choices on offer put more in the volunteer's own pocket and leave the group as a whole poorer, and nobody in the room is going to stop it. In the next cubicle someone else plays the same game in charge of a single person, with less room to take. The researchers who published the game in 2015 had measured each volunteer's testosterone. When they added up the choices, the people given more power and fewer limits chose the corrupt option about six times in ten, the people given less about four times in ten, and the difference was sharpest in those whose testosterone ran high.

There is a more famous laboratory that usually stands at the start of a chapter like this one, with a plate of biscuits on the table. I looked for it in the library this book is built on and did not find it, so it stays off the page until someone has checked it.

The game at the desk is a small copy of the oldest question about rulers. Does power corrupt the people who get it, or do the corrupt go looking for power? It matters which, because the two answers ask for different defences. If power changes people, you limit how long anyone holds it and you check what they did with it. If the corrupt seek it out, you make the door harder to push through. Either way, most of the work turns out to be bookkeeping, and the person to watch is the one who holds the pen. Whoever keeps the record keeps the village.

Four in every hundred

The Preface gave the three traits their names, and I give them once more here so that I can stop using them. Narcissism is the need to be admired. Machiavellianism is the habit of treating people as instruments. Psychopathy is the absence of the brake the rest of us call conscience. Psychologists bundled the three together in 2002 and called them the dark triad. From here on I write about people instead: the narcissist, the schemer, the one without a conscience.

How many of them are there? Fewer than the newspapers say, and more than a village would like. In the population at large the answer depends on where the line is drawn, and the honest summary is a few in every hundred at most, perhaps nearer one, on evidence thinner than the confident figures suggest. The best count in the places where power sits is older and smaller than its fame. In 2010 Paul Babiak, Craig Neumann and Robert Hare, the psychologist whose checklist is the standard clinical measure of psychopathy, assessed a group of managers whom their own companies had picked out for executive development. They used Hare's checklist rather than the managers' own answers, and they found about four in every hundred at or above the clinical threshold, far above the rate they took for the population.

The detail that matters is what the companies saw. The managers' scores on the checklist went with high marks from their own firms for charisma and presentation, and with low marks for responsibility and for working in a team. The firms had singled these people out as talent, and the quality they had singled out was the one the checklist measures.

You may have read that one chief executive in five is a psychopath. The claim went round the world's press in 2016, from a paper by researchers at Bond University, and the paper was retracted in 2018 after the university found that its senior author had copied large parts of a student's dissertation. The number has outlived its retraction. I repeat it only so that it can be recognised and left alone.

The more useful finding is about the gap between being chosen and doing the work. When psychologists pooled the studies of narcissism and leadership, narcissism helped people get picked, modestly, and did almost nothing for how well they then led, with middling levels doing best and either extreme doing worse. A later and much larger pooling of the whole

triad found the same shape and found it weaker: the triad helped a little with being chosen, more for men than for women, and hurt a little with the work. Experts asked to rate candidates in elections around the world scored the autocrats among them higher on psychopathy and narcissism than the rest.

Why would a group choose badly? Because in a room of strangers the narcissist does what we expect a capable person to do. He claims authority early, talks longer and sounds certain, and the people watching mistake the certainty for skill. An interview measures the ability to perform competence, not competence. Chapter 1 drew the line between the two kinds of standing that people grant, dominance, which is deference paid to someone feared, and prestige, which is deference freely given to someone worth learning from. In one set of experiments small groups worked through a survival puzzle together, and both kinds of person ended up steering the group. The prestigious were liked and the dominant were disliked, and the dominant got their way all the same. Dominance looks like competence from below.

The schemer is harder to see than either, because he does not look dominant at all. He looks generous and self-sacrificing, which the people who study him say is what he is best at seeming, and he gathers information the way other people gather friends.

That is the selection half of the answer. The other half is what power does to ordinary people once they have it. Dacher Keltner, a psychologist, argued with colleagues in 2003 that power switches on the part of us that reaches for rewards and switches off the part that watches for danger. In experiments built on the idea, people made to feel powerful were quicker to act, at a card table and elsewhere, and less held back by what others might think. Hormones seem to play a part as well. Testosterone pushes a person towards dominance mainly when cortisol, the hormone of stress, is low, and the safety of high office is one of the things that keeps cortisol low.

Put the halves together and the volunteer at the desk makes sense. A person already running high in the right hormone, handed power with few limits, takes the money more often than the same person with less. Both are true: the corrupt seek power, and power corrupts. Each half asks for its own defence. If power changes people, the answer is rotation and audit, so that nobody holds an office long and what they did with it is

checked. If the corrupt choose themselves, the answer is to make the door narrow, by drawing lots instead of holding campaigns and by letting the community refuse a candidate it knows. A village that builds only one of these has left the other door open.

The quiet door of money

Most capture is quieter than a coup. It is a thumb on the scale of the common purse, pressed by someone with a little more than the neighbours, and it shows only in the accounts.

At the scale of nations the thumb is a lobby. An economist wrote in 1971 that regulation, as a rule, "is acquired by the industry and is designed and operated primarily for its benefit". That was too strong, as later critics showed, but the pattern he named is easy to find. In the United States a large share of retiring members of Congress have gone straight into lobbying, and the rules they wrote travel with them.

A village has no lobby. It has the family that owns the best land, lends seed in a bad year and employs most of the young men at harvest. Economists who have modelled this put the village's problem in a sentence. Local government knows far more than a distant capital about who needs what, and it is far easier to capture, because the poor depend on the local rich for work, credit and land and cannot safely vote against them in an open meeting. A review of the community programmes on which the World Bank had spent so heavily found participation often for show and capture by local elites common.

The most careful measure of capture I have found comes from Indonesian villages, where economists compared ways of drawing up the list of households that would receive poverty relief. Where the list was settled at a full meeting of the community, nearly six households in ten came. Where the meeting was left to the local leaders to run, fewer than one in six came. When the economists checked who ended up on the lists, the village's formal office holders and their relatives were somewhat more likely than equally poor neighbours to receive cash, health cover for the poor and subsidised rice. People who were merely prominent, without an office, were slightly less likely to receive them. The capture followed the office, not the reputation. These are not large differences. Capture in a vil-

lage is rarely a robbery. It is a list drawn up a little wrong, every year, by whoever holds the pen.

Now imagine the most patient person in the room. He does not steal from the fund. He volunteers to chair the committee, because he can read and keep accounts and nobody else much wants to. He sets the meetings for the weeks of the harvest, when the landless are in the fields from dawn, and the meetings that settle the list are full of his tenants, his debtors and his cousins. Every rule has been followed. The quorum is legal. The minutes are in his hand.

The other road runs through concealment. Classical Athens did not so much tax its rich as hand them the bill: the wealthiest citizens had to pay in person, and in public, for a warship or a festival. A man who thought a neighbour richer than himself could challenge him to take the burden over or swap estates entire, and a speech from such a case, from about 330 BC, survives. The rule bred its own vice. The Athenians had a name for wealth kept out of sight, invisible property, and the rich competed to hold more of it.

Iceland showed what happens when money moves with no account kept of it. As chapter 5 told, the chieftains who owned churches kept their own share of the tithe introduced in 1096, and one study adds that they kept it without accounts. By 1220 a handful of families had swallowed what had been a country of independent chieftaincies.

Money's door changes shape as the scale grows. In a household or a hamlet everyone can see what everyone eats. In a village and a district the capture is personal, through debt, land and the timing of meetings, and from the town upward it runs through campaign money and the drafting of rules.

Who keeps the book

James C. Scott, the political scientist we met among the hill peoples who stayed out of states, spent a later book on how states see. He called it legibility. A state that wants to tax and conscript must first be able to read its people, so it gives them surnames, standard measures and a cadastral map that turns a tangle of customary rights into parcels with owners. The map serves whoever reads it. In the worst cases, Soviet collectivisation and

the forced villages of Tanzania in 1973 and 1974, the simplification broke the local knowledge that had fed people.

Writing has always cut both ways. In June 1381 the rebels of the Peasants' Revolt broke into the archives at St Albans and Bury St Edmunds and burned the manor court rolls in the open. A chronicler wrote that they meant to destroy every record of their unfree status, believing that once the parchment was gone no lord could prove a man a villein. Yet in quieter years the same rolls were the tenants' best weapon, because they showed that rents had been fixed time out of mind and could not lawfully be raised. A record serves whoever holds it, and whoever can read it.

The danger is greatest when the keeper of records is also the watcher. Imperial China kept a censorate through dynasty after dynasty, a body of officials whose task was to watch the other officials for corruption. Between 1625 and 1627 a palace eunuch who had made himself master of the court took it over and turned its charges on a circle of reforming officials, hundreds of whom were driven from office, tortured or killed. A captured watcher made the sharpest knife in the palace. The opposite idea, that the governed may read the government's papers, began as a weapon in a quarrel. In 1766 a faction in the Swedish parliament that wanted its rivals' accounts in the open pushed through a law, championed by a country priest from Ostrobothnia, that gave the public access to official records.

A village needs something humbler, and the old crafts of record keeping were made for it. The split tally was a hazel stick notched for a debt and then split down its length through the notches, so that each party kept a half. The wood tore along a grain no one could copy, and when the debt fell due the halves were laid together and had to match. In 1297 a man called William de Boochose carved extra notches into his half to claim a payment he had not made. At the Exchequer the halves were put side by side, the cuts did not meet, and he went to prison for a year and a day. The English treasury used tallies until 1826. In 1834 a careless burning of the old sticks set fire to the Houses of Parliament, which is the tally's lesson in reverse: a record that cannot be forged can still be lost, if it all sits in one place.

Parchment had its own version. A chirograph was an agreement written out twice on one sheet, with the word CHIROGRAPHUM across the gap, and then cut apart along a wavy line through the word. Each

party kept a half, and a forged half would not meet its partner along the cut. The Andes did the same work with string. Under the Inca every community kept more than one knot-keeper, each recording the same stores independently and checking the others' cords, and long after the empire fell, villages there still unrolled their cords in open assembly so that each household could see whether its days of labour had been counted.

That last habit is the one to keep. Every record should be readable by the governed. It need not mean every entry read by every person every day. It means the right to have one's own entry read aloud, and the custom of reading the whole book to the village at its spring assembly, and those two together turn a record from the clerk's tool into the village's memory.

A village also keeps a record that nobody writes down. Gossip is its oldest ledger of who did what, and it works. In experiments where groups could talk about members who held back and then vote them out, cooperation rose sharply, and merely knowing that one could be talked about was enough to raise it. Among Kalahari foragers, an anthropologist who listened for decades to the talk round the fire found that about a third of the criticism was driven by envy, which is levelling doing its job.

But gossip is a ledger anyone can write in, and it fails in two ways. It does not reach far. Past about 150 people nobody can keep the accounts in their head, and a village splits into circles that hear different stories. And it can be forged. Among the potsherds Athenians scratched with names to send a man into exile, archaeologists have found a hoard bearing the name of Themistocles written in only a few hands, prepared in advance and handed out. The European witch trials, most of whose dead were women, began as neighbours' talk about a sudden illness or a failed crop, and turned murderous when courts took the talk as evidence and torture supplied the rest. Gossip works in a household and a hamlet, strains in a village and, with a court behind it, becomes the most dangerous instrument in this chapter.

Money and records are the two quiet doors. Neither needs a weapon, both are opened by people who look helpful, and the village usually finds out only when someone reads the book.

THE STRONGEST CASE AGAINST

The case against this chapter begins with its evidence. The laboratory literature on power has had a hard decade. Power posing, the claim that standing tall changes your hormones and your nerve, rested on a small study and failed when another team tested it on a much larger sample. The Stanford Prison Experiment, long the textbook proof that roles corrupt, was taken apart in 2019. One of the most quoted findings on power and hypocrisy counts among its authors a psychologist later found to have invented data, and the biscuit experiment I left out has not been checked here at all. The dark triad itself may not be one thing. Critics within personality research argue that the schemer and the one without a conscience cannot be told apart by questionnaire, and that the whole may be ordinary disagreeableness and carelessness under a darker name. The effects that survive are small.

Then comes Mark Van Vugt, an evolutionary psychologist, with a harder point. In a real emergency, an invasion or a famine, a hard and unsympathetic person in charge may be what keeps the group alive, as Churchill was in 1940, and a village that screens out every aggressive candidate may be conquered by one that did not. Political scientists add that a society which guards every door against capture can end up unable to build anything or to move in a crisis. And some capture is benign. In parts of Indonesia, researchers found local elites who seized the development money and then shared it out fairly, for the sake of their standing. Scott has his critic too, an agricultural historian who points out that farming before the state was itself ravaged by famine, and that Tanzanian food production rose after the forced villages.

I concede most of this. The numbers in this chapter are small, and some of its famous experiments are gone. What survives is that the rules below do not depend on diagnosing anyone. A rule that no one handles the purse alone binds the honest treasurer and the schemer alike, and costs the honest one an afternoon. It does not need the triad to be real. It needs only that some people, some of the time, take what is not theirs when nobody is looking, and nobody in this argument disputes that.

IN PRACTICE

Here is what a village of 300 and its district of 3,000 could do about the two quiet doors, after the Fall. None of it needs more than a chest,

iron-gall ink, hazel for tallies, a shared calendar and three people who can read and write, so a village could begin it as soon as it has those.

When a village fills an office that touches the purse or the book, it could prefer the lot, drawn from a list the assembly has not refused, to any campaign, because charm cannot be drawn from a bag. Where it must vote, it could ask the people who have worked under a candidate rather than those who have watched him speak, since the record says the confident talker is mistaken for the able one by everyone above him. Two questions help tell prestige from dominance. Does the candidate's influence survive his absence from the room? Does he share what he knows, or keep it back? Followers judge badly in the moment, so the village would do better to judge on the record of past years.

No office holder would handle the common purse alone. Chapter 12 builds the Three Keys for the village chest, and this chapter asks only that the rule reach every store of common value, the grain, the seed, the tools and the relief list. The accounts could be posted on the wall of the meeting place, in the village's own words, after every distribution. The meeting that decides who gets relief could be the whole village rather than its officers, held when the poorest can come and never at harvest. The richest households could carry the heaviest public burdens, the mill and the winter feast, and any household could challenge another that claims to be poorer than it looks. A check from outside, at a time nobody chose, is the district's work, and chapter 12 gives its evidence.

The village could keep its land roll, its minute book, its debts and its roll of members in iron-gall ink, which does not wash off, and read the whole register aloud at the spring assembly. Each register would have a twin in another place: the village keeps one copy and the district holds the other, brought over each spring. Every adult would have the right to have their own entry read to them, in daylight and before the keyholders. Debts between households could live on split tallies, so that someone who cannot read still holds a receipt they can check with their fingers.

Gossip is the cheapest audit a village has, and it could be heard rather than hushed. The rule is that talk may start an inquiry but may not finish one. An accusation goes to the assembly with the accused present, what someone saw counts for more than what someone heard, and shaming is never the punishment. The failure to watch for is the rumour campaign: one person carrying different stories to different circles of a village too big

for everyone to compare notes, until a neighbour is ruined and nobody can say how. When the stories that reach the assembly do not match, the first question is who carried them.

The district holds the second copies, writes its water and boundary agreements as chirographs cut between the villages concerned, and can overrule a village whose officers have captured it.

The first failure is the treasurer nobody checks. Most villages would have one person who reads well and keeps accounts willingly, and everyone would be grateful. The grateful village stops reading. A boundary in the roll moves a little, a debt here and there grows, a small fee appears for writing things down, and nobody notices because nobody looks. What stands in the way is the reading of every new entry before the other keyholders, with loss of office and of land for any entry that does not match what was agreed. A village with only one person who can read could make teaching a second and a third its first public work.

The studies, figures and open questions behind this chapter are on the website.

CHAPTER 10

The Case Against

It is a wet evening at the end of October and I am kneeling on the floorboards in front of the lowest shelf in the house, the one nobody looks at. It holds the books that say this book should not be written. I put them there one at a time over the years of reading for this book, and I put them low on purpose, so that taking one down means getting onto my knees.

There is a philosopher who argues that most people should not vote. There are two political scientists who went back to a summer of shark attacks on the New Jersey shore and found voters punishing their president for the sharks. There is a philosopher who calls citizens' assemblies drawn by lot a shortcut that leaves everyone else behind. There is a speech made in New Delhi against the village, and a stack of anthropology that says the peaceful forager is a story we tell about ourselves. At the end of the shelf stands a scientist of history who says it hardly matters what anyone builds, because the wheel turns and takes it down.

I want councils that work with no state above them, and I owe the people who will build them this shelf more than I owe them my own. A book of designs that has not been through its critics is a brochure. So this chapter belongs to the critics. I mean to let them win where they win, and I expect that to be most of the way. At the end I will say what is left standing, and it is less than I would like.

Hobbits, hooligans and sharks

Jason Brennan, an American philosopher, published a book in 2016 whose title is its argument: *Against Democracy*. He sorts citizens into three kinds. Hobbits know little about politics and do not much care. Hooligans care a great deal and follow politics the way supporters follow a football club, collecting the facts that flatter their side and waving away the rest. Vulcans weigh the evidence coolly and change their minds when it changes, and they are rare. Most voters, he says, are hobbits, and most of the others are hooligans. From there he builds what he calls the competence principle. A person bound by a decision is owed a decision made competently and in good faith, as a defendant is owed a jury that is sober and awake. A mass electorate, in his account, is not that jury, and so he entertains what most of us were raised not to: votes weighted by knowledge, a veto held by the informed, a test before the ballot.

The surveys behind him are dull and devastating. About a third of Americans cannot name the party that controls their House of Representatives, and the share has hardly moved while schooling has spread. An economist goes a step further. If voters' mistakes were random, he says, they would cancel out, and the informed few would decide the result, which is the comfortable theory of why ignorance does not matter. He found that the mistakes are not random. Voters lean the same way, against markets, against foreigners, towards jobs for their own sake and towards gloom, and mistakes that lean the same way add up instead of cancelling.

Christopher Achen and Larry Bartels, two political scientists, asked a harder question. Suppose voters know nothing about policy. Can they at least judge results, keep the government that delivered and throw out the one that did not? Their best-remembered answer came from the summer of 1916, when sharks killed bathers along the New Jersey shore and the resort towns lost their season. In November, they found, President Wilson did worse in the beach towns than in the rest of the state, as if he had sent the sharks. Voters punish droughts and floods they did not cause, reward the last few months of income and forget the rest, and above all take their opinions from their party instead of choosing a party for its opinions. The folk theory, in which people hold views and elect those who share them, is in their account simply false.

