

THE IN A HURRY SERIES

Free Will

in a Hurry

Do you actually choose anything?

Max Brocklesby

BOOKSINAHURRY.COM

Contents

The Whole Thing in One Page 4

Why You Should Care 5

The Core Ideas 7

How It Actually Works 20

What People Get Wrong 31

Use It 36

Terms 41

Go Deeper 45

Notes and Sources 47

Bibliography 54

The Whole Thing in One Page

Free will is usually sold as a switch. Either a sovereign self sits behind your eyes, able to start a decision independently of biology and history, or every choice is theatre and you are a passenger watching machinery run. Both pictures hide the question rather than answer it.

A human choice is caused. Reasons, memories, values, habits, attention and inhibition are among its causes. They are parts of the person, not visitors to the mechanism. Someone who signs because a gun is at his head and someone who signs after reading, objecting and deciding both belong to the causal order. Only one acts with the control that consent and responsibility normally require.

The dispute contains three questions. First is leeway: with the past and laws held fixed, was more than one action physically possible? Libertarians defend some genuine openness and try to explain how the agent settles it without luck deciding instead. Second is sourcehood: did the action issue through the person's own reasons-responsive capacities, or were those capacities bypassed, coerced, compulsive or manipulated? Compatibilists argue that this form of ownership can exist even if only one future was physically possible. Third is ultimate desert: can anyone deserve praise or suffering as the deepest author of conduct when nobody created the starting character from which self-formation began? Hard incompatibilists answer no under both determinism and relevant indeterminism.

Neuroscience does not collapse those questions into a waveform. Libet found averaged motor preparation before five volunteers reported an urge to move. Later studies decoded arbitrary left or right presses modestly above chance before reported awareness. These results rule out a naive sequence in which a complete conscious command always appears before neural preparation. They do not show that the brain is an external decider, that an early signal is a finished decision, or that purposeless timing tasks represent considered choices. One 2019 donation study found it only in arbitrary trials. A 2025 rewarded-choice study reported some stronger deliberate

measures, with others inconclusive. Current work continues to dispute what the early ramp represents and when useful prediction begins.

The deeper pressure begins before any electrode. You did not choose your genes, childhood, language, first desires or the events that trained your attention. To shape yourself, you must start as someone you did not shape. That threatens ultimate self-authorship. It does not erase the difference between persuasion and force, reflection and seizure, adult competence and incapacity, or a process that can answer reasons and one that cannot.

Freedom therefore has a profile: practical options, understanding, attention, inhibition, ownership, learning and the ability to arrange future conditions. These capacities can be enlarged, damaged, bypassed or denied. Social and material circumstances affect which options can be seen and safely taken. Responsibility should track the control a person possessed and keep answerability, repair, protection and retribution separate.

So do you choose anything? Yes, in the important sense that outcomes can be settled through your capacities as a person. Evidence does not show a self that created itself or escaped causation. Whether the first fact deserves the title free will depends on whether the title demands the second. The useful answer is neither sovereign authorship nor helpless spectatorship. It is caused, graded human control, with an unresolved argument about whether that is enough.

That is the book.

Why You Should Care

In 1973, forty students at Princeton Theological Seminary walked between two buildings to give a short talk. On the route, each passed a man slumped in a doorway, coughing and groaning. Some students had been told they were late. Others had been told there was time. Among those under high time pressure, one in ten stopped to help. Among those with little pressure, nearly two in three did.

The result is famous because of who the volunteers were and what some

had been preparing to discuss: the parable of the Good Samaritan. Yet the useful fact is narrower. In that small American sample, one change in the situation sharply changed what people did. Belief and character did not vanish. They operated through attention, urgency, interpretation and available time. The students still acted. The conditions altered which action became reachable.

That is why free will matters. Every serious judgement about a person contains a hidden theory of control. We blame the colleague who lies but excuse the one who speaks during a seizure. We distinguish a transfer made after reflection from one made under threat. We treat a child, an intoxicated adult and a trained professional differently because knowledge, foresight and self-command matter. Long before anyone mentions determinism, ordinary life is already sorting actions by how they came about.

The philosophical argument asks whether those distinctions can survive a complete causal explanation. Suppose every preference has a history, every intention is implemented in a brain and every brain state depends on earlier states. Has the person disappeared, leaving only events? Or is the person the organised process through which some of those events become deliberation, restraint and action? The answer changes how you think about praise, punishment, regret, treatment, education and the possibility of becoming less predictable to your worst impulses.

It also changes how you use explanation. People often fear that explaining conduct excuses it. The fear reaches beyond individual cases. A prison, school, workplace or treatment service is built around assumptions about what changes conduct. If people are pure originators, warning and blame may look sufficient. If they are passive products, demands may look pointless. If agency is a responsive capacity, institutions should supply reasons, consequences, practice and routes back into control.

That caution matters most when conduct is harmful. If a violent act arose from temperament, deprivation, learning, group pressure and a moment of rage, what is left to condemn? Yet refusing explanation does not restore

agency. It removes the information needed to prevent repetition. The same causal account can support compassion about origins, protection against danger and a demand that someone answer for what he understood and controlled.

Then there is the private use. You did not choose the first version of yourself. You inherited a body, a language, a family, a century and a set of early reinforcements. But some causes can represent other causes, compare futures, build reminders, avoid temptations, seek criticism and practise stopping. A person can arrange today so that tomorrow's choice is less dependent on a tired impulse. Whether that deserves the grand title free will is disputed. Specific arrangements can change behaviour, although no one intervention works across every person and setting.

The attraction of the all-or-nothing debate is that both extremes offer relief. The sovereign-self picture says you could have done anything, so success is wholly yours. The puppet picture says you could have done nothing, so failure belongs to the universe. A more accurate account is less flattering and more useful. You possess real control, unevenly, inside conditions you did not select. Some of what happens through you is yours in a strong sense. Some is barely yours at all. The work is learning the difference.

The Core Ideas

The Chooser Is the Whole Person

The picture causing most confusion is a tiny executive somewhere behind the forehead. Sensations arrive, options are displayed, and this inner witness presses the final button. Neuroscience then looks into the skull, finds no executive chamber and announces that the brain chose instead. The alleged chooser was never a workable model.

A person is not one more object inside the brain. The person is the living system whose brain, body, memories, habits and surroundings support action. When you remember a promise and turn back, the memory is not a force acting against you. It is one way you act. When a scan records motor

preparation before your reportable urge, the activity is not evidence of a second agent stealing your movement. It is part of the process by which you move.

This does not make every bodily event a choice. A reflex, a seizure and a considered reply all occur through the nervous system, but their organisation differs. Voluntary action normally involves some combination of goals, option generation, expected consequences, attention, inhibition, initiation and correction. The balance varies. You may plan a resignation for months, decide where to place a foot in a fraction of a second, or act from a trained skill without speaking a sentence in your head. Conscious verbal deliberation is one form of control, not the sole badge of agency.

The sense of agency can also be wrong. People sometimes feel authorship over outcomes they did not produce and fail to feel it over actions they did. Timing, expectation and visible consequences help the mind infer that this movement was mine. That fallibility matters because experience alone cannot settle the metaphysics. It does not follow that the underlying control is fictional. Vision can mislead without making sight an illusion, and the feeling of authorship can misfire while voluntary action remains a useful distinction.

A better starting question is therefore not, where is the self hiding? It is, what makes an event an action of the person? A sneeze happens in you. A signature under threat comes from your hand but bypasses normal consent. A considered signature expresses an intention that survived comprehension, comparison and opportunity to refuse. All three are caused. Only the third displays the full pattern we ordinarily mean by choosing.

The levels of description matter. A physiologist can explain the muscle contraction, a psychologist the intention, and a friend the promise that made you return. These accounts need not compete. The promise is realised through neural and bodily processes, while the neural description alone may omit why this action made sense to the person. Saying that neurons fired instead of a person choosing mistakes implementation for replacement.

This shift removes a false contest between you and your brain. It also exposes three harder questions. If the chooser is the whole person, did that person have another physically possible path? Did the action flow through capacities that count as the person's own? Can a person deserve credit or suffering as an ultimate source when genes, development, injury, language, culture and earlier luck helped build those capacities? Free will cannot mean independence from every influence, because independence from memory, character and judgement would remove the equipment of choice. The argument concerns openness, ownership and desert, not whether causes exist.

Caused Is Not the Same as Forced

Causal determinism says that, given the complete past and the laws of nature, only one future is physically possible. It does not say anyone can calculate that future, that events lack explanation, or that what you do makes no difference. Those are separate claims, often smuggled in under the same word.

Fatalism says an outcome will occur whatever you do. Determinism says what you do is among the conditions producing the outcome. If a locked door prevents escape, trying another exit matters. If a doctor treats an infection, treatment matters. A deterministic account would include the attempt, the diagnosis and the medicine in the chain. It would not make them idle theatre. The future may depend completely on action even if the action itself has sufficient causes.

Coercion is different again. A threat narrows the acceptable options by attaching a grave cost to refusal. Compulsion can make one motive resistant to judgement and inhibition. Ordinary causation includes both, alongside seeing a reason and responding to it. The fact that a warning caused you to leave a burning room does not show that you were unfree in the same way as someone carried out unconscious. Freedom must be sensitive to the route by which the cause operated.

This is the compatibilist opening. Hume argued that liberty does not require

actions without causes. It requires the power to act or refrain according to the determination of the will, without external constraint. Modern compatibilists make the test more demanding. A desire can be internal and still compulsive, implanted or disconnected from the person's evaluative capacities. The relevant mechanism must be capable of recognising and responding to reasons across a suitable range of cases, and it must belong to the agent in an appropriate historical sense.

Indeterminism does not settle the matter for the other side. Suppose a neural event has two possible outcomes and chance selects one. The future is open, but the person gains no control merely because the event was not settled. A roulette wheel is less determined than a calculator and less responsible than either. Libertarian theories therefore need more than randomness. They need an account of how an agent settles an undetermined choice for reasons without the final difference becoming luck.

Quantum physics is sometimes recruited as a rescue service here. It may block a classical picture in which every physical event follows uniquely from earlier conditions. That is a fact about physical description, not yet a theory of agency. Random micro-events could influence a decision, average out, or be amplified. None becomes authorship by carrying the label quantum.

