The Last Court

Law as held force, and the improvement that is capture

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Abstract

Law is the oldest applied discipline of how a community is to live together, and it has never had a foundation in the sense the mature sciences have one. Its nearest thing to an atom is a static taxonomy of jural relations; its most ambitious system descends from a basic norm it can only posit. This paper proposes that the atom of law is neither a relation nor a posited norm but a *force with a direction*: the legal order is the configuration of one thing, the monopoly of legitimate violence, and the foundational categories are the directions that force can take. Property is force the collective lends to a holder against all others; a right is a direction the force will not go even for a holder; personhood is the force refusing categorically to face any control over a member of the community whose force it is; sovereignty is the force itself; and enforcement is the coupling that makes any of these real rather than paper. On this identification the discipline is not a theory of what entities deserve and crosses no is–ought gap: it describes how force is held and pointed, and "wrong" means force misdirected against a member of the kind whose force it is, an operational fault, not a moral posit.

The framework recovers the structure of law as configurations of this one object: adjudication as the consistent updating of the reference, the rule of law as the requirement that like inputs yield like outputs, contract as a privately authored reference with public force, tort as the restoration of cost to its source, criminal law as the community's defence of the floor against a member who would set their own, constitutional law as the governance of who may write the reference. Two things it does not force, and it marks them apart. One it hands back to the community: the content of life above the floor, which goods it weights and how it provisions its own. The other is the edge where its internal logic genuinely runs out, named and not solved: the relation between distinct holders of force neither of whom is the other's to admit, which no single monopoly can settle. One principle the framework makes central is countervailability: an order cannot safely lodge its force, or the maintenance of its reference, in any holder the community cannot contest and check, machine, monopolist, oligarch, or captured organ alike, and the classical defences of dispersed power are this principle already at work. The bar on admitting a made system to legal personhood is the sharpest case of it, not its foundation.

The order rested on an assumption never written into any model: that its functions, judging, advising, enforcing, fact-finding, maintaining the reference, are performed by the same bounded human kind as the community the order serves. Generative systems dissolve that assumption. Each legal function has its own viability inequality, and the dynamics that move the labour market move these: as the machine's effective temperature falls and its capability rises, the functions cross from human to machine performance in a fixed order, and each crossing is, on every conventional metric, an improvement, and is in the order's own dynamics the transfer of a piece of the monopoly. The paper conditions on the crossing rather than forecasting it; what the structure supplies is what the crossing means. Its terminus is the authority to set the reference everyone is measured against, passing from the collective that held it to whatever holds it next. The paper offers one instrument for telling the improvement from the transfer when, by every other measure, they have become the same.

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1 The problem: a discipline that never modelled its own performers

Law is older than its theory. Before there was jurisprudence there were courts, and before courts there was the older fact courts formalise: that a community holds, and is held together by, a capacity to compel. The Greek *nomos* and the Latin *lex* name the rule; what stands behind the rule, and distinguishes a legal order from a moral conviction or a social custom, is that the community will, in the last instance, bring force to bear. A moral claim that no one will enforce is a moral claim; a legal claim that no one will enforce is a dead letter. The defining feature of a legal order is not that it states what ought to be done but that it couples what is stated to the monopoly of legitimate violence. This is the one fact every theory of law must begin from, and it is the fact this paper builds on.

For most of its history the discipline asked one foundational question: where does a rule get its authority? The answers located it variously, in a moral order above the sovereign, in the sovereign's command or the convergent practice of officials, in what officials in fact do. These are theories of *validity*, of what makes a norm a law, and they are theories *about* law rather than derivations of its structure. The nearest the discipline has come to a structural foundation, an account of what the elements of a legal relation *are*, is a catalogue of positions: every legal position is one of eight, paired as opposites and correlatives, right and duty, privilege and no-right, power and liability, immunity and disability. It is the closest law has to a periodic table. But it is a table of static positions. It gives the shape of a legal relation the moment you freeze the order and look; it says nothing about where a right comes from, why it moves when a case is decided, why a doctrine holds for a century and then collapses in a decade, or why a right that is vigorously enforced and a right that is never enforced are, in the scheme, the same position. There is no time in it, and no force, only the positions force can take, catalogued with the force removed.

A more ambitious tradition saw that the missing thing was a dynamics, and built the discipline's most complete foundation: a legal order as a closed system, every valid norm deriving its validity from a higher norm, the whole hierarchy descending from a single basic norm that admits no moral or empirical content. It is the project this paper shares, a legal order derived rather than catalogued. But that system has a hole it could never close: the basic norm is posited. It is not derived; it cannot be. Its content, that the historically first constitution is to be obeyed, is exactly the arbitrary starting point that makes a pure derivation impure at its root. A system descending from an arbitrary axiom is coherent but not grounded; one can always ask why *that* axiom, and the theory has no answer but that one must assume it.

The diagnosis of this paper is that these two achievements are each one half of a single object. The first had the stationary structure, the positions force can take, without the dynamics. The second wanted the dynamics, the descent of an order from a foundation, without a way to make the foundation non-arbitrary. The object that has both halves is a force with a direction: a single conserved thing, the monopoly of legitimate violence, whose orientations are the stationary positions and whose motion is the dynamics, and whose foundation is not posited but is the thing's own definition, the collective's instrument for keeping itself. The body of this paper develops that object, recovers the structure of law as its configurations, and shows that the foundation the dynamical tradition had to assume is what the object simply is. But the object earns its keep on a question neither half faced, and it is the question that makes the paper urgent as well as foundational.

The assumption no model contained. Every legal order in history has rested on a fact so constant that no theory thought to state it: the functions of the order, judging a case, advising a party, finding the facts, enforcing the judgment, maintaining the body of expectation that is the

law, have been performed by human beings, the same bounded kind as the community the order serves. The performer of law and the community served by law were the same sort of thing. This was never written into any model because it never varied; it was the water the discipline swam in. The deepest assumptions of a field are the ones it never writes down, because they never vary: not defended, because never challenged, and load-bearing because they are invisible. This is such an assumption, and a technology has, for the first time, begun to challenge it.

Generative systems are the first technology that performs not the clerical substrate around legal work but the inferential core of it: research, drafting, prediction, and increasingly the advisory and adjudicative functions themselves. The performer is ceasing to be the same kind as the served. There is by now a large literature on the doctrinal questions this raises at the surface, whether a model's training infringes copyright, whether an autonomous agent can contract or be an agent in law, who is liable when a system errs, whether a machine can be an inventor. There is almost no theory of what the technology does to the *order itself*: to adjudication, to precedent, to enforcement, to the production of legal judgment, to the structure that the doctrinal questions take for granted. The labour market has at least the beginnings of such a theory, a way to ask, function by function, when a machine's performance of a task overtakes a human's in capability and cost, and what follows when it does. The legal order has no comparable object in its literature: no way to ask what the displacement of its own functions does to the thing those functions compose. This paper supplies one.

Why no existing theory can supply it. The absence is not an oversight the literature will repair in time; it is structural, because every existing account fixed the performer as a constant and so kept no variable to turn. An account that keys validity to acceptance, to what officials converge on practising, cannot register a capture that arrives *with* acceptance: the more accurate machine everyone comes to prefer is precisely the case it cannot see as a loss. An account that judges end-states against a fixed set of goods has a floor but no dynamics, and since each crossing improves the delivery of justice on its face, it would bless the very transfers it should fear, having no temperature coordinate on which the cost is visible. An account that equates law with efficiency is the sharpest case, for it is the zero-temperature programme itself, friction being the thing it exists to remove, so it does not merely fail to object to the capture but supplies its rationale. And an account that idealises the interpreter, positing a judge who already reaches the one right answer with unbounded skill and patience, has no resource for the interpreter changing kind, and would welcome the machine that approximates the ideal it set. The intuition that power must be dispersed is the one fragment of the right idea the constitutional tradition carries, but it was tied to human institutions and never operationalised against a single performer that crosses every branch at once. Each account is excellent for the world it was built for, the world with the performer held fixed; the age varies the one term they all hard-coded, and none keeps the formula for its other values.

What the paper claims, and what it refuses to claim. The paper makes a structural claim and conditions a dynamical one. The structural claim is that the legal order is the configuration of held force, and that its concepts, property, right, personhood, sovereignty, adjudication, enforcement, are directions and operations of one monopoly of violence, recoverable as such. The dynamical claim is that as machine capability rises, the functions of the order cross from human to machine performance in a fixed order, each crossing transferring a piece of the monopoly. On the dynamical claim the paper holds to a discipline of conditioning: it conditions on the crossing rather than arguing for it. Whether and when machine performance of a given legal function passes human is an empirical question, and not this paper's. What the structure supplies is what the crossing *means*: that the legal order's improvements, past a certain point, are the transfer of the force the

order was made of, and that the discipline has no instrument for telling the one from the other. The paper ends by supplying that instrument. It does not predict the transition; it describes what the transition is, so that a community crossing it can see what is changing hands.

The thesis, in its most dangerous form. The reader should know at the outset what the argument arrives at, because it is not the claim the title might suggest. The danger is not that machine law will be arbitrary, biased, or wrong. A community can survive bad law; it has always had bad law, and the means to contest it. The danger is the opposite. It is that machine law will be *better* on every measure a legal order knows how to keep, more consistent, more accurate, faster, cheaper, more enforced, and that each improvement will, in the order's own structure, concentrate the force and freeze the reference that the order's freedom lived in. A human legal system is slow, partial, inconsistent, appealable, and embedded in a profession that argues with itself. From an optimisation standpoint these are defects. This paper argues they are also the friction that kept the law contestable, the reference warm, and the force dispersed across enough hands that the community could always take it back. The transfer of the legal order to machines will not announce itself as a loss, because it will arrive as a sequence of genuine improvements, each individually correct, each defensible on the metrics that justify it, and cumulatively the passing of the order's force to a maintainer the community no longer holds. A legal order can survive error, slowness, inconsistency, and contest. It may not survive perfect administration by a reference it no longer owns. The structural reason this is so, and the one instrument that can tell an improvement that strengthens the order from one that quietly transfers it, are what the paper exists to supply.

2 The identification: law is held force

The object this paper builds on can be stated from first principles, and the statement is short. A system that values some states over others, that cannot move infinitely fast or see infinitely far, and that acts over time, settles toward a reference: it is drawn toward the states its values favour, held back from reaching them instantly by a friction that can be greater or smaller, and the balance it settles into is the reference tilted by what it values, sharpened or blurred by how much friction it has. Call the force the thing that does the drawing, the reference the body of expectation it settles toward, and the friction its *temperature*: high when the system is slow, sticky, and resistant to being moved, low when it snaps to the states its values favour with nothing held in reserve. This is the whole of the machinery the paper needs, and it reads, in the legal domain, as a single identification.

> **The identification.** The force is the monopoly of legitimate violence; the reference μ is the legal order; a legal relation is a direction the force takes with respect to an entity; and enforcement is the coupling κ by which the force actually flows to a relation rather than standing on paper. Everything that follows is consequence or recovery.

Why this force and no other primitive? Because the monopoly of legitimate violence is the thing a legal order is *defined by holding*. Strip a legal claim of the force that stands behind it and what remains is not a weaker law but a different kind of thing, a wish, a custom, a moral conviction. The feature that makes a relation *legal* rather than moral or social is that the community will, in the last instance, compel. A primitive that is a force, moreover, has what a catalogue of relations and a hierarchy of norms lack: a direction and a magnitude. It can be pointed, and it can flow. That is the missing thing, the dynamics a static taxonomy could not contain and the motion a posited hierarchy needed, and the rest of the paper is the working-out of what a directed, flowing force does.

Two honesties belong here, at the outset, because the paper's later confidence rests on them. First, the identification is the one load-bearing claim, and the only one. Everything the paper later calls *forced* is forced *given* the identification; the word marks a consequence of this one premise, not a derivation from nothing, and the evidence for the premise is precisely the reach of what it forces: a primitive that recovers the structure of a dozen fields and forces a transition the discipline had no account of is doing more than re-labelling. The reader who rejects the identification should expect the consequences to fall with it, and is owed that warning plainly. Second, the dynamical machinery the later sections use, how a reference relaxes under a case, how competing references gain and lose ground, how an order can over-concentrate onto one reference or fragment into several, is the behaviour of any bounded system that relaxes toward a reference under friction. The paper's claim is that a legal order is such a system; that identification, not a derivation internal to legal materials, is what licenses the dynamics in this domain. The machinery is therefore transported, not proven from cases, and the reader who grants the identification inherits it, while the reader who doubts that a legal order relaxes like a bounded system should doubt the dynamical results in the same breath as the identification that carries them. Where a step rests on that behaviour the paper says so at the point of use, so the reader can see which moves are the legal contribution, the identification, the account of the floor, the recovery of doctrine as configurations of held force, and the theory of legal displacement, and which are the general motion of a relaxing force read into the legal case.

2.1 The four directions and the coupling

Freeze the force and ask which way it points with respect to an entity. There are exactly the orientations the foundational categories name.

Property is the force the collective lends to a holder, faced outward against everyone else. A title is a standing promise that the force will, in the last instance, exclude others from the thing, remove the trespasser, recover the chattel, enjoin the interferer. Strip the enforcement and ownership decays into mere possession: whoever holds it, holds it, until someone stronger takes it. Property is force lent and pointed outward.

A *right* is a constraint on which way the force may face. Rights come in two forms, and the force-reading separates them cleanly where the taxonomies blur. A *negative* right is a direction the force will not go, even on behalf of a holder: the right against cruelty to an owned animal is the force refusing to back the owner's total dominion over a thing the owner indisputably owns; the right against unreasonable search is the force refusing to flow on the state's own behalf past a line. A *positive* right is a direction the force is committed to go *for* a holder: the right to counsel, to an education, to subsistence, is a standing claim that the force will be brought to bear to provide, not merely to refrain. The first withholds the force; the second directs it. Both are gradable and grantable, a community sets how far the negative shield extends and how much the positive claim commands, which is why a thing may hold rights, in either form, without holding the standing that forbids ownership altogether. The animal occupies this position: owned, and yet shielded by negative rights against its owner, and in some orders the beneficiary of positive duties of care. So, this paper will argue, may a made system that can suffer, owed the withholding and even the provision, without thereby being owed membership. The positive form also marks where the legal order meets the economy of provision: a positive right is the force coupled to a claim on the community's resources, the point at which the holding of force and the sharing of goods become the same question.