Here I thought I had them. Two younger political scientists went back

to the sharks with every election from 1872 to 2012 and found an effect they could not tell from zero. The shark had been a fluke. But as I read on, the central finding survived the loss of its most famous illustration. Voters still vote as a team, and the team still tells them what to think. The critics lost a fish and kept the argument.

The answer everyone reaches for is the test: let the informed decide. The record has a reply to that too. Mississippi wrote a literacy test into its constitution in 1890, and the men who administered the test decided who had passed. Until federal law intervened in 1965, most Black citizens of the state could not vote. The test is the government. Brennan meets the objection with safeguards, and every safeguard is something somebody must administer. I have no answer to the ignorant voter. People who may one day meet in a hall with no newspaper outside will know less than the hobbits, not more, and nothing in this book changes that. What a design can change is what the hall is asked to decide.

The drawn room and the small place

Of everything I read for this project, the work on lot gave me the most hope, and the case against it hurt the most.

Cristina Lafont, whom chapter 6 met, wrote *Democracy without Shortcuts* in 2020 against people like me. An assembly drawn by lot, she argues, is a shortcut. It asks everyone who was not drawn to defer blindly to a few strangers they never chose and cannot remove. And it has a trap built in. If the assembly deliberates well, its members learn and change their minds, and then they no longer resemble the public they were drawn to stand for, so the public has no reason to defer to them. The better the deliberation, the weaker its claim to speak for anyone else. Two theorists add that an election does two things lot cannot. It lets voters choose, and it lets them punish, and a member who can never be returned has no reason to behave in office and every reason to think about the job afterwards.

Then there are the people who never sat down. When officials send out invitations to an assembly by lot, about nine in ten of those invited say no. What gathers is not the public but the part of the public that likes meetings. France drew a convention of citizens after the yellow-vest protests, and the president promised that what they proposed would go forward

without a filter. They met over a series of weekends, heard their experts, wrote a long list of measures and handed it over. He struck several out at once, among them a tax on dividends and a lower motorway speed limit, and the law that followed kept a fraction of the rest. Asked to mark the government's response, the members failed it.

Now imagine the most patient person in the room. She is not one of the citizens. She was there before they were drawn and she is there after they go home. She wrote the question they were asked, chose the experts who briefed them, ran the tables at which they talked and drafted the text they voted on. She may be honest. She may be the best public servant in the country. The design never asked, and that is the point. In the modern assemblies capture does not need a tyrant. It needs a secretariat. Here Lafont's critique and the organisers' record meet. The citizens drawn by lot were never the danger. The people who drew them were.

The case against the small place is older and angrier. On 4 November 1948 Bhimrao Ambedkar, who chaired the committee drafting India's constitution and had been born into a caste the villages treated as untouchable, rose in the Constituent Assembly to answer those who wanted the village republic as the new nation's unit. "What is the village but a sink of localism, a den of ignorance, narrow-mindedness and communalism?" He was glad, he said, that the draft had chosen the individual instead.

The modern evidence takes his side. When aid agencies handed money straight to village committees, the World Bank's own review, which chapter 12 takes up, found that it went, again and again, to the literate, landed men who ran the village already. In Pakistan's Punjab, water boards handed over to farmers' organisations were taken by the large landholders, who starved the plots downstream. The village is where the landlord lives. An economist working in western Tanzania counted the killings of old women accused of witchcraft across a district of villages and found that they doubled in years of extreme rain, when harvests failed and there were too many mouths. The killers came most often from the victims' own households, and the village's vigilance committee shielded them from the police. Small is where the misfit is crushed. Even the small institution its admirers love most, the New England town meeting, works best below about five hundred voters and thins as towns grow. And the romance of the small, the belief that hierarchy is a disease of size, has been borrowed more than once by the far right, from the blood-and-soil writers

of the last century to the eco-fascists of this one.

In the critics' hands lot and localism are the same complaint. Whoever stands closest to the mechanism owns it. Put their cases on the ladder and the pattern is plain. Assembly and levelling hold at the hamlet and the village and fail above them, lot has worked only inside a closed citizenry, and where the village's misfit was rescued at all, the rescue came from the rung above.

Old does not mean good

The first part of this book leaned on the deep past, and the deep past has its own critics. They make four complaints, and I can rebut none of them cleanly.

The first is the noble savage. The phrase is usually pinned on Rousseau, who never used it. An anthropologist traced it to a French lawyer's account of New France in 1609 and an English play of 1672. The gentle forager has always said more about the people painting the picture than about the people painted.

The second is the count of the dead. Chapter 1 has already set the Kalahari's homicide rate beside the insulted meat. The critics' tables go further. An archaeologist assembled a famous table of violent death in societies before the state, and an economist pooling the best samples put deaths in war at between one in eight and one in seven. Then two anthropologists went through the foraging societies most like our ancestors and found that more than four in five of their killings were between individuals, a quarrel, a revenge, an execution, not war between groups. Both sides have a point and neither has a clean sample. The tables were mostly compiled by authors arguing for high violence, and many of the societies in them already lived beside farmers, traders and states. The book cannot say the ancestors were peaceful. It can say they killed, and that how often they killed in war is unsettled.

The third is the window. The foragers whom anthropologists watched in the twentieth century were not survivors from the Stone Age. A revisionist of the Kalahari argued, against Lee, that the San had been tied to herders and to trade long before the anthropologists arrived, and chapter 1 left that quarrel open. Every forager society in the literature lived at the

edge of somebody's state, on land nobody else wanted. What they show is how people level power when they can leave, not how all people once lived.

The fourth is the confederacy. It is a much-loved claim that the Haudenosaunee League shaped the American constitution. An ethnohistorian went looking for the documents and did not find them. The League itself was no simple democracy. Its chiefly titles were held in particular lineages, and when the American war came in 1777 a Mohawk war leader with British guns went round the councils, and the League split.

The critics are careful to separate three kinds of evidence, and I should be too. What these peoples said about themselves was often egalitarian. What the record shows them doing was more mixed. What outsiders inferred was coloured by what the outsiders wanted, whether that was a noble savage or a brutal one. I have no answer here either. What survives the cross-examination is narrower than the hope and still useful. The Levelling Floor was real, it was enforced, sometimes by killing, and it held only where nobody could store much and anybody could leave.

The wheel

The last book on the shelf is the most patient of all, and it says none of this matters.

Polybius, the Greek historian of Rome's rise whom chapter 6 met, described a wheel. Kings become tyrants, nobles overthrow them and become oligarchs, the people overthrow the oligarchs and become a mob, and the mob welcomes a strongman. He believed Rome had broken the wheel by mixing all three, consuls, senate and assemblies, in one constitution. Rome had only slowed it. Within his own lifetime the Gracchi raised the poor against the senate, and after him came Marius and Sulla, then Caesar, then an emperor. Ibn Khaldun, writing in North Africa in 1377, saw the same wheel turn on the cohesion of a group, which he called asabiyyah. Hard men from the margins take a soft city, and within four generations their descendants are soft. The ruler replaces his own people with paid soldiers who owe him everything, as an Abbasid caliph did when he built a new capital at Samarra and filled it with Turkic slave soldiers, and the next hard men from the margins walk in.

Peter Turchin, a scientist who set out to turn history into equations, has tried to measure the wheel. In his account a long peace makes more people and a richer elite. Wages fall as hands grow cheap, the elite breeds more aspirants than there are seats, the state goes into debt, and the frustrated aspirants raise the poor against those who hold the seats. The cycle runs two to three centuries. He built a large database of past societies to test it, and in 2010 he predicted that unrest in the United States would peak around 2020. His critics, among them the man who first built the theory, say he bends the variables to fit. A historian of inequality goes further. Nothing in recorded history has levelled wealth, he argues, except war, revolution, the collapse of states and plague. To him even the wheel is too hopeful.

I was born in a country that had watched the wheel turn within living memory. Weimar, as chapter 16 tells, was not overthrown from outside. Its own emergency article was opened again and again, lawfully, and in the end the strongman came in through the same door. Polybius would not have been surprised.

The critics' last blow lands on my own instrument. The research behind this book scored the arrangements in it for how well they resist capture, and the scores were wrong in both directions. Athens and the budget assemblies of Porto Alegre scored well and fell. The Amish scored middling and Venice poorly in that tally, and both lasted, Venice for a thousand years, though another synthesis I rely on calls its ballot the most resilient design ever built. Asked why, the scoring named four things a list of rules cannot see: size beyond the village, who holds the weapons, who owes whom money and favours, and whether the arrangement lives inside somebody else's state. Those four are the spokes of the wheel. A rule on paper is a brake, and a brake does not stop a wheel.

So here is what the shelf leaves me. The critics win on the voter and on the romance. The cycle is real, and the length of the cycle is what design changes.

THE STRONGEST CASE AGAINST

The strongest case against this chapter is the case for the book, and I will make it as well as I can, knowing it is thinner.

The critics of the voter have not found a better master. An Indian economist observed that "no substantial famine has ever occurred in any independent and democratic country with a relatively free press". The ignorant voter, whatever else he gets wrong, removes a government that lets him starve. Where institutions are weak, economists found, the death of a single ruler shifts a country's growth, and where they are strong it hardly matters. The best defence of the vote is not that voters are wise but that they can sack people.

The critics of lot attack assemblies run by a secretariat and asked to write law. Nobody has to build those. A body drawn by lot that can only say no, to a budget or to an emergency that has outrun its clock, asks less of its members and offers less to whoever runs the secretariat. The critics of the small attack villages with no court above them, no outside audit and no road out. The critics do not win on design, because the designs they defeat are the ones that never asked who would capture them. Asking that is the capture test, and it is what this book adds.

I notice how much of this rests on designs nobody has tried. Political scientists found that no democracy has fallen above a certain level of wealth, the income Argentina had in 1975, and the people this book is for may be far below it. The famine line was drawn in countries with newspapers and railways. The veto-only lottery is a theorist's proposal. The case for the book is an argument. The critics' sections are evidence.

IN PRACTICE

What follows is for the reader about to start Part III, where the book climbs from the hearth to the planet and proposes a design at each rung. Carry the critics with you. Their questions are the most useful thing on the shelf, and they cost nothing but the willingness to hear them asked.

Who is ignorant here, and does it matter? If a design asks everyone to judge a technical question, the granary's accounts, the height of the dyke, the dose of a medicine, then expect the hobbits' answer and the hooligans' noise. If it asks people only to judge results they can see on their own plates, and to remove those who failed, then their ignorance matters far less. Removing rulers by vote is historical practice with a long record. Restricting a general assembly to that and little else is my proposal.

Who steers the room? If a body is drawn by lot, ask who writes its question, picks its witnesses, runs its tables and drafts its text, and how long that person has held the post. If the answer is the same person every time, then the lot is decoration. My proposal is that every such office rotates and is itself drawn. The idea that an assembly drawn by lot should hold a veto rather than a pen is a theorist's proposal, not historical practice.

Who is the landlord? If one family holds the mill, the well, the seed or the book, then a meeting of equals in that village is a meeting in that family's kitchen. Look for a court above the village, an audit from outside it and a road out of it. Ambedkar's individual needs all three, and chapter 12 shows what an outside audit did for village roads.

Who was left out of the story? If the account of an arrangement comes from its own elders, read it as what they said, then look for the record, then for the outsider's inference, and ask who in each was not asked: the women, the slaves, the young men who left, the old woman with red eyes from the cooking fire.

Where is this on the wheel? If a design is new and its founders are poor and close, it may hold for a generation on goodwill alone. Ask what it does when the founders' grandchildren are comfortable and there are more of them than seats. A design with no answer to that question is a design for the first turn only.

The failure mode is the critic's case turned into a weapon. If the people cannot judge, then someone offers to judge for them. If the assembly is steered, then someone offers to steer it honestly. If the village is cruel, then someone offers to govern it from outside. Each is the same patient figure in a new coat, and the epistocrat's test, the permanent secretariat and the district governor each began as an answer to a real critique. When the critics' questions are asked, they should be asked of the person asking them too.

A village can put these questions to any rule before adopting it, at an ordinary meeting. It needs one person who can read the proposed rule aloud and write the objections into the village book, a second person, chosen because they oppose the rule, to argue the case against it, a room the whole village can reach, and perhaps an hour a week in the season when rules are made. Athens had a formal version: any citizen could prosecute a man for proposing an illegal decree, and the proposer, not the assembly, stood trial. That is historical practice. A standing critic named for each new rule

is my proposal.

I put the books back in the order I took them down, on the lowest shelf, at the height of my knees. If anyone ever has to build a council from nothing, these are the books I would hand them before mine, because mine only says how, and theirs say why it fails.

The studies, figures and open questions behind this chapter are on the website.

PART THREE

The Ladder

CHAPTER II

The Hearth and the Tithing

A man stands in the wet grass of an English churchyard, some spring in the twelfth century, with his neighbours in a line behind him, and waits for the sheriff to call his tithing. He is its chief pledge. The sheriff rides his circuit and holds the view of frankpledge, and at the view every free man must be found in a tithing, and every tithing must account for its men.

He has brought all of them but one. The missing man took what was not his and was gone before morning, and the hue and cry, which every household was bound to raise and follow, was raised too late to catch him. The sheriff does not ask where the man went. He asks why the tithing has not produced him, and when no answer comes, his clerk writes a fine against all of them together.

The men in the line will pay it out of their own stores. Each of them knows to the sack what the others hold, which house can bear its share and which cannot, and not one of them can read what the clerk has written. They do not need to. What they have is older than the roll: a lifetime of watching each other, and, for debts, the notched stick split down its length, one half in each hand, a record two people can keep honest without either being able to read.

I imagine them walking home angrier at the runaway than at the sheriff. That anger was the design. This chapter is about the two smallest rungs of the ladder, the household and the hamlet, and about the old discovery that the cheapest police are neighbours who will pay for each other's crimes. It is also about what that discovery costs, and about the

place where no neighbour can see at all.

Every neighbour a constable

Chapter 4 told how the tithing came and went. Here I want to look inside it, because it is the best-recorded attempt anyone has made to govern a hamlet by making its households answer for each other.

The duty is older than the Normans. Chapter 4 followed the surety, the *borh*, through the Anglo-Saxon codes and watched the Normans harden it into frankpledge after 1066. What chapter 4 did not do is go inside. Every free man past boyhood, clergy and great lords excepted, was enrolled in a tithing, and the tithing was held liable for every member in it. The sources do not agree on what a tithing was, ten households or ten men under a chief pledge, but they agree on the duty. If one of yours did wrong, you brought him to the court. If you could not, you paid. If you heard the cry, you ran.

The sheriff came only for the view, when he inspected the tithings and heard what they presented. Between views the tithing had one tool of its own, the hue and cry. Whoever found a wrong raised the alarm, and every household that heard it was bound to leave its work and follow until the wrongdoer was caught or lost. A cry not raised was itself an offence. So was a cry not followed. The village had no constable, but at the shout it had every able man it held. In 1166 a royal ordinance issued at Clarendon went further and swore men of each district and each village to name the suspected among their neighbours. The duty to tell had become an oath, and the neighbour who knew and kept silent was now forsworn as well as liable.

William Alfred Morris, who wrote the book on frankpledge in 1910, followed it through the rolls and showed how the Normans took an English habit of mutual surety and made it an instrument of their own. He read it as the work of a king without police, and the phrase that has come down from his reading is the one I would keep. Mutual suretyship makes every neighbour a constable. Nobody has to be paid to watch, because everyone pays if nobody watches. The research is clear about when it held. The tithing worked as a watch while its men were peers who lived close enough to see each other's doors. Where the houses were scattered, or a

lord's man sat inside the tithing, it became a list on a roll and nothing more. A man thinking of stealing a cow does not have to fear a distant king. He has to fear the nine men who would lose their own grain if he ran.

That is how the people inside it spoke of it, as the king's peace, the fellowship of peace. The rolls tell a harder story. The court rolls of the twelfth and thirteenth centuries show whole tithings fined for a man who had fled, for a cry not raised, for a fugitive not caught. The sheriff on his circuit, with a clause that made every tithing liable for every lapse, could find lapses wherever he looked, and the fines ran upward to him and to the crown. A man with a grudge could commit a crime and run on purpose, knowing the cost would fall on the neighbours who had crossed him. Inside the tithings, the record shows kin who kept quiet about a brother's petty theft, misfits and poor widows made to carry the blame, and feuds between one tithing and the next. Modern scholars infer a simpler mechanism under the rhetoric of peace: each man was the others' hostage.

The tithing was one rung of a decimal ladder, and chapter 4 has followed such ladders from Jethro's captains of tens to the baojia of 1070, all built by rulers who wanted every household counted. When the English one faded in the fourteenth century, as chapter 4 told, it was because neighbours had stopped knowing each other, and that is a condition a hamlet after the Fall would not have.

Where there was no sheriff, the liability stayed sideways. Saga Iceland, the country of chapter 5, priced every injury in silver and made outlawry the last sanction, and the man who won his case had to enforce it himself. Between the two lies the version worth keeping. The tithing worked at the size of a hamlet because ten households can see each other. It was captured from above because the fine went to whoever held the roll. A tithing after the Fall would have no sheriff to pay. Its fine would go to the household that was wronged, and the neighbours who chose not to look would be paying the victim, not a lord.

The house with the door shut

What passes between two people in a bed and a kitchen is the ground of PAIRING, the companion book, and I leave it there. Here the house

is a small polity: a store of food, a set of tools and weapons, and someone who speaks for it at the tithing.

On this rung the record disagrees with itself more sharply than anywhere else I have read. Several of the readings I rely on mark the old levelling coalition, the many holding down the one, as working in the household. Another marks it failed, and gives the reason in two words: patriarchal violence. The record leans to the second, and the strongest case against this chapter, below, gives the Icelandic evidence. The Kalahari evidence that chapter 1 used to show the levelling coalition at work points the same way from the other side: a household holds too few adults to overpower one strong man who has decided to rule it. And the Utku families of the Back River, whom chapter 3 visited, managed anger in winter by the freeze-out, a silence that left no mark anyone outside could see.

That is the point of this section. The household is where capture is invisible, so the hamlet must be able to see in.

Now imagine the most patient person in the room. He never strikes first. He takes charge of the key to the root cellar, because someone has to. He is the one who goes to the tithing and speaks for the house, so the neighbours hear only his account. He keeps the bow and the axe by his own bed. When food is short he names a danger outside, a raider, a rival family, and asks for the right to decide alone until it passes, and it never quite passes. The protein goes to him first. None of this breaks a rule, and none of it can be seen from the lane.

What stopped such men, where anything did, came from outside the door. Among the Igbo, women who held their own councils had a remedy for a man who wronged his wife or broke the women's rules. They called it sitting on a man: they gathered at his house, shamed him in public, blocked his door and refused him trade until he made amends. In the English tithing, the neighbours who would pay for his violence beyond his own walls had every reason to ask how his wife came by her bruises. Nothing in the record suggests a household ever freed itself from such a man by its own procedure alone. The Utku elder whose quiet remark settled a family's course, and the Icelandic farmer whose word was law in his hall, were checked, if at all, by the people in the next house, the next camp, the next valley, who could take in whoever fled.