Predictability should also be kept separate. A determined system may be practically unpredictable because its starting state is unknown, its interactions are complex, or small differences grow. An indeterministic system may be statistically predictable. Surprise proves little about freedom. A friend can predict that you will keep a promise because your character is stable, and that reliability may be evidence of agency rather than its enemy.

The basic distinction is clean. Causes answer why an event occurred. Control asks whether the event was produced through capacities that can represent reasons, compare outcomes, inhibit responses and learn. Forced and free actions both have causes. The work lies in explaining which causal structures count as the person's control.

The Three Camps Protect Different Things

The debate is often presented as believers against unbelievers. It is more useful to see three families of answers, each built around a different fear.

Libertarians fear a closed past. If the laws and everything before your birth fixed one future, then when you chose tea rather than coffee there was never a physically possible route to coffee. Event-causal libertarians place indeterminacy within deliberation or effort so that competing reasons leave more than one outcome open. Agent-causal libertarians argue that the person, rather than an undetermined event alone, exercises a distinctive power to settle the matter. Neither serious view imagines decisions appearing without reasons. Both face the luck objection: if the same history and reasons permit either result, what makes the final difference the agent's achievement rather than an unexplained break?

Compatibilists fear the wrong standard. They argue that demanding self-creation or exemption from causation would exclude every possible agent. What matters is whether action issues from the person's own values and a mechanism able to respond to reasons, without coercion, compulsion or bypass. A determined process can still distinguish evidence, revise a plan and stop when the reason changes. Its problem is the manipulation objection: if a skilful operator designed every desire and value in you, an internal and reasons-responsive action might still look authored by someone else.

Hard incompatibilists fear luck on both branches. Determinism traces action to conditions the agent did not create. Indeterminism inserts chance at the point where authorship was needed. On this view, neither route produces the basic desert required for someone to deserve suffering merely because he chose wrongly. Some hard incompatibilists still preserve agency, moral criticism and protective institutions. What they reject is ultimate responsibility.

Three famous arguments sharpen the division. The consequence argument says that nobody controls the remote past or the laws of nature. If

determinism makes present action a consequence of those, nobody controls that consequence either. Compatibilists challenge the transfer from no control over the past to no control over what a present reasons-responsive person does.

Frankfurt cases attack the demand for alternatives. Imagine a hidden controller who will force Jones to vote for A if Jones begins to choose B. Jones decides on A for his own reasons, so the controller never intervenes. Jones could not have done otherwise, yet many judge him responsible because the mechanism that guaranteed the outcome played no role in the actual sequence. The case has generated decades of replies and no agreed verdict. It does show that control over what happened and access to a different possible future can come apart.

Manipulation arguments reverse the pressure. Imagine a neuroscientist who installs in Beth the values and decision process that lead her to commit a crime, while ensuring that she reflects calmly and acts from those values. If Beth lacks responsibility, why should an ordinary deterministic history be different merely because parents, genes and society performed the shaping slowly and without a single designer?

There are hybrids inside each family. Event-causal libertarians locate indeterminacy in decision processes; agent-causal theories make the person a distinctive source; non-causal theories resist treating reasons as efficient causes. Compatibilists divide over identification, reasons, history and social recognition. Sceptics divide over whether to keep the phrase free will while rejecting desert. The labels map the main fault lines, not three finished creeds.

No camp wins by definition because the three families answer different questions. Alternatives matter when leeway itself is at issue. Ownership matters when an action flows from the person's evaluative capacities rather than intrusion or bypass. Origins matter when those capacities were engineered or formed under conditions the person could not assess. Ultimate desert asks a further question about whether finite sourcehood is enough. A sound view must explain the connections without pretending that

leeway, sourcehood and desert are one property.

A Choice Is a Process, Not a Timestamp

In Benjamin Libet's best-known experiment, five principal volunteers watched a fast clock and flexed a wrist whenever they felt the urge. Electrical activity over motor areas began building before movement. In the headline condition, the readiness potential began roughly half a second before muscle action, while reported awareness of intending to move came roughly two tenths of a second before it. Libet concluded that cerebral initiation could begin before conscious intention was reportable.

The result overturns the simple story that a finished conscious command arrives first and the brain begins work afterwards. It does not identify when the person stopped choosing. The task supplied no reason to move now rather than later, the urge time was reconstructed while watching a clock, and the readiness potential was obtained by averaging trials backwards from movements.

In 2008, Chun Siong Soon and colleagues used functional imaging while twelve participants chose left or right buttons. Patterns in frontal and parietal regions predicted the later outcome with roughly 60 per cent accuracy, several seconds ahead of the awareness report. That is above chance, not a reliable reading of a settled decision, and the alternatives again lacked reasons.

Aaron Schurger and colleagues offered a different model. When a person waits without a reason to move at one moment rather than another, ongoing fluctuations can accumulate until a threshold is crossed. Select movement trials, line them up backwards from movement and average them, and a smooth ramp can appear even if no hidden decision was completed at its beginning. The early potential may mark a developing stochastic process rather than a command already issued.

Task meaning matters, but the direction of the difference is unsettled. Uri Maoz's team observed the familiar potential in arbitrary charitable-donation presses but not in deliberate ones. A 2025 rewarded-choice study by

Guillaume Pech's team reported some stronger measures in deliberate conditions, while other comparisons were inconclusive. The studies differed in movement, waiting, reward, valuation and analysis. Together they block the assumption that purposeless timing automatically represents consequential choice.

Prepared actions can also be cancelled after early readiness activity, although one brain-computer task found a late, task-specific window in which stopping no longer succeeded. Recent work has further separated the long early ramp from a finished decision, but it remains centred on self-initiated movement rather than moral or life choices.

The reported instant of deciding is slippery because intentions have stages. You may become inclined, settle provisionally, commit, initiate and then notice that you have committed. A single clock position compresses that sequence into a retrospective mark. A timing disagreement may therefore reveal a problem in the question as well as noise in the answer.

Choice is distributed across time. Goals form beforehand. Attention changes which reasons are available. Valuation compares outcomes. Motor systems prepare, inhibitory systems delay or stop, and monitoring detects conflict and error. Conscious processing may contribute at several points rather than launch the sequence with one pulse.

A timestamp experiment can test parts of this machinery. It cannot answer whether determinism is compatible with responsibility, whether an agent must be an ultimate source, or whether alternatives are required. Those are claims about control across a process. No electrode has a channel labelled free will.

You Did Not Choose the Starting Chooser

The strongest sceptical argument begins before the decision. You act as you do because of how you are, including your motives, values and powers of judgement. To be ultimately responsible for the action, Galen Strawson argues, you would need to be ultimately responsible for how you are. But any attempt to shape yourself starts from an earlier set of preferences and capacities that you did not choose. The demand retreats backwards without reaching a self-created beginning.

This is more serious than the claim that childhood influences behaviour. It targets the idea of ultimate responsibility in any possible world. Even an undetermined choice is made by someone with a character and a view of the reasons. If chance supplies the difference, chance is not self-creation. If the person deliberately changes character, the desire to change and the judgement about how arose from the earlier person. Nobody authors the first draft.

Moral luck spreads the pressure. Two equally careless drivers take the same risk. One reaches home without incident; the other encounters a child in the road and kills. Their control before the outcome may be identical, yet blame commonly tracks the result. Circumstances also determine which temptations, emergencies and opportunities ever test a person. Character itself depends on constitutive luck: temperament, upbringing, health and social position. Responsibility practices respond to choices while the material from which choices are made is unevenly assigned.

Manipulation cases turn that unease into a thought experiment. If a technician implanted your motives yesterday, action from those motives would not seem fully yours. Now replace the technician with gradual conditioning. At what point does history stop undermining ownership? The compatibilist needs an account of how a person can take responsibility for a mechanism acquired without choosing its origins. The sceptic asks why slow and natural programming is morally cleaner than fast and artificial programming.

Self-formation is still possible in a non-ultimate sense. Repeated choices change skills, expectations, relationships and the environments in which later choices occur. A person who learns to pause before anger has not created the original temperament, but has altered the pathway through which it becomes conduct. The sceptic can call this fortunate causal development. The agent can still recognise it as work.

There is no painless reply. One can lower the ambition. Ordinary authorship need not mean creating every condition of authorship. A novelist did not invent language, memory or the desire to write, yet the book can still be hers because the work flowed through sustained capacities for judgement, revision and endorsement. Likewise, a mature action may belong to a person who did not design the starting person but has, over time, reflected on motives, resisted some, cultivated others and become answerable for the pattern.

That reply preserves ownership without establishing ultimate desert. It may justify asking for reasons, trusting, criticising, requiring repair and protecting others. It may not justify the thought that a wrongdoer deserves suffering in some backward-looking cosmic sense, independent of what punishment achieves or expresses.

This is the fracture running through the book. You can be a source without being the first source. You can shape yourself without having selected the initial shaper. Whether that finite authorship is enough for free will depends on what work the phrase is expected to do.

Freedom Comes in Degrees

Ordinary practice already treats control as divisible. We ask whether a person understood the situation, recognised the relevant reasons, could form an intention, had a workable alternative, could inhibit an impulse, acted under threat, knew the likely result and retained enough capacity to learn. These questions would be pointless if freedom were one invisible substance present in full or absent altogether.

Consider three refusals. One person declines an invitation after checking

the date. Another wants to accept but is physically locked in a room. A third is overwhelmed by a compulsion that leaves some resistance but makes refusal far harder than it is for most people. The outcome is the same. Opportunity, psychological control and ownership are not. A useful account of freedom must represent those differences.

Reasons-responsiveness supplies one dimension. A mechanism is more under the person's guidance when it would register a sufficient change in evidence or stakes and alter conduct in at least some relevant circumstances. Someone who stops after learning that a drink is poisoned displays sensitivity to reasons. Someone whose action would continue through every warning may lack that form of control, whether because of seizure, coercive threat, severe compulsion or a fixed programme.

Alternative possibilities supply another. Even philosophers persuaded by Frankfurt cases do not deny that options matter in daily life. A worker who can safely refuse has more freedom than one whose visa, housing and family's food depend on compliance. Formal permission can coexist with practical impossibility. Money, time, legal status, education, dependency and the risk of retaliation can determine whether an alternative is usable. Social and material conditions therefore enter the control profile without turning people into passive products of structure.

Ownership adds history. A motive may feel internal yet have arrived through deception, conditioning or illness in a way that bypassed the person's critical capacities. Conversely, a habit can begin unreflectively and later become endorsed. The relevant question is not whether every influence was chosen. It is whether the person had a fair route to understand, assess and govern what moved them.