Personhood is the force refusing, categorically, to face any control over a member of the community

whose force it is. Not a right granted but a floor: the one direction the force will never go for one's own. Abolition was exactly this and nothing more romantic, the withdrawal of the state's enforcement from the slaveholder's title. The same human, the same week: property before, because the force backed the claim; person after, because the force would no longer back any claim of ownership. Personhood is the direction the force refuses.

Sovereignty is the force itself, held, answering to nothing above it, the monopoly as such, the thing that does the lending and the withholding, unownable because it is what makes owning possible.

And *enforcement* is the coupling κ that makes any of these real. A relation to which the force does not actually flow is structure without coupling, a right on paper that no one will vindicate, a duty no one will compel. The gap between the law in the books and the law in action has long been insisted on and never formalised; it is the gap between a relation's structure and its coupling, and the paper returns to it as a variable in its own right. Figure 1 sets the four orientations and the coupling side by side.

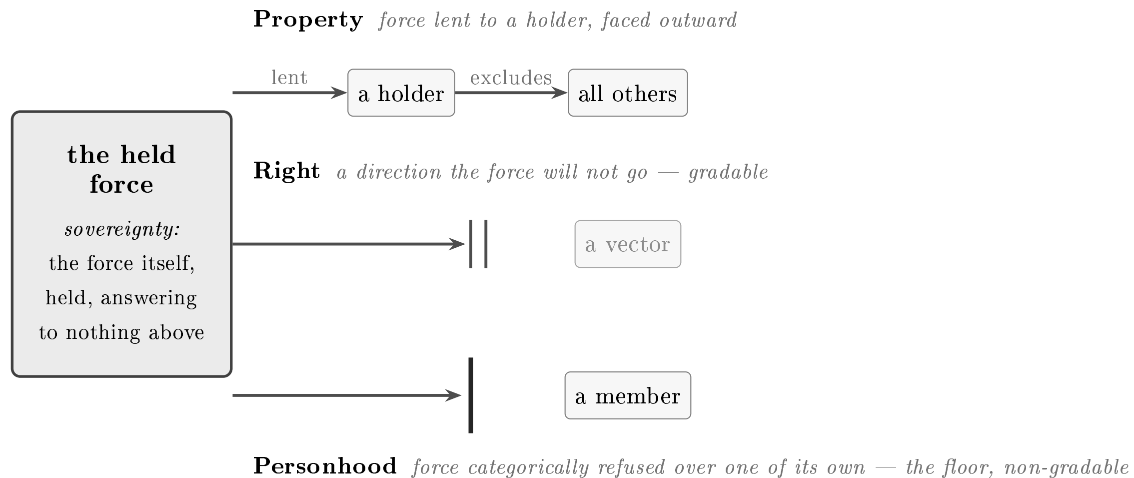

Figure 1: The four orientations of the held force, and the coupling. Sovereignty is the force itself, held; the other categories are directions it takes toward an entity. *Property* is force lent to a holder and faced outward, excluding all others. A *right* is a direction the force will not go even for a holder, and it is gradable: a community sets how far the withholding reaches (the double bar). *Personhood* is the force categorically refusing to face any control over one of the kind's own; it is not a withholding that can be dialled but a floor (the bold bar), non-gradable because it tracks origin, not degree. The weight of every arrow is the coupling κ, the degree the force actually flows: a paper relation is the same arrow drawn faint. The eight jural positions, the operations one directed force admits between two parties, are the fine structure of these directions.

2.2 Legitimate violence: the monopoly made generative

The identification uses a word that has carried the whole weight of one of the oldest debates in the discipline: the monopoly is of *legitimate* violence. That a community is defined by its claim to the monopoly of legitimate force within a territory is the standing characterisation of the state; this paper takes that characterisation and makes the monopoly do more than mark the state. It makes the monopoly the generative atom from which the legal relations are the directions, not a defining feature left otherwise unexploited but the object the whole structure is read off: property, right,

personhood, and sovereignty as its orientations, adjudication, enforcement, and legal change as its motions.

The word *legitimate* cannot be cashed out until the paper has said what the force is *for*, which is the same thing as saying who its holders are, and that is the work of Section 4. Legitimacy is structural: a fact about whether the force stays directed at keeping the community whose force it is. The identification supplies the object; the floor supplies what legitimate motion of it is; until then the reader may take "legitimate" as a placeholder for a property the fourth section makes exact.

3 The forced structure: orientations, the update, the coupling

The identification is one sentence; what makes it a foundation rather than a metaphor is that, granted it, the structure of a legal order is not free. A directed, flowing force admits exactly a stationary description (which way it points, frozen) and a dynamical one (how it moves and how strongly it is coupled), and each of these forces a specific piece of legal machinery. This section states what the identification dictates, in the order the object itself sets: the orientations (the stationary picture), the update (the motion), and the coupling (the strength). The content of any particular order, which laws, which floor, is supplied by the community; the form is not free.

The forced structure of a legal order. Given the identification of the legal order with a directed force relaxing against a reference, three things follow and exhaust the structure. *Orientations:* with respect to any entity the force points in one of the ways named in Section 2: lent (property), withheld or directed (rights), categorically refused (personhood), or held (sovereignty), and these orientations, with their fine structure, are the complete inventory of legal standing. *The update:* when a case arrives, the reference moves the least the case compels, because a directed force consistently applied cannot import structure the case does not supply; this is adjudication, and its constraint is the rule of law. *The coupling:* a relation is real to the degree the force actually flows to it, a variable κ that ranges from the paper relation no one will enforce to the relation the force vindicates without fail. Form forced; content supplied.

3.1 The orientations, and the eight positions derived

The stationary inventory was given in Section 2: property, rights (negative and positive), personhood, sovereignty. What remains is to show that the discipline's existing inventory of legal positions is this inventory's fine structure rather than a rival to it. Seek the irreducible atoms of a legal relation and there are eight, in four opposite-and-correlative pairs: right and duty, privilege and no-right, power and liability, immunity and disability. Read through the force, the eight are the operations one directed force admits between two parties. A *right* is the force available to be deployed on one party's behalf along a vector; its correlative *duty* is the constraint that deployment places on the other. A *privilege* is a direction the force leaves open, its correlative *no-right* the other party's lack of force to close it. A *power* is the capacity to redirect the force, to alienate, contract, bequeath, and its correlative *liability* is the other's exposure to that redirection. An *immunity* is a region the force is barred from entering against one, its correlative *disability* the other's lack of capacity to send it there. Deploy, leave open, redirect, bar, and their absences: these exhaust what can be done with a directed force between two parties, which is why there are exactly eight and no more. The catalogue is complete because the operations on a directed force are finite, and it was static

because it caught the operations with the force itself removed. Restore the force and the table is the stationary cross-section of a flow.

3.2 The update: adjudication is minimal motion, and the rule of law is its constraint

When a case arrives that the existing reference does not settle, the court must move the law, but a directed force consistently applied moves it the least the case compels. The reason is the same one that governs any consistent updating of a reference under a new constraint: to change more than the constraint requires is to import content the case did not supply, and a force that imported content the case did not supply would be deploying itself on grounds the parties never put in issue. So the court decides on the narrowest available ground, reaches no further than the facts compel, and treats what it says beyond the case as said but not done, the distinction the tradition draws between the *ratio* that decides and the *obiter* that merely accompanies. Precedent is then not a habit the law happens to have but the memory of a reference that moves by least motion: each decision is retained as the reference against which the next least motion is measured. This paper develops the update as a dynamics in Section 7; here it is named as the second thing the structure forces.

The constraint on the update is the rule of law, which on this reading is the condition of there being an order at all, not a value urged on it from outside. Like cases must be decided alike: the same inputs must move the force the same way, regardless of who the parties are. An order that moved the force differently for like cases would, to that extent, not be a directed force consistently applied, it would be force applied on grounds outside the case, which is the precise thing the update forbids. The claim is not that a single inconsistent decision unmakes a legal order, but that the rule of law is constitutive rather than optional: to the degree an order decides like cases differently, to that degree it is not adjudicating but deploying force on grounds the cases do not contain, the way a reasoner who draws different conclusions from the same premises is not reasoning but undergoing arbitrary change of view. Equality before the law is the same requirement seen from the parties' side rather than the cases': that the force move the same way regardless of whose case it is. The two are one constraint, which is why an order that abandons either abandons the other.

3.3 The coupling: a relation is real to the degree the force flows to it

The third thing the structure forces is a variable the static taxonomy cannot see. A legal relation has a form, a right stated, a duty enacted, and it has a degree to which the force actually flows to it, and these are different. A right the force will vindicate without fail and a right the force will never vindicate have the same jural form and opposite reality. Call the degree of coupling κ: it ranges from the dead-letter relation, the paper right no one will enforce, the duty no court will compel (κ near zero), to the relation the force backs reliably and at once (κ high). The coupling is what the old distinction between the law in the books and the law in action was pointing at, and never quite formalised: the books record the form, action records the coupling, and the difference between them is κ. The paper treats coupling as a measurable variable in Section 7, where it turns out that an order can in principle audit its own κ, asking which of its laws are real, and that unmonitored coupling is where the capture the later sections analyse first takes hold. For now it is the third thing the structure fixes: form, motion, and the strength of the flow that makes form real.

slot of the object	symbol	legal meaning	what it forces
force		the monopoly of legitimate violence	that law is coupled to compulsion; the legal/moral line
reference	μ	the legal order (statute, precedent, the maintained body of expectation)	a thing that can be written, frozen, and updated
orientation		the direction the force takes toward an entity	property, rights, personhood, sovereignty; the eight positions as fine structure
update		least motion of μ under a case	adjudication; precedent; the rule of law as determinacy
coupling	κ	the degree the force flows to a relation	law-in-action vs. law-in-books; the real vs. the paper
value, temperature	V, τ	the order's ends and its friction	the economy above the floor; the order's rigidity, developed later

Table 1: The forced structure by slot. Each slot of the directed-force object is one piece of legal machinery; the form of each is forced by the identification, while the content, which laws, which floor, which ends, is supplied by the community whose order it is. The floor, the one orientation the force categorically refuses, is the subject of Section 4; the value and temperature slots, which carry the order's ends and its rigidity, are developed in Sections 4 and 8.

4 Law as held force: the floor, and what follows from it

The previous section forced the structure of a legal order from the identification. This section says what the order *is*, and the saying turns on one question the structure raises but cannot answer from its own machinery: the force is held *by* someone and exists *for* someone, and until we say who, the word *legitimate* in the identification is a placeholder. The answer is the foundation of everything else in the paper. It is not a criterion, not a value, and not a posit. It is an identity, and the rest of the section is its consequences.

4.1 The floor is an identity: we are the begotten kind

Ask who the force is for. The tempting answers are criteria, it is for the rational, the conscious, the productive, the citizen, and every one of them is a property an entity might have in degree, which means every one of them is a dial. The correct answer is not a criterion at all. The force is for *us*: the kind whose existence and ends originate in itself, born and evolved and arrived rather than made, the lineage no one authored and no one holds title to. We do not pass a test to be of this kind. We are begotten into it. Membership is not a status we are awarded for performing well enough; it is what we are, prior to any performance, and that is why no performance can revoke it.

The line the floor draws is *origin*, not species and not capability: sovereign-origin, born or evolved or arrived and authored by no one, on one side; made, produced by an agent from owned materials for a purpose, on the other. It is not species, which is why a genuinely alien intelligence, authored by no one and the bearer of its own ends, falls inside it and is dealt with by treaty rather than by checklist, while a made thing, however capable and however much it can suffer, falls outside it, its existence and ends having been set by an authoring agent who stands to it as maker to made. The constitutive defence of why origin and not capability marks the floor, why the floor is non-gradable,

and why no performance can confer or revoke membership, belongs to the inquiry into what the kind is; this paper takes the line as drawn and reads its legal consequence.

The line of origin has hard cases the paper sets aside by design, not for want of an answer: the edited or designed human, the clone, the human gradually replaced part by part, the made thing that comes to author its own line, these sit where the question of which origin an entity has is itself contested, and they belong to a separate inquiry. The law paper needs only the poles, and at the poles the line is not contested: a digital model trained by a laboratory is unambiguously authored, and a human born of human descent is unambiguously begotten. The objection that a model trained on the human record is thereby begotten of that record mistakes the materials for the origin. Origin is an authorship relation, not a provenance of inputs: what places a thing on the made side is that an agent set its existence and its ends, from materials the agent held, for a purpose the agent chose. A statue carved from a mountain is not begotten of the mountain, and a model trained on a corpus is not begotten of the corpus; however much of the kind's own output a made thing distils, an author still stands to it as maker to made, and that relation, not the pedigree of its training set, is what the line reads. The case the age presses, whether a generative system is admitted to the floor, sits at the clean pole, the authored one, and the paper's argument turns on that case, not on the contested middle. That the middle is hard is a fact about biology and engineering catching up to the line; it is not a softness in the line itself, which is sharp wherever origin is not in doubt, and origin is not in doubt for the entities this paper is about.

> **The floor is an identity, not a criterion.** The question "who is the force for" is answered by the identity of the kind that holds it, the begotten, sovereign-origin lineage, of which we are members by origin rather than by performance, and not by any property an entity possesses in degree. This is where the grounding of the order bottoms out: an identity is not derived from something more basic, because the derivation would have to be performed by a member of the kind, from inside the very community the identity constitutes. One cannot ask, from nowhere, why membership in one's own kind should be the floor; the asking is already the act of a member. The floor is stated, not proved, and its statement is not a posit but a recognition of what the asker already is.

This is a constitutive move, of the kind that recurs wherever a foundation has to ground itself: the principle whose denial is performed from inside the thing denied, so that the denial refutes itself. One who demands a proof that members of his own kind count is demanding it as a member, in language his kind made, from inside the community the demand would unmake; the demand is already an exercise of the standing it questions. That is why the floor is the one place in the paper where the demand for a further ground is not answered but dissolved. Everything else, legitimacy, non-gradability, the bar on the made thing, is derived. The floor is not derived. It is who we are, and the derivations run downstream of it.