The proposals I have read go further and sketch a design for the rung, and I give it as what it is, a proposal no one has tried. I call it the Hearth

Council. Every adult and older child meets after the evening meal. It chooses a steward by full agreement and can unchoose one the day the steward can no longer do the work. Food, seed and weapons are inspected at a weekly council, and a hidden hoard is a breach in itself. If danger forces one person to command, the command ends when the danger ends, and if it does not end, the rest refuse together. A member who leaves takes clothes and tools. Another proposal adds that the stores should be held in two equal halves, one by the adult women and one by the men, with a women's council able to block a decision. It warns in the same breath that in a hungry winter a stronger man would try to put both halves under his own hand.

Behind all of this sits the question of force. Chapter 1 told how levelling once rested on rough parity: anyone could make a poisoned arrow, and everyone had to sleep. A household after the Fall might not have that parity. If one man holds the only gun and the rest have kitchen knives, the sleeping tyrant is no longer in danger, and the oldest check of all has gone. The research leaves this as an open question, and so must I. The design answer is to keep weapons dispersed and the stores in common sight, and to make sure the hamlet knows where every gun is kept.

The first failure on this rung is not a tyrant. It is a sick breadwinner. In a house where one person knows how to plough, hunt or mend the roof, a fever in that person is a famine. The design asks that no essential task in the house be known to one person only, and if that cannot be helped, that the house join itself to a hamlet before the fever comes.

Split before you stack

Robin Dunbar set the brain sizes of monkeys and apes against the sizes of their groups, carried the line on to humans, and arrived at about 150: the number of people one person can know as people. Other studies have found layers of roughly that shape in lists of greeting cards and in records of telephone calls. A reanalysis in 2021 with newer statistics found that the same data could support a group of a handful or of many times that. The number is contested. What survives the dispute is the stress point: somewhere in that range, people who meet every day stop knowing everyone, and something has to change.

Gregory Johnson, an archaeologist, gave the change its name in 1982. Scalar stress, he called it: the friction that grows faster than the group. On his account a body deciding things together strains at about six, a settlement near Dunbar's number must split or build a hierarchy, and somewhere around 1,500 the hierarchy becomes permanent. It is a theory, resting on a single reading of the record, but it fits what two old peoples learned without reading it.

The Hutterites have held their goods in common since 1528, from Moravia to the North American plains. When a colony nears about 150, it splits. Chapter 3 told how, by two balanced lists and the lot. John Hostetler, writing about the Hutterites in 1974, saw in it the oldest rule for dividing a cake, one cuts and the other chooses. Small colonies run on shared meals and daily talk, and need little formal government. Colonies that put off the split run into a breakdown of government, members who stop pulling their weight, and quarrels between families. Some scholars read the cause as land, not minds: a large colony has more young men than work for them. Either way, the split comes before the quarrel.

The Old Order Amish split more simply. A church district holds a few dozen families. When it grows past that, the bishop and ministers draw a new line along a stream or a road, and there are two districts, each with its own bishop. The Amish say they split so that the whole district can still worship together in one house. There is no national body and no headquarters. A bishop's reach ends where his district does, and a family that cannot bear its bishop can move across the road. The price is the Ordnung, the unwritten rule, and the shunning that enforces it. A member who leaves can lose parents, children and every friend they have. The scoring that chapter 10 doubted gave the Amish only a middling mark, and they have lasted for centuries anyway, which says something about the scoring and something about the price.

Where the Hutterites had no split rule, above the colony, the quarrel took a different road. Chapter 3 mentioned the schism of 1992. It ended in excommunications and the courts.

Two lessons come out of these peoples. Split at the threshold rather than stack. Every person added to a group brings a new relationship with everyone already in it, so the pairs to be tracked grow far faster than the heads, and somewhere the talk at the evening meal can no longer carry them. A hamlet that grows by adding a layer of officers above itself to

carry what the talk cannot has made the first officers, and officers, as Part II showed, are where capture begins. A hamlet that grows by budding keeps every rung the size at which people can still see each other. And the second failure, after the sick breadwinner, is the family that will not split: the household grown too large to feed itself that will not let its grown children go, or the two great kin groups in a hamlet whose feud nobody can settle because neither will leave. The syntheses name that feud as the hamlet's first failure.

The hamlet's record is the split tally that chapter 9 followed through the English treasury: a hazel stick notched for the sum and split down the grain, each party keeping one half until the debt is settled and the halves are fitted together. A notch added to one half no longer meets the other, and a forged stick never matches the grain. The English treasury kept its accounts this way for centuries. The design for a hamlet gives one half to the debtor and the other to the tithing's keeper, so that a debt between neighbours is never only between them.

The ledger, briefly. Suretyship needed no trying in the household, worked in the hamlet, and broke in the village into rival cliques of tithings. The split worked from the hamlet to the colony, and nobody has made it work above a federation of colonies.

THE STRONGEST CASE AGAINST

The best voice against this chapter is William Ian Miller, the historian of saga Iceland, and the record of the household he studied. His farmers governed themselves without a king for generations, and inside their houses they kept slaves, worked their younger kin like servants and, in famine, exposed their children. Small, on his evidence, is not gentle, and old is not humane.

The case runs as follows. The household is the oldest government there is and the least accountable. It has no audit, no exit for a child, and no witness but its own members. The hamlet does not correct this. It adds a second circle of people with every reason to look away. The tithing answered for a man who stole from a neighbour. Nothing in its duties asked about a man who beat his wife. The scapegoated widow, the misfit pushed out of camp for months while the camp called it his choice, the

Amish man shunned by his own mother: these are not failures of small government. They are what small government does when it works. Small, as chapter 10 put it, is where the misfit is crushed, because there is nowhere to stand that the others cannot reach.

Worse, the remedy I propose, that the hamlet see into the household, is the oldest tool of that crushing. A neighbour who inspects your stores can inspect your prayers. And the eyes that see in are not neutral. Chapter 9 counted the talk around Kalahari fires and found about a third of the criticism driven by envy, and a hearth is where that talk starts. Suretyship that makes every neighbour a constable also makes every neighbour an informer, and the English version spent most of its life raising money for a crown.

I accept most of this. The answer I can give is narrow. The alternative to a hamlet that sees in is not privacy. It is the patient man's privacy, the closed door that only he controls. The seeing must be bounded: stores, weapons, bruises and the right to leave, not belief, speech or love. And exit must be real, which means a hamlet that takes in the household's runaways without asking the household's leave.

IN PRACTICE

For a household of four to ten. The minimum version is the Hearth Council as told above: the meeting after the evening meal, the steward chosen and unchosen by full agreement, the stores where everyone can see them and counted weekly, command that ends with the danger, and the leaver's clothes and tools.

It would need enough arithmetic to count the stores, which can be taught at the table, and a record that needs no letters: notches on a stick or charcoal marks on the lintel. It would take under half an hour a day and two hours a week.

The household nobody can see into is the hard part. If the hamlet has a right to walk through every store on days fixed in advance, a household that refuses is telling the hamlet something. If a woman or a youth comes to another house for refuge, that house should take them in first and ask questions after. The halving of stores between the women and the men is untried, and a hamlet might try it in one house before asking it of all.

The first failure to expect is the sick breadwinner, and the answer is the one given above: nobody alone in any essential task, or a hamlet before the fever comes. Handing up makes sense when a task needs more hands than the house has, a plough team, a harvest or a watch against raiders.

For a hamlet of a few dozen people, usually six to eight households. The minimum version would be a sworn tithing: every adult household answers for every other, a wrong done by a member is the hamlet's debt to the victim, and every household that hears the alarm should come. The keeper of the tithing would be chosen by rotation or by lot and could not serve again until others had taken their turn. Admission of a new household should need everyone's agreement, large shared works most of it, ordinary schedules a simple majority.

It would need a meeting place and the split tally. Debts between households would go on hazel, one half to the debtor and one to the keeper, and the halves would be fitted in public at settlement. The debts should carry no interest that grows, and the hamlet might cancel all of them at a fixed interval, because a lender who holds half the hamlet's sticks soon holds half its votes. That is how the English free tithings, on the reading I follow, slid under the bailiffs of new lords. Once a year the hamlet should walk its boundaries together, as English parishes did when they beat the bounds, so that the children know where the line runs. The hamlet would meet weekly. The design gives the seats to the heads of households, and I would open them to every adult, because a council of heads hears only the patient man's account of his house. It would take an hour a week and two full days a year, and one person who can keep a running count of the hamlet's debts.

The sanctions should climb slowly: ridicule, then a fine paid to the injured, then shunning, then outlawry. A household that refuses the alarm should lose the protection of the others. If a house burns, the hamlet might rebuild it within days, which makes a promise of help into a habit.

The split rule should be written before it is needed. When the hamlet nears the size where people no longer meet every day, it should divide along a road or a stream, the older half building for the younger, two balanced lists drawn up, and the lot choosing who goes.

The first failure to expect is a feud between two strong families, neither willing to leave. Handing up to the village makes sense when the hamlets around you need one court for quarrels between them, or when one ham-

let can no longer split because there is no more land to split into.

The tithing and the tally rest on the same bet: that people who must live beside each other would keep each other honest if each held half of the account. The bet fails where one person holds both halves. It fails first behind the household door, and that is the door the hamlet must keep open.

The studies, figures and open questions behind this chapter are on the website.

CHAPTER 12

Three Hundred and a Chest

A churchwarden stands in the vestry of an English parish church after the Sunday service with an iron key in his hand, waiting for two other men. One is the minister, who holds the second key. The other is the second churchwarden, who holds the third. Between them sits a chest of oak bound with iron, and since 1603 the law of the Church of England has required it to have three locks, one key for the minister and two for the wardens, so that the book inside can be opened only when all three are in the room. The book is the parish register. The week's baptisms, marriages and burials go into it now, written while the three of them watch, and then the lid comes down and three keys turn.

The minister answers to a bishop. The wardens are laymen elected by the parish vestry, and they answer to their neighbours. Nothing requires the three to like each other, and the arrangement works best if they do not, because the point of the third lock is that no one of them, and no two of them together, can change what the parish has written about itself. Once a year, within a month of Easter, the wardens send a copy of the year's entries to the bishop's registry, so that if the church burns the parish can still prove who was born, who married and who was buried.

I begin with this box because it is the cheapest piece of government I know. It needs a carpenter, a smith, a book, some ink and three people who can be relied on not to rely on one another. A village could make one in its first season after the Fall. Much of what a village needs in order to govern itself comes down to what goes into the chest, who holds the keys, and when the lid is lifted in front of everyone.

Two locks, then three

The chest did not begin with three locks. On 5 September 1538 Thomas Cromwell, acting for Henry VIII, ordered every parish priest in England to keep a weekly register of baptisms, marriages and burials. Parishes suspected a new tax on being born and dying, and the resistance was wide. The injunction asked for the register to be kept in "one sure coffer with two locks and keys", one key for the parson and one for the wardens, so that the priest could not alter the book without the laity and the laity could not alter it without the priest. In 1597 the bishops ordered the registers copied from paper onto parchment, and in 1603 a new canon added the third lock and gave two of the keys to the wardens. The parish side of the bargain now outnumbered the Church's. One modern design I draw on says the chest had three keys from the start. The law as written says two and then three, and I follow the law.

This is what I call the Three Keys: split custody of anything that matters. The name is this book's and the practice is old. Chapter 9 followed the split tally and the chirograph, which divide a receipt between two parties so that neither can forge it alone. The chest takes the same idea and applies it to the whole memory of a community. What it guards is mostly not money. It is the record of who belongs, who married whom and whose land runs to which stone, and that record is the thing a would-be master of a village most wants to rewrite.

The village is the rung where the chest belongs. By a village I mean 150 to 500 people, the third rung of the ladder, too many for anyone to remember every debt and every boundary, and few enough that everyone still fits into one room or one field and knows most of the faces in it. In the hamlet below, households can watch one another eat, and a written register is more trouble than it is worth. In the district above, the room no longer holds everyone and the faces become strangers.

One of the best-documented villages that governed itself without a lord sits on a steep slope of the Vispertal in the Swiss canton of Valais. Törbel has stayed within that size for centuries, and Robert Netting, an anthropologist, studied it and its written statutes and published what he found in 1981. The heart of the statutes, written down around 1500, is a single rule about cows. No one may send more cattle to the common summer pasture on the alp than he can feed through the winter on hay from

his own meadows.

The rule is clever because it needs no count of the alp at all. Hay on those slopes is cut by hand, and a family can only cut so much, so the private winter meadow sets the ceiling on the common summer grass. A man who wants more cows must first find more hay, and nobody can find much more. The burghers met each year, elected a warden for the alp, and the warden counted the cattle as they went up and fined anyone over his limit. A share of every fine went to whoever made the catch, the warden himself in one account and the neighbour who reported it in another.

Netting did not find a gentle place. The record he read shows steady small poaching, endless lawsuits over boundaries and a deep suspicion of outsiders. The village held its numbers steady for centuries partly by keeping many of its younger sons and daughters unmarried, and people who lived there without citizenship were barred from grazing cattle on the alp at all. The village was small and old, and it was hard on whoever stood outside it. Törbel also answered, in the end, to a canton above it.

Elinor Ostrom, whom the Preface met at the water court of Valencia, put Törbel among the long-enduring commons in her book of 1990 and drew a short list of design principles from places like it. I take one of them here and leave the list to her. The one that matters most for a village is that punishment starts small and grows, so that a first offence costs a neighbour a fine he can pay and a third costs him his place. Later reviews across many such commons have broadly upheld her.

The pot and the semicircle

Chapter 6 showed a boy drawing palm-leaf tickets from a pot in a south Indian village in the tenth century. The village was Uttaramerur, and the rules that decided whose names went into the pot are carved on the walls of its Vaikunda Perumal temple in two inscriptions, of 919 and AD 921, from the reign of the Chola king Parantaka I. Uttaramerur was a grant of tax-free land to Brahmin scholars, and it ran its own affairs through a general assembly and a set of committees: one for the irrigation tank, one for the gardens, one for gold, one for justice, one for the year's business.

The village was divided into wards. To have his name written on a

ticket, a man had to be of mature years, own a set minimum of taxed land, and live in a house built on a plot that was his own. A man who had sat on any committee in the past three years could not be named. A man who had served and failed to render his accounts was barred for life, and so were his relatives. So were thieves and men guilty of the graver sins. On the day of the draw the tickets for each ward went into a pot before a public gathering at the temple. A boy who could not read drew one ticket for each ward. The officer who received it had to take it on an open palm with the fingers spread, so that nothing could be palmed, and he read the name aloud for the priests to confirm.

The second inscription is stricter than the first. The age limits were raised, and the ban on relatives appears. The obvious reading is that men barred by the three-year rule had been putting their kin forward in their place, and the village closed the gap. That is a capture caught in stone. It is also a reminder of what kind of lottery this was. The pool was Brahmin men of property, and the people whose labour fed the village had no ticket. Historians call it an oligarchic lottery, a way for a ruling class to share its offices without letting any one family keep them.

I should say how I know these rules. I have them second-hand, and the accounts I have rest on popular retellings rather than on a published reading of the inscriptions. They are famous, and they may be exactly right, but someone should check them against the stones before a village copies the detail.

In the Tswana villages of what is now Botswana, the assembly met in the kgotla, a semicircle of wooden palisades at the centre of the settlement. A Tswana proverb holds that even the one who speaks badly must be allowed to speak, and words spoken inside the palisade were supposed to be safe from punishment. The order of speaking was not equal. The chief consulted his uncles and headmen in private before a matter came out, senior men spoke first, commoners later, and at the end the chief gathered the debate into a decision the community could live with. There was no vote. A modern study in the Ngamiland district found close to one man from every household at a village kgotla, and only a scattering at the district level. In the district's main town almost nobody comes.

The kgotla's weak point was cattle. Chiefs and rich men lent cattle to poorer households, which kept the milk and the ploughing oxen. A loan could be recalled at any time, and a man who spoke against the chief

one evening could find his borrowed cattle gone the next morning. Older checks remained: a faction could walk away and found a new village, or the men could gather armed outside the settlement. When Sebele II of the Bakwena stopped calling the assembly, packed it with armed loyalists and fined people without trial, neither check was open any more, because a colonial power held the borders and the guns. His headmen petitioned the British Resident Commissioner, who deposed him on 10 June 1931. The village did not correct itself. A state above it did. And the kgotla never spoke for everyone: women could not attend it, and the Basarwa, held in hereditary servitude, had no voice in it at all.

The Igbo villages of south-eastern Nigeria had no chiefs to depose. *Igbo enwe eze*, the saying goes, the Igbo have no kings. The village assembly sat under its elders and the holders of the *ofo*, a staff of ancestral truth, and debated a matter for days. The account I rely on says both that it went on until unanimity or exhaustion and, in the same breath, that majority decisions were binding in the end, which tells me the line between the two was drawn case by case. When agreement would not come, a village could split, and one side could clear new forest. The women had councils of their own, and their remedy for a man who beat his wife or broke the market rules, the sitting on a man that chapter 11 told, brought the women of the village to his compound at night to sing his offences until he paid. Below them all stood the *osu*, people dedicated to a shrine and their descendants after them, who could not marry the freeborn, sit in the assembly or live inside the village. The law abolished the caste in 1956. The stigma has lasted into this century.

Uttaramerur, the kgotla and the Igbo village are three answers to one problem, and they share a shape. All three worked at the village rung. The kgotla and the Igbo assembly strained or failed at the district, and Uttaramerur's committees reached higher only inside a king's state. All three kept someone outside the door.

A fifth of the town

The New England town meeting has run since the 1630s, and it is the village assembly the modern world loves best. Frank Bryan, a political scientist, set out to count it. Between 1970 and 1998 he and his students sat in

on town meeting after town meeting across Vermont and recorded who came and who spoke. On average about a fifth of the registered voters came. The size of the town explained most of the difference between towns, and education almost none of it. Women made up 46 per cent of those in the room and 36 per cent of those who spoke.

Bryan drew two conclusions that admirers of the meeting rarely quote. The low turnout saves the institution, he argued, since no town hall could seat a majority of the voters if they ever came. And the best meetings were the longest ones, because time wore down the confident few and let more people reach the floor. The fifth who come are not a sample of the town, but in a small town they are a large enough slice that most families have someone there.