Time matters too. A person can lack control at the final second and possess control earlier. The exhausted shopper may not resist food placed at the till but could have eaten beforehand or chosen another route. That observation can become cruel when earlier options were not available, so it must be established rather than assumed. Still, agency often works by arranging conditions before the test: setting a deadline, removing access, asking

another person to intervene, or practising a response until it can survive pressure.

This also explains why responsibility varies across domains. Someone may reason well about work and lose control around a particular substance, relationship or threat. Capacity is not a global score attached permanently to a person. Nor is constraint binary. A threat can be resistible and still reduce freedom; poverty can leave legal options while making one ruinous; training can enlarge control without making failure impossible.

Degrees of freedom do not settle the metaphysical dispute. A libertarian can say these are degrees of effective exercise while deeper freedom remains categorical. A hard incompatibilist can accept every capacity described and deny that any yields basic desert. A compatibilist can identify the cluster with the freedom worth protecting.

What the graded model does settle is practical precision. Instead of asking whether someone had free will in the abstract, ask which capacities were present, which were blocked, who created the constraint and what could restore control. The answer can vary by action, moment and domain within the same person. It can also distribute responsibility: an institution that predictably removes safe alternatives may share responsibility for the conduct it later describes as an isolated personal choice.

Responsibility Without Self-Creation

Responsibility is often treated as one verdict, but it performs several jobs. Answerability asks a person for reasons and assesses them against a shared standard. Accountability requires acknowledgement, repair or changed conduct. Protection restricts dangerous behaviour. Blame expresses moral protest and can alter relationships. Basic desert adds a stronger claim: praise or suffering is justified because the person merits it for the past act, apart from any future benefit. A theory may preserve some jobs and reject others.

P. F. Strawson shifted the argument from cosmic machinery to human relationships. People respond to goodwill, indifference and contempt with

gratitude, hurt, resentment, forgiveness and guilt. We suspend or modify these reactive attitudes when an act was accidental, coerced, performed by a young child or produced by serious incapacity. The pattern tracks what the conduct expressed and whether the person could answer a moral demand. These practices are part of relating to one another, not decorations waiting for physics to grant permission.

Hard incompatibilists can retain more of this than the label suggests. If nobody is ultimately self-created, resentment may still communicate injury, criticism may still identify a reason, and consequences may still protect, deter, repair and rehabilitate. Derk Pereboom's quarantine analogy proposes restriction for dangerous people on protective rather than retributive grounds. The analogy is deliberately limited: people are agents with rights and relationships, not pathogens. Its target is punishment justified solely as deserved suffering.

Compatibilists reply that abandoning basic desert is not required. Responsibility between persons concerns whether conduct expressed the agent's evaluative capacities, not whether the agent created those capacities from nothing. A promise can bind someone who did not invent language or promising. A reasons-responsive adult can be an apt target of demand even though history explains how that adult developed. Manipulation cases remain the pressure point because they ask when a capacity has become the person's own.

Libertarians argue that genuine alternatives or agent sourcehood may be needed for the deepest credit and blame. Without them, praise can look like congratulations for fortunate construction and blame like management of an unfortunate mechanism. Their task is to explain how openness supplies authorship without chance doing the decisive work.

Credit deserves the same audit as blame. Achievement depends on inherited ability, teachers, health, timing and opportunity, but that does not make sustained effort fictitious. Praise can recognise judgement and persistence, reinforce a valuable pattern and invite identification with it while keeping the scaffolding visible. The critique of ultimate desert should cut

vanity and hatred before it cuts gratitude or admiration.

The practical settlement should therefore be plural and evidential. Grade responsibility by knowledge, reasons-responsiveness, usable alternatives, coercion, compulsion, developmental capacity and ownership. Establish those facts rather than inferring them from the outcome. Separate explanation from excuse. Use blame with care because it can inform and motivate, but can also humiliate, harden and distort. Prefer responses that protect, repair and improve future control. Keep basic desert open as a distinct philosophical claim rather than smuggling it into every demand for accountability.

This repays the opening move. Once the chooser is understood as the whole caused person, responsibility becomes one set of causes acting upon another. Reasons, expectations, relationships, training and institutions can reach a person precisely because the person is an organised system able, sometimes, to understand and change. That does not prove ultimate self-authorship. It explains why addressing an agent can differ from moving an object.

You do not need a self outside history to make a promise, hear an objection or stop. You need capacities that the action expressed and that moral address can reach. How far those capacities justify blame remains disputed. Whatever the metaphysics, our treatment of one another remains consequential.

How It Actually Works

The cargo overboard

A storm catches a ship at sea. The crew throw the cargo overboard because keeping it will sink them. Did they choose to lose it?

Aristotle uses this kind of case in the *Nicomachean Ethics* to begin the analysis of voluntary action. The sailors act with knowledge and move their own bodies. Nobody physically uses their arms as tools. Yet the

circumstances are so hostile that the action is wanted only as the least terrible option. Aristotle calls such actions mixed: in the immediate situation they are chosen, although nobody would select them in themselves.

That is a better beginning than a cosmic puzzle. The Greek question was tied to praise, blame and character. An act can be involuntary because it is compelled from outside or because crucial facts were unknown. Ignorance does not excuse automatically. A person may be responsible for becoming ignorant, or may regret the act once the truth is known. Choice also differs from appetite, anger and wish. It concerns means within one's power after deliberation.

Aristotle also connects single choices to character. People become just by doing just actions and unjust by repeated injustice, although starting conditions and education are never equal. Character then shapes what appears desirable. Responsibility therefore stretches across time: today's act expresses a person partly formed by yesterday's acts, while those earlier acts were made by a less formed version of the same person. The later regress problem is already visible.

Aristotle did not possess the later concept of a will as a separate faculty, and he did not frame the issue as modern physics versus freedom. He supplied the durable anatomy: knowledge, origin in the agent, deliberation, alternatives and responsibility. Every later theory rearranges those pieces.

Fate, assent and the swerve

The Hellenistic schools made causation central. Stoics held that the cosmos unfolds through an ordered sequence of causes, commonly described as fate. Their opponents pressed the obvious objection: if everything is fated, exhortation and effort seem pointless. The Stoic reply was that action is fated through the person's character and assent, not around them. Advice can be one of the causes by which conduct changes. Ancient discussions used the idea of co-fated events: recovery may be fated together with calling the doctor, not regardless of it. Fate does not cancel means. It includes them. This blocks laziness as an inference from determinism without yet proving that the agent deserves credit for the inherited character through which assent occurs.

Chrysippus illustrated the thought with a cylinder pushed down a slope. The push starts the motion, while the cylinder rolls as it does because of its shape. External impressions reach a person, but response depends on the kind of agent receiving them. The analogy does not solve the problem, since nobody chose the original shape of the cylinder. It does establish the compatibilist pattern: causal dependence and agency can describe the same event at different levels.

Epicureans feared that universal necessity would make human action captive to fate. Epicurus introduced an undetermined deviation in atomic motion, known through Lucretius as the swerve. It opened physical space for events not fixed by prior motion. Critics then and now ask how an uncaused atomic deviation becomes a controlled human choice. The first indeterminist rescue already carried the luck objection inside it.

Ancient sceptics exploited the stalemate. If character determines assent, how is the person responsible for character? If an event escapes determination, why call the escape an achievement? The modern debate retains this fork almost unchanged.

Sin gives the will a biography

Christian thought made freedom bear a heavier load. A just God rewards and punishes. God also knows all things and, in many accounts, governs creation. Human beings inherit a damaged condition yet remain responsible for sin. Freedom now had to fit foreknowledge, providence, grace and moral accountability at once.

Augustine's writings trace an evolving answer rather than one neat doctrine. In *On Free Choice of the Will*, evil is connected to misuse of the will, protecting God from authorship of sin. In later anti-Pelagian works, Augustine gives grace a stronger role and the fallen will less independent power. The will can be free in the sense of acting from its desire while lacking the unaided capacity to turn itself towards the good. The distinction between freedom from external compulsion and moral power over what one wants became central.

Aquinas placed choice within rational appetite. People apprehend possible goods, deliberate about means and elect an action. Divine causation does not compete with creaturely causation as though God and the person were two hands pulling one lever. For Aquinas, providence works through the secondary causes that include rational agents. Critics may reject the theology, but the structural move resembles later level-based accounts: being caused does not mean being bypassed.

The Reformation sharpened the conflict. Erasmus defended free choice in 1524. Luther answered with *The Bondage of the Will* in 1525, arguing that salvation does not turn on an unaided human power capable of choosing God. The dispute concerned grace, not laboratory determinism, yet it fixed the emotional stakes. It also split two questions that still travel together badly: whether conduct issues from what a person wants, and whether the person could have wanted otherwise. A will may act without external force while being bound at the level of desire. Later compatibilists keep the first freedom; incompatibilists insist that the second cannot be ignored. Denying free will could sound like denying responsibility, hope and the justice of judgement.

The machine and the person

Early modern science supplied a new pressure. Mechanical explanation spread from astronomy and motion towards animals and human bodies. If nature operates by law, must a choice be either another link in the mechanism or an exception to it?

Hobbes chose the first branch and kept liberty. In *Leviathan*, a free person is not prevented from doing what he has the will to do. Water can flow freely through an open channel although its motion has causes. Human liberty likewise concerns the absence of external impediments, not an uncaused will. The account is clear and too thin. A person driven by obsession or internal compulsion may face no external barrier and still lack the control at issue.

Hume refined the same family of view. Human action displays regular connections among motives, character and conduct. Without such regularity, holding anyone responsible would make less sense, since action would not express the person. Liberty is the power to act or not act according to the will. Necessity and liberty, properly understood, therefore support rather than destroy moral practice. The modern compatibilist inherits both Hume's insight and the need to handle pathological or manipulated desires.

Kant refused to place freedom inside the observable causal sequence. As appearances in nature, human actions fall under causal laws. As rational agents considering what ought to be done, people must regard themselves as free. Kant's distinction between the phenomenal and noumenal standpoints preserves morality at the cost of a difficult boundary: the free rational self cannot be observed in the same way as events in nature.

In 1884, William James called the issue a dilemma of determinism. His indeterminism defended a world with genuine possibilities, partly because he feared that a fixed future made regret and moral effort hollow. Yet James was candid that chance alone does not amount to freedom. Possibility creates room. Agency must still use it.