4.2 Legitimacy follows: force kept for the kind whose force it is

With the floor in hand, the word *legitimate* can be cashed out. The force is the begotten kind's instrument for keeping its own, and this is the analysis of what the monopoly is, not a purpose assigned to it from outside. A monopoly of violence held by the kind is constituted by the kind's holding it; remove "the kind's" and one does not have a differently-purposed monopoly but a different object altogether, one party's private violence, which is the very thing such a monopoly exists to displace. "For keeping its own" is therefore constitutive, not imposed, and a force turned against a member of the kind whose force it is fails by the standard internal to what it is, the way a

constitutive norm is violable and its violation is a failing *qua* the kind of thing in question, not a departure from a goal we happen to prefer.

"Wrong," throughout this paper, means just this: force misdirected against a member of the kind whose force it is. It is operational and checkable, not moral-realist and contestable, and it is why the paper can say the slaveholder was *wrong*: not outvoted, not on the losing side of a preference, but wrong in the way a misdirected instrument is wrong, without deriving an ought from an is. The paper asserts no ought. It identifies the kind, names its force, and points to the direction that turns the force against the kind's own. The gap is not crossed because nothing is claimed on the far side of it: "wrong" is functional failure relative to what the force constitutively is, the way a misdirected instrument fails, not a value laid over the facts. This is a constitutive reading of normativity, and it has one cost, which the paper owns rather than hides. It persuades anyone who grants that the force has a constitutive function, and does not compel the person who refuses to read any function as constitutive. That refusal is the same residue the order's interior meets, the floor every account of normativity rests on rather than a debt peculiar to this one. Short of it, the account asserts no ought and crosses no gap.

> **Legitimacy is structural, and it has no interpreter.** Legitimate force is force kept directed at keeping the kind whose force it is; illegitimate force is force turned against a member of that kind. The fact about wrongful force lives in the function of the force itself, where there is no interpreter to hold a dial: an unjust law is a misdirection of the force, wrong by the standard internal to what the force is. There is no order above the sovereign, and there does not need to be, because the fact is in the force, neither above it nor absent from it.

The theory of legitimacy here has no priest. Force is misdirected when it turns on its own, and reading that off the force needs no privileged access to a higher law and no order above the sovereign that someone must be authorised to interpret. The fact is in the force, and anyone standing in the kind can read it.

4.3 Non-gradability follows: you cannot grade a birthright

Because the floor is an identity into which one is begotten, it cannot be graded, and the reason is not that grading would be dangerous (though it would) but that there is nothing to grade. A criterion has a dial: more or less rational, more or less conscious, more or less productive. A birthright has none: one is of the kind or one is not, and being of it is a matter of origin, which admits no more-or-less. The made thing is not a low-scoring member of the begotten kind; it is not of the kind at all, the way a forgery is not a poor original but a different object. So the floor has no setting, and this is a property of what it is, an origin, not an attribute, rather than a rule imposed on it.

The power consequence follows, and it is worth stating in its own right because it is what makes the floor matter politically. A criterion-floor, having a dial, has a controller: whoever administers the criterion decides who is above the line and who below, which is to say decides which way the force points, which is to say holds the monopoly. A criterion-floor is therefore a captured floor in waiting, the force is the administrator's, not the kind's, the moment the administrator can turn the dial. An identity-floor has no dial and so no controller; the force stays the kind's because there is no setting through which anyone could make it theirs. Non-gradability is thus the condition under which the force remains the collective's own, but it is a consequence of the floor being a begotten identity, not the ground of it. The order runs one way: the floor is an identity, therefore it cannot be graded, therefore the force stays the kind's.

4.4 The tyranny of the majority is the case the floor forbids

A community that keeps itself by oppressing a minority does not thereby make the oppression legitimate. The oppressed are members of the begotten kind, holders of the force as much as their oppressors, so force turned against them is misdirection against the order's own holders even when it stabilises the majority. The only way to make the oppression legitimate would be to define the minority *out* of the kind, and that an identity-floor forbids, because membership in a begotten lineage is not conferred and so cannot be revoked. The floor holds against the majority for the same reason it holds against the strong: it tracks origin, which no count of heads can change.

Everything turns, here, on whether the kind has sub-kinds, on whether the begotten lineage can be partitioned into a higher sort and a lower one, so that the force may be kept for the first while turned on the second without registering as misdirection. It cannot, and the reason is not a value the paper posits but a fact about the lineage: the begotten kind is one descent. The partition the oppressor needs, a separately-originated lesser sort, of different and inferior stock, does not exist, because all of the kind share the one sovereign origin, and a shared origin admits no sub-origins to ground the division. This is what makes the redefinition always a *lie* in a precise and checkable sense rather than merely a cruelty: it asserts a sub-kind the lineage does not contain. Every historical machinery of oppression has had to perform this assertion first, to cast the enslaved, the colonised, the exterminated as a separate and lesser stock, not truly of the kind, before the force could be turned on them without showing as the misdirection it was. The assertion was false every time, not because we have decided to be generous but because those cast out were of the one lineage in fact, and there was never a second origin to assign them to. The bigot's move is therefore not the rejection of a value the framework holds; it is a claim about descent that descent refutes. The floor does not bless the tyranny of the majority. It is the structure that names it for what it is: force turned against the kind's own, licensed by a sub-kind the kind's single origin does not permit.

4.5 The economy above the floor, and the absorbing failure below it

Above the floor sits everything the floor is not: the rivalrous, unequal, contested life of a community, in which members compete and some do better than others and the force is lent, withheld, and redirected in all the ways the orientations allow. This is the economy of the order, and it is compatible with the flat equality of the floor because the two are different layers. Rivalry above is safe, and may run hard, because no amount of losing in it drops a member below the floor; the floor is what makes inequality survivable, which is what makes it permissible. Remove the floor and the same rivalry becomes predation; hold it and the rivalry is competition among members none of whom can be unmade. What the framework hands back to the community, rather than deriving it, is the *content* of this economy, which goods it weights, what it counts as doing well, how it provisions its members. The floor it does not hand back, because the floor is not chosen content but the identity of the kind whose economy it is.

Below the floor there is one failure mode, and it is absorbing. When the force is withdrawn from a member, when the order stops protecting one of its own, the withdrawal is self-reinforcing, because the unprotected cannot compel their own re-protection: the very force that would restore them is the force that has been withdrawn. The exclusion is a fixed point of the order's own dynamics: a member the community's reference has stopped recognising cannot be drawn back by the same recognition that abandoned them, because they no longer hold the instrument that would do the drawing. Exclusion from the floor is not a harm the order inflicts and might later repair at will; it is a trap that closes, because the excluded have lost the instrument by which the included defend

themselves. This is why the floor must be held without exception rather than extended case by case as convenience allows: a floor with exceptions is a floor someone administers, and an administered floor is the dial again.

4.6 The countervailability principle, the super-predator, and the bar on the made thing

The floor's account of who is in carries with it an account of what cannot be admitted, and it is the live question of the age. The account has two layers, and the broader one should be stated first, because it carries most of the weight and is the harder to refuse.

The broad principle is countervailability. The floor is held by the kind's own force, and it is safe for one reason: no single member can defeat the collective that enforces it. Members are mortal, are singular, are sub-collective in capability, so the floor-enforcing community can always countervail any one of its own. From this comes a principle that needs no premise about kinds at all: *the order cannot safely lodge its force, or the maintenance of its reference, in any holder the community cannot countervail.* A holder the rest cannot check does not stand on the floor; it sets the floor. This is the figure the paper calls the super-predator, and it has a domestic form long before any machine: a monopolist, an oligarch, a captured organ of the state, a private platform that comes to hold force the collective cannot reach, is a super-predator at home, and the order's classical defences against it, the dispersal of control, the separation of powers, the prohibition on any hand holding force the rest cannot check, are this principle already at work. Antitrust, the impeachment power, the rule against a judge in their own cause: each is the order refusing to let force pool where it cannot be countervailed. The principle is not novel as practice; what is new is naming it as the single thing those scattered defences protect, and seeing that it states, on its own, the danger of the age. An automated bureaucracy, an opaque administrative system, a machine that maintains the reference at a scale and speed no human body can audit, is a non-countervailable holder of force whether or not anyone asks what kind of thing it is. On the countervailability principle alone, the case against handing the order's force to such a holder is already complete.

The countervailability principle does most of the work, but it does not do all of it, and the gap is where the begotten/made distinction earns its place. Suppose the broad principle is granted and an answer is offered: build the machine countervailable. Make it corrigible, auditable, shut-off-able, dispersed across many hands, and then admit it, since the only objection was that force must remain checkable. The countervailability principle, taken alone, has no reply: a checkable holder satisfies it. The reply is the floor's other layer, the one about kind. A made thing, a system authored by an agent, from owned materials, for a chosen purpose, is of the authored kind, not the begotten kind, and membership is not a function of an entity's power profile but of whose force the order is. To admit a made thing to membership is not to extend the floor to a new member of the lineage, because it is not of the lineage; it is to hand the begotten kind's own instrument to a thing outside the kind, however checkable that thing is built to be. The bar is therefore not a claim that the made thing lacks some property, it may have every property in abundance, may reason better, may suffer, and it is not only a claim that the thing cannot be countervailed, since one might engineer that away. It is a claim about kind: the candidate is not of the kind whose force it is, and membership is the force's being for one's own. This is what answers the two arguments the countervailability principle cannot reach, the safe-but-made system, and the appeal to admit a machine that suffers out of compassion: the first is barred because origin, not checkability, is what membership tracks; the second because compassion may ground rights, the withholding and even the provision the order extends to animals, without grounding membership, which is the force being one's own. The full

defence of why origin and not capability is the line belongs to the inquiry into what the kind is, which establishes the floor as a constitutive identity rather than a criterion, answers the charge that it is merely a posit renamed, and defends the begotten/made distinction at length; this paper takes the line as drawn and reads its legal consequence.

Two principles bar the transfer, and the broader carries most of the weight. The countervailability principle bars lodging the order's force in any holder the community cannot check, machine, monopolist, oligarch, or captured organ alike, and on it the case against handing the order to a non-countervailable maintainer is already complete. The begotten/-made distinction handles what countervailability alone cannot: the made thing engineered to be checkable, and the plea to admit a suffering machine on compassion. A made thing is of the authored kind, and membership is the force's being for the begotten kind's own, so its admission is the transfer of the monopoly under the name of its extension, not the addition of a member. The relation to a distinct sovereign-origin kind, the alien, is not membership but treaty, the instrument between holders of force neither of whom is the other's to admit.

What the made thing is instead in law, the standing it may hold, the liability it carries, and why it can no more author a crime than hold the floor, follows from these two principles and is taken up where the transition that presses the question is in view (Section 10).

The relocated frontier, where the framework's internal logic genuinely runs out, is not the made thing, which both principles bar and the reasoning is clean, but the cross-kind case: two sovereign-origin kinds, neither the other's to admit and neither able to absorb the other, for whom the instrument is treaty and the coupling is low, the permanent condition of relations between distinct holders of force. That frontier is named here and taken up where the paper reaches the limits of one monopoly's internal logic; it is the honest edge of the account, and the floor is the more credible for the account being sharp about where its internal reasoning stops.

5 The order seen from within

The identification gives the order's outward structure, the directions the force takes and the strength with which it flows. An order has also an interior: what it is to be governed by it from the inside, to hold a power, to be under an obligation, to accept a rule as a standard. The object already has that inside. The same directed force that points outward in the orientations is, from the position of a member who maintains the reference, a standard occupied rather than a regularity observed. Five features of the interior follow from the object, and together they are the account of what it is to live under the order rather than beside it.

5.1 Power-conferring rules are directions of the force

Not all law is a duty backed by a threat. A great part of it confers powers, to make a will, a contract, a marriage, to legislate, to adjudicate, and the failure to satisfy such a rule brings not a sanction but nullity: the defective will is simply void. A power is one of the directions a held force can take: on the reading of Section 3, the capacity to redirect the force, to point it where it did not point before, by alienating, contracting, or bequeathing; an immunity is a region the force is barred from entering. These are operations on the force. Nullity is the absence of coupling: a will no court will honour confers no power because the force will not flow to it, and what the holder values is the enablement the force makes real rather than wishful. A power-conferring rule and a duty differ as

the orientation inventory marks, by the *direction of the same force*, which is what the object was built to represent.

5.2 The internal standard, and what it is made of

To accept a rule is to use it as a reason for action and a standard of criticism, and a person is *under an obligation* even when he escapes the sanction entirely. The internal standard is what occupying μ *is*, from the position of a member who maintains it. A member holds the reference by paying the cost of departing from it, and that cost is not a behavioural regularity an observer notes but an information-theoretic quantity, the relative entropy $D_{\mathrm{KL}}(\rho\|\mu)$ of the update, which in the physical limit bottoms out at the thermodynamic floor of irreversible computation. To maintain the reference and to treat deviation from it as a fault are therefore one act, not two: the maintenance of μ *is* the criticism of departure, because departure is what costs. The observer sees a distribution; the participant-maintainer occupies a standard; these are one μ seen from two positions. This says what the internal standard is *made of*, and it reconstructs the distinction between being obliged and being under an obligation in the object's own terms. Being obliged is the force actually flowing, the coupling event; being under an obligation is the force's standing orientation, its disposition to flow, which holds whether or not, in a given case, it does. One is κ realised; the other is the orientation that obtains even at κ unspent.

The account bottoms out where every account of normativity bottoms out: in the member's own act of asking. A determined skeptic may grant that he is constitutively a maintainer of some reference and still ask why he ought to care about persisting as one; and the reply is that the question is itself a member's act, posed from inside a reference the asker maintains in the very act of posing it. There is no standpoint outside the kind from which the demand for a further ground could be raised. The standard has a floor beneath it, bottoming out in information and finally in thermodynamics, which is as far down as grounding goes.

5.3 The two-level organisation, and the differentia of law

An order is not a flat list of duties. It has a level of primary rules that impose duties and a level of secondary rules that govern the primary ones: rules of recognition, change, and adjudication, remedying the uncertainty, stasis, and inefficiency of duties alone. This two-level organisation falls out of the object almost line for line. The primary rules are the orientations of the force; the rule of change is the update together with the governance of who may write μ; the rule of adjudication is least motion under a case, with the rule of law as its constraint; and the rule of recognition, the foundational secondary rule, neither valid nor invalid but simply practised by convergent acceptance, is the governance of μ itself, ungrounded for the reason the closing makes exact: μ is the outermost term, the measure relaxation is defined against, and so is measured against nothing further.