Jane Mansbridge went to look at what happened inside the room. In the 1970s she studied a Vermont town no bigger than a village, which she called Selby, at close quarters. She found that the poorer and less confident townspeople often kept silent rather than cross neighbours they depended on, and that older, wealthier men set the terms of debate by how much they spoke and by what they let pass in silence. Votes were taken by voice or by standing up, in full view of everyone. She called what she saw hidden coercion. A meeting that looked unanimous was sometimes a meeting in which the people who disagreed had done the arithmetic of their own lives and stayed quiet.

The Russian mir shows the same assembly with the coercion in plain view. Its gathering, the skhod, was a meeting of the heads of households, the elder men of each family. It shared out the commune's land and carried joint liability for the tsar's taxes and conscripts, so that when one household fell short the others had to make up the debt. A historian who worked through the records of one village in Tambov province found the household heads using the commune to rule their sons, their sons' wives and the village's labour with great harshness. From 1889 the state set gentry Land Captains over the assemblies, with power to overturn their decisions, depose their elders and order peasants flogged. When the reforms of 1906 let peasants leave the commune with their land, millions of households did.

How should 300 people decide anything? Two answers have been tried. Consensus asks that everyone agree. The Quakers have practised a version of it since the seventeenth century, with no vote and a clerk who finds the

sense of the meeting, and it works where everyone shares a faith. Its record shows the weakness. In 1827 a Philadelphia clerk faced a majority he disagreed with, declared the minority to be the weightier part of the meeting and split the Society of Friends until 1955. Consent asks a different question: does anyone have a reasoned objection grave enough to stop this? A proposal stands unless someone can show it would do harm. That is the question chapter 2 promised, and the studies find it holds in larger and less alike groups than consensus does, though an articulate objector can still turn objections into a veto. Consent scales further than consensus.

Now imagine the most patient person in the room. He does not stand for anything. He marries into the largest family, and in a dry year he lends seed to the households that ran short, so that by spring a good many families owe him. At the next meeting the votes are taken by voice, and his debtors find they have nothing to say. He offers to keep the village book, since he writes a fair hand, and the village is grateful. His first move, in the designs I have read, is smaller than any of this. His kin begin to vote together to excuse their own sons from the spring ditch-clearing, and the work falls on the families with fewer votes. The first failure of a village is a family bloc that excuses its own from the common work. What stops him is the chest. The book he wants to keep sits behind three locks he cannot open alone, the keyholders are drawn rather than chosen so that his charm buys him nothing, debts sit on split tallies held by both sides, and any vote about a person is taken in secret, as chapter 8 urged.

That held for 300 people. On every account in this chapter, from Tswana villages to Vermont towns, it did not hold for 3,000, because attendance thinned, the speakers narrowed to the confident and the room stopped being the village. Attendance and speech thin out as the room grows, and the village is the last rung where everyone can be in it. What a village after the Fall can take from all of this is the box in the vestry, and the rule that nobody opens it alone.

THE STRONGEST CASE AGAINST

The strongest case against this chapter comes from people who spent a great deal of money finding out. Over a generation, aid agencies have put more than 85 billion dollars into programmes that hand money and

decisions to village assemblies. In Sierra Leone a randomised trial gave villages grants and several years of help in running committees with seats for women and the young. The villages built meeting halls, latrines and drying floors, and on the long list of measures of how villages actually decide things the programme changed nothing. When the researchers offered the villages fresh choices afterwards, the chiefs and headmen made them, in the treated villages as in the rest, and a return visit years later found the same. In Indonesia an economist had engineers drill cores out of new village roads and found about a quarter of the money missing. Inviting villagers to accountability meetings filled the meetings and left the theft where it was. Raising the chance of a government audit from almost nothing to certain cut the loss by about a third.

Ghazala Mansuri and Vijayendra Rao, economists who reviewed the World Bank's own record, put the lesson in one image. Village participation works, they argue, when a responsive state stands above it with the power to discipline the local powerful, and mostly fails without one. Chapter 10 asked who the landlord is. The answer matters most where votes are taken by voice, because a tenant cannot vote against the man who owns his field. The village is not where capture is weakest. It is where capture lives.

I concede most of this. Every village in this chapter that held for long had something above it. Törbel had its canton. The kgotla's tyrant fell to a commissioner. Kerala's People's Plan, the most ambitious modern attempt to run villages through assemblies, handed a large share of a state's planning budget to local bodies and drew crowds to its village assemblies, and it ran under a state that paid for it and trained the volunteers who checked the work. What the Three Keys do is bring as much of the outside check inside the village as a village can hold. It is not all of it. The audit at a time nobody chose belongs to the rung above.

IN PRACTICE

Here is what a village of 300 could do after the Fall. The minimum version is a monthly assembly, a chest with three keys, a register and a roll of names, and a few rules about cattle, ditches and fines.

The assembly could meet once a month for half a day, one voice for each household, with the agenda read out at the start by someone who

can read. Matters could be settled by consent, a proposal standing unless someone states an objection the assembly accepts as grave. Votes about persons, who holds an office and who is fined, could be taken in secret, with beans or pebbles in a pot. The design I follow most closely goes further and sets a higher bar for rules about the common land than for the work roster, and the highest for a levy on everyone's capital. That is one way to do it, and nobody has yet.

The officers could be few. Three to five syndics run the year's business, with a scribe and a bailiff. One design fills them by lot from a list the assembly has approved, drawn from households free of debt that have done their share of common work, to serve a year and then stand down for three, as at Uttaramerur. Another has shorter terms and fewer of them. Neither has been tried in a village, and one careful study thinks the lot does more harm than good at this size, where everyone already knows everyone. I prefer the lot for the keys and the book, because charm cannot be drawn from a pot, but it is a proposal and not a finding. Whichever way the village chooses, the roll of names should be read aloud before every draw, as chapter 6 asked.

The chest is the centre. It could hold the land roll, the minute book, the roll of members and the tally of debts and work. One key goes to the head syndic, one to the scribe, and one to a person drawn by lot from the poorest households, so that the people with most to lose from a forged entry hold a lock on it. Another design has the third key held by an elder elected each year. The chest opens only with all three present and only before the open assembly, in daylight. The register is written in iron-gall ink on parchment or good rag paper, read aloud once a year, and copied each spring to the district, as chapter 9 set out.

The cattle rule travels well. No household may put more animals on the common grazing than it can feed through the winter on its own fodder, and an elected warden counts them in spring and takes a share of the fines he levies. Sanctions climb, as Ostrom found they must: a fine for a first offence, a heavier fine with the loss of a vote for a year for a second, and shunning for a third. A constable could hold emergency powers that lapse within days unless a large majority of the assembly renews them, which is chapter 16's subject.

The time it takes is modest. Half a day a month for the assembly, one day a month of common work for each adult, as the acequias of New

Mexico still turn out each spring to clean their ditches, and a few days a year to walk the bounds. Literacy is the bottleneck. The design I follow most closely contradicts itself, asking in one place for no more readers than the scribe and a keyholder and in another for a small share of the village. The first is too few, because nobody else could then check what the scribe writes, so a village should count its readers first and add to them every winter.

The first failure to expect is the kin bloc that excuses its sons from the ditch. The remedy is to write the work roll into the chest, read it aloud at the spring meeting, and refuse any exemption that is not voted in secret.

The village hands a matter up when it cannot settle it alone: when armed raiders come in numbers no village can face, when the water must be shared among several villages, and when the village needs an audit it did not arrange. Those belong to the district, the subject of chapter 13. The village keeps the chest, and when the lid comes down, three keys turn.

The studies, figures and open questions behind this chapter are on the website.

CHAPTER 13

Lead by Obeying

A woman walks out of the council house of a caracol in the highlands of Chiapas with her turn finished. For a week or two she has sat on the Good Government Council of her zone, hearing a quarrel over a boundary, a complaint about the clinic and a message from the next zone, and none of it was hers to decide. Her village assembly told her what to say before she left. Had she said something else, the assembly could have called her home the same day and sent someone in her place, with no hearing and no term to wait out. She was given her food and her fare and nothing more. Now she goes back to her field, and to the water, the cooking and the children that waited for her, because nobody took those over while she governed.

She is my composite, a Tzotzil woman in one of the years after 2003, but every part of her day is in the record. The Zapatistas, who built these councils in rebel country in the south of Mexico, had a phrase for what she did. They called it *mandar obedeciendo*, to lead by obeying. The order ran upward. The person at the top carried it.

In November 2023 the councils were dissolved by the movement's own command, for reasons I come to below. It is three years old as I write, in the autumn of 2026. I begin with her anyway, because she is the clearest picture I know of the office this chapter is about: the person a district sends to speak for its villages, who speaks with their voice and not her own.

Far to the north, and centuries earlier, another confederacy had a shorter way of putting the same rule. The women who chose a chief could

take away his horns.

A turn in the caracol

On 1 January 1994, the day the North American trade agreement came into force, an indigenous army came out of the jungle and the highlands of Chiapas and took several towns, among them San Cristóbal de las Casas and Ocosingo. Its soldiers were Tzotzil, Tzeltal, Tojolabal, Ch'ol and Mam. The government sent troops, then talked, and in 1996 signed accords at San Andrés that recognised indigenous autonomy. The president then declined to write them into the constitution. So the Zapatistas built the autonomy themselves, without permission.

They built it in layers. At the bottom was the community assembly of a hamlet or a village, deciding by consensus where it could and by majority where it could not. Above it stood the autonomous municipality, which ran schools, clinics and justice for a cluster of communities. At the top, from August 2003, a handful of regional centres called caracoles each housed a Good Government Council, a *Junta de Buen Gobierno*, for its zone. That top layer sat at the district on this book's ladder and somewhat above it, the rung where villages that govern themselves have to learn to govern together.

Three rules made the councils. Office was a *cargo*, a burden carried for the community and not a job, and those who carried it received food and transport and nothing else. Turns were short: a week or two in the caracol, then home to the fields, so that in intention most adults would serve at some time and nobody would serve for long. And the mandate could be taken back. The assembly that sent a delegate could recall and replace her at once, without waiting for her turn to end.

The word for such a person matters. A representative is someone you send to use her own judgement on your behalf, and you get your say again at the next election. A delegate is someone you send to carry a decision you have already made, and you get your say whenever she departs from it. A delegate is not a representative. The difference is not in the oath or the title. It is in who can stop her, and how fast.

That is why the recall carried the weight. Where modern constitutions allow recall at all, it is slow. In California in 2021 the opponents of a gov-

ernor spent months collecting signatures before anyone voted, and he survived the vote. In Venezuela in 2004 the government published the names of everyone who had signed the petition against the president, and the list was then used to fire, refuse and blacklist them. By the time a slow recall arrives, the vote she should not have cast has been cast and the deal is done, and at the size of a nation the petition can become a list of the ruler's enemies. The Zapatista recall needed only the assembly that sent her to meet and send someone else, and because her turn was short, the cost of being wrong about her was short too. Recall must be instant and cheap, or it is decoration.

Rotation had costs, and the people who studied it named them. Delegates who arrived for a short turn had to run clinics, solar panels and legal cases in several languages, and they went home just as they learned how. The knowledge stayed with whoever stayed: an outside adviser, a translator, the armed command. The rebels' Women's Revolutionary Law of 1993 gave women the right to hold office and to choose whom they married, and women served on the councils. A scholar who looked at their service found them working a double shift, because the cooking, the water and the children had not been shared out when the offices were. That is the woman in the opening, going home.

What ended the councils came from outside. Between 2021 and 2023 two cartels fought over the roads of Chiapas and the routes to the Guatemalan border, set up roadblocks, extorted traders and recruited the young by force. A council that sits in a known building at a known centre is something an armed group can besiege, cut off or lean on. In early November 2023 Subcomandante Moisés, of the movement's command, announced that the autonomous municipalities and the Good Government Councils were dissolved. Authority went down to a local government in every community, with only travelling assemblies above it that could carry messages and command nothing. "We have prepared for the survival of our peoples," he said, "even in isolation from one another."

When armed men came, the Zapatistas kept the village and gave up the district. I find it the most instructive thing they did, and the least comforting.

The women who raise the chief

The Haudenosaunee, the people of the longhouse, lived in the lake country of what is now New York State. Their tradition tells of a time of blood feud among the Mohawk, Oneida, Onondaga, Cayuga and Seneca, and of the Peacemaker, who went from nation to nation until he came to the most feared of the Onondaga chiefs, whose body was bent with crooks and whose hair was snakes, and changed him. What they made together was the Great Law of Peace, the *Kaianere'kó:wa*, and a league that the Tuscarora joined in 1722.

Nobody agrees when. In 1997 Barbara Mann and a colleague, in a paper called *A Sign in the Sky*, took the tradition that the sun went dark while the founding council sat at Ganondagan, near the present town of Victor, and looked for an eclipse to match. They found a total eclipse over Seneca country in late August 1142. The archaeologists, working from pottery and from the moment scattered villages pulled together behind palisades, put the founding between about 1450 and 1500. I follow the archaeologists, because their evidence is in the ground, and I note that many Haudenosaunee today hold to the older date. Either way the League is old, which tells us nothing yet about whether it was good.

Its Grand Council sat fifty chiefs, the sachems, shared unequally among the nations according to the lineages that held titles at the founding and not according to headcount. The Onondaga kept the council fire. A matter went first to the Mohawk and Seneca, the elder brothers, who talked until they agreed, then across the fire to the Oneida and Cayuga, the younger brothers, who could send it back, then to the Onondaga, who could send it back again. Nothing passed until all agreed.

Each title belonged not to the man who held it but to a lineage of women, and the senior woman of that lineage, the clan mother, chose which of its men would carry it. The men of the clan and then the Grand Council confirmed him. She could also take it back, and the procedure that survives is three warnings. First she warned him herself. If he went on, she warned him again with the men of the clan beside her. After the last warning she took his horns, the deer antlers that were the sign of his office, and he went back among the people as an ordinary man with no voice in council. A clan mother who failed her lineage could in turn be replaced by its women. Women did not sit on the Grand Council. Their power over

it was indirect, and it was real: no man sat there whom a woman had not named, and none stayed whom she wanted gone.

The fifty were peace chiefs. A sachem who wanted to go with a war party had to set down his antlers first. War was led by others, and the League made room for men of talent outside the hereditary titles, the Pine Tree chiefs, who were given a seat for their merit, whose titles died with them, and who had little or no vote in council, depending on which account you read. The Cheyenne, whose soldier societies chapter 3 followed onto the buffalo hunt, drew the same line on the Plains. A warrior who accepted a seat among the peace chiefs gave up his command in the soldier societies. And a peace chief who crossed the line lost everything. Little Wolf, one of the most respected of them, a man who had led warriors in his time, killed a man of his own people in a rage. He was stripped of his chieftainship and went into exile.

Whoever carries the war horn must not sit in the peace council. The rule does not make warriors gentle. It makes sure that the body deciding whether to fight is not made up of the men who gain by fighting.

Then came the war that tested it. In 1777, with the British and the American colonists at war around them, the Grand Council met at Onondaga and could not agree. The Oneida and the Tuscarora leaned towards the Americans, most of the rest towards the British. Unanimity failed, and the Onondaga covered the council fire, which meant the League would take no decision and each nation would go its own way. Into that space stepped Joseph Brant, Thayendanegea, a Mohawk war chief educated by the British, with British patronage behind him and British guns and goods to hand out. He held no title a clan mother had given, so there was none for her to take away. He went past the hereditary chiefs and the women who chose them and brought Mohawk and Seneca warriors into the war. At Oriskany, in August 1777, Haudenosaunee fought Haudenosaunee. Two years later an American army burned their towns and their fields.

The captor in this story was not a patient man working the council from inside. He was a man whose power came from outside it. The clan mothers' check worked on the power the League gave, and Brant's came from a king's storehouse. The rule of all-or-nothing failed in the same season. Built to prefer doing nothing over forcing a minority into war, it delivered nothing in the one year that needed a decision, and the nations

went to war anyway, on both sides.

The League's long internal peace was also paid for. The Haudenosaunee fought mourning wars to replace their dead with captives, adopted some and tortured others, and through much of the seventeenth century made war on their neighbours over the fur trade. The council kept the peace among its own nations and sent the violence over the border. Old does not mean good, and small does not mean fair.

Presence and power

The clan mothers held something the men needed. Their power did not come from sitting in a room with the chiefs. It came from owning the titles. The question for a district is whether a share of seats for women does anything comparable, and here the modern evidence is good and does not agree with itself.

In 1993 India amended its constitution to reserve a third of the seats on village councils, and a third of the posts of council head, for women, the reserved villages chosen by lot and changed at each election. Because the choice was random, it came close to an experiment. Chapter 8 told what the reserved headships did in West Bengal: more women at the meeting, more spent on drinking water. Their measure was about 60 per cent more drinking-water works in the reserved villages, which matched what the women there had asked for, since they were the ones who carried the water. Later work in the same part of West Bengal found that with repeated exposure the villagers' prejudice against women heads wore down, and more women won seats that were not reserved for them.

Then the doubts. A team that followed West Bengal villages over a longer horizon found no lasting effect on what the councils provided, and argued that a reservation which rotates away at the next election leaves its holder too little time to change much. A study in southern India found that women heads decided much as men did, because the party and the local officials mattered more than who sat in the chair. Wherever the reservations went, observers found the husband who governs through his wife, a figure common enough to have a name, the *sarpanch pati*. Bina Agarwal, an economist who studied community forest groups in Nepal, found that women changed the rules only once they reached a critical mass on the

committee, and that women who owned property were far safer at home than women who did not.

Small places can be the hardest. In the Swiss canton of Appenzell Innerrhoden the men met in the open square each spring and showed a sword as proof of their right to vote. In April 1990, after a local woman had taken the canton to court and received threats for it, they voted down women's suffrage again in a matter of seconds, and the Federal Supreme Court struck the exclusion down that November. In northern Syria the Kurdish movement put a woman beside a man at the head of every council, and the armed wing still held the decisive power.

The distinction to keep is between the presence of women and their power. A women's body with a veto is one of the oldest checks on a coalition of armed men, but its record is mixed: it has held where the women owned something the men could not do without, a title, a store, a living of their own, and seats alone have not been enough. *PAIRING after the FALL* followed women's share through the household and the economy. Here I carry only what it does to capture.

A moot for the valley

The district on this book's ladder is a few thousand people in the villages of one valley. The record has several working pieces of a government for that size, and none of them was built for the purpose from scratch.

The English hundred met as a moot in the open, at a known place on known days, and chapter 4 told how the Norman sheriff came to sit in it and turned it into a means of collection. Iceland's Althing met each summer at Þingvellir, where the Lawspeaker recited the law from the Law Rock, and chapter 5 told how a handful of families bought up the chieftaincies and ended it in private war. Chapter 9 told the chirograph: an agreement written twice on one sheet and cut apart along a wavy line through a word, each party keeping a half, the halves matched when there is a quarrel. The Swiss require a federal popular initiative to win both a majority of voters and a majority of cantons, so that the towns cannot simply outvote the valleys. And the herding peoples of chapter 5 settled feuds between lineages through mediators who carried no arms and could compel nothing, at sanctuaries where nobody might fight.