The argument changes target

Twentieth-century philosophy narrowed the question from a metaphysical substance called the will to the conditions under which actions belong to agents. One early compatibilist strategy analysed the ability to do otherwise conditionally: you could have done otherwise if you had chosen otherwise. Incompatibilists objected that determinism may fix what you would choose, leaving the analysis silent about the disputed power.

P. F. Strawson changed the terrain in his 1962 lecture *Freedom and Resentment*. He began from human relationships and the reactive attitudes: resentment at ill will, gratitude for concern, guilt, forgiveness and indignation. We modify these reactions when conduct was accidental or compelled, and sometimes when the person lacked ordinary capacity. The practices are rooted in what it is to relate to others, not deductions waiting upon physics. Even if determinism were true, Strawson doubted that people could or should replace all participant relationships with detached management.

Harry Frankfurt attacked the principle that responsibility always requires an ability to do otherwise. His 1969 cases place a counterfactual controller in the background. The controller will force the desired action if the agent begins to choose differently, but never intervenes because the agent chooses that action independently. If the agent remains responsible, actual ownership matters more than an unused alternative.

Frankfurt's 1971 account then located freedom in the structure of desire. People have first-order desires to act and higher-order attitudes about which desires they want to govern them. An unwilling addict may take a drug while wishing that the craving did not control action. The conflict distinguishes having a desire from endorsing it as one's will. The theory made identification central, though critics asked why a manipulated higher-order endorsement should carry authority.

Peter van Inwagen's 1983 consequence argument gave incompatibilism its modern centre. Nobody has power over the remote past or the laws. If

determinism makes each present act the consequence of those, it seems nobody has power over the act. John Martin Fischer and Mark Ravizza answered by separating regulative control, access to alternatives, from guidance control, action through one's own moderately reasons-responsive mechanism. Derk Pereboom and other source incompatibilists replied that a mechanism can respond to reasons and still inherit a responsibility-undermining history.

Susan Wolf and others added a different correction: identification with one's values cannot be enough if those values are morally or factually warped. A person might act wholeheartedly from a cruel outlook and remain unable to recognise sufficient reasons against it. Freedom connected to responsibility therefore needs some relation to the world, not a tidy fit among desires alone. This makes control partly a capacity for correction.

Galen Strawson pushed the sceptical case past determinism. To be responsible for an action in the ultimate sense, one would need responsibility for the way one is. Deliberate self-change depends on the way one was before changing. The regress means ultimate self-authorship is impossible whether causation is deterministic or partly random. Debate then divides over whether ordinary freedom ever required so absolute a power.

A hand, a clock and an electrode

Hans Helmut Kornhuber and Lüder Deecke reported the readiness potential in the 1960s: a slow electrical shift that appears before self-initiated movement when many electroencephalography trials are averaged. Benjamin Libet added a fast clock, a muscle recording and an introspective report.

Five principal volunteers completed repeated sessions. They watched a spot rotate and moved a hand or wrist whenever they wished. Afterwards they reported where the spot had been when they first became aware of wanting or intending to act. In the principal 1983 condition, the preparatory shift began around 550 milliseconds before movement and reported awareness appeared around 200 milliseconds before movement. Neural

preparation seemed to lead the report by roughly 350 milliseconds.

Libet did not conclude that conscious control had no role. He proposed that consciousness might veto an action during the remaining interval. The famous popular conclusion was stronger: the unconscious brain makes the decision, then consciousness receives a late press release and invents authorship.

That conclusion requires assumptions the timing result did not establish. The readiness potential must mark a completed decision rather than preparation, bias or fluctuating activity. The clock report must locate a single, well-defined conscious event. An arbitrary wrist movement must represent choices involving reasons and consequences. The brain must count as a rival to the person whose brain it is. None follows from the measured order alone.

The design also turned a measurement problem into a conceptual problem. Urge, wish, intention, commitment and awareness can refer to different stages. Participants divided attention among the clock, incipient movement and later recall. Reported intention times shift with task design and events around action. The number remains evidence, but it is not a transparent reading from an internal stopwatch.

The experiment nevertheless forced a lasting correction. Conscious awareness need not be the first stage of voluntary action, and introspection does not reveal the full process that produces a movement. Any theory requiring a conscious inner executive to issue every command before the brain prepares it now has an empirical problem.

From prediction to process

Soon and colleagues extended the timing backwards with functional imaging in 2008. Twelve participants chose between left and right buttons while watching letters, then reported the letter visible when the decision entered awareness. Patterns in frontopolar and parietal cortex predicted the side at about 60 per cent accuracy several seconds before the report. The result showed early information related to outcome, not a fully fixed choice readable with certainty.

In 2011, Itzhak Fried and colleagues recorded individual neurons from patients undergoing clinical monitoring. Medial frontal activity changed before self-initiated movements and helped predict reported urge timing. The recording was unusually direct, while the patient group and arbitrary task were unusually specific.

Schurger, Sitt and Dehaene challenged the standard reading of the readiness potential. In their accumulator model, spontaneous fluctuations drift towards a movement threshold. Select trials because movement occurred, align them backwards and average them, and a gradual ramp can emerge even when individual trials contain no long command beginning at the average onset. Early activity may be a fluctuating antecedent rather than a completed decision.

Stopping studies weakened the ballistic picture too. Brass and Haggard identified activity associated with intentionally withholding a prepared action. Schultze-Kraft and colleagues detected preparation in real time and challenged participants to cancel a foot movement. Cancellation remained possible after early activity but ceased to succeed within about 200 milliseconds of muscle onset in that task. The result maps one late motor window, not a universal deadline for every choice.

The arbitrary-deliberate comparison has produced mixed results. Maoz and colleagues found the familiar potential before arbitrary presses but not deliberate donation choices. Pech and colleagues later reported some larger or steeper measures before deliberate rewarded handgrip choices,

with evidence varying by comparison. Movement, delay, reward beneficiary, valuation and analysis differed, so the amplitudes are not directly combinable. The secure conclusion concerns external validity: purposeless timing cannot stand automatically for consequential choice.

Gavenas, Schurger and Maoz reported in 2025 that early readiness-potential build-ups did not track awareness of motor preparation in a probe task. A 2026 eLife reviewed preprint by Jeay-Bizot and colleagues compared movement epochs with matched non-movement periods. It found early ramping to be a reliable antecedent but a weak predictor, with the strongest prediction close to movement. Reviewers described the approach as valuable while asking for more analysis of the central claim. It remains a reviewed preprint about self-initiated movement.

This literature is best read as research on volition: how actions are generated, selected, inhibited, experienced and adjusted. It constrains theories of agency. It does not turn leeway, sourcehood and desert into one waveform.

Where the argument now sits

The old camps remain because they protect different claims. Libertarian theories seek leeway or agent sourcehood that is neither fixed by the past nor delivered by luck. Compatibilist theories specify ownership, history and reasons-responsiveness tightly enough to distinguish an agent from a well-programmed puppet. Hard-incompatibilist theories ask what agency and moral life can retain once ultimate self-creation and basic desert are rejected.

Psychology and neuroscience add a temporally extended agent. Goals can form long before action. Attention changes what is considered. Automatic processes supply candidates. Conscious reflection can compare, rehearse, inhibit and reshape future habits. Social arrangements affect which options are visible, affordable and safe. Injury, development, compulsion, manipulation and coercion can impair different components without turning the whole person from free to unfree in one step.

No single result is likely to finish the argument because each result bears on a specified condition. Neural precursors threaten an inner executive that must appear first, but not a compatibilism built from person-level control. Evidence of physical indeterminacy would challenge strict determinism, but not prove agent authorship. Perfect prediction would pressure some forms of leeway while leaving actual-sequence ownership open. A manipulation that preserves calm reflection would test ownership even if alternatives remained. The empirical finding matters only after the target claim has been named.

The strongest working answer is therefore conditional rather than evasive. Human beings make choices when actions are settled through capacities for representing options, responding to reasons, forming intentions, inhibiting and learning, with usable opportunity and without decisive bypass. That is a real, graded kind of control. It does not establish that the complete past left more than one physical future open. It does not make anyone the ultimate creator of the capacities doing the settling. Calling it free will is defensible when the phrase names sourcehood and guidance; it is inadequate when the phrase demands ultimate desert or a stronger leeway than the evidence supplies.

How we know

The historical sequence is a genealogy of the modern European dispute, built from surviving philosophical texts and modern scholarship. It is not a world history of agency. Indian, Buddhist, Chinese, Islamic and other traditions contain major accounts of action, fate, karma, cultivation and selfhood, but translating them directly into libertarian, compatibilist and hard-incompatibilist camps would distort their questions. Their omission is a scope limit, not evidence that reflection on agency belonged only to Europe.

The experimental evidence is narrower still. Libet's principal data came from five people in repeated sessions. Soon's 2008 button study used twelve. Maoz's donation comparison used eighteen. Later EEG, imaging, intracranial and brain-computer work improves particular measurements while retaining controlled tasks, retrospective reports or specialised

populations. The 2025 deliberate-choice study and 2026 reviewed preprint are newer publications, not newer observations of one shared dataset, and their tasks and outcome measures are not numerically interchangeable.

Readiness potentials, classifiers, inhibition windows and agency reports measure proposed components of volition. Averaging can hide trial variation, introspective timing can move with the design, and above-chance prediction is not certainty. No experiment records free will as a single variable. The evidence rules out some simple stories about conscious initiation and leaves the larger philosophical questions open.

What People Get Wrong

“Libet proved that your brain decides before you do”

Across five principal volunteers, Libet's averaged signal began before they reported becoming aware of an urge to move. The slogan adds three claims the experiment did not establish: that the readiness potential was a completed decision, that the report marked the beginning of the person's involvement, and that the brain is something other than the person.

The task was an arbitrary movement at no preferred time. The potential was reconstructed by aligning and averaging trials backwards from movement. Intention time depended on a revolving clock and retrospective judgement. Later decoding predicted arbitrary outcomes modestly above chance, not with certainty. Accumulation models show how a smooth ramp can emerge before the outcome is settled.

The signal also changes with the task without one stable direction. A 2019 donation experiment found it before arbitrary but not deliberate choices. A 2025 rewarded-choice experiment produced larger or steeper values in some deliberate comparisons, but not a uniform pattern. Other recent studies separate the long early ramp from awareness or useful prediction. Different movements, rewards, delays, samples and analyses prevent a combined verdict.