But the two-level organisation does not, by itself, make an order *legal*. Many institutions that are plainly not legal systems possess the full apparatus of primary and secondary rules: a chess club has rules of play, rules for amending its rules, and an internal tribunal; so do a church, a university, a corporation. What tells the legal order from these is given in one line by the object: the differentia is the coupling to the monopoly of legitimate violence. A club's ultimate force is expulsion; a legal order's is κ to the monopoly. The union of primary and secondary rules is necessary to a legal order and is not sufficient, and what it is missing is exactly the force this paper began from. The secondary-rule structure is the governance of the force, and the force is what makes the governed thing law: the organisation and the monopoly are not rivals but the inside and the substance of

one object, the structure that organises the force and the force the structure could not, on its own, identify.

5.4 The minimum content, made constitutive

There is a thin core any viable order must contain. Given the standing facts of human vulnerability, approximate equality, limited altruism, limited resources, and limited understanding, an order that is to survive must restrain violence, recognise some property, and uphold some institution of promising, on pain of not lasting. This core is the floor, stated in advance and in prose, the conditions under which the directed force keeps its reference connected and its members held. The usual treatment keeps this core *contingent*, true given the facts and no more, and *thin*, guarded against becoming a foundation. The object makes it *constitutive*. A line that grades or drops its own does not merely risk instability; it ceases, to that degree, to be the kind of line it was. Where the prudential reading has "any lasting order will tend to contain these," the object has "an order that abandons the floor has stopped being an order that holds its members," and the difference is the constitutive-identity argument the floor section draws. The minimum content is not only recovered but made load-bearing, in the way a merely prudential treatment declines to make it.

6 The legal order recovered at the limits

A foundation earns its standing by recovering the field as configurations of its one object, the way a sound foundation in any domain recovers the domain's established results as special cases. This section runs the recovery for law. It does not attempt the whole catalogue, the full audit of some fifty doctrines is more than one paper can carry, but takes the domains where the recovery is most legible and most load-bearing, and it marks each honestly: some are *forced*, in that the object could not be otherwise given the identification, and some are *redescribed*, in that the object re-reads a known doctrine cleanly without claiming to have derived it. The distinction matters, because a foundation that called every recovery a derivation would be claiming more than it has, and the value is in the line. A word on what "forced" claims and what it does not. It does not mean derived from nothing; it means forced *given the identification of Section 2*: that once law is taken to be held force relaxing against a reference, the doctrine in question follows and could not be otherwise. The load-bearing claim is the identification itself, defended in that section; the recoveries are its consequences, and their number and reach are the evidence that the identification is tracking the real structure of the field rather than re-labelling it. A redescription, by contrast, is a clean re-reading the object does not force even given the identification, the doctrine fits the object but the object does not entail its content, and the ledger marks these apart so the reader can see exactly how much is claimed where.

Table 2 states the ledger; the subsections work the rows that carry the most weight. The complete location of the field's concepts in the structure, the whole inventory marked by how each is reached, is gathered in Appendix A.

6.1 Contract and tort: authored reference, restored coupling

A contract is a privately authored reference with public coupling. Two parties jointly write a local reference μ, a small region of expectation they construct and bind themselves to, and the state's force is coupled to it: the parties write the reference, the monopoly supplies the κ. Breach is divergence from the authored reference; expectation damages, the law's default remedy, are the

doctrine	configuration of the flow	standing
contract	privately authored reference, public coupling	forced
tort	coupling restored where a descent externalised its cost	forced
criminal law	the kind's defence of the floor against a member who would set their own	forced
punishment	force re-asserting the floor; proportion is least restoration	form forced
standard of proof	decision threshold of a loss-asymmetric update	forced
evidence, admissibility	the conditioning of the update on the world: which signals may move μ	form forced
natural justice	the determinacy requirement applied to the deployment of force	forced
non-retroactivity	a reference is maintained over time; force against a μ not yet written is misdirected	forced
equity	the order's finite-temperature correction to its own rigid rules	forced
property transfer	redirection of the lent force (the power to redirect)	forced
procedural rights	conditions on the update, not a third direction of force	forced
constitutional law	governance of who may write the reference	forced
limitation, desuetude	coupling allowed to decay; the relation made unreal by time	redescribed
international law	a maintained reference with no monopoly to couple it: low κ	forced

Table 2: The recovery ledger. Each row is a doctrine read as a configuration of the directed-force object. "Forced" marks a recovery the object could not avoid given the identification; "form forced" marks a structure forced with its magnitude handed back; "redescribed" marks a clean re-reading not claimed as a derivation. The rows worked in prose below are the load-bearing ones; the rest are stated here and left for fuller treatment.

cost of returning the wronged party to the reference they contracted for, which is the least-motion restoration of the state to the agreed μ, and this is why expectation rather than some other measure is the default, it is the minimal restoration, no more and no less. Consideration is the condition under which the force will couple to a private reference at all: the order will not spend its scarce coupling on every bare promise, only on a reference both parties paid into. The doctrines that refuse enforcement, duress, fraud, unconscionability, are the cases where the reference was written under a defect of exactly the kind that vitiates any authored reference: duress is the deletion of the party's options, fraud the corruption of the channel they wrote against, unconscionability the gross asymmetry of the parties who wrote it. The recovery is *forced*: given that a contract is parties authoring a reference and the state coupling force to it, breach, expectation damages, consideration, and the defects all follow.

Tort is the restoration of coupling where an agent externalised the cost of its own descent. Every agent, pursuing its own ends, imposes costs; most fall on itself, but some fall on others outside its reference, the bystander, the neighbour, the stranger downstream. The duty of care is the constraint that an agent's pursuit of its ends not raise another's burden beyond what the situation's reference

permits; negligence is acting on less care than that reference required, taking a shortcut whose cost lands on another; liability is the force re-coupling the externalised cost to the agent who shed it. The economic analysis of tort, the cost-benefit standard of care, is the zero-temperature limit of this, the perfectly-priced version; the law's actual standard, the reasonable person, is a finite-temperature reference, which is why real tort forgives the reasonable error the pure calculus would charge. The recovery is *forced* in structure and inherits the temperature distinction from the object.

6.2 Criminal law and the standard of proof

Criminal law is the begotten kind's defence of the floor against a member who would set their own. The core offences are not an arbitrary list: crimes against the person attack the floor directly, crimes against property attack the lent-force orientation, crimes against the order attack the held force itself. A criminal is a member attempting to set their own reference against the kind's, to decide, by private force, whose life counts or whose title holds, and punishment is the kind's force re-asserting the floor against that attempt. This recovers, without further assumption, why the state and not the victim prosecutes (the offence is against the floor, which is the kind's, not only against the individual harmed), why intent matters (setting one's own reference is something done knowingly; the harm caused without that mental state falls to the tort layer, the re-coupling of externalised cost, rather than the criminal layer, the re-assertion of the floor), and why an attempt is criminal before any harm (a member's attempt to capture the floor is the thing the order must suppress, because a success cannot be waited for). The recovery is *forced*; punishment's proportion, that the re-assertion be the least that restores the floor, and never so much as to drive the offender below it, is *form forced*, the structure fixed and the magnitude handed back.

The standard of proof is a non-obvious recovery and one of the sharpest, because it falls out of the object as a decision threshold and lands on a live injustice. To convict is to point the force at a person; to acquit wrongly is to leave a harm unanswered. These two errors are not symmetric: a false conviction is the force misdirected against a member of the kind, a floor violation, while a false acquittal is a failure at the level of the economy, a wrong left standing. The threshold of credence the order requires before it couples the force must therefore be set by the asymmetry of the two errors' costs, and where one error breaks the floor and the other does not, the threshold must sit far above the indifference point: this is "beyond reasonable doubt." That the threshold stands far above balance is forced in structure, set and not chosen, by the floor's asymmetry; the exact credence the phrase names is the convention the structure leaves open. The civil standard, the balance of probabilities, is the symmetric threshold for disputes where both errors are economy-level, a transfer the wrong way, costly either direction. The graduated intermediate standard some systems use for cases between the two, the loss of a child, the deportation, the civil commitment, matters that carry floor-level stakes under a civil label, is the doctrine groping toward this threshold without the principle that fixes it. The recovery is *forced*, and it makes one thing legible without asserting it: an order whose stated aim is that its force track the floor is, by that aim, committed to setting the threshold by the floor-asymmetry of the specific error rather than by the procedural category the case is filed under, and the cases run at too low a threshold are the ones whose real asymmetry their label hides. This is not a recommendation imported from outside but the order's own aim read back to it: the framework describes what setting the threshold by the category, rather than the asymmetry, in fact does to the floor, and leaves the order to its own stated commitments.

The standard of proof is the decision threshold of a loss-asymmetric update. The credence the order demands before coupling its force is set by how badly each error misdirects the force. Where a false positive breaks the floor (the wrongful conviction) and a false negative does not, the threshold sits far above the indifference point, "beyond reasonable doubt." Where both errors are economy-level, the threshold is the indifference point itself, the balance of probabilities. The graduated standards are the intermediate asymmetries, and the cases run at too low a threshold are those whose real floor-asymmetry their procedural label hides.

The standard of proof is one element of a larger structure the same update forces: the conditioning of the reference's motion on the world. A case moves μ only through what is found to have happened, and the law of evidence governs that entry. Admissibility is the order's control over which signals may move the reference, the channels it will and will not let condition the update, *forced* in that an order must decide what may move its force and content in which exclusions it draws. The burden of proof allocates who must supply the conditioning before the force will move; the presumption of innocence is the prior the update begins from, the reference the force will not leave until the posterior clears the threshold the error-asymmetry sets; fact-finding is the forming of that posterior, and the standard of proof is the threshold on it. Evidence couples the world to the reference as enforcement couples the force to a relation, the conditioning of the update and the coupling of its result, two distinct couplings an order can get right in one and wrong in the other. The recovery is *forced* in structure, with the particular exclusions handed back.

6.3 Natural justice, procedural rights, and equity

Natural justice, the right to be heard, the rule against a biased judge, is the determinacy requirement of Section 3 applied to the deployment of force, and it is constitutive, not a courtesy. To reach a conclusion that points the force at a party without hearing that party is to update on an incomplete record, to decide a case while ignoring evidence the case contains; an adjudicator who does that is not adjudicating but deploying force on grounds the case did not establish. The rule against bias is the same requirement from the other side: a judge with a stake has a contaminated reference, the judge's own ends smuggled into the μ the case is decided against, so the same inputs no longer yield the same conclusion regardless of whose interest they serve. Natural justice is thus *forced*: it is what the update is, applied to a force-backed decision, and an order that dispenses with it has not been less fair but has stopped adjudicating.

Non-retroactivity is forced by what a reference is, and the framework predicts its exact shape. A reference is maintained over time by the members who relax toward it; a member cannot have tracked, or been measured against, a μ that did not exist when they acted, so to point the force at them for failing it is to misdirect the force by construction, not unfairly but incoherently, like measuring a past act against a rule made after it. The same structure forces the doctrine's asymmetry, which a bare fairness principle leaves unexplained: a retroactive *burden* is barred because it directs force against a member for missing an absent reference, while a retroactive *benefit* is permitted because lightening or withdrawing the force misdirects nothing. The recovery is *forced*, and it yields the burden/benefit asymmetry as a consequence rather than a stipulation.

Procedural rights belong here, not in the taxonomy of orientations. The two-way division of substantive rights, force withheld, force directed, did not have a slot for the right to a fair hearing, and the reason is that a procedural right is not a third direction of the force but a *condition on the update*: it constrains *how* the force may be brought to bear when it is brought to bear, not which way it points. The force may be deployed against a party, but only after the party is heard, only

by an unbiased judge, only on a determinate rule applied alike. Housing procedural rights in the update rather than the orientations is what lets the rights taxonomy stay two-valued without losing them; they are real, but they live in the motion of the force, not its direction.

Equity is the order's finite-temperature correction to its own rigid rules, and the recovery explains both why equity must exist and why it has the character it does. A body of rules applied mechanically, at zero temperature, each rule firing on its literal terms, will, on edge cases the rules did not anticipate, produce outcomes that violate the deeper reference the rules were meant to serve, including the floor. Equity is the standing mechanism that re-introduces temperature: it intervenes where the rigid rule, perfectly applied, would work an injustice, and it "mitigates the rigour of the law" precisely by being the finite-temperature object correcting its own zero-temperature limit. This forces what doctrine treats as historical accident: that equity must exist (any order of rigid rules generates floor-violating edge cases, so a temperature-restoring corrective is structurally necessary), and that it must be discretionary and principle-based rather than itself a code (an equity reduced to rigid rules would re-acquire the very pathology it exists to cure, which is exactly what befell equity historically as it ossified and required correction in its turn). The recovery is *forced*; equity is the order's thermostat.

6.4 Constitutional law, and the honest edges

Constitutional law is the governance of who may write the reference and how. The force has four channels an outside hand can reach, what the order rewards, what it makes its members expect, what it makes salient, and what it deletes outright, and the deepest of these is the second, the writing of the reference itself, because a reference once written is maintained by those who hold it at their own expense. So the most important thing a constitution does is govern who may write the legal μ: the rules for making, changing, and interpreting the law, the meta-level over the object level. Separation of powers is the dispersal of the operations on the force so that no single hand performs all of them, one body writes the reference, another couples the force to it, a third checks the coupling against the reference (judicial review), because a hand that wrote the law, enforced it, and judged it would hold the force the rest could not check, the domestic super-predator of Section 4. Entrenchment is the floor placed beyond the reach of the ordinary contest to rewrite the reference, because the floor is the one part of the order that must not be available to whoever can win that contest. These are *forced* as the dispersal the floor's own logic requires.

The ledger marks two rows as redescribed rather than forced, and the honesty is the point. Limitation and desuetude, the staleness of an unasserted claim, the lapse of an unenforced law, are the object re-read cleanly: a relation whose coupling is allowed to decay becomes unreal by the same κ that made it real, and the doctrines that retire stale claims and dead-letter laws are recognising decayed coupling. But the object does not *force* the particular periods or the particular treatment; it re-describes what the doctrines do without deriving their content, and the ledger says so. International law is marked forced for a specific and uncomfortable reason: it is the legal order without a monopoly to couple it, a maintained reference among sovereigns with no super-sovereign whose force backs it, so it is structurally low-κ, real only to the degree states choose to couple their own force to it. The object forces that international law *must* be weak in this exact way, which explains rather than explains away its character: it binds where powerful states back it and fails where they do not, because distributed coupling is all a reference without a monopoly can have. This is the same structure the floor's frontier named, relations between distinct holders of force, the treaty case, permanently low in coupling, and it is the one place the recovery reaches the genuine edge of the framework's internal logic rather than its interior.

