

Craving Without a Commander

Dependent Origination, Predictive Processing, and the Construction of Wanting

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Abstract

Craving is often narrated as the act of a unitary inner agent: *I wanted; therefore I acted*. This monograph asks whether that grammar mistakes the felt endpoint of a process for its cause. It brings early Buddhist analyses of contact, feeling tone, craving, clinging, and dependent origination into disciplined conversation with incentive salience, interoception, predictive processing, reinforcement learning, temporal discounting, and dynamical systems. The traditions are not collapsed into one another. A phenomenological distinction is not treated as a brain region; an ancient causal analysis is not redescribed as predictive coding; a mathematical analogy is not presented as an established biomarker.

The central Flow Hijacked proposal is the **Conditional Capture-Release Model (CCRM)**. Its key construct, **Accessible Action-Space Compression**, describes a state in which the person may still know that many actions exist, yet only one or two retain enough salience, credibility, bodily readiness, and contextual feasibility to organize behavior. Craving intensity and behavioral capture therefore need not coincide. A powerful urge can occur in a broad action space; a moderate urge can become dangerous when viable alternatives have already lost access to the present.

This account shifts the governing question from *How strong is the urge?* to *How many futures are still actionable from here?* It also reframes recovery. Recovery is not permanent successful suppression. It is the re-expansion of accessible futures: more ways to obtain relief, connection, meaning, safety, and time; greater flexibility of transition; and less executive force required to preserve a valued direction.

The model is offered as a research programme, not a completed theory. Its constructs are operationalized, its boundary conditions are stated, and six falsifiable predictions are proposed. Throughout, the person remains larger than any state, diagnosis, scan, lapse, or model.

SCOPE AND SAFETY — This is an educational and interpretive monograph, not individualized medical or psychological advice. Meditation is not detoxification or emergency care. Withdrawal from alcohol or sedatives can be medically dangerous; overdose risk, suicidal intent, psychosis, mania, severe insomnia, or escalating dissociation requires timely human and professional support.

How to Read This Monograph

Three threads run through the book. The **phenomenological thread** asks what can be distinguished in lived experience before an urge becomes action. The **mechanistic thread** asks which interacting processes may help explain that transition. The **dynamical thread** asks how context, history, feedback, and thresholds make one route temporarily dominate. No thread is permitted to impersonate the others.

Epistemic labels mark the status of important claims: established evidence; strong but incomplete evidence; emerging evidence; plausible mechanistic interpretation; historical contemplative claim; philosophical analogy; and Flow Hijacked hypothesis. These labels are part of the argument, not editorial decoration.

The compact form of the thesis is:

CORE — Feeling is not yet wanting. Wanting is not yet action. Between them lies a conditional dynamics that can narrow—or reopen—the field of what is possible next.

Chapter 1 • The Want That Feels Like Me

GOVERNING QUESTION — What happens when an internal event stops being merely an event and begins determining what the system must do next?

A craving arrives at 9:17 in the evening. At first it may be only a pressure in the chest, dryness in the mouth, a remembered taste, a picture of the route to the shop, or the sentence I cannot carry this for another hour. None of these is yet an action. None logically entails an action. Yet within seconds the person's world can reorganize. The children who matter, the promise made that morning, tomorrow's meeting, the accumulated losses, and the knowledge of what the next drink may cost have not vanished from objective reality. They have lost behavioral reality. One option has become near, vivid, embodied, and executable. The others remain true but cannot recruit the system strongly enough to compete.

This monograph begins there. Not with a tranquil person sitting on a cushion, and not with the claim that an ancient tradition secretly anticipated a brain scanner, but with a transition: sensation becomes demand; demand recruits attention; attention narrows prediction; prediction changes the felt future; action becomes easier to initiate; the action changes the body and environment that will shape the next demand. What requires explanation is not simply the presence of desire. Human life without desire would not be freedom. What requires explanation is the conversion of one event into a temporary monopoly over what happens next.

CORE — A human system may contain many objectively possible futures while, in a particular state, only one or two of those futures remain experientially and behaviorally real.

The early Buddhist vocabulary of *taṇhā* (often “thirst” or “craving”), *upādāna* (grasping, clinging, appropriation, or “taking up”), *dukkha* (a range extending beyond ordinary pain), dependent origination, impermanence, and not-self offers an unusually sustained inquiry into how experience becomes binding. It belongs to soteriological, ethical, philosophical, and communal projects whose aims are not identical to clinical recovery or experimental psychology. Contemporary addiction science, meanwhile, studies incentive salience, learning, habits, interoception, stress, temporal discounting, and frontostriatal control. Dynamical systems science asks how feedback, history, context, amplification, and attractor structure constrain transitions. These discourses can illuminate one another, but only after refusing to collapse them.

This is therefore a four-voice monograph. The first voice asks what a tradition actually claims. The second asks what historical scholarship can responsibly say about that claim. The third asks what contemporary empirical science supports. The fourth is the Flow Hijacked synthesis: a proposed dynamical interpretation that must remain distinguishable from all three.

EPISTEMIC KEY — “Established evidence” denotes replicated or convergent evidence appropriate to the claim. “Strong but incomplete” denotes substantial support with unresolved heterogeneity or mechanism. “Emerging evidence” denotes suggestive work that should not carry a major conclusion alone. “Plausible mechanistic interpretation” denotes a model consistent with evidence but not uniquely established by it. “Flow Hijacked hypothesis” denotes a new, testable proposal. “Philosophical analogy” denotes conceptual illumination without empirical identity. “Historical contemplative claim” denotes what a text or lineage maintains. “Metaphysical claim not currently scientifically testable” is neither endorsed nor dismissed by measurement that cannot address it.

The purpose is not to advocate meditation or Eastern spirituality. It is to ask what these traditions force modern accounts of craving, self, suffering, and freedom to notice—and what modern evidence forces contemplative interpretations to qualify.

Chapter 2 • No Commander Required

The phrase *without a commander* does not deny agency. It denies that agency requires a hidden executive who first manufactures a desire, then issues a complete instruction to the rest of the person. The homunculus explains nothing: once we place a commander inside the mind, we must explain how that commander perceives, values, remembers, and chooses. The same problem has merely been moved inward.

Contemporary cognitive science offers many distributed accounts of action. Perception, bodily regulation, memory, valuation, attention, motor preparation, social expectation, and learned policy can converge without waiting for a single central author. Conscious intention still matters. It can stabilize a goal, recruit help, rehearse a competing route, and change the environment. But it enters a field already shaped by prior learning and present conditions.

This is also why *caused* and *coerced* are not synonyms. Every human act depends on conditions; some acts nevertheless express the person's values more fully than others. Agency can be understood as a system-level capacity to register reasons, model consequences, inhibit or redirect action, seek support, and reshape future conditions. A distributed person is not an unreal person.

CORE DISTINCTION — No commander is required for wanting to feel personal. No commander is required for a person to become more free.

The practical implication is humane. When a route captures behavior, the explanatory task is not to locate a defective inner ruler. It is to identify which relations made that route executable and which relations could make other routes real again.

What the tradition claims

In the Anattalakkhaṇa Sutta, form, feeling, perception, formations, and consciousness are examined as not-self: because they are impermanent, vulnerable to affliction, and not fully commandable, they are not appropriately regarded as “mine,” “I,” or “my self.” The discourse is a liberative analysis, not a claim that people do not exist, lack moral responsibility, or possess a particular imaging pattern. Buddhist schools later developed divergent accounts of persons, continuity, cognition, Buddha-nature, and emptiness. [20, 78, 159]

“No-self” can mislead English readers into imagining a neuroscientific null finding. Anattā functions in many contexts as a strategy of non-appropriation and an analysis of phenomena rather than a request to locate an absent object. Historical scholarship also warns that modern presentations often privilege private meditative experience in ways shaped by colonial and modernist exchange. [133, 172]

HISTORICAL CONTEMPLATIVE CLAIM — Not-self is part of a path that links insight, conduct, craving, and liberation. It is not equivalent to weak self-esteem, dissociation, ego loss, or DMN suppression.

The self is not one scientific construct

Contemporary philosophy and psychology distinguish at least eight partially overlapping levels:

The minimal self: the immediate first-personal character of experience.

The embodied self: body ownership, location, boundary, and sensorimotor perspective.

The interoceptive self: bodily predictions and feelings that help constitute “how I am.”

The agential self: the feeling and judgment that I initiated or controlled an action.

The narrative self: an organized story connecting events, motives, and values.

The autobiographical self: memory structures that support continuity through time.