One of the designs I drew on assembles these pieces for a district, and it is a proposal, not history. Nobody has run it whole. The villages send delegates on the Zapatista pattern: instructed, rotated after a short turn, recallable the same day. The whole district meets in spring and autumn at a neutral site in the open, a hill or a rock or a meadow by running water, and nobody brings an armed retinue onto the ground. A rule that binds the district needs a double majority, most of the delegates present and most of the villages, so that the largest village cannot rule the hamlets. Auditors from the northern villages inspect the grain stores and weirs of the southern ones, and the other way round, so that mutual suspicion does the work of an inspector. When raiders come, a high constable lights the beacons and every village owes its share of armed men at the stronghold within hours. His authority lapses after fourteen days, and only the full assembly, meeting in person and by a large majority, can extend it. It is the Clock on the Emergency, which chapter 16 sets out, fitted to a valley. The judges hold no command and the constable judges nothing. A village may leave once it has settled its blood debts.

The instructed delegate, the open moot, the neutral rock, the cut parchment and the double majority of people and cantons are history. The fourteen days, the beacons, the double majority of villages and the audit by the far side of the valley are proposals.

The ledger is short. Instructed delegates held from the village to the district and somewhat above it in Chiapas from 2003 to 2023. The League held across several nations for centuries and broke in a war. The moot held at the district and was absorbed by whatever ruled above it. None of these has governed a nation. That is the kit a valley has to work with.

THE STRONGEST CASE AGAINST

The strongest case against this chapter is not that delegates are slow, though they are. It is that divided power loses wars. Keith Otterbein, an anthropologist who compared societies across the ethnographic record in *The Evolution of War* in 1970, found that the more centralised a society's politics, the more likely it was to have professional soldiers and the more effective its fighting. Other cross-cultural work found war common among peoples without a state, not rare. When a people that kept its war

chiefs and peace chiefs apart met one that had joined them under a single ruler, the divided one was, almost everywhere, conquered, destroyed or forced to centralise in its turn. Look at my own cases. The League held for centuries and broke in a war. The Cheyenne line held until Sand Creek, and then, as chapter 3 told, the Dog Soldiers kept the police power and the peace chiefs' authority thinned. The Zapatista councils gave up the district when the cartels came. Each lost its upper rung to armed force.

The Zapatista record is also thinner than its admirers suppose. The civil councils lived beside an army that never dissolved. A law the rebels issued in 1993 said that "absolutely no one will be able to have meetings or treaties with the oppressor government" without the leave of the General Command, and critics read the command as holding a veto the councils never had. One account says the command was barred by its own charters from civil office, another that it could override the councils whenever it chose. Much of what is written about the councils' inner life comes from sympathisers, and the historians who know Chiapas best warn against the romance of it. And the autonomy lived inside a state with an army that could have ended it and did not. Self-government that depends on a stronger neighbour's restraint is a test of the neighbour as much as of the arrangement.

I have no full answer to the war argument. The best one the record offers is the Roman one, a commander for a stated task and a stated time, and chapter 16 is about how often that clock was broken.

IN PRACTICE

For a district, a few thousand people in the villages of one valley, the moment comes when each village has its own meeting working and something has come up that no village can settle alone: a boundary, a weir, armed men on the road.

If your villages want to act together without making anyone their ruler, then send delegates and not representatives. Let each village meet before the district meets, decide what it wants, and send someone to carry it. Give her a turn of a week or two, feed her and pay her nothing else, and let the village that sent her call her home the day she departs from what she was told. A delegate who cannot be recalled by Tuesday is a representative, whatever the charter calls her. The first thing to go wrong is the one the

Zapatistas met: she goes home just as she has learned the work, and the scribe or adviser who stays becomes the real council. Keep the minutes where every delegate can read them, and rotate the scribes as well.

If the district must decide by vote, then use a double majority, of delegates and of villages, and not unanimity. The League's rule of all-or-nothing kept the peace among its nations for centuries and failed in the one season that needed a decision. The double majority fails the other way: a bloc of small villages can block the large one, and the large one starts to talk of leaving.

If you meet, meet in the open, on ground that belongs to no village, on days everyone knows, in spring and autumn, with no armed men allowed on the ground. The hundred's moot and the Althing are the precedents. Write every agreement between villages twice on one sheet and cut it, so that neither side can alter its half.

If you need a commander, and a valley with raiders on its roads does, then keep him out of the council and out of the courts, and put a clock on him. One design gives him fourteen days and makes any extension a matter for the whole assembly in person. That is a proposal, and nobody has run it, though the Roman dictator's six months is its ancestor. The failure is the one 1777 shows: a commander who gets his arms from outside the valley owes the valley nothing. Let no single man be the door through which outside weapons or money arrive.

If you want a check on him that works, then give the women of the district a council of their own, with the power to name and remove the men who sit for their lineages, and to refuse the common stores to a war party. That too is a proposal built from a historical practice, and the practice held where the women owned what the men needed and failed where they had only seats. Expect the husband who sits for his wife. Expect, in a hard year, the war chief who promises young men plunder and wives.

What it needs is this: villages near enough to walk between, a meeting ground everyone knows, a calendar of the equinoxes, at least ten people in the district who can read and write well enough to keep the rolls and the cut agreements, a few days each spring and autumn from everyone, and about a day a month from whoever is serving on the delegates' council.

The first failure to expect is quiet. Now imagine the most patient person in the room. He sits for one of the villages near the moot ground, and he never misses a meeting. The far villages, the poor ones, stop sending del-

egates in the busy season, because the walk costs a day's work and nobody repays it. The villages near the ground keep coming. His lineage takes the agenda, then the judges' seats, then hires its own men to carry out the judgements, and one year the district's law is that family's law. Iceland ended that way. If you pay the far villages' delegates from the common store, you have made the store worth capturing, and you are back at the chest of chapter 12.

The handoff comes when the work outgrows the valley: a river that runs through several districts, a dike that protects them all, a road the next valley needs. A district can federate its villages. It cannot govern a river it shares with its neighbours. That is the watershed, and the next chapter meets it on a Thursday at noon. Until then, decide who carries the decision, who can call her home, and who keeps the horns.

The studies, figures and open questions behind this chapter are on the website.

CHAPTER 14

Thursday at Noon

A farmer stands on the paving outside the Door of the Apostles in Valencia, a little before noon on a Thursday, with a grievance about water. Facing him, eight men in black smocks sit in a half circle in the open air, one for each of the irrigation communities that draw from the river Turia. When the cathedral bell has struck and his canal is called, he says his neighbour opened the gate on a day that was not his. The neighbour says it was. The eight ask their questions in Valencian, confer, and give the verdict there and then. There is no lawyer, no fee and no appeal, and nothing is written down. The hour is not out, and the court has already moved on.

I told this scene in the Preface, together with what the archive says about it. I come back to it here because it is the oldest working answer I know to the question of the fifth rung. Below it is the district, a few thousand people in the villages of one valley, who can still meet in the open twice a year. Above it is the region, where most of them never will. In between lies the town or watershed, 15,000 to 50,000 people who share a river, a road and a market but cannot all fit in one square. This is the rung where governing stops being a conversation and starts needing offices, and where the people who want those offices first find them worth buying.

The record offers three kinds of answer at this size. Some people cut their government along the water. Some gathered ordinary citizens into a room to decide what the officials had not. Some built firms that work like small towns, owned by the people who work in them. Each of the three

has a postcard and an archive, and this chapter needs both, because a rung like this may one day have to stand with no state above it, and a postcard is no use to the people who build it.

The court and the archive

The court is the visible tip of eight canal communities on the plain around the city. In each, the holders of irrigated land elect a syndic every two or three years, and the syndics together sit as the court. The water runs by turns. The court hears quarrels between irrigators, appeals against a syndic's ruling and charges of water theft, sits in the open, hears both sides in the local language, and decides on the spot. It claims descent from the caliphate of Córdoba in the tenth century. The first date anyone can document is a Christian king's confirmation of the irrigators' rights after the conquest, which one account puts in 1238 and another in 1239. "About a thousand years" is the irrigators' figure, and the archive does not support an unbroken line.

A historian of medieval Valencia described the court and its canals in 1970, two American scholars of irrigation studied it later in the decade, and in 1990 the political economist who made the commons famous put it in her book as a case of people governing a shared resource for centuries without ruin. From there it travelled. It became the postcard: peasants ruling their own water without a lord.

Peris Albentosa, the Valencian historian the Preface met, went into the early modern records and came back with a different picture, and the Preface gave the bones of it: the vote went with land, the *sequier*'s office was sold to the highest bidder, and the postcard of the democratic peasant was drawn by two colonial engineers. What the archive adds is the company the court kept. Other historians found the city council leaning on the court and large landholders using their standing to sway poorer farmers during the hearings. Behind every verdict stood the city and the crown. The verdict of what I have read is plain: a property-based oligarchy, whose peasant democracy is largely a nineteenth-century myth.

What the archive leaves standing is the form. A man could buy the sequier's post, and with it a share of every fine. He could not make the court sit in private, or on a day of his choosing, or put off a verdict until

the plaintiff gave up. Every week, before the hour was out, a judgment had to be spoken in front of the plaintiff's neighbours. That is an inference, not a finding, but it is the one I trust most in this chapter, because it rests on something any farmer at the door could see.

The Dutch water boards are the other postcard. They date their origins to around 1255, and they ran on a rule summed up as interest, pay, say: those with a stake in the dikes paid for them and had a voice in proportion. Dutch poets of 1812 and 1833 sang the boards as the cradle of a free people won from the swamp, and a historian of Dutch water has shown that the story of water forging Dutch democracy was largely made up by the Patriot movement of the late eighteenth century. For most of their history the boards were property-based oligarchies, many small and conservative. Since the middle of the nineteenth century thousands of them have been merged into fewer than two dozen. Residents who owned no land got a vote only with a law of 1991 and direct elections in 2008, and few of those entitled use it. Farmers still hold roughly twice the share of seats that their share of the tax would give them. The boards work. They work inside a state, and they were never the democracy their poets described.

On Bali the water runs through temples. Stephen Lansing, an American anthropologist, spent years with the *subaks*, the associations of farmers who share a canal, and with the priests of the water temples who set the calendar of planting and flooding for whole river valleys. In the 1970s the Green Revolution brought government orders to plant new rice continuously, outside the temple calendar. Plagues of brown planthopper and shortages of water followed, and the harvests recovered when the scheduling went back to the temples. With a colleague, Lansing built a computer model of every subak and dam on two rivers. If each subak coordinated only with its neighbours, the pests won. If the whole valley planted at once, the water ran short. The nested temples, coordinating at each level, did best. The model has its critics. A historian of Bali has shown that the water tax was collected for the kings by a royal officer, and that the office passed to salaried Dutch officials after 1908. Since the terraces were listed as world heritage in 2012, they have lived inside the tourist trade as well. Anthropologists who admire the subak also record the caste order that ran it, the women kept out of its assemblies and the fighting between subaks in drought years. Water cut along the river held at the size of a watershed, with a king collecting at the top.

In Hawaii the land was cut the same way, into wedges from the mountain to the reef, and a leading archaeologist of Hawaii calls the islands that held them an archaic state, where breaking a *kapu*, a sacred prohibition, could mean death.

These are different peoples on different islands and plains, and the lesson they share is the plainest one in this chapter. Cut the unit along the water and the people who share the water can govern it themselves. What none of them shows is that they can do it alone. The water courts work at the village and the district. At the town and the watershed they hold, but in every case on record, with a state behind them, and above the watershed they fail, or survive only as arms of a state, as the Dutch boards do.

The room that changes its mind

The second answer puts ordinary people in a room, gives them time and evidence, and asks them to decide something real.

The largest attempt began in Porto Alegre, the capital of a southern Brazilian state, when the Workers' Party took the town hall in 1989, a few years after the end of military rule. It handed part of the capital budget to assemblies. Neighbourhoods met by district, the whole city met by theme for transport, health and schooling, and each district elected delegates to a budget council. The money was not shared out by applause. A matrix weighted each district's claim by its deprivation, so that the district with no sewer beat the district with the loudest speaker. At first few came. One researcher found that attendance rose once people saw that what they had voted for was being built. By the turn of the century around 20,000 people a year took part. By the end of the 1990s more than four in five homes were on the sewer.

Gianpaolo Baiocchi, a sociologist who spent years in the assemblies, found that they changed the people in them. Neighbourhood associations that had known only how to protest learned to read a municipal budget, argue a case for a road against a clinic, and hold officials to dates. Across Brazil, a study of the country's municipalities found that those adopting participatory budgets moved their spending towards health and sanitation by between a fifth and nearly a third, and that infant deaths fell

by one or two in every thousand births, more the longer the budgets ran.

Then the follow-through failed. By 2003 the city had a deficit, projects already voted were delayed, and a sociologist wrote of the Porto Alegre Thermidor. In 2004 the Workers' Party lost the city. The accounts disagree about what came next. One says the budget assemblies were abolished. Another says they stayed in law and were emptied in practice, their decisions ignored and their money cut. A third says participation had already collapsed before the election. They agree on the shape. Where the assemblies survived, better-off residents came to dominate the thematic meetings and steered money to visible projects over sewers. An American political scientist who has studied these budgets across Latin America says the arrangement needs a committed mayor, money to spare and a civil society already organised, and that in scarcity it pits the poor against the poor. Porto Alegre ran inside a federal state, on a city treasury and a power grid. It shows what the mechanism does, not what a valley could start on its own.

The deliberative poll, invented by an American political scientist in 1988, asks a random sample of the public to spend a weekend with balanced briefings and experts and then answer again. In Mongolia it became law. In April 2017, more than four in five of those invited came to the capital to deliberate on the constitution, turned against a stronger presidency, and in November 2019 parliament wrote a single six-year presidential term into the constitution. In 2023 another poll was held, and analysts found it used by the ruling party to bless an enlargement of parliament it already wanted.

The German-speaking community of eastern Belgium went further. On 25 February 2019 its parliament created a standing council of citizens drawn by lot, each serving a year and a half, which chooses the topics on which assemblies of drawn citizens then deliberate: the working conditions of carers, schooling, housing. Parliament must answer each recommendation in writing and account a year later for what was done. It has complied with every step. Two political scientists who followed the council watched what happened to the substance. Committees split broad proposals into technical pieces and deferred the parts that touched other levels of government. The written replies were drafted by the ministries, which fitted the recommendations to plans they already had. At the hearing a year on, the administration explained that steps were underway.

Now imagine the most patient person in the room. He was not drawn, and no lot can send him home. He sits in the ministry, he has drafted many replies and will be in post long after the council has rotated, and he never has to say no. He only has to say yes in a form that changes nothing. Fewer than one in ten of those invited agreed to serve, and most residents did not know what it was debating. Nothing in the design stopped him, because his answers went back to the council, and almost nobody else was watching.

France's citizens' convention on climate, which chapter 10 followed, met the same end by a shorter road. Deliberation changes minds, and the follow-through problem eats the change.

The firm as a town

The third answer is to own the place where you work and govern it as a town governs itself.

In 1941 a Basque priest arrived in Mondragón, an industrial town in a poor valley under Franco. Two years later he opened a technical school. In 1956 five of its graduates bought a bankrupt workshop and started making paraffin stoves as a cooperative owned by the people who worked in it. In 1959 the priest helped them found a bank of their own, because no ordinary bank would lend to a firm run by its workers. The rules were strict. Every worker was a member with a vote. The highest pay was held at three times the lowest, later six, and nine for a few executives of the largest groups. Members elected a governing council and a separate social council to speak for them as workers. The cooperatives grew into a federation of dozens of firms across the Basque Country. How many people it employs depends on the year and on who is counted, and the counts disagree by a factor of four or more.

There is an old prediction about firms like this, made by English socialists more than a century ago: if they fail they die, and if they succeed they degenerate, closing their membership to protect the gains of the founders and hiring wage labour to do the work. At the level of the single firm, the evidence is against it. Studies of plywood cooperatives in the Pacific Northwest found productivity higher than in conventional mills, and studies of Uruguayan cooperatives found them less likely to close and no

more likely to replace members with hired hands.

At the level of the federation, the prediction does better. From the mid-1990s the managers pushed abroad. The flagship, Fagor, which made washing machines and cookers, bought a French manufacturer in 2005 and ran plants in France, Poland and Morocco with employees who were not members. When the Spanish building market collapsed, Fagor's members voted to cut their own wages, and the federation's solidarity funds poured in years of rescue money. In October 2013 Fagor asked for more, the federation said no, and Fagor went under. Within two years the federation's placement office had found the displaced members, Basque worker-owners all of them, places in other cooperatives. The workers in its foreign plants were laid off like anyone else's. Sociologists of Mondragon describe managers who professionalised, assemblies that lost their grip on policy, and a solidarity that stopped at the edge of membership. The refusal itself was the veto working: the federation would not let one firm's managers drain the others. A cooperative at scale drifts towards its managers unless the members keep the veto.

Jos de Blok, a community nurse, founded Buurtzorg in Almelo in 2006 with two colleagues, as a revolt against the managed, corporate home care of the day. Nurses work in teams with no boss, plan their own patients and split in two when a team grows too large to plan its round at one table, with a small office handling pay and billing and coaches who advise but cannot order. The care hours per patient came out well below other providers'. When the health ministry had the accountants check, its patients turned out to run up more hospital costs than those of nine in ten other providers, and the total cost per patient came out only a shade below average, almost exactly the national middle. When Buurtzorg took over a bankrupt provider in 2015, the incoming staff demanded supervisors and job descriptions, and de Blok imposed the change from the centre. The firms in these studies that stayed without bosses for long all had an owner or founder who could overrule everyone.

Cooperatives of this kind work from the workshop up to the size of a town. Mondragon at the size of a region is strained, and its plants abroad are ordinary capitalism. And all of it ran under Spanish and Dutch law, on public grids, with courts to enforce contracts.

That leaves three tools on the table, and I want to hand them over plainly. A court that sits in public at a fixed hour and must decide be-

fore the hour is out. A room of ordinary people whose advice has to be answered where everyone can hear the answer. A membership that keeps the veto over the managers it hires. None of them has yet been shown standing without a state behind it, and the people who may one day need them would have to build that part themselves.

THE STRONGEST CASE AGAINST

The strongest voice against this chapter is Donald Alexander, who in 1990 took apart the bioregionalists' faith in the watershed. To cut a polity along the water, he argues, is the naturalistic fallacy in civic dress: the assumption that what is natural is good. People are also creatures of language, religion and history, and those do not stop at the ridge line. A valley can be as feudal and as warlike as any empire, and blood and soil have been sold before as the natural order of a place.