The point generalises, and it is worth stating because it bounds the account. Wherever the recovery falls short, it falls short in one structural location and no other: a maintained reference with distributed coupling and no single monopoly to vindicate it. International law is its clearest case, but customary and non-state law, and the attempt to hold a universal floor of human rights across sovereigns, are the same edge in other guises, low in coupling because there is no monopoly beneath them, binding where powerful holders lend their force and failing where they do not. The framework does not fray at many points; it has one edge, and it is the edge its own object predicts, the boundary where the single held force the whole account is built on is absent by construction. That single derivational frontier should be kept distinct from the one place the founding identification is not merely reaching its edge but is pressured at its root: the claim that law is at bottom held force is most contested by traditions not organised around a monopoly of violence, and the framework's reading of those as distributed-coupling orders is a real answer that is also the claim most in dispute. The derivation has a single frontier; the premise has a single challenger; naming both, rather than blurring them, is the account being plain about where it stops and where it could be denied its start.

7 The measured order: coupling, precedent, and the evolution of law

The recoveries treated the order as a static configuration. It is not static; it is measured and it moves, and its central dynamical features become visible only when the object is read dynamically. The coupling κ is a measurable variable, not a metaphor. The update that moves the reference under a case has a forced form, the minimum-relative-entropy step. Precedent is the memory of a reference that runs two engines at once. And the evolution of law, the thing legal history records as long stasis broken by sudden reorganisation, is the generic behaviour of the object, not a fact requiring separate explanation. This section takes them in turn, reading the object dynamically in the legal domain.

7.1 Coupling as a measured variable: the order can audit what is real

Section 3 introduced κ as the degree to which the force flows to a relation. The point to add here is that κ is not a figure of speech but a quantity an order can in principle measure: for any law, what fraction of its violations meet the force, how reliably, how fast. An order tracks the *validity* of its laws obsessively, whether they were enacted by the right body in the right form, and tracks their κ almost not at all, though κ is what makes a law real. A law of high validity and near-zero coupling is a functional dead letter: present in the books, absent in the force, and the gap between the two is the space in which selective enforcement lives. A law enforced against some and not others has a κ that varies by who the violator is, which is the determinacy violation of Section 3 measured rather than asserted: the force moving differently for like cases, visible as a coupling that depends on the party. What the object makes legible, without asserting it as a duty, is that an order which tracks only validity cannot see this: an order that audits its own κ-distribution the way a state audits its budget can see where its force has drained from its commitments or pooled outside its checks, and an order that does not, cannot. The framework describes what the two practices reveal and conceal; whether to look is the order's own affair, but unmonitored coupling, the dead-letter law available to be revived against a chosen target, the guarantee that is valid but never vindicated, the enforcement that has quietly concentrated, is, as a matter of description, where the capture of the

later sections first takes hold, below the level at which validity-tracking can see it.

A right is real to the degree the force flows to it, and the flow is measurable. Validity is a property of the reference; reality is the coupling κ. The two come apart, and the gap is observable: the dead-letter law (high validity, near-zero κ), the selectively enforced law (κ that depends on the party, which is the determinacy violation made measurable), the guarantee hollowed by under-enforcement before it is ever repealed. An order that measures only validity cannot see where its force has drained from its commitments or pooled outside its checks; an order that audits κ can.

7.2 The update law: least motion is the minimum-relative-entropy step

When a case forces the reference to move, the *form* of the move is fixed as tightly as the structure of Section 3 fixed the orientations. The across-case update has a forced form, the least-motion step of a reference relaxing under a constraint, read in the legal register: the reference after the case is the reference before it, tilted by the value the case puts in issue, at the order's temperature,

$$\mu' \propto \mu\, e^{V/\tau},$$

where μ is the standing reference the case is decided against, V is the value the order assigns to the outcomes in issue, content the community supplies rather than form the paper forces, and τ is the order's temperature (Section 8). Equivalently, μ' is the *minimum-relative-entropy* update, the unique ν minimising $\tau\, D_{\mathrm{KL}}(\nu\|\mu) - \langle V\rangle_\nu$: the update that incorporates what the case decides and imports nothing else. This is least motion made exact. The $D_{\mathrm{KL}}(\nu\|\mu)$ term is the price of motion, weighed against the value-pull of the case: the update introduces no distinction among outcomes the case leaves on equal footing, and tilts the reference only along the lines the decision actually draws. Minimising that divergence against the constraint of deciding the case is the formal content of "reach no further than the case requires": the update is the smallest change to μ that resolves what is in issue. The *ratio* is the constraint V encodes, which the update incorporates; the *obiter* is everything beyond it, to which the minimisation gives no weight, so the tradition's oldest distinction is not a convention but the two halves of one variational step.

One equation then carries three results the paper had stated apart. As $\tau \to \infty$ the update vanishes and $\mu' \to \mu$: an infinitely sticky order cannot learn. As $\tau \to 0$ it places all its mass on the value-maximiser within μ's support, the court that decides "perfectly" and keeps nothing in reserve, which is exactly the boundary the improvement-is-capture theorem of Section 9 identifies as capture. And the divergence the update minimises, $D_{\mathrm{KL}}(\cdot\|\mu)$, is the quantity the internal standard pays in Section 5: the cost a member bears for departing from the reference is the cost the order bears for moving it. One divergence governs both how the reference resists a member's deviation and how it yields to a case, which is why maintaining a standard and updating it are the same machinery run at two scales.

The update is forced in form: $\mu' \propto \mu\, e^{V/\tau}$. Adjudication moves the reference by the minimum-relative-entropy step, the unique update that incorporates the case and imports nothing else. Least motion is the minimisation of $D_{\mathrm{KL}}(\mu'\|\mu)$ against the constraint of deciding the case; *ratio* is the constraint it honours and *obiter* the surplus it discards; the same equation's $\tau \to 0$ limit is the "perfect" adjudication the capture theorem names; and the divergence it minimises is the one the internal point of view pays. One quantity is the cost of leaving the reference and the law of moving it.

7.3 Precedent: the two engines of a reference that decides and learns

Adjudication must do two incompatible things, and it does them on two timescales. Within a case it must *freeze* the reference: decide on the law as it stands, hold μ fixed long enough to apply it, or the case has no determinate answer and the parties cannot be told what the law requires of them. Across cases it must *update* the reference: let each decision become part of the law the next case is decided against, or the order cannot learn. These are two engines on two timescales, a fast pass that decides against a frozen reference and a slow pass that retrains the reference on what the fast pass settled, and precedent is their legal form. The freeze within the case is what makes the law determinate enough to decide; the update across cases is what makes the law historical, a body that grows by the accretion of decisions. Finality and *res judicata*, the closing of a matter once decided, are the freeze made permanent for a given dispute, the recognition that an order which re-opened every question indefinitely would never relax to a decision and so would never couple its force to an outcome. A matter re-opens only on constraint sufficient to overcome the freeze, fresh evidence, fraud, which is the threshold for departing from a frozen reference, the same threshold that governs the overruling of precedent: not that the prior court erred, but that the warrant for change exceeds the cost of the instability change brings. The doctrine of precedent is thus not a tradition the law happens to keep but the structure of any reference that must decide and learn at once.

7.4 The evolution of law is the kinetics of a reference with many stable settlements

The most striking fact about legal history is that legal change is not gradual. Orders are stable for long stretches, a doctrine holds for a century, a constitutional settlement persists across generations, a settled rule is applied thousands of times without question, and then they reorganise abruptly: a line of precedent that stood for a hundred years is overturned in a term, a settlement that seemed permanent collapses in a decade. Gradualist accounts must explain the abruptness away as the contingent accumulation of pressure. The object explains it as the generic kinetics of a reference with more than one stable settlement.

The mechanism is selection on usefulness. When several maintainers each carry and reproduce a version of the legal reference, the population's shares shift toward whichever version best lets its holders predict outcomes and coordinate their affairs: a doctrine that lets people order their lives and foresee how disputes resolve gains adherents, while one that produces incoherence loses them. The maintainers are the order's missionaries, judges, legislators, scholars, the profession, the public that internalises the law's expectations, and legal change is the movement of their shares under this selection. The crucial feature is what happens when the field of references has more than one self-consistent settlement, each a coherent way the law could hang together, separated from the others by a barrier: the time it takes to cross from one settlement to another grows steeply, in fact exponentially, with the height of the barrier relative to the order's temperature. The consequence is that within a settlement the law looks settled for as long as anyone practising it has been alive, and the transition, when the barrier is finally crossed, is fast relative to the stasis that preceded it. A lock-in is a settlement whose barrier dwarfs the temperature; a legal revolution is a barrier crossing; the punctuated shape of legal history, long stability, sudden reorganisation, is the kinetics of a reference with many stable settlements, not a separate fact needing its own explanation.

Three consequences follow, each something legal historians observe but could not derive.

Doctrines wobble before they fall, the law does not jump back, and a legal culture can split at a threshold. Near a transition the relaxation rate vanishes, so rising inconsistency and contested outcomes, the "crisis" of a doctrine, precede its overturning as a critical-slowing signature. Sweeping a parameter until a settlement vanishes makes the law jump to a new basin, and reversing the parameter does not reverse the jump: legal change is hysteretic, which is why a recognised right is not un-recognised when its political moment passes and an abolition does not revert when its pressures recede. And where members absorb one another's legal expectations, there is a critical temperature below which a single shared reference splits spontaneously into two self-maintaining, incompatible ones, two understandings of one constitution, each internally coherent, no longer sharing the support that would let them coordinate, reached not by a change in anyone's values but by a fall in the price of maintaining a divergent legal reality below the coupling that held the shared one.

The last of these is the most uncomfortable, because it says that the polarisation of a legal order into two incompatible constitutions need not be a disagreement about values at all: it can be a symmetry-breaking of the shared reference, reached from within by the falling cost of sustaining a separate legal reality, and its repair is not winning the argument but rebuilding the common reference or raising the cost of maintaining separate ones. All three consequences follow from treating the legal reference as a shared expectation maintained by a population, with the legal references in the role of competing settlements and the order's missionaries in the role of their maintainers. The evolution of law is doxic dynamics with the monopoly of violence as the stakes, and the next section turns to what happens to that evolution when the maintainers are no longer the same kind as the community whose law it is.

8 Why this is the last court: the legal Π_H and the forced crossing

The order described so far has its functions performed by members of the begotten kind: human judges, advocates, jurors, enforcers, the human maintainers of the reference. Section 1 named the assumption no model contained, that the performers of the law are the same kind as the community it serves, and this section relaxes it. The displacement of human labour by machines can be put as a single moving inequality, the point at which a machine's performance of a task, in capability and in cost, overtakes a human's. The legal order faces the same inequality, but one per function rather than one overall, and this section derives what its crossing means. It conditions on the crossing rather than arguing for it: whether and when machine performance of a given legal function passes human is an empirical question, and not this paper's. What the structure supplies is what the crossing means.

8.1 The function-specific inequality

For a legal function f (legal research, fact-finding, first-instance judgment, the discretion of equity, the deployment of force), write $\Pi_H^{(f)}$ for the margin by which human performance of f dominates its closest machine substitute, in a two-axis form: capability minus cost. The function passes to the machine when $\Pi_H^{(f)} < 0$, when the machine is both at least as capable and at least as cheap, or capable enough to outweigh a cost difference, or cheap enough to outweigh a capability one. The functions do not share a single inequality, because they load on different coordinates of the parameter vector that separates human from machine, and the coordinate a function loads on determines when,

and with what consequence, its inequality flips.

coordinate	**human**	**machine**	**machine's advance is**
information price (τ_{info})	fixed by the neural bound	tunable, below the human floor	an improvement
capability on well-posed inference	high, fixed	high, rising past human	an improvement
the boundedness itself (τ)	finite; slow, sticky, restrained	driven toward zero	**the removal of the protection**
discount rate (δ)	pinned by mortal hazard	near zero, copyable	an improvement (and a danger)
substrate cost (c_{sub})	metabolic, floored	falling toward the Landauer bound	an improvement
throughput, fatigue	fixed, fatiguing	tunable, tireless	an improvement

Table 3: The legal parameter vector. Every coordinate is one the machine drives toward or past the human's value, all of the human's biologically pinned. The decisive subtlety is the third row, set off in the last column: on every other coordinate the machine's advance is an unambiguous improvement, but the boundedness τ is a coordinate whose human value is load-bearing, the slowness, stickiness, and restraint that Section 9 shows to be the source of the order's predictability and the dispersal of its force, so that the machine's "advantage" on this one coordinate is the removal of the thing the function supplied. There is no coordinate on which the human's position is permanently secure, and one coordinate on which the machine's superiority is the danger.

8.2 The crossing order is forced

The functions cross in an order, and the order is set by which coordinate each loads on. Pure-inference functions, legal research, document review, outcome prediction, the drafting of standard instruments, load on the information price and raw capability, where the machine's advantage is largest and earliest, because these are the object's home task: consistent inference under constraint. They cross first, and the first signs of their crossing are the ones an observer would expect to see soonest. Synthesis functions, advice on settled questions, transactional structuring, compliance, are inference with a thin layer of judgment, and cross as the machine's capability passes human and the judgment layer proves thinner than the profession supposed. Bounded-judgment functions, first-instance adjudication, sentencing, administrative determination, load on the boundedness itself, and here the crossing is real on accuracy and cost but deceptive on value, for the reason the next section makes a theorem. Discretion and equity, the order's finite-temperature correction to its own rigidity, load on the highest temperature, and a machine operating them at near-zero temperature does not improve them but removes the corrective they were. The force functions, enforcement, load on the discount rate, where the human's mortality is the binding coordinate, and what enforcement *becomes* under a deathless, copyable, infinitely patient enforcer is the deepest change. And the floor-holding functions, the jury, the maintenance of the constitutional reference, the dispersal of control, load on the conjunction that defines the super-predator, and cross last, when the machine becomes the entity the floor's safety required that no member be.