The social self: roles and identities sustained through recognition and group membership.

The metacognitive self: models of what one knows, feels, intends, and can control.

None is the whole person. Neuroscience finds distributed processes associated with self-reference, ownership, memory, and agency; it has not found a metaphysical self, nor could the absence of one localized center settle the metaphysics. [18, 41, 73, 87, 143]

State is not identity; identity is not ontology

“I am anxious” can be shorthand for a present state, a recurrent vulnerability, a diagnosis, an identity claim, or a request to be understood. “I am addicted” can recognize a dangerous pattern, secure community membership, and protect against overconfidence. “I am broken” can express unbearable pain rather than a philosophical thesis. Precision requires asking what the statement is doing.

State differs from identity: a recurring state may become central to self-description but need not.

Identity differs from ontology: even a durable identity is not the final substance of a person.

Diagnosis differs from destiny: a category can guide care without exhausting future possibility.

FLOW HIJACKED CONSTRUCT — Identity as a Metastable Coordination Pattern is a proposed view of identity as a relatively durable organization of memory, prediction, bodily expectation, social recognition, values, and action—stable enough to coordinate life, revisable enough to permit development.

The word metastable matters. If identity changed with every mood, commitments would disintegrate. If it never changed, learning and recovery would be impossible. Healthy identity does not mean infinite malleability; it means structured continuity capable of revision.

Chapter 3 • Dependent Origination

Dependent origination (*paṭiccasamuppāda*) is not a primitive flowchart of the brain. In early Buddhist sources it appears in several formulations and time scales, serving a soteriological analysis of how suffering arises and ceases in dependence on conditions. The familiar twelve-link sequence is important, but it should not erase shorter presentations, reciprocal relations, or the interpretive disputes that surround the doctrine. [20, 77–78, 158, 201]

Its methodological force lies in refusing two temptations at once. The first is essentialism: the idea that craving reveals a fixed kind of person. The second is single-cause thinking: the idea that one cue, molecule, belief, or trait contains the whole explanation. Conditionality instead asks, *given what configuration does this transition become likely?* The answer may include bodily discomfort, remembered relief, availability, social isolation, depleted sleep, learned sequence, present threat, and an attenuated future.

The relation is not simply linear. Conditions can be mutually sustaining. Use changes the body; the changed body alters feeling; feeling alters prediction; action changes the social field; shame and concealment reduce alternatives; reduced alternatives increase the relative value of rapid relief. Dependent origination and dynamical systems are not identical theories, but both direct attention away from isolated objects and toward relations, recurrence, and conditional transition.

PHILOSOPHICAL ANALOGY — The ancient analysis and contemporary systems science can illuminate a shared question: how does a pattern become self-renewing? Their vocabularies, evidence, and aims remain different.

The anti-essentialist implication is not that consequences disappear. Conditionality intensifies responsibility by making leverage points visible. If a harmful act depends on conditions, then sleep, access, treatment, medication, relationships, money, cues, practice, and institutional design are not peripheral. They are part of the causal field in which accountability and change become possible.

Thirst, grasping, and the construction of necessity

In the formulation of the Four Noble Truths preserved in the Dhammacakkappavattana Sutta, craving is described in relation to renewed becoming: craving for sensual pleasure, craving for becoming, and craving for non-becoming. The formula is not a neurobiological taxonomy. It is a diagnosis embedded in a path of ethical conduct, cultivation, and insight. Nor is dukkha exhausted by “stress.” Depending on context it can refer to overt pain, the vulnerability of pleasant conditions to loss, and the unsatisfactoriness of building security upon processes that cannot be possessed permanently. [78, 90, 161]

The distinction between *taṇhā* and *upādāna* is especially fertile. English translations variously render *upādāna* as clinging, grasping, attachment, fuel, sustenance, or appropriation. No single English word captures every canonical use. But the dependent-origination formula places it after craving, suggesting at minimum that wanting and taking something up as organizing commitment need not be identical moments. [20, 77, 158]

HISTORICAL CONTEMPLATIVE CLAIM — In early Buddhist analysis, suffering is not explained merely by the existence of unpleasant sensation. The problem concerns conditioned patterns through which feeling, craving, appropriation, becoming, and renewed vulnerability co-arise.

Flow Hijacked translates none of these terms into brain mechanisms. It asks instead what becomes visible if craving is treated as a perturbation and grasping as a reorganization. A sensation can appear without becoming the center of the field. A thought can be believed weakly, strongly, or not at all. An urge can recruit a motor plan without that plan crossing an action threshold. Grasping, on

this proposed reading, is not “more sensation.” It is a change in relations: this matters above all else; this must be solved now; this is mine; this says what I am; this determines the next transition.

That difference can be seen outside addiction. Fear is an adaptive alarm. Grasping fear can mean constructing the whole future around the alarm. Sadness can register loss. Grasping sadness can turn a state into a verdict that possibility itself has ended. Shame can inform social repair. Grasping shame can transform “I did something harmful” into “harm is what I am.” Pleasure can enrich life. Grasping pleasure can make its continuation feel compulsory and its ending feel like injury.

FLOW HIJACKED PROPOSITION — Craving is not merely wanting more. It may temporarily restructure the field so that fewer alternatives remain experientially and behaviorally available.

This proposition should immediately be constrained. Sometimes alternatives are not merely inaccessible; they are materially absent. Poverty, withdrawal, violence, exclusion, chronic pain, precarious housing, and lack of treatment can make a short-horizon choice tragically rational. A state-space account becomes morally evasive if it converts structural deprivation into a problem of private perception. “Accessible state space” must therefore include body, relationships, institutions, resources, and environment—not an isolated brain contemplating nominal options.

Chapter 4 • Contact Is Not Craving

The short sequence *contact* → *feeling tone* → *craving* → *clinging* is useful because it prevents the entire episode from being packed into the word *urge*. In canonical analysis, contact (*phassa*) is not a substance entering the mind; it names an event dependent on a sense faculty, an object, and the corresponding consciousness. Feeling tone (*vedanā*) marks the event as pleasant, unpleasant, or neither-pleasant-nor-unpleasant. Craving (*taṇhā*) and clinging (*upādāna*) are related but not interchangeable. [20, 77–78, 201]

The distinctions create analytical room. The sight of a bottle is not yet craving. An unpleasant contraction in the body is not yet a policy. Wanting relief is not yet the same as organizing perception, memory, and movement around obtaining it. And none of these moments, by itself, logically entails use.

Judson Brewer and colleagues used dependent origination as one psychological model for understanding addictive loops and mindfulness training. Their bridge is productive: affective tone can condition craving, and craving can propel repeated learning. But it remains a bridge between levels of description, not proof that Buddhist links are modules in a modern learning circuit. [202]

The sequence should not be romanticized as a row of separable beads. In lived time, contact, valuation, memory, preparation, and action can recur within hundreds of milliseconds; top-down prediction can shape what counts as contact; and a learned motor routine may begin before the person reports a discrete urge. The value of the analysis is not a universal stopwatch. It is the refusal to treat the final sentence—*I had to*—as the only available unit of explanation.

TESTABLE PREDICTION — If feeling, craving, and capture are distinct, then interventions and contexts should sometimes change the conditional probability of action without producing an equivalent reduction in reported urge intensity.

Chapter 5 • Vedanā: Before the Story

Vedanā is frequently translated as feeling, but in this context it is closer to affective tone than to a fully narrated emotion. Pleasant, unpleasant, and neutral are not diagnoses, moral judgments, or fixed properties of an object. They describe a basic evaluative contour through which experience begins to invite approach, avoidance, or disregard. [4, 20, 77]

That early contour matters because a story often arrives late and speaks as though it had initiated everything. *I decided I needed a drink* may be the first reportable sentence after bodily agitation, learned anticipation, attentional orientation, and a narrowing of relief options are already underway. The sentence is real; it is not necessarily the beginning.

Yet the translation into neuroscience must stop at a firm boundary. *Vedanā* is not the insula. It is not dopamine, valence coding, prediction error, or a single autonomic pattern. Modern research can study components of valuation, interoception, arousal, salience, and action readiness. None provides a one-to-one anatomical identity for a category developed within a different practice and philosophical system.

Neutral feeling is especially important. What is neither clearly pleasant nor clearly painful can be ignored, under-sampled, or rapidly converted by boredom, restlessness, or expectation. Addictive behavior is not always a flight from dramatic distress. It can become the shortest practiced route out of flatness, indeterminacy, or the inability to remain with an unremarkable moment.