The record adds two blows of its own. First, the water can be taken out of the watershed without anyone crossing the ridge. In 1955 the water supply board on O'ahu drove a tunnel into the mountain and took much of a valley stream's flow to supply the central plains, and it took the state's supreme court in 2000, invoking the public trust in water, to order water left in the streams. The research I rely on puts it bluntly: a perfectly drawn watershed is useless if the law lets capital tunnel through the mountain and sell the river. In the American Southwest the *acequias*, the Hispanic irrigation ditches, lost water the same way, once rights were measured, written down and made saleable.

Second, no commons in the record has governed more than about 50,000 people on its own. Every success above the village had a state behind it: Valencia's court had the city and the crown, the Dutch boards a state around them, the subak the rajas' tax collectors, Mondragon Spanish courts and banks. The drawn assemblies are worse placed still, because they advise bodies that can ignore them.

I accept most of this. The water courts are not a design for a free valley. They are a design for a valley with someone above it, and the someone has usually been a king. What survives the objection is narrower. The unit cut along the water is the right unit for water, not for identity, and the form of the court, public and weekly and quick, can be used inside a larger order without trusting that order.

IN PRACTICE

At the town or watershed rung, the minimum version would be the one Valencia shows, without the postcard. Each canal, ditch or dike district would hold an assembly of everyone who takes its water or keeps its bank, and that assembly would elect its own syndic and a ditch-boss for a short term. The syndics together would sit as a court at a fixed hour each week, in a public place everyone in the valley can reach, hearing complaints aloud and deciding before the hour is out. Elected canal officers and an oral court sitting in public at a fixed hour are historical practice in Valencia, and elected ditch-bosses are historical practice in the acequias of the American Southwest. Most of what follows beyond that is proposal.

What it would need is modest, and I want to state it once. Each canal community would need a syndic and a clerk who can read, write and reckon, a handful of literate people in all. It would need a written record kept by the clerk of turns, labour owed and fines levied, even if verdicts stay oral. It would need one meeting place, a church door or a market square at the confluence. And it would need of each syndic perhaps a morning a week in the irrigation season, and the court's single hour. A shared calendar, a ledger of labour and the willingness to shun a neighbour who refuses to dig would be the rest.

The proposals, drawn from the research syntheses rather than from any record, would add five things. Every right to water would be tied to land in the basin and could not be sold out of it, the lesson of the tunnel on Oʻahu and the acequias. The vote in each canal assembly would go to everyone who works the land, not only to its owners, which is the correction Valencia never made. The chair of the court would rotate, and a syndic whose canal was party to a case would step down for it. Twice a year the syndics and ditch-bosses would walk every canal and bank together, and a stretch left unkept would be repaired at its holder's cost. And syndics would serve short terms, as the Italian towns did when they hired a stranger as *podestà* for six months or a year, a practice chapter 7 followed.

A drawn council could advise the assembly on what the valley should build next, as in eastern Belgium. The rule that would matter is that every recommendation be answered in public, at the court hour, by the syndic responsible, and that a second drawn group, not the officials, check a year later whether anything was done. Where money is shared out, a matrix

weighting need, as Porto Alegre used, would stop the biggest village from taking the most.

The first failure to expect is at the head of the water. The upstream villages hold the gates, and their syndics would be tempted to collude, dominate the court and levy fines on the tail. In Nepal, where canals run by farmers have done better than those run by the state agency, the record shows the counterweight: the head-enders need the tail-enders' labour to keep the canal open, and that need restrains them. A valley that rotated the court's chair, counted the labour in public and let the tail withhold its digging would be using the same weight on purpose. The second failure is quieter: free-riding on ditch work, which only the ledger and the shunning answer. The third is the follow-through that never comes.

The handoff to the region would come when two watersheds quarrel over water that neither court can command. That is the moment when, in every case on record, a state stepped in, and it is the subject of the next chapter. A valley that had built its court could at least arrive at that table with its records, its rotating chair and its own idea of who answers to whom. After the Fall, the court that would still be sitting is the one that has kept its hour.

Thursday comes round again. The bell strikes. Someone has a grievance about water, and before the hour is out, someone has to answer it.

The studies, figures and open questions behind this chapter are on the website.

CHAPTER 15

The Valley of Death

A farmer stands in the summer grass at Þingvellir, below the long wall of dark rock where the Lawspeakers have recited the law since 930, and listens to men he has known all his life talk about giving the country away. It is 1262, the season of the Althing, and the floor of the valley is crowded with tents, tethered horses and farmers who have ridden in from their own valleys to hear the chieftains out.

The talk is of peace. Since 1220 the great families have fought each other with private war bands, burned farms with the families still inside and settled lawsuits by who could bring more spears to court. The most feared of the chieftains, Gissur Thorvaldsson, has already sworn himself the King of Norway's man. What the king offers is the one thing the Commonwealth never had: someone to make a verdict stick.

The farmers agree. They swear allegiance to the Norwegian crown in the oath later called the Old Covenant, *Gamli sáttmáli*, and by 1264 the last districts have followed. Nobody has conquered them. They are tired, and they have done the sum.

I keep coming back to that summer, because it is the most honest scene I know in the long record of people governing themselves. A free people looks at its freedom and decides it cannot afford it any more. Nobody is lying in that valley. The chieftains are not tricking the farmers, and the farmers are not cowards. They have simply reached the place where courts without a constable stop working, and they choose the constable.

I am writing in October 2026, before the Fall, for people who may one day stand in a valley like that one and be offered the same bargain. This

chapter is about the few arrangements that tried to refuse it, and about what the refusal cost.

The Law Rock

Chapter 5 told how the Commonwealth worked and how it came apart, and I give only the bones of it here. The court could only find. The winner of a lawsuit had to enforce the verdict himself, so a weak man handed his claim to a strong one. The tithe accepted in 1096 let a chieftain who owned a church keep half of what it collected. The chieftaincies, the *goðorð*, could be bought, and over the generations a handful of families bought or took nearly all of them.

What 1262 adds is the reason the end came the way it did. The Commonwealth did not lack law. It had law in plenty, recited from memory and argued over by men who loved argument. It lacked anyone who could make the strong obey a judgment they disliked. While the chieftaincies were many and small, no family could field more men than its neighbours could answer, and the threat of a feud did the constable's work. Once a few families held the chieftaincies and the men, the courts became a stage on which the strong performed.

Gissur's own life shows what that felt like from the inside. In 1241 his men came to Reykholt and killed his former father-in-law, a chieftain and the country's great historian, in a cellar. In 1253 his rivals burned his farm at Flugumýri during a wedding, and his wife and sons died in the fire while he escaped. A man who has lost his family to a fire set by his neighbours has his reasons for wanting a king. So, by 1262, did the farmers. They got peace, and within a generation they got a law book drafted for the king, Jónsbók, in 1281. Iceland did not govern itself again for centuries.

Here is the uncomfortable part for the ladder this book climbs. By headcount Iceland never reached the rung this chapter is about. It had about as many people as a market town, scattered over an island with one assembly for all of them. It died at the lip of the valley, not in it. But it had already met the problem that waits further down: too spread out for its people to meet as neighbours, too proud for a ruler, and with nobody in the middle who could make a verdict hold.

I borrow a phrase for the rung that follows and make it a house term.

The *Valley of Death* is the region, somewhere between half a million and five million people, where face to face has already failed and the state has not yet been built. Below it, people can still meet, or send someone they know to meet for them. Above it lies the nation, with taxes, armies and clerks. In between there is a long stretch of ground where nobody can see everybody and nobody yet commands everybody, and that is where most attempts at self-government have died.

That is the first thing the record teaches, and it is the bleakest. In the millions, nearly everyone who tried to govern face to face has failed, and most of those who crossed the valley did it by becoming a state. The ladder in this book has a breaking point at every rung: the band that must split, the village that needs written rules, the district that needs delegates, the town that needs offices and is too large for one square. The region is the last of them. The Hanse, a league of towns with no capital, no treasury and no army of its own, dominated the trade of the Baltic for centuries and still lost to the princes who had all three. The leagues gave way to territorial states nearly everywhere we can look.

Nearly everywhere is not everywhere. A few arrangements went into the valley and came out with something worth carrying.

Instructions from home

In Glarus, once a year on a spring Sunday, the citizens of a Swiss canton still stand in a square and decide their laws by raising their hands. In Appenzell men once carried a sword to the square as proof of their right to vote. The *Landsgemeinde*, the open-air assembly of a whole canton, is the picture most people have of Swiss democracy, and it is beautiful, and it is small. Only a minority of those entitled come, by most counts between a tenth and a third of them, and those who come are better schooled and freer on a Sunday than those who stay home. A show of hands also lets an employer see how his workers vote. As late as 1990 the men of Appenzell Innerrhoden raised their hands against votes for women once more, as chapter 13 told, and it took the federal court to overrule them. The square works for a district. For a town it strains. For a region it is impossible.

The more interesting thing is what sat above the squares. The old Swiss confederation had no permanent head of state, no central treasury, no

standing army and no written constitution. Each canton was its own small republic, some ruled by assemblies in the square, the cities by councils of merchants and guild masters. When the cantons needed to act together they sent delegates to a diet, the *Tagsatzung*, and the delegates carried written instructions from home. If a question came up that the instructions did not cover, the diet adjourned and the delegates rode back to ask. Decisions needed every canton's consent. It was slow beyond belief, and it held a confederation together from the late Middle Ages until the French army marched in in 1798.

Even the founding is less solid than it looks. The charter dated 1291, which Swiss schoolchildren learn as the beginning, may have been drafted some years later, and it became the founding document only in 1891.

There is a name for the principle the diet ran on, and an older theory behind it. In 1603 Johannes Althusius, a Calvinist lawyer who served as syndic of the city of Emden on the North Sea coast, published a book that described a commonwealth without a sovereign at the top. Families joined into guilds, guilds into cities, cities into provinces, and each association kept the rights it needed for its own work. The magistrate at the top was a hired manager, not a master. Emden lived something close to it, a self-governing city that held its own against princes, though it was also a city of guild masters and enforced orthodoxy, and dissenters there learned how small a free town can feel. Much later the Catholic Church gave the idea its modern name, subsidiarity: a larger body should not take on what a smaller one can do for itself.

Put the Swiss diet and Althusius side by side and the second lesson comes out plainly. Nesting works when each layer does only what the one below it cannot, and when the people sent upward carry instructions they did not write and can be called home. The Swiss delegate was the purest case. He could decide almost nothing on his own, and that is why nobody needed to fear him.

I had expected the ratio to matter more. The designers of nested councils like to calculate how many people one delegate can speak for before he stops knowing them, and they set safe limits. The old confederacy broke every such limit by a wide margin. Each delegate spoke for far more people than any designer would call safe, and the arrangement held anyway, because what he carried upward was not his judgment but his canton's letter. The ratio mattered less than the leash.

The road to Cîteaux

Every September, for generations, abbots rode out from Scotland, Poland and every country between toward a single house in Burgundy. The rule that sent them was written at Cîteaux in about 1119 under its abbot, Stephen Harding, and it was called the *Carta Caritatis*, the charter of charity. Under it every Cistercian monastery kept its own lands, managed its own harvest and elected its own abbot. Two bonds tied the houses together. Once a year every abbot came to Cîteaux for the General Chapter, which passed statutes binding on all houses and heard appeals against local abbots. And once a year the abbot of each founding house rode out to visit each of its daughter houses, checked their discipline and their accounts, and could depose an abbot on the spot.

It spread fast. From twenty monks in 1098 the order grew to some seven hundred houses by 1300, by the count most often repeated, though the source for that count is thin.

The visitation is the part I would carry out of the valley. A corrupt abbot could hide a great deal from his own monks, who had sworn obedience to him. He could not easily hide his books from a man who arrived every year, owed him nothing and had the power to remove him. The third lesson is this. A federation without a capital can keep its officers honest if its members audit one another in person, on a calendar that nobody at the top can move. The Council of Constance, which met from 1414 to 1418 to end the scandal of rival popes, tried to give the whole Church the same thing. Its decree *Frequens* ordered a general council at fixed intervals whatever the pope wished. The popes kept their monarchy by not calling the councils, which says the same thing from the other side: the date of the assembly is its first decision, and the one most often stolen.

The Cistercian federation did not die from inside. Kings ended it. As the national monarchies hardened, they forbade their abbots to ride to France and forbade them to send money there, and then they handed abbeys to outsiders who drew the income without ever living in the house. The best audit in medieval Europe could not survive a border its auditors were not allowed to cross.

There was a second flaw, closer to home. The work in the fields was done by lay brothers, the *conversi*, who took vows and lived by the rule and had no vote in anything. A historian of the order has shown how they

carried the estates on their backs, and how in the twelfth and thirteenth centuries they rose against the monks more than once. The federation audited its abbots superbly and never let its labourers into the room.

I should also be honest about the ledger. The order reached across a continent, but it counted members, not populations. Its houses, spread over Europe, were never a region governing itself. They were communities of monks and lay brothers who had agreed to be audited, living among people who had not been asked.

A commune on every street

In February 1999 Turkish agents captured Abdullah Öcalan in Nairobi and took him to a prison on the island of İmralı. He had founded the Kurdistan Workers' Party in 1978 as a Marxist-Leninist insurgency whose aim was a Kurdish state of its own. In his cell he read, among much else, Murray Bookchin, an American social ecologist who argued that the nation-state could never free anyone, and he came out of that reading with a new programme. He called it democratic confederalism: communes in every village and street, federated upward, with no state at the top.

From 2012, in the north-east of Syria, in the land its Kurds call Rojava, his followers built it while fighting a war. The base was the commune, the *komîn*, a village or a single street in a town, which met in assembly and elected two co-chairs, one man and one woman. Communes sent their co-chairs to neighbourhood councils, those to districts, the districts to cantons, and at its height the administration stood over a territory of several million people. Committees in the communes settled most local quarrels without a court. The forms are a nesting theorist's dream.

The attendance is not. On the best field accounts, between a tenth and a third of the households took part in the meetings, rising when the Turkish army crossed the border or when bread was being handed out. That is about the share who come to the square in Glarus, which tells you something about people and not much about ideology.

Now imagine the most patient person in the room. He does not speak at the commune meeting. He may not even attend it. He is a cadre, a *kadro*, schooled in the party's mountain academies, and he sits in a min-

istry where the fuel is allocated, the budget drawn up and the security forces deployed. Observers describe how decisions of that weight needed his quiet clearance, whatever the councils had voted. Behind him stood the purse. Most of the administration's budget came from oil, sold at home, through pipelines and by smugglers' trucks, and whoever held the oilfields held the confederation's money. Behind the purse stood the guns. In June 2013, in the town of Amuda, security men opened fire on protesters who were demanding the release of detained opponents.

Both the admirers and the critics of this experiment write as partisans, and it was a war, so I hold every claim at arm's length. Its own press and its supporters abroad describe a stateless, feminist and ecological democracy. Its critics call it a Leninist one-party statelet, with the communes as an outer shell. The fairest reading I can give is that the communes were real, the councils above them were real, and the decisions that mattered were taken by people no commune could recall. The paired co-chairs and the women's councils made the cadre's work slower. Nothing in the communes could stop it.

This gives the fourth lesson, the one no federation has escaped. Enforcement is the thing no federation in the record has solved without becoming a state. The ones that lasted borrowed force from a protector, sold it abroad, or kept it in a party that answered to nobody below.

In January 2026 the Syrian government's forces, joined by Arab tribes in revolt, attacked across the north-east. By the end of that month the administration had signed a ceasefire, given up the Arab-majority provinces and, with them, more than four-fifths of its territory and nearly all its oil. When I last read of it, in the autumn of 2026, the forces that had defended it were merging into the Syrian state's.

The other cases that went into the valley tell the same story in different clothes. As chapter 5 told, in Somaliland the elders made a peace that conferences paid for from abroad could not, and then their house extended its own term six times. The Gada's wheel, which hands power to a new generation every eight years, held a whole people together on the Borana's own account, but where war chiefs had booty to keep, in the Gibe, they kept their offices too. The Haudenosaunee gave the clan mothers the power to remove a chief, and chapter 13 told what that bought.

C. S. Holling and Lance Gunderson, ecologists who studied forests after fire and fisheries after collapse, offer a way to think about all this.

They describe every living system as running through a cycle of growth, rigidity, collapse and renewal, and every small cycle as nested inside slower and larger ones. When a small system collapses, the larger and slower one above it can hold what the small one needs to grow back: seed, pattern, rules that worked. They call that remembering. It suggests that the proper work of a region, after a collapse, is less to command than to remember. The Lawspeaker reciting the law at the Rock was that kind of office. So was the September chapter at Cîteaux, and the Gada's calendar. What the region could never do, on the record we have, was the other thing. It could not make the strong obey.

THE STRONGEST CASE AGAINST

The strongest voice against this chapter belongs to Alfred Kieser, a German organisation theorist who read the medieval monasteries as the first designed organisations in Europe and then refused to admire them on their own terms. Those who followed his line argue that the monasteries were rent-seekers, landlords with prayers, and that their famous internal government could not have survived without someone else's monopoly on violence around it. The Cistercian audit worked inside a world where princes kept the peace on the roads. When the kings withdrew that shelter, the audit failed.

Apply that reading to every case in this chapter and it holds uncomfortably well. The old Swiss confederation was not a league of free farmers. It was a league of oligarchies. Bern came to be ruled by a closed circle of patrician families. The cantons governed subject lands that had no voice at all, and they paid for much of their independence by exporting their young men as mercenaries to the kings of Europe. When the peasants rose in 1653, Catholic and Protestant cantons forgot their quarrel long enough to crush the revolt together and execute its captains. The confederation survived for centuries, its modern historians argue, because it was useful to the great powers as a buffer and because it controlled its own people well, not because it was free. When France no longer needed the buffer, its army marched in.

Rojava held exactly as long as an armed party held it, and as long as outside powers found it useful. Somaliland's elders became a house that

would not go home. And Iceland, the case this chapter opened with, chose the king with its eyes open, and got the peace it asked for.

On this view the Valley of Death is not a valley at all. It is the place where states are born, and they are born there for good reasons, because a population that size needs someone to make verdicts stick, and the alternative to a state is not freedom but the strongest family. The farmers at Þingvellir were not defeated. They were right.

I cannot answer this case in full. I can only note that the state the farmers chose was a long way off, and that what they bought, in the end, was a distant master instead of a near one.

IN PRACTICE

What follows speaks to a region on the rung of the Valley of Death, made up of watersheds that each govern themselves. The confederal forms below are historical practice. Combining them, and the rules on money and arms, is my synthesis, and nobody has run a region on it.