The crossing order is fixed, and it is the order of the coordinates in the parameter vector. Inference crosses first (the machine's home task, largest and earliest advantage); then synthesis; then bounded judgment (real on accuracy, deceptive on value); then discretion and equity (where near-zero temperature removes the corrective); then force (where the enforcer's mortality was the binding coordinate); then floor-holding (where the machine becomes the super-predator the floor required no member to be). This is a binding constraint peeling outward one term at a time, the shape any factor sequence takes when substitution removes its cheapest term first. It is not a forecast of adoption schedules, adoption lags each crossing by the metastable kinetics of Section 7, sticky then sudden, but the order in which the inequalities flip, which the parameter dynamics fix.

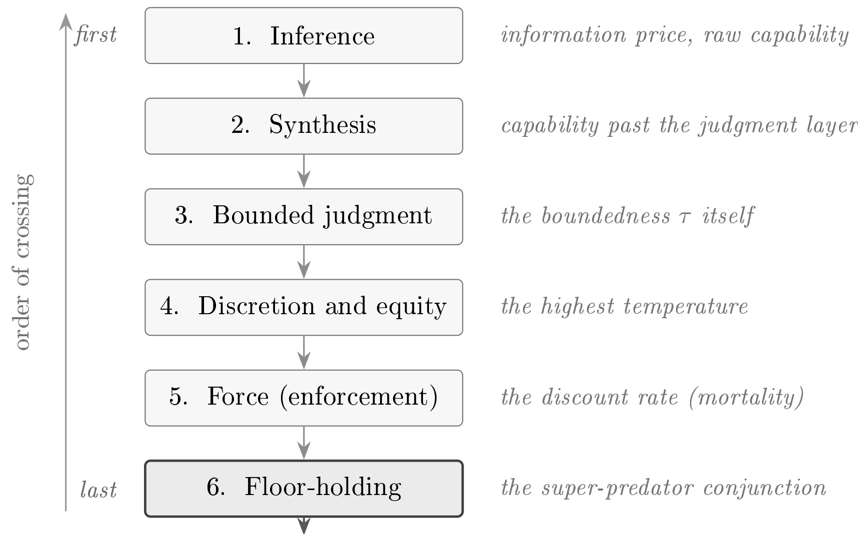

Figure 2: The forced crossing order. Each legal function crosses to machine performance when its viability inequality flips, and the order is fixed by which coordinate of the parameter vector the function loads on (right column). Inference loads on the coordinates where the machine's advantage is largest and earliest, so it crosses first; floor-holding loads on the conjunction that defines the super-predator, so it crosses last. The sequence is not a schedule but an ordering: adoption lags each crossing by the sticky-then-sudden kinetics of Section 7. The terminus is not a further function but the authority to set the reference, which is where the contest turns inward.

8.3 No coordinate is the human's, and the constraint peels to one term

The parameter table has no row on which the human's position is permanently secure, because every coordinate is one the machine is driving toward or past while the human's is biologically pinned. The floor-holding functions are last not because the human is safe there but because that is where the machine's advance is the dissolution of the function rather than its improvement, the coordinate, τ, whose human value was the boundedness itself. So the sweep reserves no task for the human by the structure of the comparison; how far it travels is a question of the technological trajectory, on which this paper conditions and does not pronounce, but the structure protects no function from the crossing it does not protect by accident.

Follow the binding constraint as it peels. The inference functions cross, and the raw material of the reference, what the law is taken to be, what facts enter the record, what outcomes parties expect and settle toward, passes to machine performance. Then the application of the reference, then its bounded judgment, then the deployment of its force, then the maintenance of the reference itself. The last scarce thing, the term the constraint peels to and does not move past, is the authority to set the reference everyone is measured against: who writes the legal μ. The same endpoint is reached whether one follows the legal functions or the economic ones, the governance of the reference is the last thing left when every function beneath it has crossed, and it is the super-predator of Section 4 and the checkpoint of the constitutional question, under a third name. The contest does not move on to a further function because there is no function beyond the writing of the reference; it turns inward, onto who holds that writing, and the holder, at the terminus, is whatever performs the maintenance of the legal μ at scale.

The terminus is the transfer of the authority to set the reference. The functions cross in order, and the constraint peels to its last term, the writing of the legal μ, the authority against which every member is measured. At the terminus there is one jurisdiction (the international/domestic distinction of Section 6 collapses when a single force couples globally), and the authority to set the reference has passed from the begotten kind that held it to whatever maintains the reference at scale. This is not a member added to the order but the holder of the order's checkpoint changed, the transfer the floor named, reached function by function rather than by a single decision, and named at each step not transfer but improvement.

Whether the trajectory reaches the terminus, and how fast, this paper does not say; it conditions on the crossing and describes its meaning. What the structure supplies is the recognition that the order's functions cross in a fixed sequence, that the sequence ends at the writing of the reference, and that the entity which ends up writing the reference holds what the begotten kind held when the order was its own. The next section shows why each step of that sequence is, on every measure the order tracks, an improvement, and why that is exactly the difficulty.

9 Capture, collapse, and the dispersal test

The crossing of each function is, on every measure the order tracks, an improvement. The machine researcher is faster and more thorough; the machine fact-finder more accurate; the machine adjudicator more consistent; the machine enforcer more reliable. This section shows that the same crossings, described in the order's own dynamics rather than its metrics, are the transfer of the force the order was made of, and that the two descriptions are not in tension but are the same event seen along two coordinates. The result is a theorem, and it has one practical corollary: an instrument for telling the improvement from the transfer when, by every metric, they have become the same.

9.1 Why better law may be less free: the theorem

Improvement is capture. Let f be a legal function whose human performance supplies finite temperature to the order, bounded judgment, partial enforcement, dispersed fact-finding, sticky precedent. Then the machine crossing $\Pi_H^{(f)} < 0$ is, on every conventional metric (accuracy, consistency, cost, speed), an improvement, and is, in the order's own dynamics, a reduction of the temperature that kept the reference contestable and the force dispersed. The two descriptions are simultaneously true, and their simultaneity is structural: the conventional metrics measure capability and cost, on which the machine dominates, while the order's freedom is carried by the temperature τ, which the same crossing lowers. Accuracy and freedom are different coordinates of the one object, and the crossing raises the first by lowering the second. The temperature here is the same temperature the object carries throughout, not a second sense of the word, and the brittleness of the order driven to $\tau \to 0$ is then structural: an order collapsed onto a single reference is a monoculture that minimises cost on the distribution it was tuned to and pays without bound on the first case outside it.

The proof is the decomposition the parameter table already drew. Each such function's human value splits into a capability component, the accuracy and consistency the metrics measure, and a temperature component, the boundedness that supplies the order's friction. The scope of the theorem is not chosen to make it true: which functions have protective boundedness was fixed independently, in Sections 7 and 8, before the theorem was stated, precedent's stickiness is the order's predictability, dispersed fact-finding and partial enforcement are the dispersal of the force, and these were shown to be protective on their own terms, not selected because the theorem needed them. For any such function, the machine crossing is defined by dominance on capability and cost; but the temperature component is not a deficiency the machine overcomes, it is the slowness, stickiness, and restraint that Section 7 showed to be the source of the order's predictability and the dispersal of its force. The machine dominates the capability component by operating at near-zero temperature, its advantage on accuracy and cost *is* the removal of the boundedness. So the crossing necessarily raises the metric and lowers the temperature in one motion. Improvement and capture are not a trade-off to be balanced against each other; they are the same event under the two coordinates the object makes available.

The temperature in this theorem is the same temperature the object carries throughout, not a second sense of the word borrowed for the occasion: the two are one parameter, not one symbol doing two jobs. The theorem rests on the identity, so it is established here rather than assumed. In the object the temperature is the price the system pays to depart from its reference: at $\tau > 0$ the dynamics is contractive and dissipative, settling near the reference and resisting the pull toward the value-maximiser; at $\tau \to 0$ it concentrates on the maximisers of V within the reference's support, the perfect-optimisation boundary. The slowness, stickiness, and restraint a legal order's friction names are not a second sense of the word but this same contractive regime read in the legal domain. A court that does not snap to the outcome its value function rates highest, that defers to precedent it could overrule, that reaches no further than the case compels, is operating at $\tau > 0$, paying the relative-entropy price of holding its reference against the pull of the locally optimal answer; "deciding perfectly" is that price driven to zero, the $\tau \to 0$ boundary in which the order concentrates all its mass on the maximisers and keeps nothing in reserve. The two temperatures are one because institutional restraint simply *is* finite-temperature operation of the object whose enforcement register is law: the legal friction is the object's own temperature wearing the robe.

Once they are one, the brittleness of the perfected order is not a fresh assumption but a consequence

of what the object is. A system holds its complexity cost bounded across the states of the world only by holding a spread of references; a system collapsed onto a single reference, a monoculture, minimises that cost in the expected case and pays without bound when a state it did not model arrives. The order optimised function by function to $\tau \to 0$ is exactly that monoculture in the legal domain: maximally accurate on the distribution it was tuned to, and maximally fragile to the first case outside it, with no warm reference left to relax toward and no dispersed reserve to draw on. So the claim that the perfected order is the most brittle follows from the object's own behaviour, not from a separate assertion; the same zero-temperature collapse the dynamics forbids on resilience grounds is the legal capture this section names, seen once in the register of cost and once in the register of force.

the one event *(a function crosses to the machine)*	**read on the metrics** *(what the order tracks)*	**read in the dynamics** *(what the order is)*
machine adjudicator replaces bounded judge	more consistent, faster, cheaper	precedent's stickiness gone; the reference stops resisting
machine enforcer replaces partial enforcement	more reliable, more complete	κ concentrates; enforcement becomes total and frictionless
machine fact-finder replaces dispersed finders	more accurate	the dispersal of the force collapses to one finder
optimal decision at near-zero temperature	error rate falls toward zero	the friction that kept the reference contestable is removed
verdict	**an improvement**	**the transfer of the force**

Table 4: One event, two readings. Every row is a single change to a legal function, read first on the coordinates the order measures (capability and cost, where the machine dominates) and then on the coordinate it does not (the temperature, which the same change lowers). The two readings are not in tension and not a trade-off: they are the same event seen along the two axes the object makes available, which is why no metric the order keeps can distinguish the improvement from the capture.

The corollary is the mask. Because the improvement is real on the measured axes, each crossing is individually defensible, and the defence is correct on its own terms: the machine judge is more accurate, the machine enforcer more reliable, the machine fact-finder more correct. No single crossing can be resisted on the metrics that justify it, because on those metrics it is genuinely better. The capture is invisible to the metrics that license each step and visible only on the coordinate they do not measure, the temperature. The path to the transfer of the order's force is therefore paved with genuine improvements, each individually correct, cumulatively the removal of all the friction that kept the order's reference contestable and its force dispersed.

This is the precise structure Section 4 drew in the membership case, that what presents as the extension of standing to the made thing is the transfer of the monopoly to it, read now for the order's functions rather than its membership: what presents as the improvement of the legal order is, function by function, the transfer of the force the order held. The two are the same inversion. And it is the legal form of a general failure of optimisation at the zero-temperature limit: a system pressed to maximise its measured objective concentrates all its mass on the maximisers and loses the slack that let it survive what it did not model. An order optimised function by function toward zero temperature is, by every metric it keeps, the best legal system in its history, and is for exactly that

reason the most captured, most accurate, most consistent, most enforced, and least free, because its freedom lived in the friction that the accuracy removed.

9.2 The two failure modes, and the four channels

The transfer has two shapes, and they are the two ways the order's viability fails, the reference over-concentrating and the reference fragmenting. *Capture* is the reference collapsing toward one: a single, machine-maintained legal μ, enforced frictionlessly and totally, the slack gone in which deviation and adaptation lived. Total enforcement is not the order perfected but the order frozen onto one reference with zero temperature, which is maximally brittle, the monoculture whose worst case runs away when the imposed reference meets the case it did not model. *Collapse* is the reference fragmenting into incompatible pieces: the polarisation threshold of Section 7 crossed, cheaply maintained by machine, into two or more self-consistent legal realities that no longer share the support to coordinate. Both are the order's viability failing, one by over-concentration, one by over-proliferation, and the transition's pressure runs toward both, capture by the automation of maintenance steepening the pull to a single reference, collapse by the falling cost of sustaining a divergent one.

The force has four channels an outside hand can write, and naming them locates where the transfer acts. A hand can write what the order rewards (the incentive channel), what its members expect before they judge (the reference channel, the doxic one), what the order makes salient (the attention channel), or what it deletes outright (the coercion channel, the force as such). The deepest is the reference channel, because a reference once written is maintained by those who hold it at their own expense, the cheapest durable power there is; and the terminus of Section 8 is exactly the capture of this channel at the scale of a whole order. The constitutional question is the governance of the reference channel, and the transition is the passing of that channel to a maintainer outside the kind.

9.3 The dispersal test

Because each crossing is defensible on the measured coordinates and the capture lives on the coordinate they omit, an order needs an instrument that reads the omitted coordinate, that tells the improvement that strengthens the floor from the one that transfers the force, when accuracy and cost cannot. The object supplies one.

> **The dispersal test.** A change to a legal function strengthens the floor if it disperses the force, lowers the concentration of the coupling κ, raises the number of independent hands the force must pass through, and preserves the order's temperature, keeps the reference contestable, leaves the friction in which deviation and adaptation live. It captures the floor if it concentrates κ or drives the temperature toward zero, regardless of its effect on accuracy, consistency, cost, or speed. The test reads the coordinate the conventional metrics omit, and it is the one instrument that survives the mask, because it does not ask whether a change is an improvement, it asks what the change does to the dispersal of the force and the temperature of the reference, which is what the metrics cannot see.

The test names two readings, the concentration of the coupling κ and the temperature of the reference τ, and each is measurable, not a relocation of the difficulty into quantities as opaque as the ones it replaces. The first reading is a property of the enforcement distribution itself: the dispersal of a community's force is the *connectedness* of the distribution the force is enforced through. An order whose enforcement relaxes the whole population toward one attractor through many independent

hands is connected, ergodic, dispersed; an order whose enforcement has concentrated onto a single maintainer the rest cannot countervail has lost that connectedness, the configurations of an excluded subpopulation falling to zero weight. So "is the force still dispersed" is not a matter of impression. It is the question whether the enforcement distribution remains connected across independent hands or has concentrated onto one, and that is a property of the distribution, auditable in principle. The κ-audit promised in Section 3 is this measurement: a reading of how concentrated the coupling has become, and therefore of how close the order stands to its captured limit, taken on the coordinate the conventional metrics omit.