HISTORICAL CONTEMPLATIVE CLAIM — The practice significance of feeling tone lies partly in recognizing reactivity before it becomes fully appropriated as *my need* and *my next act*.

For Flow Hijacked, the question is therefore relational: what downstream authority does a pleasant, unpleasant, or neutral event acquire in this body, in this setting, with this history, at this time?

Chapter 6 • The Body Predicts

The body does not wait for a courtroom of conscious deliberation. It anticipates, regulates, mobilizes, and learns. Hunger, withdrawal, fatigue, pain, arousal, and respiratory change can alter what the world affords before a detailed account is available. Predictive accounts describe one possible architecture for this: the system uses prior expectations and incoming signals to estimate bodily condition and select regulatory action. They are influential models, not a completed theory of addiction.

A 2024 meta-analysis of interoception in alcohol use disorder identified a left middle-insula convergence across a small and heterogeneous literature and, more importantly, situated it within salience and somatomotor connectivity rather than a solitary “addiction area.” A 2026 systematic review likewise underscores the multidimensionality and methodological variability of interoception research in substance-use disorders. [204, 209]

STRONG BUT INCOMPLETE EVIDENCE — Bodily sensing and interpretation participate in craving, withdrawal, and decision processes. The direction, specificity, and clinical meaning of individual interoceptive measures remain unsettled.

The useful question is not whether a body signal is “true.” It is what the signal predicts, what action it prepares, and which alternatives remain credible while it is present.

Interoception is not simply “listening to the body”

Before craving is narrated, it can be bodily. A hollow agitation, a tightening throat, heat in the face, a diffuse ache, a pressure behind the eyes, or a rapid heartbeat may be perceived as evidence that something must change. Interoception refers broadly to sensing, integrating, and interpreting signals concerning the body’s internal condition. It includes multiple channels and multiple levels: afferent signaling, central representation, attention, accuracy on particular tasks, confidence, self-report, and meaning. These do not collapse into one ability. A person can attend intensely to bodily signals while interpreting them catastrophically; another can detect accurately but report low sensibility; a third may feel little until arousal is extreme. [74, 106]

Addiction research implicates insular and broader interoceptive systems in craving, withdrawal, and decision processes, but the slogan “the insula causes addiction” is untenable. The insula participates in salience, bodily representation, pain, affect, and control switching, among other functions. Its role depends on networks, tasks, substance histories, and body states. [147, 187]

STRONG BUT INCOMPLETE EVIDENCE — Interoceptive processes participate in craving and psychiatric symptoms. Measures are multidimensional, and more interoceptive attention is not automatically healthier.

Predictive approaches add a useful but not uniquely proven account. The nervous system does not wait passively for pure data; it uses prior expectations and bodily regulation to anticipate what signals mean and what action is needed. Interoceptive prediction may shape whether arousal is experienced as danger, withdrawal, excitement, shame, or ordinary fluctuation. Precision, in predictive-processing language, concerns the relative weighting afforded to prediction errors or expectations. It should not be imagined as a literal dial observed directly in routine imaging. [8, 38, 171]

Flow Hijacked asks: when an internal signal appears, how much authority is it granted over action? A pulse of discomfort can be low-intensity yet behaviorally sovereign; intense pain can sometimes be present while a person still chooses among alternatives. Magnitude and capture are therefore different dimensions.

Allostasis, stress, and the promise of immediate regulation

Allostasis concerns regulation through change: organisms anticipate demands and mobilize resources rather than preserving every variable at a single fixed point. Repeated or chronic stress can produce allostatic load, while repeated drug exposure can alter reward, stress, and relief systems. These concepts illuminate why a person may seek a substance not to depart from ordinary equilibrium toward pleasure but to approach a new, costly baseline in which non-use feels intolerable. [112, 132, 175]

The word “regulation” must be handled carefully. Alcohol can regulate—briefly. Avoidance can regulate—by removing exposure. Self-attack can regulate—by creating the illusion of moral control. Compulsive checking can regulate—until uncertainty returns. A behavior’s short-term regulatory effect does not establish its long-term adaptiveness. In a nonlinear system, an input can reduce one variable now while deepening the basin that makes the same input more likely tomorrow.

Consider a loop:

Stress increases bodily arousal and narrows attention.

A learned cue activates the expectation of relief.

Expected relief increases the salience of the substance and decreases the credibility of alternatives.

Use rapidly changes bodily state.

The speed and reliability of that change strengthen the learned transition.

Consequences add shame, conflict, disrupted sleep, or withdrawal.

Those consequences increase the probability of the next stress state.

Nothing in this loop requires a single moment of irrationality. Each local transition can make short-horizon sense while the recursive system becomes devastating. That is one meaning of nonlinearity in lived life: the consequence of an action depends on state, timing, history, and feedback, not only on the action considered in isolation.

LIVED FIELD — “I knew exactly what tomorrow required. But tomorrow was an argument, and relief was in the room.”

Chapter 7 • Wanting Without Liking

The wanting/liking distinction corrects one of the most persistent public misunderstandings of dopamine. In incentive-sensitization theory, cue-triggered “wanting” can become excessive and enduring without a matching increase in hedonic “liking.” Dopamine is centrally implicated in incentive motivation and learning-related functions; it is not a simple pleasure fluid. The 2025 review by Robinson and Berridge restates the theory after three decades, addresses major criticisms, and places it alongside habit, opponent-process, and impaired-control accounts rather than declaring every addiction solved. [13–14, 156, 203]

This distinction explains why “I do not even like it anymore” may be an exact observation rather than denial. The action can retain motivational force because cues predict relief, because withdrawal makes non-use costly, because a route is fluent, or because alternatives have lost effective value. Pleasure may be present, absent, brief, or beside the point.

CORE — Wanting is not a transparent meter of expected pleasure. It is a mode of motivational organization.

The theory also has boundaries. Not every episode is cue-triggered; not every person develops sensitization; human behavior remains responsive to price, setting, social consequence, access, and competing reward. The power of incentive salience is greatest when it is allowed to interact with these conditions rather than replace them.

Wanting, liking, learning, and relief

Contemporary affective neuroscience provides a different set of distinctions. Incentive-sensitization theory argues that drug-associated cues can acquire excessive motivational pull: “wanting” can intensify or persist even when “liking” does not. Dopamine participates in learning, vigor, prediction-related signaling, and incentive motivation; it is not simply a chemical quantity of pleasure. This framework is influential and empirically productive, but it is not a universal account of every addiction or every episode of use. [13–14, 156]

The person who says, “I do not even enjoy this anymore,” is not reporting a paradox that science must explain away. The dissociation is part of the phenomenon. A cue may invigorate approach, a remembered relief may dominate valuation, and withdrawal may make non-use feel costly, even when consummatory pleasure is brief or absent. Negative reinforcement adds another trajectory: action is learned because it removes or reduces an aversive state. The substance or behavior does not need to promise ecstasy. It may promise the end of the next ten minutes.

The neurocircuitry literature accordingly describes interacting phases and systems rather than one addiction center: reward and incentive processes, stress and negative affect, memory and cue learning, prefrontal valuation and control, habits, interoception, and social context all matter. Frontostriatal findings are real at the level of distributed group effects, but no scan can read a person’s inevitable next choice. [83, 113, 190, 200]

ESTABLISHED EVIDENCE — Drug cues can evoke measurable subjective, physiological, and neural responses, and cue-related craving is associated with subsequent use at the group level.

LIMIT — Cue response is heterogeneous, context-dependent, and probabilistic. It is not a command, a moral failure, or a sufficiently accurate individual forecast.

Cue-reactivity meta-analyses reveal distributed activity rather than a singular craving locus. Laboratory pictures, smells, paraphernalia, and imagined contexts capture only fragments of the lived cue field, which can include a particular hour, loneliness after a call, the route home, money arriving, bodily agitation, or the belief that one has already failed. [33–34, 60]

Chapter 8 · The Cue Enters the Body

A cue does not merely put a picture of a substance into thought. It can alter gaze, muscle readiness, heart rate, skin conductance, expectancy, memory sampling, and the felt shape of the next few minutes. A cue may be visual or olfactory, but it may also be payday, an hour of night, the end of a shift, a quarrel, a route, a social role, or the first bodily sign of withdrawal. [33–34, 60]

Laboratory cue-reactivity findings are reliable at the level of group tendencies and limited at the level of personal destiny. The same cue can produce approach, aversion, grief, indifference, or a request for help depending on state and setting. A photographed syringe in a scanner is not the ecology of a life.