If you are a region of watersheds, keep the confederal layer to the few things no watershed can do alone: peace between watersheds, the shared calendar, the audit, the common weights and records, and the defence of the passes when an emergency is declared. Everything else stays below. The test for any new task is the Althusian one: can a watershed do this for itself? If it can, the region should not.

If the watersheds send delegates, send them with written instructions and the right to call them home. A delegate who meets a question his instructions do not cover goes back and asks. This is slow, and the Swiss diet shows how slow, including a paralysis in 1798 that helped a foreign army walk in. The counter-evidence matters. A region that needs to act in days needs a small standing exception, with a fixed end date, and chapter 16 is about putting a clock on it.

If the region meets as a whole, let it meet once a year, on a date fixed in its founding agreement that no officer can move. The council that cannot be postponed may be the most useful thing the medieval Church invented, and it was the thing its popes worked hardest to kill. Make the date part of a shared calendar that every watershed keeps anyway, with a feast at the meeting place, because the Gada and the Cistercian September both held people by ritual as much as by rule.

If officers are to stay honest, audit them in person. Each year, let each watershed send two people to audit a neighbouring watershed's books and officers, with power to suspend an officer until the general meeting hears the case. Rotate the pairings so that no two watersheds audit each other year after year and grow friendly. If any power, inside or outside, stops the auditors from travelling, treat that as the alarm. It is how the Cistercian federation died.

If the confederation needs money, do not let one resource pay for it. Whoever holds the oilfield, the mine, the toll bridge or the only working port tends to hold the confederation. Let each watershed pay its share from its own taxes, in proportion, so that the region stays poor, dependent on its members and easy to refuse.

If the region keeps no standing army, it has to face the problem that creates. The confederation's only weapons against a watershed that refuses a verdict are exclusion, embargo and the shame of the general meeting. The Hanse's embargo worked against towns that needed its trade. It does not work against a family with a fortress and its own grain. For defence, the watersheds raise their own militias, and the region names a war captain only for a declared emergency, with a fixed end.

The first failure to expect is the war captain who stays. He has won, his men love him, there is still danger on the border, and stepping down feels like abandoning them. The Gibe war chiefs kept their booty, then their men, then their offices. The second failure is the slow one that ended Iceland: offices that can be bought or inherited until a handful of families hold them. A cap on how many seats, mills and offices a single family may hold across the region is cheap to write down and very hard to keep.

What it takes is modest by the standards of a state and heavy by the standards of a village. Each watershed needs literate clerks who can keep a record in two copies, couriers, and roads that stay open in the summer. The region needs a meeting place with room and food for a few weeks, and a small secretariat that rotates among the watersheds and owns nothing. Delegates give a few weeks a year to the general meeting, and the clerks of the secretariat perhaps a day a week in ordinary seasons. Auditors give a fortnight to their neighbours. Most people give nothing except their taxes and their presence at the feast.

Above the region lies the nation, and the question there is not how to meet but how to survive an emergency without handing it to someone

who never gives it back. That is the next chapter.

After the Fall, someone is likely to stand where the farmer stood and hear the same offer: peace in exchange for a master. The arrangements in this chapter are the reasons not to accept it too soon. They are not proof that the offer is wrong, and the valley is long.

The studies, figures and open questions behind this chapter are on the website.

CHAPTER 16

The Clock on the Emergency

On the night of 27 February 1933 the parliament building in Berlin is on fire. By the next day the president of the German republic, an old field marshal called Paul von Hindenburg, has signed a decree that suspends the civil liberties written into the constitution, and he has done it lawfully. Article 48 of the constitution drawn up at Weimar in 1919 lets the president take the measures needed to restore public security and order, with armed force if he must, and suspend basic rights while he does. The decree names no day on which those rights come back.

The article was not careless. It gave the parliament the power to revoke anything the president did under it. For the three years before that night, as the Preface told, three chancellors, Brüning, Papen and Schleicher, had governed almost entirely by decrees issued under it, because the parliament was too divided to pass laws, and too divided to say stop. Nobody had to tear up the constitution. It had a check on the emergency and no clock.

I grew up under the constitution written in 1949 by people who had watched this happen, as the Preface said, and every German of my generation was taught the lesson at school. I am writing this in October 2026, before the Fall, for whoever has to govern after it, and of all the chapters in this book this is the one nearest home. It is about the nation or continent, the rung of a few million to 500 million people, which is the rung you are least likely to build and most likely to be asked to join. The question it asks is small and old. When a body that large is given a power for a danger, who decides when the danger is over?

A check and a clock

The Roman dictator had six months. Hindenburg's chancellors had Article 48, which had no clock on it at all.

Chapter 6 told how the Roman office was built: one man, for one stated task, at most half a year, with no treasury of his own, and how Rome lost it, first when the Senate began to issue a final decree with no end date against its own citizens, and then when the legions came to belong to their generals. The part worth carrying out of Rome is a separation. The Senate declared that there was a danger, a consul named the man to meet it, and neither of them was the man himself.

Weimar joined the two. The president decided that there was an emergency, the president's chancellor used the powers, and the only brake was a vote of the parliament to revoke them afterwards. That brake needed a majority to stop the emergency. In a parliament split among many parties, intimidated by men in uniform on the streets and later purged of its opponents, no majority could be found to stop anything. A check of that kind fails in exactly the conditions in which emergencies are declared.

A clock turns this round. Under a clock the power lapses on a fixed day unless someone gathers a majority to continue it, so a divided assembly, which cannot agree on anything, lets it lapse. The division that paralysed Weimar becomes the guard.

The man who gave the decrees their theory was a German professor of law, Carl Schmitt. In 1922 he wrote that sovereign is he who decides on the exception, and in 1931 he argued that the president, not the parliament and not a court, was the guardian of the constitution, because only he could act when the rules ran out. An Austrian jurist who had designed his own country's constitutional court answered him the same year: a court must guard a constitution, because an executive that acts outside the law in order to save it has already put an end to it. The constitution I grew up under took the court's side. I quote Schmitt as a warning. He saw the danger more clearly than most of his opponents and drew from it the lesson that made it worse.

What came after is the sentence of Giorgio Agamben's that the Preface quoted, and this chapter is its home. Hitler never abolished the Weimar constitution. He suspended it, for twelve years. The decrees of the three years before the fire had made each further step look like one more decree,

up to the Enabling Act of 1933 that ended the republic.

This chapter's name for the alternative is the Clock on the Emergency. Any power granted for a danger carries an end date, written down when the power is granted, and only a body other than the one that holds the power can move that date. Rome had a plain version of it, and Weimar had none.

In the record, tyranny inside a constitution most often came in through an emergency that was never allowed to expire. The clock must be set by a body other than the one that benefits.

Who winds the clock

In 1948, with the war only just over, Clinton Rossiter, an American political scientist, published a study he called Constitutional Dictatorship. He had looked at how republics had governed in crisis and concluded that the line between democracy and dictatorship was drawn too sharply. A republic in danger, he thought, could lawfully hand near-absolute power to a trusted person, provided the power was temporary, used only to defend the constitutional order, and never used to abolish the ordinary institutions, the legislature above all.

His favourite case was Abraham Lincoln. In April 1861, with the civil war starting and Congress not sitting, Lincoln suspended habeas corpus, the right of an arrested person to be brought before a judge, along the line between Washington and Philadelphia. On 4 July 1861 he put his defence to Congress as a question: "Are all the laws, but one, to go unexecuted, and the government itself go to pieces, lest that one be violated?" Congress approved what he had done and passed a law on it in 1863, and in the middle of the war the election of 1864 was held. Rossiter counted Lincoln a successful constitutional dictator. Later scholars point out what the success rested on. Nothing in the arrangement made Lincoln hold the election. He held it because he was Lincoln. A clock that depends on the man who holds the power is a promise.

Other emergencies ran without even the promise. The Committee of Public Safety in Paris, set up in April 1793 for the war, ruled through the Terror until it was overthrown in July 1794. In June 1975 Indira Gandhi had India's president declare an emergency on the ground of internal dis-

turbance, after a court had voided her election. It ended only because in 1977 she called an election, misjudged her own popularity and lost.

Sorting the cases, the research I relied on finds a pattern in what ended on time. The end date was fixed in advance and measured in weeks or months, not years. The public had trusted its institutions before the crisis began. The danger came from outside and everyone could see it, an army at the gates or a new disease. What did not end had a vague mandate, a divided country, and a danger that the government itself got to define.

After the attacks on the United States in 2001, Bruce Ackerman, an American professor of constitutional law, watched emergency powers that were meant to be temporary settle into permanence, because no elected member wanted to be the one who repealed an anti-terror law before the next attack, and because the security offices that used the powers came to depend on them. His answer, in a book of 2006 called Before the Next Attack, was a clock that grows harder to wind. The government could declare a short emergency on its own. Each renewal would need a larger majority of the legislature than the one before, three-fifths the first time, then seven in ten, then four in five. The longer the danger lasts, the more of the government's opponents have to agree that it is still there.

The pandemic of 2020 was the latest test, and the record is better than I feared. A team at the Varieties of Democracy institute followed governments through the first year. Most democracies used measures roughly in proportion to the danger and let them lapse. A minority went further, and in Hungary Viktor Orbán's government took the power to rule by decree with no end date at all. The harsher governments did not save more lives. Where enforcement was abusive, the deaths were higher, not lower. The virus was a danger from outside that everyone could see, which is the condition under which clocks have run down as they should.

Seven chairs

In Bern, seven people govern Switzerland together. The Federal Council has been elected by the federal parliament since 1848, for fixed terms. Each councillor runs a department, decisions are taken by the council as a body, and the presidency passes from one member to the next every year and carries no more authority than the chair at a meeting. Since 1959 the

seats have been shared among the largest parties by an unwritten rule the Swiss call the magic formula. Scholars of the council think it works because it is weak. The cantons hold much of the power, and any law can be put to a popular vote, so no seat at that table is worth capturing outright.

Now imagine the most patient person in the room. He is not Christoph Blocher. In 2003 Blocher, a billionaire who led the Swiss People's Party, won a seat on the council and did what its custom forbids. He attacked his colleagues in public and used his department to campaign for his party. No law stopped him. The calendar did. At the next scheduled election, in 2007, the parliament gave his seat to another member of his own party. The patient man would have kept the custom, waited, and built his following inside his department, and the calendar would have come for him all the same at the end of his term. A college with fixed terms keeps a clock on every member, patient or not.

The Swiss are not a fable. Swiss women had no vote in federal affairs until 1971, the many foreign residents who work there have none now, and the council's critics say that consensus makes the country slow to change anything. But the shape recurs wherever people have feared one ruler. Rome had its two consuls, each able to veto the other. San Marino, a republic the size of a town inside Italy, has been governed since 1243 by two Captains Regent, elected for six months, whose every act needs both signatures, and when they leave office any citizen may bring complaints against them. In north-east Syria the autonomous administration that chapter 15 followed put a woman and a man jointly in charge of every council from the street commune upward. Since January 2026, as chapter 15 told, I do not know what remains of it.

Colleges fail too. Uruguay replaced its president with an elected council in 1952, deadlocked through years of falling incomes and inflation, abolished the council by referendum in 1967, and fell to the soldiers in 1973. A college is slow, and it can be swept aside at the speed of an invading army. But in the record I have read, colleges with a rotating chair were slow, deadlocked and overthrown, by soldiers, invaders and crowds, and none was turned into one man's rule from its own chair.

The theory of divided power says the same thing in other words. A political scientist who studied what he called veto players, every person or body whose consent a change requires, showed that adding one can never widen what is able to pass, only narrow it. That protects against a

quick capture and condemns a country to slow decline when the world changes faster than its veto players can agree. The comparisons of recent decades are hard on the arrangement in which a single elected president faces a parliament of many parties, because neither can remove the other and the deadlock has often ended in a coup. One proposal for making laws by lot splits the work among separate bodies: one drawn to set the agenda, volunteers to draft, another drawn to review, a large jury drawn for a few days to vote yes or no without amending, and two more to watch the rules and the staff. Nobody who proposes gets to vote, and nobody who votes gets to draft. It has never governed anything larger than a pilot, the nearest being a standing citizens' council in the German-speaking part of Belgium since 2019, which chapter 14 followed. On the ladder, colleges with short terms have worked from a town to a federation of a few million people and have not been tried at the size of a large nation. Unanimity has held in small leagues and failed at the region and above, as the next section tells.

A veto for sale

In 1652, in the parliament of the Polish-Lithuanian Commonwealth, a deputy from Upita called Władysław Siciński objected, and the session was over. Under the custom the nobility called its golden liberty, a single deputy's "I do not allow" dissolved the whole diet and voided everything it had already passed. One of the sources says he acted for a magnate, Janusz Radziwiłł. Historians count differently, but between a third and a half of all the Commonwealth's diets ended that way, and in the century after Siciński most of them did.

Russia and Prussia guaranteed the veto by treaty, and Catherine II instructed her ambassador in Warsaw to bribe, frighten or arrest deputies as needed. The reformers found a way out in the confederated diet, which set the veto aside and decided by majority, and the Great Diet of 1788 to 1792 used one to pass the constitution of 3 May 1791, which abolished the veto. In 1792 a group of magnates formed a confederation under Russian protection, the Russian army came in, and the partitions of 1793 and 1795 took the Commonwealth off the map until 1918. Unanimity at scale is a veto for sale, and the buyer is whoever can pay most, at home or abroad.

The Dutch lived longer with the same rule. Under the Union of Utrecht of 1579 their provinces had to agree unanimously on taxes, war and peace. It worked for a long time because one province, Holland, paid most of the bills and bought or bullied the others into line, while the lands the provinces had conquered together had no vote at all. Unanimity among unequals is the rule of the largest, with a delay. In 1672, when France and England invaded together, the provinces could not raise an army in time. A crowd in The Hague killed Johan de Witt, the Grand Pensionary who had run the republic since the 1650s, and his brother, and the provinces handed command to William III of Orange. The American states learned it faster under their first articles of union, when Rhode Island alone refused the union an import duty in 1781. The European Union still keeps unanimity for taxes, foreign policy and changes to its treaties, and Hungary's government has used its veto to buy exemptions for itself.

The nation has cousins in the record that were not nations. The Church held a continent together for centuries by separating spiritual authority from territory, chose its head in a locked room after the long vacancy at Viterbo that chapter 8 told, and when rival popes split it, a council at Constance deposed them between 1414 and 1418. The Mongols sorted their armies and subjects into decimal units, as chapter 4 told, and ran horse relays across Asia, but their succession was settled by assemblies of princes, and when Möngke Khan died and two of his brothers convened rival assemblies, as chapter 5 told, the empire's unity ended. The European Union, the nearest thing to a continental self-government there is, depends on courts, a civil service, interpreters and a treasury that no region after the collapse could supply. I tell it for its mechanism, a double majority of states and of people, not as something to copy.

The turn to the present comes from the villages. Large states have often let villages govern themselves, and the record says why. China let its villages elect their committees from 1987, because Beijing could not watch its own village officials, and spending on roads and irrigation rose. Once the state could afford its own auditors, from the early 2000s, it put the elected committees back under appointed party secretaries. In Wukan, in 2011, villagers drove out corrupt officials and elected their own head, and in 2016 he was arrested on corruption charges. Indonesia sent a share of its national budget straight to its villages from 2015, a good deal of it was

taken by village heads, and what stopped them was not village meetings but the national anti-corruption agency's sudden arrests. India reserved a share of village headships for women, and in many villages, as chapter 13 told, the husband governs in his wife's name. A strong centre grants self-government when it needs what villages know and takes it back when it can afford not to. What it can give a village that the village cannot give itself is an outside audit.

Taiwan shows what a large body can do with what it hears. In March 2014 students occupied the parliament in Taipei, and a programmer named Audrey Tang joined the volunteers inside to broadcast the floor to the country. From 2015 civic programmers and the cabinet ran consultations with a piece of software called Pol.is, which has no reply button. People write short statements and mark agreement or disagreement with each other's, the software groups them by how they vote, and it puts first the statements that win agreement in every group, not the ones that excite one. In the 2015 dispute over Uber, taxi drivers and app drivers turned out to agree on more than either side had said. Tang became a minister in 2016, founded the Ministry of Digital Affairs in 2022 and left it in May 2024. The claim that most of the consultations led to government action comes from a paper Tang co-wrote and counts small administrative cases with large ones, the ministries lost interest when the minister who had sponsored the consultations left office in 2016, and most petitions on the government's own site never reached the number of signatures that forces a reply. It needs electricity, servers, a cabinet that wants to listen and a state to host it. I tell it for the mechanism: in a divided body, read out first what every side agrees to.

THE STRONGEST CASE AGAINST

Then there is the case my own argument would rather you did not read. Giorgio Agamben does not think the emergency is an exception at all. He traces it to the Roman practice of a standstill of the law and argues that suspending the law has become the ordinary way modern states govern, the means by which a state holds its people as bare life, exposed to power without the protection of law. On his reading a clock is written by the same order that decides when to ignore it, and when the date arrives,

whoever commands the soldiers decides whether the date means anything. A legal theorist who has argued with the defenders of emergency law adds that emergency rules never stay inside their dates. They reshape the ordinary law around them, so that what lapses on paper has already changed the country.

There is a second force in the case. The clock can kill. A danger that outlasts its date, a siege, a war, a disease in its second winter, meets a renewal that needs four votes in five, and a faction of one in five can let the defence lapse out of spite or for a price. That is the veto for sale again, in the clock's own mechanism. The founders of the American republic made the matching case against colleges: a council hides who is to blame, and it hesitates when a raiding army is a day's march away, and in the hesitation a war captain steps forward who does not step back. Rome's clock, the model for all of this, ran inside a slaving society among an elite that agreed with itself.

I take this seriously because the cases in this chapter that ended on time are fewer than the ones that did not. The best I can say for the clock is that it does not stop a determined man. It makes him break something in public in order to go on.

IN PRACTICE

Nobody has built a body of many millions of people from the ground after a collapse, and I would not expect you to. What you are more likely to meet is an offer to join one, or a demand. The record gives conditions under which your region might join, and conditions under which it should refuse.

If the larger body has an emergency power, look for the date first. A power granted for a danger should carry its end in the grant, set by a body other than the one that uses it, and lapse unless that other body renews it. One way to do it, and nobody has yet done it at this size: the first grant measured in weeks, each renewal needing a larger majority than the last, as Ackerman proposed, and the body that declares the danger never the body that acts on it. If the union you are offered has an emergency article with a check and no clock, refuse it, or join only once the clock is written in. The failure to expect is the emergency renewed by the people it serves, or defined so widely that it has no outside. The counter-failure is the fac-

tion that blocks a renewal the danger still needs, and the only defence the record offers is a danger plain enough for everyone to see.