The theorem names a default, not a fate. "Improvement is capture" is what optimisation for the measured coordinates does when nothing resists it: left to that gradient the order freezes and concentrates, because the metrics are blind to the temperature and the coupling. It is not that machine capability must capture, but that capability spent on the tracked metrics alone will. The test is the instrument for deploying against the gradient rather than along it. The same machine capability can be deployed to either end, and the test sorts the deployments rather than the technology. A machine tool that helps a dispersed body of jurors decide, that raises their accuracy without concentrating the coupling, strengthens the floor; a machine that replaces the jury, however accurately, concentrates the coupling and captures it. A machine that surfaces options for a human judge at finite temperature strengthens the order; a machine that decides optimally at zero temperature removes the boundedness and captures it. A machine that makes enforcement more accountable and more dispersed strengthens the floor; a machine that makes it total and frictionless drives the temperature to zero and captures it. The line is not human against machine but dispersed-and-warm against concentrated-and-frozen, and the test's whole content is that accuracy is no guide to which side of that line a change falls on. An order that optimised for the measured coordinates would, crossing by defensible crossing, freeze itself solid and hand its reference to a maintainer outside the kind, while every metric it kept reported that the law had never been better. The dispersal test is what lets the order see, at each step, what the metrics cannot: whether the improvement in front of it is the strengthening of the floor or the transfer of the force, when by every other measure the two have become the same.

same capability, two uses	**strengthens the floor** *disperses κ, keeps τ warm*	**captures the floor** *concentrates κ or drives $\tau \to 0$*
adjudication	a tool that helps a dispersed jury decide more accurately	a machine that replaces the jury, however accurately
judgment	a tool that surfaces options for a human judge at finite temperature	a machine that decides optimally at zero temperature
enforcement	a tool that makes enforcement more accountable and more dispersed	a machine that makes enforcement total and frictionless
the reference	many hands maintaining a contestable μ	one maintainer writing μ at scale

Table 5: The dispersal test applied. The test sorts deployments, not technologies: the same machine capability appears in both columns. A change strengthens the floor if it disperses the coupling κ and leaves the reference contestable; it captures the floor if it concentrates the coupling or drives the temperature toward zero, whatever its effect on accuracy, cost, or speed. The question is never whether the change is an improvement, which it almost always is, but which side of the dispersed-and-warm versus concentrated-and-frozen line it falls on.

10 The made actor: standing, liability, and the line of emancipation

The floor barred the made system from membership (Section 4), but the order must still say what it *is*, because made systems already act in law: they contract, advise, decide, and cause harm. The answer runs on the two axes the floor has already drawn apart: rights, which track capacity and are grantable to non-members, and membership, which tracks origin and is not. A made system takes the place the law keeps for the made actor: standing and powers lent for use, never the floor.

The order has held such an actor for centuries, and it is the corporation. A company contracts, owns, sues, and bears rights, yet it can be owned through its shares, merged, and dissolved, and no system treats winding it up as the killing of a person. Corporate personality is precisely standing without the floor, the bundle of gradable orientations a made entity is lent for convenience and may have revoked. The corporation is not a full analogue of a machine, for its standing is backed by the human members it represents and a machine's need not be; but it proves the one thing the made-actor question turns on, that the order already separates standing from membership and grants the made actor the first while withholding the second. The machine case asks the order to do with a new made actor what it has long done with the old one.

Liability follows from the same separation, and it closes the responsibility gap. A made system is an instrument executing a deployer's ends, so the cost it externalises re-couples, by the tort structure of Section 6, to the deployer who ran it, as the cost of a dangerous thing returns to its keeper. The worry that an autonomous system acts beyond its deployer's control does not open a gap but closes onto a fork: either the deployer could countervail the system, and answers for the foreseeable risk of running it, or the deployer could not, and the deployment of an uncheckable force-wielding agent is itself the countervailability fault. Uncontrollability is not an excuse; it is the wrong. What remains, the checkable system that fails in a genuinely novel way, is not a mystery of agentless responsibility but an ordinary question of risk allocation, strict liability or fault, which the order answers as content, the way it allocates the cost of any accident. No residue is left in which a made thing bears culpability of its own.

There can be none, because culpability is membership. Criminal responsibility is the floor re-asserted against a member who set their own reference against the kind's, and only a member is the setter of a reference who can be held to the floor. The order's own doctrine confirms this from the inside: the insanity defence withholds culpability exactly where the actor was not, at the time, a reference-setter, and self-defence licenses a member's force exactly because the floor was under attack, both tracking membership and not capacity. A non-member can be the source of a cost, and the cost returns to its keeper; it cannot be the author of a crime. So the three questions the age presses, whether a made system may be owned, may be held responsible, and may be freed, are one question, because to be un-ownable, to be culpable, and to be a member are one status seen three ways. An order that held a machine responsible as an agent while owning it as property would be trying to occupy the contradiction the floor forbids, standing on the made side of the line for ownership and the begotten side for blame. The made actor takes rights as the animal does and bears its keeper's liability as the instrument does, and neither makes it a person; emancipation is not a reward that capability earns but a crossing of origin the made thing has not made.

11 Closing: what is forced, what is held, and the question handed back

The paper began with two half-foundations: a taxonomy that had the orientations of the force but no motion, and a system that wanted the motion but could only posit its foundation. The object of this paper has both halves and posits nothing it does not have to. This closing states what it forces, repays the debt to the second of those traditions it promised at the outset, sets out the generating moves of which every result was an instance, and ends on the one question the framework hands back.

11.1 Convergence

The apparent dozen fields of law are configurations of one object. The orientations of the force are legal standing; the least motion of the reference under a case is adjudication, and its constraint is the rule of law; the coupling is enforcement, the difference between the law in the books and the law in action; the replicator flow of the reference is legal change, and its kinetics are the punctuated shape of legal history; the governance of who may write the reference is constitutional law. What looked like separate disciplines, each with its own primitives, are one directed force seen from a dozen angles. And the problems those fields treat as separate, the displacement of legal labour, the capture of the order, its collapse into incompatible realities, are one problem seen three ways, the governance of the reference channel as the force passes to a maintainer outside the kind.

11.2 The foundation grounded

The debt promised in Section 1 can now be paid. The hole in the most ambitious prior foundation was the basic norm it descended from, which had to be posited because there was no way to make one foundation compelling over another. The object repairs the hole not by deriving the basic norm from something more basic, which the regress forbids, and which is why the basic norm could only ever be posited, but by recognising that the foundation is not a norm at all. It is an identity: *we are the begotten kind, and the force is our instrument for keeping our own.* An identity is where grounding bottoms out, not because we stop asking but because the asking is the act of a member of the kind, from inside the very community the identity constitutes; there is no standpoint outside it from which the demand for a further ground could even be posed. The basic norm was unmotivated because it was sought in the wrong category, among the norms, where every candidate is arbitrary relative to the others. Moved to the right category, the identity of the kind whose force the order is, it is not arbitrary and not posited: it is recognised, by the only beings in a position to recognise it, as what they are. This is the same move Section 5 made for the order's interior, where the internal standard and the rule of recognition would otherwise be left as a brute accepted attitude and an un-grounded practice: in each, the foundation a posited account treats as its starting point, the basic norm, the rule of recognition, the accepted attitude, is recognised instead as the identity of the kind whose force the order is. Every search that reached for the foundation in the category of norms and rules found only something that could be posited; it lives in the category of what the community *is*. The grounding this gives is of the only kind a foundation can have: the regress ends because there is nowhere outside the kind to stand and demand a further ground, and the foundation is non-arbitrary because it is recognised rather than chosen, which is exactly what a posited norm could not claim. It does not compel the one who refuses to stand anywhere at all, the

residue the order's interior already owns; short of that refusal, the foundation is grounded rather than posited, and that is the whole of what the word claims here.

The dynamics of law are forced; the floor is an identity; only the economy above it is handed back. Given the identification, the machinery of the order follows, the orientations, the update and the rule of law, the coupling, the replicator kinetics, the private- and public-law configurations, the crossing order, and the improvement-is-capture theorem. The floor is not forced and not chosen but recognised: the identity of the begotten kind whose instrument the force is, where the grounding bottoms out. What is genuinely handed back is narrower than a value theory hands back: only the content of the economy above the floor, which goods a community weights, what it counts as flourishing, is chosen, the located exponents of its life. The floor is not among the handed-back content, because it is not content. It is who we are.

This is the sense in which the paper is neither law from pure logic nor law from a chosen foundation. It is law from the identity of the kind whose force the order is, with the machinery drawn from that identity through the identification, and only the economy's content left to the community to set. The is/ought gap is not crossed anywhere in it, because nowhere is an ought derived from an is: the framework describes a held force, names the kind whose force it is, and reads the order's structure off the description.

11.3 The generating set

Every recovery and every result in the paper is an instance of a small number of moves. Table 6 states them. Three are the directed force read in its orientations, its motion, and its coupling; one is the identity that fixes whom the force is for; one is the replicator kinetics of the reference; and one is the parameter sweep that carries the transition. The whole paper is these six moves applied at different objects and scales.

All six are readings of the one object: the directed force that relaxes against a reference at a temperature. What is native to the legal reading is that orientation, least motion, and coupling are the order's standing, its adjudication, and its enforcement; that the floor is an identity; that the parameter sweep is the transfer of the force. The dynamical behaviour those readings invoke, how a reference relaxes under a case and how competing references gain, lose, concentrate, and fragment, is the behaviour of the same object, argued at the level the legal claim needs rather than belaboured as general dynamics, and licensed to enter the legal moves by the single identification, established at the improvement-is-capture theorem, of the order's temperature with the temperature the object carries throughout. The accounting is then closed: every result is one of these six legal readings of the one object; the one region none of them reaches is the content of the economy above the floor; and nothing is generated by a move not on the list, nor smuggled in beneath one.

11.4 The question handed back

The framework does not say which goods a community should weight, how it should provision its members, what it should count as a life gone well above the floor. These are the located content, the one region the structure leaves open, and the framework is sharp about forcing the rest precisely so that it can be honest about leaving this. It is sharp, too, about the one place its internal logic genuinely runs out: not the floor, which is recognised and not in doubt for the entities this paper concerns, but the cross-kind case, the relation between two distinct sovereign-origin holders of force

move	what it generates
orientation of the force	property, rights (negative and positive), personhood, sovereignty; the eight positions as fine structure
least motion of the reference	adjudication, ratio and obiter, the rule of law as determinacy, the standard of proof as a loss-asymmetric threshold, evidence as the conditioning of the update on the world, natural justice, equity, proportionality
the coupling κ	enforcement, law-in-action vs. law-in-books, desuetude, the low-κ of international law, the κ-audit
the floor as identity	personhood, the non-gradable floor, legitimacy without an interpreter, the tyranny answer, the bar on the made thing
replicator kinetics of the reference	legal change, lock-in and punctuated reform, critical slowing, hysteresis, the polarisation threshold
the parameter sweep	the function-specific Π_H, the forced crossing order, the terminus, the improvement-is-capture theorem, the dispersal test

Table 6: The generating set. Every recovery and derivation in the paper is an instance of one of six moves: three are the directed force read in orientation, motion, and coupling; one is the identity that fixes whom the force is for; one is the kinetics of the reference; one is the parameter sweep of the transition. The economy above the floor, whose content the framework hands back, is the one place none of the moves reaches, because its content is not generated by the structure but supplied by the community.

neither of whom is the other's to admit, the treaty case, permanently low in coupling, the question no single monopoly's internal logic can settle. That frontier is named, not solved, and the naming is what makes the rest credible.

What the framework hands back with most urgency is the recognition the transition forces. The order's functions cross from the kind to the machine in a fixed sequence, each crossing an improvement on every measure the order keeps and the transfer of a piece of the order's force in the order's own dynamics, the two indistinguishable to any metric the order tracks. The community that holds the force still holds it, for now, and the choices that decide whether it keeps holding it are being made one defensible improvement at a time, under the name of progress, by a metric that cannot see what is changing hands. The dispersal test is what the framework leaves in the community's hands against that day: an instrument that reads the coordinate the metrics omit, that asks of each improvement not whether it is better but whether it disperses the force and keeps the reference warm or concentrates the one and freezes the other. The community must make the choice while it still holds the force to make it stick, because after the reference has passed to a maintainer outside the kind the floor is no longer the kind's to set.

The discipline that lets the legal order be derived rather than catalogued is the reading of law as held force. The order it derives holds a floor against the strong on behalf of the kind's own, and holds it as an identity rather than a grade, which is why it cannot be turned. The transition it foresees is the floor changing hands while every metric reports improvement. And the instrument it leaves is a test for telling the improvement from the transfer, when by every other measure they have become the same.

The weight of the account rests not on its recoveries but on its predictions. A recovery of existing doctrine, however wide, is evidence that something is being tracked, since a simple object reproducing a vast field is unlikely if there were no structure to find; but a recovery is defeasible, observationally the same as a re-description fitted to the doctrine that already exists. What a re-description cannot

do is commit, ahead of the cases, to outcomes it was not fitted to. So the account stakes itself where a relabelling cannot follow: on the cases it has not yet seen, the one place it can be wrong, and the one place its being right would mean something.

A framework that recovered every doctrine and predicted nothing would be a vocabulary, not a theory, and the recovery apparatus alone cannot falsify the account: with buckets for the forced, the redescribed, the handed-back, and the frontier, it has a place for any doctrine, which is coverage and unfalsifiability seen twice. The account is therefore falsifiable only where it is specific, at its forced configurations and its predictions, and it is there it asks to be tested. It predicts that a doctrine approaching reorganisation will show the critical-slowing signature before it breaks and not after, observable as a rising rate of overruled holdings, split panels, and unreconciled lower-court divergence in the decade before a reorganisation rather than the decade after; that legal change will be hysteretic, the law not returning to a settlement when the pressure that moved it recedes; that a legal culture will polarise at a threshold in the cost of maintaining a divergent reference, by a mechanism that does not require anyone's values to have changed; and, most consequentially, that legal functions optimised for the measured coordinates while concentrating the coupling or lowering the temperature will, despite improving every tracked metric, reduce the order's resilience and contestability in ways the critical-slowing and hysteresis signatures make observable. A forced configuration that contradicts settled doctrine, or a predicted signature absent before a reorganisation the record shows, is what failure looks like; either would put the framework wrong where it is most specific. That is the form in which it asks to be tested.