The phrase *the cue enters the body* therefore names a loop, not a one-way invasion. Learned context changes bodily prediction; bodily change makes a memory or affordance more salient; attention samples confirming evidence; the resulting readiness changes how the cue is perceived. The next action becomes easier not because an image issued a command, but because multiple systems began to converge.

LIMIT — Cue reactivity is probabilistic and distributed. It is neither a moral verdict nor a single neural signature capable of forecasting an individual's next act.

What captures the field?

Attention is often treated as a spotlight: it illuminates one object while leaving others dark. The metaphor is useful but incomplete. Attention also changes processing priority, learning, conscious access, action preparation, and the effective competition among representations. Goal-directed and stimulus-driven attention depend on interacting large-scale systems; salience-related systems help identify what warrants control or reorientation; frontoparietal systems participate in maintaining goals and adjusting behavior; the default network participates in internally oriented cognition, autobiographical memory, future simulation, and spontaneous thought. These names identify statistical and functional patterns, not little agents inside the head. [42, 136, 149, 169]

An addictive cue, a threat, a shame memory, physical pain, a notification, or an unfinished social conflict can all obtain priority. The question is not only whether the object enters consciousness. It is whether enough computational and experiential weight accumulates around it to dominate the next transition. Digital environments exploit this distinction. A notification is tiny as a sensory event but rich in learned uncertainty, social prediction, and variable reward. Repeated design choices externalize part of the capture architecture into the environment.

FLOW HIJACKED INTERPRETATION — Attention is the allocation of computational and experiential priority. Capture occurs when priority becomes sufficiently concentrated that competing perceptions, goals, memories, and futures cannot organize action.

This does not mean a person can simply choose where attention goes. Salience is partly trained by evolutionary relevance, learning history, bodily state, current goals, social threat, and environmental engineering. Nor does it mean attention alone causes behavior. It means that what receives sustained priority can change which evidence is sampled, which predictions are confirmed, and which actions become easy to initiate.

Mind wandering, meta-awareness, and the moment capture becomes visible

Mind wandering is not one defective state. Spontaneous thought supports planning, creativity, autobiographical continuity, and problem solving, while also contributing to distraction or rumination when it becomes poorly constrained. Meta-awareness is the awareness of the current

contents or processes of mind. One can think for several minutes without recognizing that attention has left the chosen task; then, suddenly, “I am lost in thought” becomes available. [37, 164, 176]

That moment matters dynamically. Before meta-awareness, the thought stream supplies the apparent world. After meta-awareness, the same thoughts may be represented as thoughts. Their semantic content has not necessarily changed. Their control relation has.

The difference can be lived in shame. Without meta-awareness: Everyone can see what I am. This will never change. I should disappear. With meta-awareness: A shame sequence is occurring. It is painful, embodied, and persuasive. It is not yet a complete description of me or of the future. This second stance does not refute the feeling or absolve responsibility. It changes the number of possible transitions after the feeling.

Predictive-processing language may describe this as a change in the relative precision of a high-level interpretation or a newly available model of the current mental process. That is a plausible mechanistic interpretation, not a direct measurement. The science is not yet able to watch “the precision of shame” rise and fall in ordinary life.

Chapter 9 • Precision: When One Prediction Becomes Loud

Predictive-processing language becomes useful when it distinguishes expected content from confidence. Probability asks what the system expects; precision concerns the relative reliability or gain assigned to predictions and prediction errors. A low-probability threat can dominate if its cost and precision are high. A valued future can fail to compete if represented vaguely and with little confidence.

In addition, this suggests a focused question: under what conditions does the prediction *relief is available through this route* become louder than contrary knowledge? Withdrawal, repetition, uncertainty, stress, and cue proximity may raise its effective weight. Repeated failed attempts, unstable housing, or broken promises may lower the precision of an alternative prediction: *another future is reachable*.

Active-inference and predictive accounts of addiction propose roles for priors, precision, policy selection, and bodily regulation. They generate useful hypotheses, but the field is young and model-flexible. Precision is rarely observed directly, and a theory that can explain every result after it occurs explains too little.

BOUNDARY CONDITION — Dependent origination is not predictive coding. The former is a Buddhist analysis oriented toward suffering and liberation; the latter is a family of contemporary computational models. Any relation asserted here is structural analogy plus testable mechanism, never historical or anatomical identity.

The empirical burden is clear: a precision account should predict trial-by-trial or within-person transitions better than simpler accounts based on arousal, craving intensity, working memory, or demand characteristics.

Precision as priority—not a mystical volume knob

Predictive processing proposes that perception and action depend on hierarchical expectations and prediction errors weighted by estimated reliability or precision. Attention is often modeled as related to precision allocation. This offers a possible account of capture: an addictive cue, threat expectation, or shame model may dominate not because no contrary evidence exists, but because contrary evidence is given too little effective weight. [8, 38, 70]

Meditation might alter this relation in several nonexclusive ways: increasing detection of a perturbation before elaboration; decreasing automatic confidence in a thought; increasing sensory granularity; sustaining a goal during competition; or changing the expected cost of remaining with discomfort. These are hypotheses. Existing studies seldom measure precision directly, and predictive frameworks can become unfalsifiable if every outcome is redescribed after the fact.

FLOW HIJACKED HYPOTHESIS — Contemplative practice may sometimes change not what enters consciousness, but what receives enough precision or salience to dominate the next transition.

A test would compare this hypothesis with simpler explanations such as relaxation, demand characteristics, improved working memory, exposure, respiratory change, or social expectancy. It would need to predict within-person trial-by-trial transitions, not merely correlate questionnaire scores with a network.

Chapter 10 • Learning the Route

Reinforcement learning describes how consequences alter future action values. A prediction error registers a discrepancy between expected and obtained outcomes; model-free algorithms cache values through repetition, while model-based control represents aspects of transitions and outcomes. Human behavior rarely belongs entirely to one system. Goal-directed, habitual, Pavlovian, and socially learned influences cooperate and compete. [48, 54, 61]

Addictive routes acquire several learning advantages. Their outcomes can be rapid. Relief may arrive before longer-term costs. Cues are frequent and portable. Pharmacological effects can be unusually reliable relative to social rewards. Repetition lowers the effort of action selection. And the consequences of use—poor sleep, conflict, shame, withdrawal—can recreate the state in which the same rapid route is valuable.

This means that prediction-error reduction is not always pleasure. A familiar act can terminate uncertainty, remove an aversive bodily state, or restore an expected configuration. The learning system records the local success even while the person's life absorbs the global cost.

FLOW HIJACKED INTERPRETATION — Learning the route means learning not only the value of an outcome, but the conditional ease with which a particular sequence can be initiated from a particular state.

The model remains sensitive to change. New learning can increase friction, attach the cue to a different response, strengthen alternative rewards, and make support part of the transition. Extinction-like learning does not necessarily erase an old association; renewed craving under stress can coexist with genuine recovery learning.

From action to habit to compulsion—and back

Habit language is easily abused. In reinforcement-learning models, goal-directed control represents relationships between actions and outcomes, while habitual control learns cached action tendencies from repetition. These systems can compete and cooperate. Under uncertainty, cognitive load, stress, or extensive repetition, control may shift. But addiction is not adequately described as a one-way switch that deletes choice and transfers the person to a habit module. Human substance use often remains sensitive to price, availability, social observation, competing rewards, withdrawal, and future expectations. [48, 54, 61]

Compulsion is also not merely high frequency. An action becomes clinically and existentially important when it persists despite conflict with longer-horizon goals, continues under mounting cost, or feels difficult to inhibit even when the person can articulate why they wish to stop. Automaticity can reduce the need for conscious deliberation, yet conscious craving can become most intense when an established sequence is blocked. Tiffany's cognitive model made this point early: highly practiced drug-use action schemas may proceed efficiently, while urges become especially noticeable under obstruction or attempted control. [180]

The consequence is a plural account. Some episodes are cue-triggered and rapid. Some are deliberate responses to anticipated withdrawal. Some are socially coordinated. Some follow hours of rumination. Some are acts of despair in a future that has become unbelievable. Some are pleasure-seeking. Some are avoidance. These forms can coexist in one life. A serious theory of capture must explain how different mechanisms converge upon the same narrowing without pretending that the narrowing has one cause. [105, 154]

Chapter 11 • Habit Is Not the Whole Addiction

Habit is indispensable and insufficient. It explains fluency, reduced deliberation, and persistence of well-practised sequences. It does not, by itself, explain why cues become magnetically wanted, why withdrawal reorganizes value, why relief dominates under stress, why a person bargains consciously for hours, or why the same routine collapses when price, access, observation, or a competing reward changes. [61, 180]

The slogan *addiction is a habit* can become politically and clinically dangerous. If it minimizes pharmacology, deprivation, trauma, social exclusion, or overdose risk, it blames the individual for failing to break a routine. If it erases preserved sensitivity to reasons and context, it also underestimates the person's capacities. A plural model can hold both difficulty and responsiveness.