If it has an executive, ask for a college with a chair that rotates each year, fixed terms, and an audit when each term ends, at which anyone may bring a complaint, as San Marino does and as chapter 7's podestà faced. If the college must have a war office, keep command of armed force out of the college and the stores out of the commander's hands, so that a general has to come back to a civilian body for bread. The failure to expect is hesitation in front of a raiding force, and the record's answer is the Roman one, a separate office for the danger with its own clock.

If the union decides by unanimity, expect its smallest member to be bought, and the buyer to come from outside. Keep unanimity for admitting and expelling members and for changing the founding agreement, and decide everything else by large majorities. If the union is deeply divided, a hall where delegates write short statements and mark agreement, with the statements agreed on every side read out first, can do with chalk what Taiwan did with servers. That too is a proposal.

If the union offers your villages self-government, ask what it gets in return. The record says a strong centre grants it while it needs what villages know and takes it back when it can afford its own officials. What is worth asking for is the outside audit that villages cannot run on themselves, done by auditors from elsewhere who arrive without warning and leave.

What it needs: a written founding agreement copied into every member region, clerks who can read it, a roll of who may vote and serve kept in public, couriers fast enough to carry a renewal vote to every region before the date runs out, a calendar every region keeps, and a place where the college and the assembly can meet. For most people it asks no hours in an ordinary week and a day at each renewal vote. For delegates it asks weeks away from home each season, which is why the delegates should rotate.

The first failure at this rung is rarely a single man. It is a single party filling every college seat and every co-chair, so that the clock is set and wound by people who answer to the same office. If one organisation holds the majority in every body that is meant to check another, the separation is already gone, whatever the founding agreement says.

What passes upward to the planet is not an executive and not an emergency power. There is no body above the planet to set its clock, and a power that nobody outside can end is the thing this chapter warns against.

What a union can hand upward is the habit: grants with dates in them, renewals that cost more each time, and colleges that cannot agree to stay. The next chapter takes it from there.

Before you sign anything after the Fall, find the clock.

The studies, figures and open questions behind this chapter are on the website.

CHAPTER 17

The Seventh Generation

A health worker walks the one lane of a village in India in 1977, looking at faces. She is not looking for fever. She is looking for the small pitted scars that smallpox leaves on those it does not kill, and above all for fresh ones on children, because a child with new scars means the disease has passed through since the last search. A clerk behind her writes in a ledger. If she finds a fresh case, a sample goes to a laboratory and a team comes to vaccinate every household within reach, with a forked steel needle that can be boiled clean in a pot on the fire and used again. Nobody in this lane can hide a case for long, and neither can the state government above it, because a scar on a face is a fact anyone can count. There is an old teaching that a council should weigh each decision for what it does to the seventh generation still to come. The searcher is not thinking about the seventh generation. She is thinking about this lane, today, and the one after it. By 1980 the disease is gone from the earth.

This is the chapter about the top of the ladder, the planet, and I should say at once what that means for anyone reading it in the hope of building something. Nothing in it passes the bar the rest of this book sets, that a group could start it with the people, the literacy, the record, the meeting place and the hours it actually has. Once the state has withdrawn, no one could run a treaty, an internet or a commissioner for future generations, by definition. I tell the record anyway, for what it shows about three things that matter on every rung: scale, the veto, and whether anyone can check. Then I come back down to the hearth, because that is where it would start.

What could be counted

The smallpox campaign is the planet's cleanest success, and it is worth saying why before praising it. In 1967 the world's health agency put money from its ordinary budget behind a last push. Benjamin Rubin, an American microbiologist, had invented a needle with two prongs that held a drop of vaccine between them, so that one vial went much further than before and a villager could learn to use it in an afternoon. The United States and the Soviet Union, who agreed on little else in those years, agreed on this. And the enemy could be seen. A case was a face, a face could be counted, and a government that wanted to hide an outbreak from the world could not hide its children's faces. The campaign did not need anyone to trust anyone. It needed searchers, a needle and a ledger. The counter-evidence sits inside the praise. Smallpox was one disease, with a visible mark and a cheap vaccine, and both great powers wanted it gone. Almost nothing else the planet faces has all four.

The other success most often named is the Montreal Protocol on the chemicals that thin the ozone layer, adopted in 1987. I begin with it because the scholars fight over why it worked, and the fight is the lesson. By the accounts I rely on, over 98 per cent of the controlled chemicals have been phased out, and every country in the world has signed. One reading says it worked because the problem was small in the right way. A handful of firms made the chemicals, cheap substitutes existed, a fund paid poorer countries to switch, and the scope was strictly technical, kept clear of politics, and physically verifiable. An economist, Scott Barrett, reads it the other way. The treaty worked, he argues, precisely because it refused to be voluntary. Parties were barred from trading the chemicals with countries that stayed out, which made staying out expensive. The fund bought in the countries that could not afford the switch. The firms that held patents on the substitutes had every reason to want the old chemicals banned. In his telling Montreal is not a gentle coordination among equals. It is coercion, well designed and well paid for.

Both readings agree on one thing, and it is the thing I would keep. The banned chemicals can be measured in the air. In 2018 and 2019 the stations that sample the atmosphere picked up a rise in a chemical that should have been falling, and traced it to factories in eastern China. Nobody had to confess. The air told. That is the smallpox searcher's ledger at the scale of

the sky.

Montreal is also the treaty everyone wanted to copy, and the copies failed. The climate treaties of Kyoto and Paris tried the same form against a problem that is not a few firms and a substitute but every stove, engine and field on earth, and the gases kept rising. The Antarctic Treaty of 1959 froze claims to a continent where no one lives, and a protocol of 1991 banned mining there, which is narrow in the most literal sense. Where the planet's bodies tried to govern politics rather than chemistry, they met the veto. The League of Nations needed unanimity and could not act. The Security Council gave each of its permanent members a veto, and in Rwanda in 1994, and again in Syria, the veto or the fear of it held the council still while people died.

Kings, presidents and voting

The second arrangement told in full is the body that sets the technical standards of the internet, the Internet Engineering Task Force. In 1992 David Clark, one of the engineers who had built the early network, put its creed into a line that its members still quote: "We reject: kings, presidents and voting. We believe in: rough consensus and running code." It has no members in the ordinary sense and holds no votes. A chair who wants to know where a working group stands asks the room to hum, for and against, and listens for which side is louder, which tells the room its mood without making anyone stand up to be counted. A guidance note of 2014 says what consensus means there: every objection has to be answered, though not every objection has to win. And an argument ends, in the end, when someone shows a program that works. That is verification again. You can dispute a design for months, but you cannot dispute that it runs.

The counter-evidence is in the mailing lists. A study of the body's whole email archive, every list over decades, found that a small core of regulars does most of the work. The open door is open to those with the time and the employer to walk through it. The research I draw on calls it a technocracy of endurance, and names its first failure plainly: the bad-faith objector who keeps a thread alive late into the night until everyone else goes home to sleep. The same source then recommends humming to

anyone building a council, without reconciling the two, which is a fair picture of how the arrangement is usually praised. Running code is the defence, where there is code. Where the internet had one scarce thing to govern, the root of its address book, it built a single body, ICANN, and handed it the job in full in 2016. In 2019 that body moved towards letting the registry for every address ending in .org be sold to a private equity firm, and in April 2020 the sale was stopped not by anything inside it but by the Attorney General of California.

On the ledger of rungs, the smallpox campaign is the only arrangement marked as working at every rung from the household to the planet, Montreal works at the nation and the planet and nowhere below, and the internet's standards body works in rooms the size of a hamlet or a village, strains above them, fails at the nation, and works again at the planet only because what it makes is code, which anyone who disagrees can copy and change. Each success was a narrow job that could be checked from outside, done through many hands rather than from one centre.

The planet has never been governed. What worked there was narrow, checkable and spread among many hands.

One parliament or many

The idea of a parliament for eight billion people is old and comes back after every great war. A philosopher in Königsberg warned in 1795 that a single world state would end as a soulless despotism, and preferred a league of free republics. The modern arithmetic is no kinder. A world parliament of any size that a hall could hold would give each member more constituents than many countries have citizens. And a world state would remove the oldest defence in this book. The foragers of the first chapters kept their would-be chiefs small by walking away from them. Under one government of the whole earth there would be no frontier left to walk to.

The nearest the planet has come to an assembly of its own was the Global Assembly of 2021, timed to the climate talks in Glasgow. It drew a hundred people by lot, weighted to match the world's population, and brought them together online over several weeks in many languages. About a third of them could not read fully, and most lived on very little. They wrote a declaration. It bound no one. The study that weighs it calls

it logistically possible but functionally toothless, and that is fair. It proved the lot can reach the whole world, and it proved nothing else.

Now imagine the most patient person in the room. He would not try to be drawn, because the lot does not take requests. He would offer to run the secretariat: to choose the experts, frame the questions, write the briefing papers and summarise the hearings. Chapter 10 followed this patient figure through the modern assemblies drawn by lot, where whoever wrote the question, chose the experts and drafted the text was never drawn and never sent home. A world assembly drawn by lot would be captured as chapter 10's assemblies were, at the desk and not at the draw, and the one office no one draws for would be the one that matters.

So the serious alternatives are not one body but many. Elinor Ostrom, whom the Preface met at the water court, wrote for the World Bank in 2009 and again in 2010 that waiting for one top-down climate treaty was fragile. Cities, regions, firms and farmers acting at many levels at once, each learning from the others' failures, would be slower to agree and quicker to try. Her work is the most fully tested of anything in this chapter, but it was tested up to the size of a watershed, not the sky. Two other camps look beyond the treaty and the patchwork alike. A circle of writers and podcasters who call their project Game B describe a metacrisis and hope for a third path between collapse and a surveillance state. Their material comes almost wholly from their own newsletters, podcasts, wiki and blog posts, and the one study that weighs it finds no working design in it. An Oxford philosopher went the opposite way, arguing that if some invention made mass destruction cheap enough, only surveillance of everyone and a single global authority could stop it. The hope of designing globally and making locally, with open blueprints and small workshops, rests on a grid and a supply chain that would not survive what this book prepares for.

Venice closed its Great Council to the families already sitting in it, and that closing, the Serrata, is the story of chapter 7. A body that holds the whole earth and then closes has no outside from which anyone could audit it, appeal against it or leave it.

A single world body is the largest Serrata imaginable.

Seven generations

The title of this chapter comes from a teaching attributed to the Haudenosaunee, that a council should weigh each decision for its effect on the seventh generation to come. I tell it as a teaching, not a rule. Its most cited written source is an ethnographer's edition of 1916, and the closest reading of my sources is that it should not be treated as a working rule. Even its horizon wobbles between a century and a half and two centuries. The confederacy's working rules, the clan mothers who could take a chief's office away, belong to chapter 13. What the teaching asks is still a fair question for the end of a book: what makes an arrangement last long enough to reach anyone's grandchildren?

The record is unkind. Political scientists who traced every national constitution written since 1789 found a median life of nineteen years. Against that stand a few survivors. A Japanese temple-building firm ran from the sixth century until 2006, and kept itself alive by adopting able sons-in-law into the family name, so that the best carpenter led and not merely the eldest son. It died when its last head borrowed against property and the debt outran the trade, and the account of it rests largely on blogs. The Benedictine rule, written in the sixth century, tells the abbot to call the whole community to counsel on any weighty matter, "because the Lord often reveals to the younger what is best." The Rijnland water board in Holland dates its origins to around 1255, and twice a year its inspectors walked every dike in the schouw, under the old line *wie het water deert, die het water keert*: whoever the water harms must keep it out. Merton College in Oxford has had an outside Visitor since 1264, who can hear complaints against the head of house. The cardinals have been locked in to choose a pope since 1274, which chapter 8 told. The Ise shrine in Japan has been pulled down and rebuilt on a fixed cycle since the seventh century, so that each generation of carpenters learns the work from the last. Valencia's water court, the Icelandic Commonwealth and the confederacy itself belong to other chapters.

The counter-evidence is as old as the survivors. An economist argued that stable societies grow thick with interest groups that slow everything down, and the long-lived bodies are good evidence for him. Adam Smith complained that most Oxford professors had long since given up even the pretence of teaching. And nearly every survivor lasted partly by keeping

people out: women, servants, the unlanded, the unbaptised. Long life is not the same as fairness. But the survivors share a pattern. Each tied the future to a ritual that came round whatever anyone wanted, the rebuilding, the inspection, the chapter meeting, the adoption, and each tied the present to an audit by someone who could not be dismissed, the Visitor, the walking inspectors, the youngest monk.

The institutions that last bind the future with ritual and the present with audit.

The third arrangement told in full is the newest attempt to give the future a seat. Tatsuyoshi Saijo, an economist at a research institute in Kyoto, began running experiments in which some members of a group were asked to speak as people living decades from now, and to argue for them. In one study of 2017 the share of groups that chose to leave resources for later rose from about a third to about a half or more when such imaginary future people were present. The town of Yahaba in northern Japan tried it in planning, and its residents, some speaking for the future, accepted a rise in their own water rates to renew the pipes. That account comes only from Saijo's own group. The claim that the effect repeatedly doubles is overstated, a laboratory is not a town, and the sharpest critique is the simplest: the present speaks for the future and tends to hear itself.

States have tried harder versions and learned a tradeoff. Israel gave a commissioner for future generations the power to hold up bills in its parliament, and abolished the office. Hungary gave its ombudsman for future generations the power to suspend harmful regulations, and then folded the office into another. Wales passed an act in 2015 binding its public bodies to consider future generations, with a Commissioner to watch them, and it survives because it can advise and cannot stop anything. In 2025 the Welsh auditor found it was not yet driving change. A guardian with a veto is abolished, and a guardian who survives has no veto. In New Zealand the Whanganui river was made a legal person by an act of 2017, with a voice of two persons, one named by the Crown and one by the river's iwi. The river now owns its own bed, though the Crown kept the water. Its people say *ko au te awa, ko te awa ko au*, I am the river and the river is me. It holds where an old guardianship, already alive and now paid for, stands behind the legal form, and it strains wherever lawyers try to lift it into national water policy.

THE STRONGEST CASE AGAINST

The best voice against this chapter is Frank Biermann, who has spent his career on what he calls earth system governance. His case runs like this. The planet's problems now have thresholds. Past a certain point an ice sheet goes or a forest dries, and no amount of learning afterwards brings it back. Polycentric governance learns by failing, and a world near its tipping points cannot afford the failures. Look at the record of the patchwork, he says. Since 1990 the world has had climate pledges by nations, networks of cities, carbon markets and voluntary schemes by the thousand, and emissions have risen by over 40 per cent. Europe's Covenant of Mayors, a showpiece of cities acting for themselves, has a membership in which two in three cities filed nothing on what they had done. Meanwhile the one treaty everyone praises, Montreal, worked by trade sanctions, a fund and patents imposed from the top, which is the opposite of what the polycentrists draw from it. And there are dangers, as the Oxford philosopher argued, where a single failure is final, so that a habit of trying and learning would end in the trial that leaves no one to learn.

On this view the chapter's preference for narrow, many-centred bodies is a preference for drift. The real choice at the planet is between strong anchoring institutions with powers to match the problem and a slow slide into the ruin the polycentrists say they fear. Biermann does not ask for a world state. He asks for teeth at the top: a world environment body with binding powers, a council for sustainable development that decides by qualified majority rather than waiting for consensus, and a trusteeship council that could hold states and firms to account for the biosphere. And he points out that the alternative has been tried for a generation and has failed.

I have no full answer. I can only say that every planetary body with teeth this chapter has met was either narrow and checkable or captured, and that a body with teeth and no outside is a bet that the most patient person in the world never arrives.

IN PRACTICE

What follows is in conditionals, because none of it has been tried in the conditions this book prepares for. Historical practice means something

people did and someone recorded. A proposal means a design drawn from that practice that no one has run.

At the planet, the honest answer for the first years after the Fall is nothing. No assembly, no secretariat, no treaty. If a planetary body were ever rebuilt, the record suggests it should be what the successes were, narrow, checkable and spread among many hands: one job, one thing that can be measured from outside, and several bodies rather than one. The smallpox searchers and the air stations are historical practice. A standing rule that no body may hold more than one planetary job, and that every such body must answer to measurements it does not control, is a proposal. The first failure to expect at this rung is the veto, the member who can stop everything and does. The handoff runs downward. Whatever cannot be verified at the planet should be handed back to the nations and regions, where the Clock on the Emergency and the long Valley of Death are the subjects of the two chapters before this one.

At the watershed, if the old water boards are a guide, the river is governed by those it harms, with inspection on the calendar and a court that sits in public on a fixed day. The first failure would be the upstream village that refuses to share in a drought.

At the district, delegates would carry instructions from home and lose their seat if they ignored them. The first failure would be the wealthy clan that offers to keep order with its own men.

At the village, a chest with Three Keys held by three people drawn by lot, as chapter 12 preferred, and a register kept by the few who can write. The first failure would be a family that shirks its share of the common work and makes the others pay.

At the hamlet, a weekly council, a keeper of the tithing chosen by rotation or lot, the duty to raise the hue and cry, and tallies split down the middle so that both sides hold a half.

And at the hearth, the household is where it would start, and here the bar is met. The Hearth Council of chapter 11 would take every adult and older child in the house. It needs no literacy, only counting, and its record is a notched tally stick, or cuts in the wooden beam above the fire. It would meet in the kitchen after the evening meal, for under half an hour at dusk and perhaps two hours a week in all. Its first business would be three things: count the seed and the water, set the night watch, and divide the work. One steward would be chosen by full agreement and could be

replaced the moment the work showed someone better. The stores would be opened and counted at each weekly council, so that no one keeps a hidden hoard. Any emergency command would end the moment the danger ended, and anyone could leave with their clothes and their tools. The first failure would be the loss of whoever feeds the house, through illness or injury. The handoff to the hamlet would come when the fields needed more teams than one house can field, or when a band of strangers larger than the house came down the road. This whole design is a proposal, drawn from the record of households that governed themselves, not a practice anyone has recorded in this form. So is the idea, drawn from the Japanese *ie*, the house kept as a line that outlives its members, that the house and its land should belong to that line and not to any one person in it.

The first morning after, there is a hearth, a tally stick and a day fixed for the next meeting. Everything else is later.

If that morning comes, it would be a small inheritance. The kettle would be on. Someone would have counted the sacks in the store and cut the count into the beam. Someone else would have said, out loud, that the house meets again tonight when the meal is cleared, and that the youngest speaks first. Nobody in the room would be thinking about the seventh generation.

Equality was never given. It was done, by hand, every day.

The studies, figures and open questions behind this chapter are on the website.