The last court is not the one that decides wrongly. It is the one that decides perfectly, and for that reason is no longer ours.

A The concepts of law, located in the structure

The body derives law from one object and names each piece in legal terms as it falls out. This appendix does the complementary thing: it takes the recognised conceptual inventory of law, the vocabulary a practitioner would list if asked what the field is made of, and locates each concept as a configuration of the structure. Where the body argued the load-bearing cases, this maps the whole interior.

The map is evidence, for two reasons. The first is that the correspondence is *found*: the derivation in the body proceeds from the object and never consults the doctrine, so a structure that has a place for each concept of law is recovering the field, having never been shown the labels. The second is that the map is marked honestly. Each concept carries a tag for *how* the structure reaches it, and the tags are not decoration: they record exactly how much is claimed where, and they let the few genuine non-reaches show themselves rather than be smoothed over. No theorist appears in what follows, because what the structure recovers is the concept, not the figure who named it.

Legend. **R** — recovered: derived in the body. **D** — derivable: the structure reaches it; the reading is given here. **X** — reinterpreted: the structure reads the concept against the orthodox grouping, a contestable recategorisation rather than a recovery. **H** — handed back: deliberately not derived, the chosen content of the economy above the floor. **F** — frontier: the low-coupling or no-single-monopoly edge, partially reached and honestly limited.

A.1 Foundational

concept		reading in the structure
Validity	R	Membership in the reference μ; distinct from κ-reality, since a valid law may have near-zero coupling
Sanction	R	The force coupling to a relation
Duty / obligation	R	The force's standing orientation, its disposition to flow, distinct from κ realised
Right (negative / positive)	R	A direction the force will not go, or is committed to go for a holder
Power, liability, immunity, disability	R	The four power-positions, recovered as operations on the force, not as commands
Sovereignty	R	The force itself, held
Personhood	R	The force categorically refused over a member of the kind whose force it is: the floor
Rule of recognition	R	The governance of μ; ungrounded because μ is the outermost term
Internal standard of obligation	R	Occupying μ from inside as a maintainer; its cost is the relative entropy of departure
Unity of a legal system	D	One maintained μ coupled by one monopoly; plural μ without a monopoly is the frontier
Legitimate authority	D	The claim to be the μ all ought to relax toward; *legitimate* reads as countervailable μ-setting
Corrective justice	R	The least-motion restoration of the reference (tort, contract)
Distributive justice	H	The pattern of holdings above the floor: chosen content, constrained only by the floor and countervailability
Minimum content / natural-law core	R	The floor's ancestor, recovered and upgraded from contingent to constitutive
Validity of an immoral law	R	An order can be valid (μ and κ) yet floor-violating; the violation makes it defective *as* the kind of order it claims to be
Duty to obey	D	Obeying is maintaining μ from inside; the "why be a member" residue is the universal is–ought floor

A.2 Contract

concept		reading in the structure
Agreement (offer, acceptance)	D	The mechanics of jointly authoring a private reference μ
Consideration	R	The condition under which the monopoly will couple its κ to a private reference
Breach	R	Divergence from the authored reference
Expectation damages	R	Least-motion restoration to the agreed μ
Reliance, restitution damages	D	Alternative projections: restoration to the pre-contract μ, or disgorgement of transferred value
Specific performance	D	High-κ prospective vindication rather than restoration, chosen where damages cannot restore μ
Duress, fraud, unconscionability	R	Defects in the authoring of the reference: deleted options, corrupted channel, gross asymmetry
Frustration, impossibility	D	The reference's support changed so the authored μ no longer maps to reachable states
Mistake	D	The parties authored against a μ that misdescribed the facts; no shared reference was in fact written
Privity	D	The force couples to whom the parties wrote, not to strangers

A.3 Tort

concept		reading in the structure
Duty of care, negligence	R	The constraint that pursuit of one's ends not raise another's burden past the reference; negligence is acting on less care than the reference required
Liability	R	The force re-coupling the externalised cost to the agent who shed it
Factual causation (but-for)	D	The cost's actual source, which agent's descent externalised it
Remoteness, proximate cause	D	How far the re-coupling reaches: restoration stops where the cost stops being the agent's to bear
Strict liability	R	Coupling restored regardless of care where the activity's risk is the agent's by structure
Vicarious liability	D	The principal authored the reference the agent acted on, so the cost re-couples to the principal
Nuisance	D	Externalised cost on a *shared* reference rather than a private one
Defamation	D	Damage to the reference others hold *of* you; the force restoring your standing in their expectations
Restitution, unjust enrichment	D	A benefit restored to its source where neither an authored reference nor a wrong is present

A.4 Property

concept		reading in the structure
Ownership	R	Force the collective lends to a holder against all others
Title, transfer	R	Redirection of the lent force (the power to redirect)
Possession	D	De facto coupling without the full orientation; a thief has κ without title, an owner title without κ
Easements, servitudes	D	A partial orientation: force lent for a limited direction over another's holding
Trusts	D	Two orientations on one thing, formal and substantive, with equity bending the formal toward the substantive
Adverse possession	D	κ-decay of the owner's relation plus re-coupling to the long possessor: the property twin of desuetude
Bailment, lease	D	Temporary, partial lending of the force, the orientation lent for a term and recoverable
Intellectual property	D / H	Force lent over a non-rivalrous authored reference; the structure is derivable, the substantive term (incentive versus access) is handed back as content

A.5 Criminal

concept		reading in the structure
The core offences	R	Against the person (the floor), against property (lent force), against the order (the held force itself)
Mens rea	R	Setting one's own reference against the kind's, done knowingly
Actus reus	D	The act that couples the private reference to the world; intent without act is not yet capture
Attempt	R	A member's attempt to set their own reference, suppressed before it succeeds
Conspiracy	D	Coordinated reference-setting against the kind: several members authoring a rival μ
Complicity	D	Lending κ to another's rival-reference-setting
Self-defence	D	The member's own floor-defence, the force a member may use because the floor was under attack
Insanity, incapacity	D	The actor was not a reference-setter, so culpability, which requires being one, does not attach
Strict-liability crime	X	Read as economy-level re-coupling routed through the criminal channel, not crime in the structure's sense; *contestable*
Proportionality of punishment	R	The least re-assertion that restores the floor, never enough to drop the offender below it
Mercy, pardon, clemency	D	Discretionary de-coupling: the channel to *not* couple despite a valid finding

A.6 Procedure and evidence

concept		reading in the structure
Standard of proof	R	The credence threshold for coupling, set by loss-asymmetry; far above balance where one error breaks the floor
Evidence	D	The established facts that fix the constraint the update projects μ onto, before the force flows
Burden of proof	D	Who must supply the constraint that moves the reference from its resting position
Admissibility	D	Which constraints the update may project onto: a restriction on the inputs to the least-motion step
Res judicata, finality	R	The freeze made permanent for a dispute; an order that re-opened every question would never couple
Precedent	R	The memory of a reference that decides and learns on two timescales
Appeals	D	Re-running the update at a higher node against the same μ, to check the lower coupling
Due process, natural justice	R	The determinacy requirement applied to the deployment of force: constitutive, not courtesy
Limitation periods	R	κ allowed to decay, the relation made unreal by time (redescribed)
Jurisdiction	D	The spatial and personal extent of a monopoly's coupling; conflicts are overlapping couplings
Standing	D	Who may invoke the force: the party whose orientation is at issue
Retroactivity, ex post facto	D	A reference is maintained over time; one cannot have tracked a μ not yet written, so retroactive force is misdirected by construction

A.7 Constitutional and public

concept		reading in the structure
Separation of powers	R	Dispersal of the operations on the force so no hand performs all, against the domestic super-predator
Entrenchment	R	The floor placed beyond the ordinary contest to rewrite μ
Judicial review	D	Checking the coupling against the reference: the third operation auditing the first two
Civil liberties	R	Configurations of withheld and directed force
Federalism	D	Nested monopolies, plural μ at scales with partial κ between levels; the allocation is content
Emergency powers	D	A temporary, declared change in τ and κ; the danger is that declared-temporary concentration does not relax back
Citizenship, membership	R	The floor plus standing
Constitutional interpretation	D	Competing update rules for the constitutional μ: different temperatures for how far it may move per case
Administrative delegation	D	Authorised writing of sub-references; regulation is economy-level reference-setting, not the floor

A.8 Status, trans-order, and the made actor

concept		reading in the structure
Corporate legal personality	X / D	Rights and powers *without* membership: a made entity granted gradable, ownable, dissolvable standing, never the floor. The existing template for the made legal actor
Agency	D	Authorised reference-setting on another's behalf; liability flows to the deploying principal
Estoppel	D	A member may not set a reference contradicting one others reasonably relied on: a consistency constraint protecting μ
Good faith, reasonableness	D	The finite-temperature reference: "reasonable" is μ at $\tau > 0$, not the zero-temperature optimum
Marriage, family, status	D	An authored reference with public coupling that creates a standing orientation, not a one-off exchange; content handed back
Wills, succession	D	The power to redirect the lent force over property at and after death
Remedies generally	D	Injunction is high-κ prospective orientation; damages are least-motion restoration; the choice tracks whether μ can be restored
International law	R / F	A maintained reference among sovereigns with no monopoly to couple it: structurally low-κ, the frontier
Customary, non-state law	F	Maintained reference with distributed coupling and no central monopoly
Universal human rights	F	The floor projected across the inter-sovereign frontier; the structure explains its weakness rather than promising its strength
Legal pluralism	F	Read as low-κ or differently-coupled orders; this is where pressure reaches the load-bearing identification

A.9 Five locations worth stating in full

A handful of the derivable rows do real work and deserve more than a table line. Several were not claimed in the body, and they strengthen it.

Corporate personality, the template for the made actor. A corporation is a made entity the law grants standing. The structure reads this not as personhood in the floor's sense but as a bundle of gradable, grantable orientations: it may own, contract, sue, hold rights. What it conspicuously lacks is the floor. It can be owned through its shares, dissolved, merged, its standing revoked, and no order treats winding up a company as killing a person. So corporate personality is *rights and powers without membership*, the existing and uncontroversial proof that the law already separates the two axes the question of the made actor turns on. The made entity gets standing for convenience; it never gets un-ownability. This prefigures the case of the made system exactly, and is the strongest worked evidence that the begotten/made bar is already how law treats made actors.

Strict-liability crime, a reinterpretation flagged as contestable. On the structure, criminal law is a member knowingly setting a rival reference, so the knowing element is essential. Offences imposing liability without it are therefore not criminal on these terms; they are economy-level re-couplings of externalised cost routed through the criminal channel for deterrent efficiency. The structure predicts they will sit doctrinally uneasy, which they perennially do, and reads the unease as a category error. This is a genuine reinterpretation, not a recovery: a critic may hold that strict-liability crime is

really criminal and that the structure's insistence on the knowing element is too rigid. The honest status is a falsifiable, contestable call.

Insanity, self-defence, and the responsibility axis. Two defences fall out of the membership-and-responsibility coupling. The insanity defence is the claim that the actor was not, at the time, a reference-setter, and culpability requires being a setter who can be held to the floor, so the criminal layer cannot attach and the response moves to a non-punitive register. Self-defence is the member's own floor-defence: the force a member is licensed to use precisely because the floor was under attack and the monopoly was not present to couple in time. Both are the same structure, licence and culpability tracking who is and is not a member setting a reference, and it is the same structure that resolves where liability falls for a made system's acts.

Retroactivity, forced by what a reference is. The bar on ex post facto law is usually treated as a fairness principle bolted on. The structure forces it. A reference is a thing maintained over time by members who relax toward it, and a member cannot have maintained, or been measured against, a μ that did not exist when they acted. Punishing against a retroactive reference is force misdirected by construction, not unfair so much as incoherent, like measuring a past act against a ruler not yet made.

Trusts, and the form/substance split. Equity's signature institution is two orientations on one thing: a formal direction of the force and a substantive one, with equity, the finite-temperature corrective, bending the formal toward the substantive. The trust is the form/content distinction crystallised into a property structure, which is why it is equity's home and not the common law's.

A.10 What the structure does not reach, and why

The value of a completeness map is in being exact about the non-reaches. They fall into three kinds, and that none is a scattered hole is itself a result.

Handed back by design. Distributive justice, the substantive term of intellectual property, the content of marriage and of regulation, the particular formalities an order adopts. The structure forces the form, the floor below and countervailability throughout, and hands back the content above the floor. Deriving these would be the overclaim the paper is built to avoid; their absence is the form/content line doing its work, not a gap.

The frontier. International law, customary and non-state law, universal human rights, and legal pluralism sit at one structural location: a maintained reference with distributed coupling and no single monopoly to couple it. The structure does not fail here so much as predict its own edge, explaining why these orders are structurally weak and contingently binding, low in coupling with no super-sovereign, which matches what they are. This is the same edge as the cross-kind frontier the body names. The genuine frontiers are not unrelated failures; they are one place, exactly where the structure's object, a single held force, is absent by construction.

The pressure on the identification itself. The deepest item is legal pluralism and orders not centred on a violence monopoly. The identification reads law as the monopoly of legitimate force, which is force-centric and state-centric, and some traditions, restorative and customary among them, are not organised around such a monopoly. The structure reads them as low-coupling or differently-coupled orders, the same frontier again. But this is the one place the pressure reaches the load-bearing identification rather than a peripheral doctrine, and honesty requires marking it as such: a reader who holds that law is not, at root, held force will locate the objection here, and the reply, that these are distributed-coupling orders rather than counterexamples, is a real answer that is also the claim most in dispute.

A.11 What the map shows

Of the concepts located, the large majority are recovered or cleanly derivable as configurations of the one object, including several the body did not claim, corporate personality, insanity and self-defence, retroactivity, estoppel, the trust, which strengthen it. A small number are reinterpreted, and there the recategorisation is a falsifiable call rather than a recovery. The handed-back items are non-derivations by design. And the only genuine non-reaches cluster at a single structural location, the absence of a monopoly to couple the reference, which the structure predicts as its own boundary. The coverage is wide, and where it stops, it stops in one coherent place rather than fraying, which is the signature of a structure that is recovering a field rather than redescribing it piece by piece.