Compulsion should be defined by the relation among action, cost, conflict, and control—not by repetition alone. Highly repeated valued practices are not compulsions; infrequent behavior can be gravely compulsive. The relevant question is how difficult it has become for alternative goals to alter the transition when they matter.

CORE DISTINCTION — Habit describes one route by which action becomes easy. Capture describes a relation in which competing routes become too weak, remote, or costly to organize the next act.

Addiction: relief becomes the shortest executable path

In addiction, the narrowed repertoire may be organized around intoxication, relief from withdrawal, escape from affect, cue-evoked approach, ritualized belonging, or a learned interruption of self-consciousness. These functions are not interchangeable. The transition may be rapid and seemingly automatic, or slow and deliberative: hours of bargaining can still inhabit a narrow field if every branch eventually returns to use. The distinctive clinical reality includes pharmacology, tolerance, withdrawal, overdose risk, social consequence, and persistent use despite harm. A generic flexibility model cannot replace those specifics. [61, 113, 175]

Depression: the path exists but carries no felt affordance

Depression can restrict movement differently. The problem may not be that one action has excessive salience, but that many actions fail to recruit energy, expectancy, or reward. Getting out of bed remains physically possible; calling a friend remains semantically conceivable; neither appears behaviorally “real.” Rumination can recursively strengthen global conclusions—nothing changes, I fail, the future is empty—while withdrawal removes experiences that might update them. Dynamic models of depression explore feedback among symptoms and early-warning changes, but evidence remains sensitive to measurement frequency, person-specific structure, and model choice. [22, 43, 155]

PTSD: the past acquires present-tense precision

In posttraumatic stress, cues may activate a current-threat model: bodily mobilization, attention to danger, involuntary memory, avoidance, and altered beliefs reinforce one another. To say “the past behaves as present” is phenomenological and functional, not a claim that the person literally confuses calendar dates. Avoidance can prevent corrective learning; hypervigilance can sample the environment selectively; social mistrust can remove safety signals. Trauma-related dissociation, however, may involve under-engagement or discontinuity rather than high arousal. No single attractor diagram captures both.

OCD: uncertainty cannot remain open

In obsessive-compulsive disorder, intrusive thoughts are not the same as desires, and compulsions are not the same as addictive reward seeking. A thought, image, or doubt becomes linked to inflated threat, responsibility, incompleteness, or intolerable uncertainty. Checking or neutralization offers temporary closure and thereby preserves the loop. The narrowed state space consists not simply in “doing the habit,” but in the loss of permission to leave uncertainty unresolved.

Anxiety and compulsive avoidance: safety shrinks the world

Avoidance often works immediately. It reduces contact with the feared cue, which is precisely why it can be reinforced. Across time the safe zone may contract: fewer places, conversations, bodily sensations, or decisions remain reachable. The short-term decrease in fear and long-term increase in vulnerability illustrate a general systems problem—local optimization can damage global adaptability. Still, avoidance can also be wise when danger is real. Context and function matter.

Shame loops: identity becomes the basin

Shame may begin with social pain or recognition of harm, then recruit concealment, self-attack, withdrawal, substance use, and further behavior that confirms the shame narrative. Unlike guilt focused on an action, shame often globalizes: I am the thing that happened. When a person expects rejection, ambiguous social signals can be sampled as evidence, and withdrawal prevents disconfirmation. The loop is interpersonal even when no one else is present; remembered and predicted others inhabit the field.

CORE DISTINCTION — Addiction, depression, PTSD, OCD, anxiety, rumination, avoidance, and shame may all restrict accessible state space. They are not therefore the same disorder, caused by the same mechanism, or treated in the same way.

Chapter 12 · When Tomorrow Cannot Compete

Hyperbolic discounting is commonly represented as

$$V(R, t) = \frac{R}{1 + kt},$$

where a reward of magnitude R loses present value as delay t increases, more steeply when k is large. The equation is a compact behavioral model, not a portrait of a person. It does not encode trust, poverty, withdrawal, episodic imagination, social obligation, or whether the promised future has repeatedly failed to arrive.

Flow Hijacked distinguishes **policy compression**—how few actions can organize behavior now—from **temporal compression**—how little influence delayed outcomes exert on current action. The two can interact. A short temporal horizon increases the relative value of the practised immediate route; repeated selection of that route makes future alternatives less credible and less rehearsed.

Episodic future thinking can reduce delay discounting and has been tested in substance-use contexts, but the evidence is heterogeneous and long-term generalization remains uncertain. The 2024 systematic review located promise alongside the need for larger, more durable, and clinically realistic tests. [11, 148, 208]

FLOW HIJACKED SYNTHESIS — The future has not disappeared from knowledge. It has lost enough vividness, credibility, or causal weight that it cannot recruit action now.

Temporal discounting is one window, not the whole horizon

Delay-discounting tasks ask how the subjective value of an outcome decreases with delay. Across studies, steeper discounting is associated with addictive behavior. Yet the measure is not a moral score, a diagnostic essence, or a complete account of future collapse. Results depend on reward domain, magnitude, task structure, deprivation, uncertainty, socioeconomic conditions, and what the person believes about whether a promised future outcome will actually arrive. [3, 17, 124]

The lived phenomenon is broader than choosing twenty dollars now over forty later. The future must be simulated, trusted, emotionally inhabited, and connected to present action. “My relationship will improve in six months” competes poorly if the person cannot generate a credible image of being there. “My health matters” competes poorly when withdrawal is immediate and medical harm is probabilistic. “I love my children” remains entirely true while the action system is organized around surviving the next hour.

Experimental studies show that episodic future thinking can reduce delay discounting under some conditions, with interactions among prefrontal and medial-temporal systems. These findings support the proposition that the accessibility of future scenes can alter valuation. They do not prove that imagining tomorrow will overcome addiction, depression, trauma, or structural deprivation. [11, 148]

FLOW HIJACKED SYNTHESIS — Future compression is not the literal disappearance of future time. It is a reduction in the capacity of possible futures to exert control over present transitions.

This yields a humane reinterpretation of “poor decision making.” The person may retain factual knowledge and moral concern. What changes is the effective geometry of choice. Immediate relief is close, rehearsed, embodied, and high-confidence. Repair, trust, employment, health, and meaning are distant, uncertain, socially contingent, and costly to initiate. The comparison is asymmetrical before deliberation begins.

Three temporal disorders that must not be confused

Addiction can compress the future by making immediate relief disproportionately actionable. Depression can make future possibility feel empty, effortful, or inaccessible. Trauma can make a prior danger function as present evidence, so that the body and attention prepare for what is no longer occurring. These are not equivalent disorders. They can overlap, but their histories, symptoms, mechanisms, and treatment needs differ.

The dynamical comparison is narrower: each can alter the temporal reachability of alternatives. In addiction, the route to relief can become extraordinarily short. In depression, routes to rewarding futures may lose expected value and vigor. In PTSD, routes are organized around a threat model whose temporal index has not been adequately updated. In OCD, the next checking or neutralizing act can become the only action that seems able to close uncertainty. In rumination, thought repeatedly returns to an unresolved explanatory basin. The common word “capture” names a relational property, not a diagnosis.

LIMIT — A transdiagnostic state-space lens is useful only if it preserves disorder-specific evidence, individual histories, and material context. Similar topology does not imply identical cause.

Chapter 13 • Relief Changes the Landscape

Relief is frequently treated as a lesser cousin of reward, as though the “real” motive were pleasure. In many lives, relief is the governing event. An aversive state falls; uncertainty closes; withdrawal softens; shame quiets; vigilance stops; sleep becomes imaginable. The local transition can be powerful even when the person expects little enjoyment. [112–113, 175]

Negative reinforcement explains how removal of an aversive state strengthens the act that preceded it. Allostatic accounts add history: repeated exposure can change the baseline from which relief is evaluated, so that non-use becomes increasingly costly and use increasingly resembles temporary normalization. Neither account reduces the person to a mechanism. Both explain why admonitions about distant harm can lose to an executable change in the next ten minutes.