Any physical account should expect neural activity before muscles move and before every stage reaches reportable awareness. The questions are what the activity represents, how much it predicts, whether later processes can alter the action and whether the task resembles the choice under discussion. Early does not mean external, complete or irreversible.

The experiments matter because conscious awareness is not always first and does not inspect every stage. They do not show that consciousness never contributes, that meaningful deliberation works identically, or that reasons-responsive control is absent. Libet measured part of a motor process. The metaphysical conclusion was added afterwards.

“If determinism is true, nothing you do matters”

This confuses determinism with fatalism. Fatalism says the result arrives regardless of what you do. Determinism says what you do arises from earlier conditions and helps produce what follows. Under determinism, studying can cause knowledge, braking can prevent a collision and persuasion can change a vote. Remove the action and the later history differs, even if the action had sufficient causes.

The distinction also survives prediction. Knowing that a reliable friend will arrive does not make the arrival pointless or forced. The prediction may rest on the same capacities that make the act hers: remembering, caring, planning and responding to delay. Predictability can express stable agency.

Trying is not an exception to the chain. It is one of its working parts. A deterministic doctor still treats, because treatment changes bodies. A deterministic judge still listens, because evidence changes belief. The claim may threaten the idea that, with the entire past held fixed, you could have tried otherwise. It does not turn effort into theatre.

The practical danger lies in adopting fatalism as a belief. Saying events are caused can direct attention towards causes that can be changed. Saying outcomes happen whatever anyone does abandons that search. The two positions point in opposite directions.

“Quantum randomness gives us freedom”

Indeterminacy can make more than one future physically possible. It cannot by itself make one outcome yours. If a random event tips a decision from left to right, the alternative was open, but the final difference came from luck. A dice throw can break predictability without gaining judgement.

An undetermined hesitation might still matter if it gives competing reasons time to influence a decision, but then the theory must show why the eventual act counts as control rather than a fortunate fluctuation. Openness is a necessary condition for some theories, never the complete account.

Serious libertarian theories know this. They place indeterminacy within deliberation, effort or agent causation and try to explain how reasons still guide the outcome. The unresolved problem is how the agent settles the choice without either sufficient prior causes or an arbitrary gap doing the decisive work.

Physics also does not offer one simple rescue. Interpretations of quantum theory differ, and microscopic indeterminacy does not automatically control behaviour at the scale of persons. Even a world containing genuine chance could lack free agents. Freedom needs a theory of control, not an escape from certainty alone.

“You either have free will or you do not”

The metaphysical compatibility question may have a yes-or-no answer. Human control does not. A person can know more or less, face wider or narrower options, resist an impulse weakly or strongly, understand reasons clearly or poorly, and act under anything from mild pressure to overwhelming threat.

Legal systems express the same structure imperfectly through ideas such as intent, capacity, duress and diminished responsibility. The categories vary by jurisdiction and should not be treated as philosophical proof. Their existence shows that practical judgement cannot operate with one undifferentiated quantity called will.

Ordinary judgement already tracks the gradient. We distinguish accident from intention, persuasion from coercion, a competent adult from a young child, and a fleeting urge from a compulsion that repeatedly defeats endorsed plans. The same person can possess strong control in one domain and impaired control in another.

Treating freedom as a single switch hides the information needed for a fair response. The useful questions are which capacity failed, why it failed, whether an earlier opportunity existed, and what could restore it. Philosophers can still dispute whether any degree meets the deepest definition. Institutions and relationships cannot wait for that verdict before recognising differences in control.

“Compatibilism only changes the subject”

Compatibilists redefine nothing by stealth. They argue openly that the freedom worth wanting is action through one's own suitably reasons-responsive capacities without coercion, compulsion or bypass. That is a substantive proposal about what makes a choice the agent's, not a claim that determinism is false.

The strongest versions also move beyond doing whatever one currently wants. They ask whether the mechanism can recognise reasons, whether the person has taken responsibility for it, and whether its history involved manipulation or bypass. A contented compulsion is not made free by contentment alone.

The objection still bites. Someone may say the original question concerned ultimate sourcehood or a future open in more than one physically possible direction, and that reasons-responsive control leaves those missing. Manipulation cases press the concern: a person whose values were implanted might pass an internal-control test while seeming unfree.

Compatibilism succeeds if ultimate self-creation was never required for responsibility and if ownership can be explained through the right history of learning, reflection and responsiveness. It fails if determination itself makes every person's agency derivative in a disqualifying way. Calling the view a

word game avoids the argument. Accepting it too quickly avoids the source problem.

“Without free will, nobody can be held responsible”

This treats responsibility as pure retribution. Even a hard incompatibilist can ask a person to explain conduct, state that a reason was unacceptable, require repair, protect others, deter future harm and support changed behaviour. None requires the claim that the wrongdoer created character from nothing and deserves pain for its own sake.

Praise can be separated in the same way. Admiration may recognise effort, skill and commitment, while gratitude acknowledges teachers, luck and opportunity. Rejecting ultimate credit need not flatten every achievement into an event that merely happened near a person.

Something may still be lost. Basic desert is the idea that blame or punishment is justified solely because the agent merits it for the past act. Scepticism about ultimate sourcehood puts that form under pressure. It does not erase the difference between someone who understood and controlled an act and someone whose body moved during a seizure.

A better response separates jobs. Answerability concerns reasons. Accountability concerns acknowledgement and repair. Public safety concerns risk. Moral formation concerns future capacities. Retribution concerns deserved suffering. A theory can retain the first four while rejecting or limiting the fifth.

“Disbelief in free will makes people behave badly”

Early experiments reported that reading anti-free-will messages increased cheating, aggression or reduced helping. The findings became a policy warning: perhaps society needed belief in freedom whether or not freedom existed.

The later evidence is less dramatic. A 2023 meta-analysis examined 145 experiments, including 95 unpublished ones. Anti-free-will messages could

reduce reported belief in free will and raise belief in determinism. After accounting for small studies and publication bias, the authors found little evidence that the brief manipulations produced downstream changes in behaviour, cognition or attitudes.

That result has limits. A short laboratory passage is not lifelong conviction, and correlation between beliefs and behaviour can reflect other traits or institutions. It does remove the confident claim that telling people about determinism reliably makes them immoral. Truth should not be settled by a feared side effect in any case. The better lesson is to distinguish causal explanation from fatalism and responsibility from vengeance, so that a metaphysical view is not mistaken for permission.

Use It

Ask what kind of control is missing

The sentence “He had no choice” usually hides several different claims. There may have been no physical alternative, no safe alternative, no known alternative, no time to deliberate, no capacity to inhibit, or no route by which a reason could change the action. These are not interchangeable.

When judging yourself or someone else, replace the global verdict with a control question. What did the person know? What options were reachable rather than merely imaginable? Was refusal punished, dangerous or impossible? Could the person understand the reason, retain it and act on it? Did the action express an endorsed aim or a process the person was trying and failing to resist?

The answer will often be mixed. Pressure can reduce freedom without eliminating it. Compulsion can impair control without turning a person into an object. A bad option can remain an option while making blame less confident. Precision improves fairness because it identifies the missing capacity instead of awarding or removing a mysterious substance.

Move the choice earlier

At the final second, the strongest cause often wins cheaply. Hunger meets food, anger meets a reply box, fatigue meets the easy default. Calling the last instant a test of will ignores the earlier stages at which the situation could have been shaped.

Agency over time works by moving intervention upstream. Decide a rule before temptation supplies its own reasons. Put distance between impulse and action. Remove access, set a delay, ask another person to hold you to a commitment, or prepare the first response before the pressure arrives. These methods do not bypass freedom. They are ways a temporally extended person governs later states that will be less reflective.

The caution is important. Earlier control must be available, not invented after failure. Someone with no safe exit, no information or no stable period in which to plan cannot be blamed for failing to use one. The lens is practical before it is moral: find the last point at which a small change could still alter the chain, then place support there.

Separate explanation from excuse

A causal account answers how an action became likely. An excuse says a person should not be blamed, or should be blamed less. The first does not contain the second automatically.

Suppose an employee falsifies a record after a manager rewards impossible targets, colleagues normalise concealment and exhaustion narrows attention. Those facts can explain the conduct while leaving room for responsibility if the employee understood the deception, could refuse and responded to self-protective reasons while ignoring others. The same facts may distribute responsibility upwards because the institution created predictable pressure.

Refusing to explain protects no freedom. It keeps preventable causes in place. Explanation can support condemnation of a choice, criticism of the system, repair for the victim and redesign of incentives at once. The relevant

question is which causes bypassed control and which operated through it. An excuse concerns capacity and opportunity, not the mere existence of a cause.

Design so reasons can land

Reasons change behaviour only when they can reach a mechanism able to use them. A warning given too late, a rule nobody understands and feedback separated from action by months may be formally present and causally useless. A system that wants responsible conduct must make its reasons legible, timely and connected to consequences.

This applies to workplaces, schools, families and public institutions. State the standard before the breach. Explain why it exists. Give a realistic route to comply. Detect failure early enough for correction. Distinguish inability from refusal. Preserve a way back after error, because a person treated as permanently identical to the worst act has little reason to develop a different pattern.

None of this guarantees good conduct. It creates conditions under which reasons-responsiveness can be observed. If behaviour changes when evidence, stakes or support change, control is present in a form worth cultivating. If nothing reaches the action, more moral volume may add heat without adding agency.

Replace verdicts with control profiles

Free or unfree is often the wrong administrative question. Build a profile instead: understanding, foresight, option access, inhibition, ownership, responsiveness to reasons, exposure to coercion and capacity to learn. Different responses follow from different deficits.

Ignorance may call for information. A missing skill calls for training. A dangerous impulse may call for friction and supervision. Deliberate exploitation by a fully informed person calls for boundaries and accountability. Severe incapacity may call for protection and treatment rather than moral demand. The profile does not remove consequences. It

makes them fit the mechanism.

Apply the same method to praise. Separate luck, support, opportunity, effort, judgement and persistence. This prevents two opposite errors: treating success as wholly self-made and treating effort as meaningless because its capacity had causes. A mature account can recognise achievement while keeping the scaffolding visible.

Test the nearby alternative

Could have done otherwise is useful only after otherwise is specified. With the past and laws held fixed? If the person had noticed a reason? If the threat were removed? If a different option had been taught? Each counterfactual tests a different capacity.