Relief also modifies the landscape it solves. If use reliably changes bodily state, it raises confidence in that policy. If the consequences produce conflict, isolation, disrupted sleep, or withdrawal, they increase the probability of the next aversive state. A locally effective regulator can therefore become a globally destructive attractor-like route.

CORE — Relief is not evidence that the route was good. It is evidence that the route solved something quickly enough for the system to learn from it.

Clinical translation begins by asking what function requires a substitute: analgesia, withdrawal management, sleep, social belonging, interruption of self-attack, reduction of arousal, or protection from danger. “Choose differently” remains abstract until another route can actually perform enough of that work.

Chapter 14 · From Craving to Capture

From metaphor to a proposed construct

A state space is a representation of the possible states of a system, defined by variables chosen for a purpose. For a human system, no complete state vector exists. We can nevertheless define a task-specific vector:

FORMAL MODEL — $z(t) = [\text{bodily state, affect, attention, memory, prediction, action readiness, social field, environment, temporal horizon, identity coordination}]$

The list is deliberately multilevel. A craving episode cannot be adequately located in dopamine concentration, self-report, or social setting alone. State-space construction is always a map. Its value depends on whether the chosen variables improve explanation and prediction.

Let $A(z, c, \tau)$ denote the set of trajectories that are sufficiently available to organize behavior from state z , in context c , over horizon τ . “Sufficiently available” means more than logically possible: the trajectory must be perceivable, credible, executable, and weighted strongly enough to compete. The effective size of A may be estimated through choice repertoires, response entropy, future-generation tasks, ecological sampling, action latency, and counterfactual reachability—but no accepted clinical metric currently exists.

FLOW HIJACKED HYPOTHESIS — Craving as State-Space Compression is a temporary reduction in the effective set A : fewer alternatives cross the threshold from nominal possibility to behavioral reality.

Compression can occur through several paths:

- salience concentration around the cue or anticipated relief;
- bodily prediction that non-action will become intolerable;
- decreased precision or vividness of longer-horizon goals;
- habitual preparation of a familiar action sequence;
- social isolation that removes co-regulation and accountability;
- environmental proximity and low friction of the addictive option;
- shame-based identity that makes alternative futures feel undeserved;
- stress-related impairment in working memory and flexible control;
- previous failed attempts that reduce the expected credibility of change.

The construct does not say that craving always compresses. Desire for a relationship, a creative project, food, justice, or recovery can widen exploration and organize sustained action. Nor does it say that a larger number of options is always healthier. Mania can produce proliferating projects without viable regulation; fragmentation can increase variability while destroying coherence. Freedom requires structured possibility, not maximal randomness.

Attractors, basins, and history

An attractor is a set of states toward which a system tends to evolve under specified dynamics. A basin of attraction contains starting states that converge toward that attractor. In human applications, these are models, not entities hidden inside the brain. A recurrent shame-to-isolation-to-use sequence may be treated as an attractor-like pattern if diverse perturbations reliably lead into it, dwell time is prolonged, and leaving requires disproportionate input.

Path dependence means that how the system arrived matters. Two people with the same present craving intensity may have different next-state probabilities because their learning histories, withdrawal states, relationships, resources, and identities differ. Context dependence means the same person can show different dynamics at home, at work, alone, in a meeting, after rejection, or while caring for a child. Nonlinearity means that doubling one input need not double the response. A small cue near a transition threshold can trigger a large trajectory; a large cue in a supported context may not.

Feedback deepens basins. Repetition makes action more fluent; relief confirms prediction; consequences generate states that renew the need for relief; stigma reduces social options; concealment prevents corrective learning. This does not make change impossible. It explains why information alone so often loses. Knowledge may update one variable while the basin is maintained by many others.

Transient amplification and the danger of elegant mathematics

Some linearized dynamical systems are non-normal: their interacting directions are not orthogonal, allowing a perturbation to undergo large transient amplification even when every eigenmode is asymptotically stable. Resolvent analysis asks which inputs, frequencies, and directions the system amplifies most. These ideas have genuine uses in fluid mechanics and computational neuroscience. Their application to lived craving is, at present, a Flow Hijacked research hypothesis—not established clinical science. [82, 92, 185]

Why consider them at all? Because not every capture episode reflects a deeper stable attractor. A person can be broadly stable and nevertheless undergo a brief, disproportionate escalation when a particular sequence aligns: poor sleep, rejection, payday, a route past a familiar place, a bodily memory, and a message from someone associated with use. The response can grow faster than equilibrium language predicts and then subside. Non-normality offers a precise question: does system structure amplify particular perturbation directions before long-term stabilization appears?

EPISTEMIC LIMIT — No study has established a clinical “resolvent of craving.” The concept earns its place only if it yields preregistered, falsifiable predictions beyond generic arousal, autocorrelation, and symptom severity.

A Flow Hijacked research program would require densely sampled multimodal time series, clearly defined state variables, directional models, out-of-sample prediction, and comparison with simpler alternatives. Elegant mathematics must not decorate suffering. It must pay rent by explaining why a small event sometimes becomes a wave.

A system is not free because it never enters fear, sadness, craving, anger, absorption, or dependence. Some states are appropriate, protective, or beautiful. Freedom concerns the relation between state and transition.

FLOW HIJACKED CONSTRUCT — Freedom as Dynamic Mobility is the capacity to enter a state, remain there when useful, leave when conditions change, return when appropriate, and access viable alternatives.

Five verbs matter: enter, dwell, leave, return, and redirect. A person who cannot concentrate is not free merely because attention shifts constantly. A person who cannot stop concentrating is not free merely because performance is high. Healthy grief requires the ability to remain with loss and also to re-enter ordinary life. Recovery requires the capacity to experience craving without obligatory use and to experience pleasure without converting it into a demand for permanence.

Dynamic mobility is not raw entropy. Entropy measures differ across probability distributions, signals, and models. Higher neural or behavioral entropy can reflect repertoire, noise, disorganization, measurement artifact, or pathology. Likewise, “criticality” is a family of precise claims about systems near transitions; it should not be used as a compliment meaning optimally alive. Evidence that the brain operates near critical regimes is scientifically interesting and

contested in scope. It does not establish that meditation moves people toward a universal critical point. [25, 76, 181]

Metastability offers a more disciplined image. A metastable system can form temporary coordination without becoming permanently locked; components partly integrate and partly retain autonomy. Psychologically, structured mobility would mean states coherent enough to guide action yet permeable enough to update. This remains a cross-level analogy unless variables and time scales are specified.

We can therefore ask measurable questions:

How quickly does attention recover after a cue?

How many viable actions can a person generate under stress?

How long does a shame episode determine social withdrawal?

Does a craving increase the conditional probability of use less after practice or treatment?

Can a person return to a valued task after interruption?

Does identity language become more differentiated across contexts?

Does support change the transition threshold before an urge becomes action?

Freedom here is not independence from causes. It is an altered causal organization in which more than one future can exert influence.

Anicca, impermanence, is often reduced to a consoling slogan. In early Buddhist practice it is more demanding: conditioned phenomena cannot supply permanent ownership or reliable satisfaction because they arise and cease in dependence on conditions. Observing change is tied to loosening appropriation, not merely appreciating novelty. [77, 159]

Modern dynamics adds distinctions. A system can change constantly while remaining trapped: rumination varies in sentence content yet returns to the same basin. A person can look behaviorally still while maintaining flexible internal readiness. Variability is not mobility; novelty is not liberation.

Metastability describes temporary coordination that can dissolve and re-form. Neural variability can relate to adaptive capacity in some tasks and to noise or pathology in others. Entropy can quantify uncertainty or diversity in a defined distribution; it is not a spiritual virtue. Criticality may support dynamic range in some models, but evidence does not justify declaring a universal contemplative optimum. [25, 76, 181]

FLOW HIJACKED SYNTHESIS — A healthy system is neither frozen nor chaotic. It possesses structured mobility: enough stability to sustain values and relationships, enough flexibility to update, disengage, and recover.

Impermanence becomes clinically relevant when a person learns that the present state is not an ontological verdict. Craving changes. Panic changes. Pleasure changes. Shame changes. Their changing does not guarantee safety or make endurance easy. It prevents the state from having automatic jurisdiction over the definition of the person and the whole future.

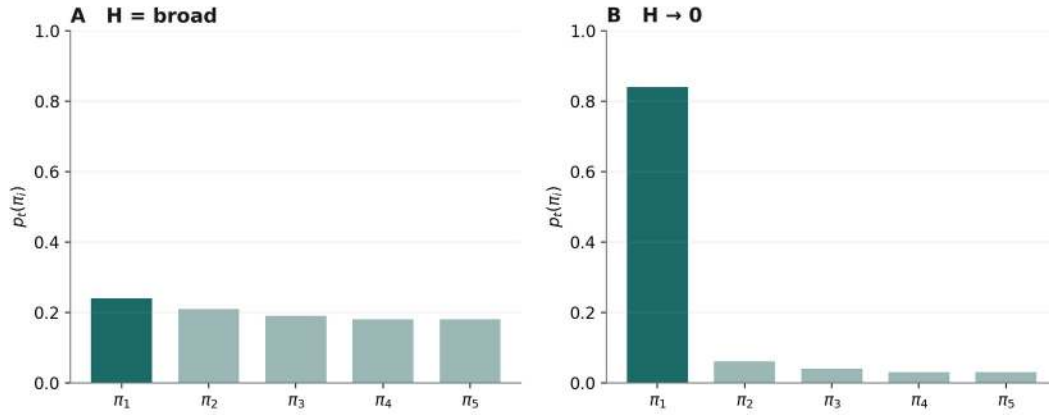
Linear chains help identify links; dynamics explain why the same link behaves differently across time. A small cue may pass unnoticed on one day and precipitate a large transition on another. The difference can lie in proximity to a threshold: sleep debt, withdrawal, conflict, money, access, and isolation have already reshaped the field before the cue appears.

The language of attractors, basins, tipping, and hysteresis can discipline this intuition if used carefully. An attractor is defined only relative to variables and dynamics; a basin is a set of starting states that converge under those dynamics; hysteresis means that the path into a state can differ from the path out. None proves that “addiction is an attractor in the brain.” The human model spans body, action, relationship, and environment.

The operational core is **Accessible Action-Space Compression**. Let $\Pi_t = \{\pi_1, \dots, \pi_N\}$ be policies that are not merely imaginable but sufficiently credible and executable at time t . Let $p_t(\pi_i)$ represent their conditional action weights. Then

$$H_t = - \sum_{i=1}^N p_t(\pi_i) \log p_t(\pi_i)$$

is the entropy of that defined policy distribution. High entropy is not automatically healthy; it can be noise or disorganization. Low entropy is not automatically pathological; commitment appropriately concentrates action. Capture concerns low entropy around a policy that conflicts with durable values or safety while alternatives have lost effective access.



Conceptual comparison of a broad policy distribution and a captured policy distribution.

Figure 1. Two distributions can contain the same named options while differing radically in effective accessibility. Flow Hijacked conceptual schematic; not a validated clinical measure.

EPISTEMIC LIMIT — “Attractor-like,” “entropy,” and “tipping” are model terms. They earn their place only through defined variables, time scales, preregistered predictions, and comparison with simpler explanations.

Chapter 15 · Watching the Link Instead of Fighting the Chain

The most defensible mindfulness question is not *Does mindfulness work?* It is *Which practice, for whom, compared with what, changes which link, over what interval, and with what risks?*

“Mindfulness” can name a quality, a family of practices, or a multicomponent clinical programme. Treating it as a uniform dose produces false certainty.

Cochrane’s review included 40 randomized trials of mindfulness-based interventions for substance-use disorders; the evidence was generally low certainty and every included study carried high risk of bias in at least one domain. A 2023 craving-focused meta-analysis of 17 RCTs found a pooled standardized effect of -0.70 , but heterogeneity was extreme ($I^2=92\%$), risk of bias was high in most studies, and GRADE certainty was low. The signal is worth investigating; it is not a warrant for universal efficacy claims. [205–206]

Mindful acceptance is theoretically important because it may alter coupling rather than erase content. In an experimental pain and negative-affect study, brief acceptance instructions reduced reported intensity and amygdala responses without evidence of increased prefrontal control. The study does not establish an addiction mechanism, but it demonstrates that regulation need not always look like stronger executive opposition. [207]

TESTABLE PREDICTION — Acceptance can reduce $P(\text{use} \mid \text{craving, context})$ even when the average intensity of craving changes little.

That prediction protects against a common error: evaluating freedom only by symptom absence. A craving that occurs without obligatory enactment is not a failed intervention. It may be evidence that the relation between state and action has changed.

The research word “meditation” can conceal practices that differ as much as sprinting, physiotherapy, and dance. Focused-attention practice stabilizes an object and trains detection and return. Open monitoring emphasizes receptive awareness of changing contents without selecting one primary object. Loving-kindness and compassion practices actively cultivate affective and relational orientations. Mantra uses repeated sound or phrase. Absorption practices cultivate unusually stable unification. Some Zen, Mahāmudrā, Dzogchen, and nondual practices question the subject-object structure of attention itself. Lineages, teachers, ethical settings, and practitioner aims alter what the same label means. [46, 122, 129, 137]

Clinical programs add further complexity. MBSR, MBCT, mindfulness-based relapse prevention, body scan, mindful movement, and brief app exercises are packages, not pure manipulations of one mental faculty. A finding from eight weeks of MBCT cannot be transferred automatically to jhāna retreat, Zazen, or a ten-minute breath recording.

METHOD RULE — For every practice ask: What is trained? What captures attention? What happens after capture? What is reinforced by returning? How does sensation relate to action? What might change in salience, meta-awareness, interoception, self-reference, and emotional reactivity? Is the evidence about a temporary state, a durable trait, or neither?

Focused attention

An object—often breath, sound, or visual form—is selected. Capture occurs when thought, sensation, or environment displaces it. The decisive event is not perfect maintenance but recognition, disengagement, and return. Each return may reinforce detecting deviation without converting deviation into failure. Mechanistic studies suggest separable moments of mind wandering,

awareness, disengagement, and reorientation, but much evidence comes from small, selected samples. State effects on attention are more defensible than broad personality transformation. [67, 91, 122]

Open monitoring and choiceless awareness

No single content is held exclusively. The training target is awareness of arising and passing events with less automatic selection or elaboration. Capture may appear as unnoticed identification with a thought or as covert preference for particular experiences. Returning means reopening the field rather than restoring one object. Evidence supports changes in some attention and affect measures, but instructions vary greatly; “nonjudgmental” does not mean absence of discernment. [56, 67]

Vipassanā

Vipassanā means insight and names multiple historical and modern practice systems, not one laboratory protocol. Modern Theravāda movements often emphasize moment-to-moment observation of body, feeling, mind, and phenomena, sometimes with labeling. What is trained may include resolution of change, recognition of reactivity, and reduced appropriation. Capture is not merely distraction; it can be the unnoticed construction of permanence, ownership, or demand. Evidence usually studies modern mindfulness-derived forms, so neural claims should not be generalized to all vipassanā lineages. [4, 133, 172]

Samatha

Samatha refers to calming or tranquillity cultivation across Buddhist contexts. Practice can stabilize attention, reduce discursive proliferation, and support absorption. The relation between samatha and vipassanā is described differently across texts and lineages: sequential, mutually supportive, or inseparable. Capture may be agitation or dullness; return adjusts energy as well as focus. Scientific work rarely isolates classical samatha with sufficient fidelity, so claims about durable trait change remain limited.

Breath awareness

Breath can function as attentional object, interoceptive signal, autonomic influence, or temporal scaffold. Natural breath observation differs from deliberate slow breathing. Capture may be thought, aversion to bodily sensation, or compulsive control of respiration. Returning can train renewed contact with sensation without immediate correction. Mechanistic interpretation must distinguish attentional training from changes produced by respiratory rate and depth. [106, 127]

Body scan

Attention moves systematically through bodily regions, often cultivating detection and an accepting stance. The practice may increase granularity and reveal that an “urge” is a changing constellation rather than a unitary command. It can also intensify distress in people with trauma, panic, pain, dissociation, or health anxiety. State evidence for bodily awareness exists; claims that body scan universally improves interoceptive accuracy are unsupported because interoception has multiple dimensions. [62, 74]

Practice as ecology

Teacher, ethical commitments, social setting, ritual, intensity, sleep, retreat conditions, and a person’s psychiatric and trauma history modify every practice above. A technique is not an isolated dose. The same instruction can regulate one person, destabilize another, and do little for a third.

STATE-TRAIT RULE — A temporary shift during practice is a state effect. A durable, generalized change outside practice is a trait claim. A profound state, repeated state, or compelling story is not by itself evidence of trait transformation.

CENTRAL FLOW HIJACKED PROPOSITION — Meditation may be understood not merely as training attention, but as training what happens after perturbation.