Use nearby alternatives rather than fantasy. Ask what modest change would have altered the action. Would accurate information have mattered? Would a pause, a witness or a lower cost of refusal have changed the outcome? If yes, the mechanism shows a route for influence. If no realistic change in reasons or conditions would register, control may be badly impaired or the commitment unusually settled.

The test also checks claims about character. A person who behaved well only because detection was certain may be responsive to prudential reasons while indifferent to moral ones. A person who keeps a promise despite cost may be predictable because the value is stable. The counterfactual reveals what the action was responsive to, not whether it emerged from causation.

The limits

This book cannot settle whether the universe is deterministic, whether agent causation is coherent or whether basic desert exists. The evidence from neuroscience constrains some models of conscious initiation but does not select a complete metaphysics. Philosophical arguments expose costs and counterexamples; they do not produce a measurement that forces every premise.

The graded account also risks becoming too accommodating. Nearly any action can be described as flowing through some internal process, and every wrongdoer has a history. Compatibilists must state a demanding threshold for ownership and reasons-responsiveness rather than baptise whatever happened as free. Sceptics must explain why ordinary distinctions in control remain important rather than letting the rejection of ultimate authorship blur every difference.

Causal understanding can be misused. Institutions may call people determined when denying them opportunity, or call them free when shifting responsibility away from conditions they created. A control profile is only as honest as the evidence about threats, resources, development and impairment. It should reveal power, not provide a technical language for ignoring it.

The one thing to keep

Keep one sentence: you choose, but you do not choose from nowhere.

The first half matters because reasons can make a difference. You can understand an objection, stop a prepared act, keep a promise, seek information and arrange the conditions under which a later impulse will meet resistance. These capacities are implemented in a brain and shaped by history. That is how a human choice exists, not evidence that the choice was made by something else.

The second half matters because nobody created the starting person. Ability, appetite, fear, education and opportunity arrive unevenly. Every achievement contains support and luck; every failure has causes beyond the final moment. That should reduce vanity, cruelty and confidence in pure retribution. It should not produce passivity, because people and institutions can alter what happens next.

The old question now separates into three. Was another future physically open? Did this action issue through the person's capacities rather than coercion, compulsion or bypass? Does that finite sourcehood justify ordinary accountability, ultimate desert, or something in between? Evidence and

argument may support different answers. Combining them under one word creates more heat than understanding.

Human freedom is strongest when treated as an organised capacity, not an exemption from influence. A chooser with no history, character or reasons would have nothing with which to choose. Control lies in noticing options, allowing relevant reasons to register, inhibiting some impulses, sustaining commitments and changing the conditions under which later actions form.

The practical demand is exact. Build knowledge, workable alternatives, better inhibition, fairer conditions and stronger routes by which reasons can change conduct. Judge a person by the control available in the action, not by a power to create the self from nothing. Keep praise, blame, repair, protection and deserved suffering separate enough to justify each on its own terms.

You are a caused creature who can understand causes and sometimes redirect them. That is enough for choice. Whether it is enough for free will is the remaining argument.

Terms

Free will. The disputed control over action that makes choices meaningfully one's own. Theories disagree over whether it requires alternative possibilities, ultimate sourcehood, reasons-responsiveness, or some combination of them.

Volition. The capacities involved in generating, selecting, initiating and withholding endogenous, goal-directed action. Neuroscience often studies volition because its components can be operationalised without claiming to measure metaphysical freedom.

Agency. The ability of a system to act towards goals and affect what happens. Human agency includes perception, intention, learning and control, but agency alone does not settle moral responsibility.

Action. An event attributable to an agent, commonly contrasted with

something that merely happens in or to the person. The boundary is central when distinguishing movement, reflex, accident and choice.

Intention. A commitment or plan that organises action. Intentions can concern immediate movements or distant projects, can form gradually, and need not be continuously conscious while guiding behaviour.

Deliberation. The comparison of options, reasons and consequences before settling what to do. It can improve control, though many voluntary actions arise from skill, habit or rapid judgement without extended reflection.

Causal determinism. The thesis that a complete past plus the laws of nature permits only one physically possible future. It is a claim about possibility, not human predictability or the futility of action.

Fatalism. The view that a particular outcome will occur whatever a person does. Unlike determinism, fatalism removes the causal importance of action rather than including action among the outcome's conditions.

Predictability. The practical ability to forecast an event from available information. Determined systems can be unpredictable, indeterministic systems can be statistically predictable, and predictable conduct may express stable character.

Indeterminism. The denial that every event is fixed by the complete past and laws. It creates openness but does not by itself supply authorship, judgement or control over which possibility occurs.

Libertarianism. The incompatibilist view that human beings sometimes possess free will. Libertarian theories seek genuine alternatives or agent sourcehood while trying to prevent indeterminacy from reducing choice to luck.

Compatibilism. The view that free will can exist even if causal determinism is true. Contemporary versions focus on ownership, suitable causal history and mechanisms capable of responding to reasons.

Incompatibilism. The claim that free will, in the relevant sense, cannot

coexist with causal determinism. Libertarians accept incompatibilism and retain freedom; hard incompatibilists reject the required freedom under either causation branch.

Hard determinism. The combination of determinism with the denial of free will. It is narrower than hard incompatibilism because its conclusion depends on the truth of a deterministic world-picture.

Hard incompatibilism. The view that the control required for basic-desert responsibility is absent whether action is determined or contains relevant indeterminacy. Determination traces to prior causes; indeterminacy appears to insert luck.

Alternative possibilities. Options that an agent could take instead of the action performed. Dispute concerns how the alternatives must be held open and whether moral responsibility always requires access to them.

Sourcehood. The condition of being an appropriate origin of action rather than a channel for coercion, manipulation or bypass. Theories disagree over whether finite personal authorship is enough.

Ultimate responsibility. Responsibility requiring the person to be responsible for the self from which action flows. Galen Strawson argues that this standard is impossible because self-formation always begins from unchosen conditions.

Reasons-responsiveness. A capacity or mechanism's sensitivity to relevant reasons across a suitable range of situations. It asks whether changes in evidence or stakes could guide conduct, not whether action lacked causes.

Guidance control. John Martin Fischer's term for control of the actual sequence through one's own reasons-responsive mechanism. It can remain even when a person lacks access to a different possible future.

Regulative control. Control involving the power to select among alternative possibilities. It is the familiar could-have-done-otherwise condition, contrasted with guidance over the action that occurred.

Coercion. Pressure that makes compliance occur through a threat or imposed cost. The person may still act intentionally, while the coercive structure reduces consent and responsibility by corrupting the options.

Compulsion. A motive or process that resists the person's judgement and ordinary inhibitory capacities. Compulsion comes in degrees and should not be inferred merely from strong desire or repeated wrongdoing.

Manipulation argument. A challenge asking why agents shaped by covert design lack responsibility while agents shaped by an equally determining natural history possess it. It tests ownership and sourcehood rather than merely alternatives.

Consequence argument. The incompatibilist argument that nobody controls the remote past or natural laws and, if determinism holds, therefore cannot control their present consequences in the required sense.

Frankfurt case. A scenario in which a hidden controller guarantees one outcome but never intervenes because the agent chooses it independently. It tests whether responsibility can exist without alternative possibilities.

Readiness potential. A slow electrical shift preceding self-initiated movement when electroencephalography trials are averaged. Its existence is established; whether its early onset marks an unconscious decision remains disputed.

Veto. The withholding or cancellation of a prepared action. Libet proposed conscious veto as a remaining role for will, while later work studies inhibition as one component within voluntary control.

Sense of agency. The experience that one caused or controlled an action and its effects. It is constructed from intention, prediction and feedback, and can diverge from the underlying causal relation.

Basic desert. The claim that praise, blame or suffering is justified solely because an agent merits it for past conduct, independent of future benefit. Sceptical theories target this especially demanding form.

Go Deeper

The map

Robert Kane, *A Contemporary Introduction to Free Will* (2005). Kane is a libertarian, but this is a fair and unusually clear route through determinism, compatibilism, alternative possibilities, moral responsibility and the main libertarian models. It gives the reader the argument's architecture before asking for allegiance. The later chapters become technical because indeterminist theories must explain how openness avoids luck. Start here after this book if you want one sustained survey rather than a collection of positions. Kane also shows why the dispute persists: each answer preserves a familiar intuition by accepting a liability elsewhere, so disagreement is structural rather than a failure to learn the definitions.

The neuroscience

Alfred R. Mele, *Free: Why Science Hasn't Disproved Free Will* (2014). A short, disciplined examination of Libet, Soon and the claims made from them. Mele does not pretend that neuroscience is irrelevant. He asks what each experiment measured, which concept of intention it used and what conclusion the evidence entails. Read it as training in resisting the jump from a neural precursor to a metaphysical verdict. Its experimental coverage predates Maoz's deliberate-choice work and the 2024 review literature, so use it with the newer studies in this book's notes. The virtue is methodological restraint: Mele repeatedly separates what would threaten one theory of freedom from what would threaten every theory.

The sceptical case

Derk Pereboom, *Living Without Free Will* (2001). The strongest accessible book-length case that neither determinism nor indeterminism gives the control required for basic-desert responsibility. Pereboom's manipulation argument is designed to make ordinary deterministic development look uncomfortably close to engineered agency. The constructive half matters as much as the attack: he preserves moral concern, protection and personal relationships while rejecting retribution. The book is denser than Mele and should be read slowly, especially where responsibility separates from blame. Readers who find the conclusion too austere should mark which practice they think requires ultimate desert, since Pereboom is strongest when opponents leave that requirement vague.

The classic essay

P. F. Strawson, "Freedom and Resentment" (1962). One lecture redirected the field from abstract causal machinery towards the reactive attitudes that organise human relationships: resentment, gratitude, guilt, forgiveness and their suspension. It is primary philosophy, compact but difficult, and some sentences need rereading. The reward is a question that no theory can ignore: even if determinism were true, what would it mean to abandon the interpersonal stance from which responsibility arises? Strawson does not prove compatibilism in a few pages. He changes what must be explained by making responsibility a feature of human relations rather than a prize awarded after solving physics.

Notes and Sources

Free will has no single agreed definition, and empirical work cannot test the phrase until a proposed capacity has been specified. These notes support the historical sequence, the principal arguments and the experiments used in the text. They also mark the limits that change what can be inferred. Philosophical positions are presented in their strongest recognisable forms rather than assigned by survey vote. Scientific material was checked against primary papers and review literature on 4 September 2026.

The Whole Thing in One Page

The three families. The division among libertarianism, compatibilism and hard incompatibilism follows standard contemporary usage. Libertarians require an incompatibilist freedom and normally defend alternative possibilities, sourcehood or both. Compatibilists identify freedom with forms of ownership and control that can exist under determinism. Hard incompatibilists deny the freedom needed for basic-desert responsibility whether determinism or relevant indeterminism is true. The Stanford Encyclopedia entries on free will, compatibilism and alternative possibilities were used as reference maps; Kane, Fischer and Ravizza, van Inwagen, Pereboom and Galen Strawson supply the principal arguments.

Neuroscience in miniature. Libet and colleagues reported a readiness potential beginning around 550 milliseconds before movement and a reported conscious intention around 200 milliseconds before movement in their principal condition. Soon and colleagues decoded later left-or-right choices at about 60 per cent accuracy several seconds before reported awareness, but the task was arbitrary and prediction was probabilistic. Maoz and colleagues found a readiness potential before arbitrary but not deliberate donation decisions in one paradigm. Pech and colleagues reported larger or steeper readiness-potential measures in some deliberate comparisons in a different 2025 paradigm, with other comparisons inconclusive. Gavenas and colleagues' 2025 probe study and Jeay-Bizot and colleagues' 2026 reviewed preprint further challenge the interpretation

of a long early ramp as a settled, consciously inaccessible decision. None of these measures directly records metaphysical free will.

Why You Should Care

The hurried seminarians. Darley and Batson analysed forty Princeton Theological Seminary students in 1973. Participants were assigned a talk topic and one of three levels of time pressure before passing a person apparently in distress. Sixty-three per cent in the low-hurry condition, 45 per cent in the intermediate condition and 10 per cent in the high-hurry condition stopped. The talk-topic effect was not statistically significant. The manuscript uses the study as a bounded example of situational influence, not as a universal estimate of altruism or proof that character is unreal.

Explanation and control. The practical claim is an inference from the book's model rather than one experimental finding. If voluntary control depends on knowledge, opportunity, reasons-responsiveness, inhibition and learning, then causal explanation can identify which component was blocked and which intervention might restore it. This does not show that every intervention works, that all harmful action is treatable, or that explanation supplies an excuse.

The Core Ideas

The chooser and the brain. The claim that neural implementation does not replace person-level explanation is a levels-of-description point, not a denial that mental life depends on the brain. Haggard reviews the neuroscience of volition as the study of endogenous, goal-directed action. Mudrik and Maoz identify the misleading dualism in language that treats a person's brain as a rival agent. Research on the sense of agency shows that experienced authorship can be altered or mistaken; that fallibility does not by itself establish that voluntary control is absent.

Determinism, fatalism and coercion. Determinism says that the complete past and laws fix one physically possible future. Fatalism says an outcome occurs regardless of what an agent does. The difference is causal: under determinism, deliberation, warning and effort can be among the conditions

on which the outcome depends. Hobbes and Hume give classical compatibilist formulations based on action according to one's will without external impediment. Contemporary accounts add reasons-responsiveness and historical ownership because internal compulsion and manipulation expose the limits of an absence-of-barriers test.

The consequence argument. Van Inwagen's argument begins from the agent's lack of control over the remote past and laws and claims that, if present action is their deterministic consequence, the agent lacks control over that consequence. Compatibilist replies dispute the transfer principle or distinguish control over the sources of an action from control exercised through the action-producing mechanism. The manuscript states the structure and the contested step rather than claiming a settled proof.

Frankfurt cases and alternative possibilities. Frankfurt's 1969 counterexamples target the principle that a person is morally responsible only if able to do otherwise. A counterfactual intervener guarantees one outcome but remains idle because the agent reaches it independently. The cases have generated extensive objections concerning signs, timing, indeterministic escape and whether some alternative remains. Their durable contribution is to separate control of the actual sequence from access to another future.

Reasons-responsiveness. Fischer and Ravizza distinguish regulative control, which includes access to alternatives, from guidance control exercised through one's own moderately reasons-responsive mechanism. The manuscript compresses a technical account. The relevant test is not that a person would respond correctly to every reason, but that the mechanism exhibits an intelligible pattern of receptivity and reactivity across possible cases and is owned in an appropriate history.

The Basic Argument. Galen Strawson argues that ultimate responsibility for action would require ultimate responsibility for the way one is, yet deliberate self-formation proceeds from an earlier self for which the same demand recurs. The argument is meant to survive both determinism and indeterminism. The manuscript distinguishes its target, ultimate or

basic-desert responsibility, from every ordinary practice of answering, criticism, protection or repair.

Manipulation. Pereboom's manipulation cases ask why agency engineered by direct design appears responsibility-undermining while an equally determining natural history is treated differently. Compatibilists answer through historical conditions such as non-bypass, opportunities for critical assessment and taking responsibility for one's mechanism. There is no agreed boundary. The cases expose a pressure on ownership accounts rather than showing that slow formation and sudden implantation are identical in every respect.

Degrees of freedom. The graded account is a synthesis of capacities recognised across philosophical, psychological and legal discussions: knowledge, opportunity, option access, reasons-responsiveness, inhibition, ownership and learning. Libertarians may treat these as degrees in the exercise of a deeper categorical power. Hard incompatibilists may accept the capacities while denying basic desert. Compatibilists may identify the cluster with the freedom worth wanting. The manuscript does not claim that the metaphysical dispute itself admits degrees.

Responsibility and reactive attitudes. P. F. Strawson's 1962 lecture places resentment, gratitude, guilt, forgiveness and their exemptions at the centre of moral responsibility. Pereboom's hard incompatibilism retains moral concern, protection and rehabilitation while rejecting basic-desert blame; his quarantine analogy concerns the justification of preventive restriction, not a claim that offenders are diseases. The manuscript's plural settlement is an argued practical synthesis, not a consensus position.

Historical and experimental sequence

Aristotle. *Nicomachean Ethics* Book III distinguishes voluntary action from action caused by force or ignorance, analyses mixed actions through the storm-and-cargo example, and connects choice to deliberation about means within one's power. Aristotle did not use the later Latin and Christian faculty concept of a free will. Dihle and Frede trace the contested development of that concept in antiquity.

Stoics and Epicureans. The Stoic sequence of causes, assent, co-fated means and Chrysippus's cylinder is reconstructed from surviving reports and analysed by Bobzien. Lucretius preserves the Epicurean atomic swerve as an escape from necessity. Because Epicurus's own writings survive incompletely, the account should not be read as a full reconstruction of his psychology of action. The luck objection is the manuscript's comparison between the ancient move and a recurring modern problem.

Augustine, Aquinas and the Reformation. Augustine's treatment changes across his career. *On Free Choice of the Will* connects evil to voluntary misuse; later anti-Pelagian works give grace and inherited incapacity greater weight. Aquinas's analysis of human acts treats choice as rational appetite operating through deliberation and treats divine and creaturely causation as different orders rather than competing pushes. The 1524-1525 exchange between Erasmus and Luther concerned grace, salvation and the bondage of the will, not physical determinism. Rupp and Watson's collection supplies both texts in translation.

Early modern accounts. Hobbes locates liberty in the absence of external impediments. Hume argues that stable relations among motive, character and action support moral attribution and defines liberty as acting according to the will. Kant's practical philosophy places human action under natural causation as appearance while requiring rational agents to regard themselves as free from the practical standpoint. James's 1884 essay, later collected in *The Will to Believe*, defends open possibilities while acknowledging that chance alone is not agency.

Twentieth-century redirection. Frankfurt's 1971 essay distinguishes first-order desires from higher-order volitions. Fischer and Ravizza develop guidance control; Wolf argues that wholehearted identification is insufficient without a capacity to recognise the right reasons; Pereboom and Galen Strawson press sourcehood and desert objections. The sequence is selective. It represents the arguments needed for this book's model rather than a complete history of analytic free-will scholarship.

The readiness potential. Kornhuber and Deecke reported the Bereitschaftspotential before self-initiated movement. Libet added a rotating clock, electromyography and retrospective reports of the first awareness of wish or intention. His 1983 paper involved five principal participants over repeated sessions. The often-repeated conclusion that the brain had completed a decision before the person knew it requires further assumptions about what the readiness potential and the reported time each mark.

Prediction and single neurons. Soon and colleagues studied twelve participants and used multivariate functional imaging to extract about 60 per cent predictive accuracy for arbitrary left-or-right choices, with informative patterns appearing several seconds before reported awareness. The number describes group-level classifier performance, not certainty about a settled individual choice. Fried, Mukamel and Kreiman recorded medial frontal neurons in patients undergoing clinical monitoring and found activity predictive of self-initiated movement and reported urge. Patient recordings offer rare temporal and cellular detail, but the population and task are setting-specific.

Accumulation and stopping. Schurger, Sitt and Dehaene showed how aligning self-initiated trials backwards from movement can produce an average readiness-potential ramp from stochastic accumulation towards a threshold. The model is an alternative interpretation, not a demonstration that every readiness potential is noise. Brass and Haggard studied intentional inhibition. Schultze-Kraft and colleagues used real-time detection and found that cancellation in their task became ineffective when the stop

challenge arrived within about 200 milliseconds of movement onset. That interval is not a universal point of no return for all decisions.

Arbitrary and deliberate action. Maoz and colleagues' 2019 donation design used eighteen participants and found the classic readiness potential for arbitrary but not deliberate choices. Pech and colleagues' 2025 study began with fifty participants and reported a steeper slope for hard deliberate versus arbitrary choices and a larger mean amplitude for easy deliberate versus arbitrary choices; the other direct readiness-potential comparisons were inconclusive. Other paradigms have found no reliable difference. Movement method, required waiting, reward beneficiary, valuation, sample and analysis differ, so amplitudes and directions are not directly combinable. The retained conclusion is limited to external validity: findings from meaningless timing tasks cannot be transferred automatically to consequential choice.

Current readiness-potential work. Gavenas, Schurger and Maoz used external probes in a 2025 *Imaging Neuroscience* study. Early readiness-potential build-ups did not track reported awareness of motor preparation; their modelling favoured metacognitive access to stochastic accumulation. Jeay-Bizot and colleagues' 2026 *eLife* reviewed preprint compared movement epochs with matched non-movement periods. Its public assessment described a valuable contribution with solid methods, while asking for additional analyses to strengthen confidence that predictive information is concentrated in a late neural event. The manuscript labels the work a reviewed preprint and does not treat it as settled consensus.

How we know. Historical coverage follows the lineage that produced the modern European vocabulary. Indian, Buddhist, Chinese, Islamic and other traditions contain important accounts of action, fate, karma, cultivation and selfhood, but forcing them into libertarian, compatibilist and hard-incompatibilist boxes would create false equivalence. Empirical studies isolate components of volition under controlled conditions. Their measurements constrain theories after the target capacity has been specified; they do not record free will as one observable variable.

What People Get Wrong

Belief and behaviour. Early experiments reported that weakening belief in free will increased cheating, aggression or conformity. Genschow and colleagues' published meta-analysis included 145 experiments, 95 of them unpublished. Anti-free-will manipulations shifted questionnaire beliefs, but the analysis found no evidence of downstream behavioural consequences. The result does not prove that beliefs never matter. It shows that the broad claim of a reliable causal slide into bad behaviour is unsupported by that evidence base.

Quantum rescue. The text makes no claim that one interpretation of quantum mechanics is established or that microscopic indeterminacy reaches decisions in a specified way. The philosophical point is conditional: an undetermined contribution is insufficient unless a theory explains why the outcome is controlled by the agent rather than lucky.

Use It

The practical lenses are applications of the capacity model. They should be treated as questions for diagnosis rather than algorithms. Moving a choice earlier can enlarge control when earlier options exist; it can also become a way of blaming people for constraints they never had a fair chance to manage. Designing so reasons can land means improving information, time, opportunity and feedback, not manipulating people while calling the result autonomy. Explanation, accountability and protection can coexist, but each real case still requires evidence about capacity, risk and available interventions.

Bibliography

Primary philosophical texts

Aquinas, Thomas. *Summa Theologiae, Volume 17: Psychology of Human Acts, 1a2ae. 6-17*. Translated and edited by Thomas Gilby. Cambridge: Cambridge University Press, 2006.

Aristotle. *Nicomachean Ethics*. 3rd ed. Translated by Terence Irwin. Indianapolis: Hackett, 2019.

Augustine. *On Free Choice of the Will*. Translated by Thomas Williams. Indianapolis: Hackett, 1993.

Frankfurt, Harry G. "Alternate Possibilities and Moral Responsibility." *The Journal of Philosophy* 66, no. 23 (1969): 829-839.

Frankfurt, Harry G. "Freedom of the Will and the Concept of a Person." *The Journal of Philosophy* 68, no. 1 (1971): 5-20.

Hobbes, Thomas. *Leviathan*. Edited by Richard Tuck. Cambridge: Cambridge University Press, 1996.

Hume, David. *An Enquiry concerning Human Understanding*. Edited by Tom L. Beauchamp. Oxford: Oxford University Press, 1999.

James, William. *The Will to Believe and Other Essays in Popular Philosophy*. New York: Longmans, Green, 1897.

Kant, Immanuel. *Practical Philosophy*. Translated and edited by Mary J. Gregor. Cambridge: Cambridge University Press, 1996.

Lucretius. *On the Nature of Things*. Revised ed. Translated by Martin Ferguson Smith. Indianapolis: Hackett, 2001.

Rupp, E. Gordon, and Philip S. Watson, eds. *Luther and Erasmus: Free Will and Salvation*. Philadelphia: Westminster Press, 1969.

Strawson, P. F. "Freedom and Resentment." *Proceedings of the British Academy* 48 (1962): 187-211.

Modern philosophy and history

Bobzien, Susanne. *Determinism and Freedom in Stoic Philosophy*. Oxford: Clarendon Press, 1998.

Dihle, Albrecht. *The Theory of Will in Classical Antiquity*. Berkeley: University of California Press, 1982.

Fischer, John Martin, and Mark Ravizza. *Responsibility and Control: A Theory of Moral Responsibility*. Cambridge: Cambridge University Press, 1998.

Frede, Michael. *A Free Will: Origins of the Notion in Ancient Thought*. Edited by A. A. Long. Berkeley: University of California Press, 2011.

Kane, Robert. *A Contemporary Introduction to Free Will*. Oxford: Oxford University Press, 2005.

McKenna, Michael, and D. Justin Coates. "Compatibilism." In *The Stanford Encyclopedia of Philosophy*, Summer 2024 ed., edited by Edward N. Zalta and Uri Nodelman. Stanford: Metaphysics Research Lab, Stanford University, 2024.

Mele, Alfred R. *Free: Why Science Hasn't Disproved Free Will*. New York: Oxford University Press, 2014.

O'Connor, Timothy, and Christopher Franklin. "Free Will." In *The Stanford Encyclopedia of Philosophy*, Winter 2022 ed., edited by Edward N. Zalta and Uri Nodelman. Stanford: Metaphysics Research Lab, Stanford University, 2022.

Pereboom, Derk. *Living Without Free Will*. Cambridge: Cambridge University Press, 2001.

Robb, David. "Moral Responsibility and the Principle of Alternative Possibilities." In *The Stanford Encyclopedia of Philosophy*, Winter 2023 ed., edited by Edward N. Zalta and Uri Nodelman. Stanford: Metaphysics Research Lab, Stanford University, 2023.

Strawson, Galen. "The Impossibility of Moral Responsibility." *Philosophical Studies* 75, nos. 1-2 (1994): 5-24. doi:10.1007/BF00989879.

van Inwagen, Peter. *An Essay on Free Will*. Oxford: Clarendon Press, 1983.

Wolf, Susan. *Freedom Within Reason*. New York: Oxford University Press, 1990.

Neuroscience and psychology

Brass, Marcel, and Patrick Haggard. "To Do or Not to Do: The Neural Signature of Self-Control." *The Journal of Neuroscience* 27, no. 34 (2007): 9141-9145. doi:10.1523/JNEUROSCI.0924-07.2007.

Darley, John M., and C. Daniel Batson. "From Jerusalem to Jericho: A Study of Situational and Dispositional Variables in Helping Behavior." *Journal of Personality and Social Psychology* 27, no. 1 (1973): 100-108. doi:10.1037/h0034449.

Dominik, Tomáš, Alfred Mele, Aaron Schurger, and Uri Maoz. "Libet's Legacy: A Primer to the Neuroscience of Volition." *Neuroscience and Biobehavioral Reviews* 157 (2024): 105503. doi:10.1016/j.neubiorev.2023.105503.

Fried, Itzhak, Roy Mukamel, and Gabriel Kreiman. "Internally Generated Preactivation of Single Neurons in Human Medial Frontal Cortex Predicts Volition." *Neuron* 69, no. 3 (2011): 548-562. doi:10.1016/j.neuron.2010.11.045.

Gavenas, Jake, Aaron Schurger, and Uri Maoz. "Probing for Intentions: The Early Readiness Potential Does Not Reflect Awareness of Motor Preparation." *Imaging Neuroscience* 3 (2025): imag_a_00465. doi:10.1162/imag_a_00465.

Genschow, Oliver, Emiel Cracco, Jana Schneider, John Protzko, David Wisniewski, Marcel Brass, and Jonathan W. Schooler. "Manipulating Belief in Free Will and Its Downstream Consequences: A Meta-Analysis." *Personality and Social Psychology Review* 27, no. 1 (2023): 52-82. doi:10.1177/10888683221087527.

Haggard, Patrick. "The Neurocognitive Bases of Human Volition." *Annual Review of Psychology* 70 (2019): 9-28. doi:10.1146/annurev-psych-010418-103348.

Jeay-Bizot, Lucas, Mehmet Basbug, Uri Maoz, Robert Schapire, and Aaron Schurger. "The Time Course of Neural Activity Predictive of Self-Initiated

Movement." *eLife* 15 (2026): RP109913. Reviewed preprint.
doi:10.7554/eLife.109913.1.

Kornhuber, Hans Helmut, and Lüder Deecke. "Hirnpotentialänderungen bei Willkürbewegungen und passiven Bewegungen des Menschen: Bereitschaftspotential und reafferente Potentiale." *Pflügers Archiv* 284 (1965): 1-17. doi:10.1007/BF00412364.

Libet, Benjamin, Curtis A. Gleason, Elwood W. Wright, and Dennis K. Pearl. "Time of Conscious Intention to Act in Relation to Onset of Cerebral Activity (Readiness-Potential): The Unconscious Initiation of a Freely Voluntary Act." *Brain* 106, no. 3 (1983): 623-642. doi:10.1093/brain/106.3.623.

Maoz, Uri, Gideon Yaffe, Christof Koch, and Liad Mudrik. "Neural Precursors of Decisions That Matter: An ERP Study of Deliberate and Arbitrary Choice." *eLife* 8 (2019): e39787. doi:10.7554/eLife.39787.

Mudrik, Liad, and Uri Maoz. "Me and My Brain: Exposing Neuroscience's Closet Dualism." *Journal of Cognitive Neuroscience* 27, no. 2 (2015): 211-221. doi:10.1162/jocn_a_00723.

Pech, Guillaume P., Emilie A. Caspar, Elisabeth Pacherie, Axel Cleeremans, and Uri Maoz. "A Multi-Measurement Study of the Relation Between Deliberation and Volition." *Neuroscience of Consciousness* 2025, no. 1 (2025): niaf023. doi:10.1093/nc/niaf023.

Schultze-Kraft, Matthias, Daniel Birman, Marianna Rusconi, Carsten Allefeld, Kai Görden, Sven Dähne, Benjamin Blankertz, and John-Dylan Haynes. "The Point of No Return in Vetoing Self-Initiated Movements." *Proceedings of the National Academy of Sciences* 113, no. 4 (2016): 1080-1085. doi:10.1073/pnas.1513569112.

Schurger, Aaron, Jacobo D. Sitt, and Stanislas Dehaene. "An Accumulator Model for Spontaneous Neural Activity Prior to Self-Initiated Movement." *Proceedings of the National Academy of Sciences* 109, no. 42 (2012): E2904-E2913. doi:10.1073/pnas.1210467109.

Soon, Chun Siong, Marcel Brass, Hans-Jochen Heinze, and John-Dylan

Haynes. "Unconscious Determinants of Free Decisions in the Human Brain."
Nature Neuroscience 11, no. 5 (2008): 543-545. doi:10.1038/nn.2112.