A sound occurs. An itch appears. A shame memory arrives. A craving forms. The system has a history of next states: orient, elaborate, suppress, act, attack, flee, or dissociate. Practice introduces repeated micro-events in which a perturbation is detected and the usual trajectory is not completed. In focused attention, the event is followed by recognition and return. In open monitoring, it may be followed by inclusion without pursuit. In compassion practice, it may be followed by a deliberately different relational response. In exposure-like aspects of body awareness, sensation may be followed by staying rather than escape.

This framing clarifies why “stopping thoughts” is a misleading criterion. The perturbation may continue to appear. What changes is the conditional transition distribution after it. If $P(\text{use} \mid \text{craving, context})$ decreases while craving remains present, freedom has increased even before craving intensity declines. If $P(\text{self-attack} \mid \text{shame})$ decreases and $P(\text{repair, disclosure, rest, or connection} \mid \text{shame})$ becomes nonzero, the accessible field has widened.

FORMAL MODEL — Let $K(s' \mid s, p, c)$ denote the probability of next state s' given current state s , perturbation p , and context c . Transition training changes K ; it need not delete p .

Returning is therefore not a correction after failed meditation. It is the repetition through which new transition dynamics may be learned. The practical unit is: capture $\rightarrow$ recognition $\rightarrow$ non-punitive disengagement $\rightarrow$ reorientation. Self-attack after distraction can reinforce a different basin: error becomes shame, shame becomes agitation, agitation increases capture. The manner of return matters.

The analogy to extinction must remain qualified. Meditation is not identical to laboratory extinction, and a breath is not a conditioned safety signal in every practice. Yet repeated contact with sensation without the historical action may permit new learning. The original association may remain and reappear in stress or context change. Thus, a return of craving need not mean practice or recovery learning has been erased.

EQUANIMITY — EMERGING FH CONSTRUCT — Equanimity as Reduced Behavioral Capture by Perturbation means preserved sensitivity with less obligatory downstream action. Emotional flattening, dissociation, exhaustion, and indifference can also reduce visible reactivity; they are not equanimity.

What brain networks can and cannot tell us

Meditation neuroimaging repeatedly reports changes involving frontoparietal control, salience and insular systems, dorsal attention, default-network regions, sensory cortices, and subcortical structures. Meta-analyses are useful precisely because single studies are flexible and underpowered; even the meta-analytic results remain heterogeneous across practice, task, expertise, and analysis. Structural differences among long-term practitioners are particularly vulnerable to self-selection and lifestyle confounds. [67-68, 179, 188]

The default mode network is often misrepresented as the ego network. It contributes to autobiographical memory, future simulation, social cognition, semantic construction, and internally oriented thought. Reduced activity during one meditation contrast does not imply that a self has disappeared, and increased coupling can be adaptive in another task. Likewise, salience-network engagement does not mean that salience is located in one place. Networks are dynamic coalitions described at a particular scale. [26, 136, 176]

Focused-attention practice plausibly recruits goal maintenance, conflict detection, and reorientation. Open monitoring may alter how spontaneous events are selected and elaborated.

Compassion practice adds imagery, emotion, social cognition, and motivation. Absorption changes the task entirely. A single “meditator versus control” contrast conceals these process differences.

NEUROSCIENCE LIMIT — Brain localization can constrain hypotheses about process. It cannot establish Buddhist insight, ethical maturity, freedom, or the metaphysical status of self.

Meditation research has improved, but recurring problems remain: small samples, variable definitions, inadequate active controls, self-selection among long-term practitioners, retrospective practice estimates, teacher and allegiance effects, expectancy, attrition, multiple analytic choices, underpowered neuroimaging, publication bias, and weak adverse-event monitoring. The strongest reviews support modest benefits for selected outcomes, not transformation of every person or disorder. [47, 81, 85, 188]

Evidence about addiction-specific programs is promising but mixed. Mindfulness-based relapse prevention and related interventions can help some participants and may alter stress, craving, or coping processes. They are packages delivered within treatment ecologies, not tests of “meditation alone.” Effects vary by comparator, substance, adherence, severity, support, and outcome. A non-replication of self-reported mindfulness as a mediator is especially instructive: an intervention can have effects without the favored questionnaire mechanism explaining them.

Adverse experiences include anxiety, dysphoria, traumatic material, altered self-experience, depersonalization, dissociation, insomnia, functional impairment, and, in vulnerable people, manic or psychotic phenomena. Incidence is uncertain because studies define and solicit events differently. Retreat intensity, sleep loss, prior history, teacher response, and explanatory culture can matter. [27, 62, 118, 163]

SAFETY — Meditation is not emergency care, detoxification, trauma treatment, or a substitute for individualized clinical assessment. Abrupt withdrawal from alcohol or sedatives can be medically dangerous. Severe insomnia, mania, psychosis, suicidal intent, overdose risk, or escalating dissociation requires timely human and professional support.

Cultural translation adds another limit. Removing ritual, ethics, community, teacher authority, cosmology, and liberation aims may make a practice accessible and clinically testable; it may also change what the practice is. Conversely, invoking tradition does not immunize institutions against abuse, hierarchy, dogmatism, or harm. Respect requires critical symmetry: neither romanticize the ancient nor assume the modern laboratory owns the meaning of experience.

Chapter 16 · Reopening Alternatives

Alternatives become real through more than insight. A route competes when it can be perceived, believed, initiated, sustained, and reinforced. That may require medication, withdrawal care, food, sleep, transport, money management, a locked door, a person answering the phone, a safer neighbourhood, meaningful work, or a practiced response that can begin before deliberation collapses.

Behavioral economics emphasizes the relative value and availability of competing rewards. Environmental design adds friction to the captured route and removes friction from valued routes. Social regulation changes what the body predicts and what actions carry accountability or belonging. Episodic future thinking can give delayed outcomes sensory and autobiographical weight. None is sufficient alone; together they can change the field before the next crisis asks executive control to perform a miracle.

FLOW HIJACKED PRINCIPLE — Build alternatives while the field is open. A plan that exists only as a sentence may not survive the state in which it is needed.

Re-expansion is not maximal choice. Too many unstructured options can paralyze. The target is a small, viable repertoire across functions: more than one way to obtain relief; more than one person who can enter the system; more than one valued future with a next step; more than one identity capable of carrying the day after a lapse.

The language after a lapse matters. “Everything is lost” compresses time and policy at once. A more accurate response preserves consequence without turning an event into destiny: what conditions converged, what protection failed, what remains intact, and what action can reopen the next hour?

A recovery identity can be life-saving. It can transform isolated failure into a shared pattern, provide scripts for high-risk moments, connect the person to others, and make future action legible. Saying “I am in recovery” can protect a commitment when immediate preference shifts. Social identity research and recovery-capital frameworks support the importance of belonging, models, resources, and group norms, although pathways and preferences vary. [30, 39]

The same identity can become restrictive if it permits no further differentiation. A person may come to believe that every pleasure is dangerous, every mistake proves total collapse, every relationship must be filtered through the diagnosis, or every future self must remain organized around the period of greatest capture. Communities can stabilize recovery and also police identity. Both are possible.

FLOW HIJACKED PRINCIPLE — Recovery Identity as Scaffold, Not Prison.

A scaffold supports construction and can later change its function. The question is not whether a person should keep or abandon a recovery identity. It is whether the identity increases durable agency, connection, honesty, and future possibility—or reduces them. Early recovery may require strong categorical boundaries. Later development may require greater bandwidth: parent, worker, friend, athlete, artist, citizen, scholar, partner, and person in recovery can coexist.

Not-self contributes a question, not an answer: which identity components are being treated as permanent, fully owned, or finally defining? Psychology contributes another: what function does this identity serve now? Dynamical systems contributes a third: does the coordination pattern stabilize valued behavior while allowing adaptive transitions? No tradition answers all three alone.

Karuṇā and mettā are not sentimental decoration

In Buddhist contexts, karuṇā and mettā belong to ethical and contemplative systems. They involve dispositions, intentions, practices, and relationships, not simply a warm feeling. Modern compassion

interventions vary widely, combining imagery, phrases, psychoeducation, attention, and behavioral commitments. Meta-analyses suggest average benefits for distress and self-criticism, but studies often rely on self-report, passive controls, and enthusiastic developers. [63, 72, 109]

Compassion can also be threatening. For a person whose care was followed by betrayal, warmth may predict danger. For someone organized by shame, receiving kindness can intensify the discrepancy between how they are treated and how they believe they deserve to be treated. A humane practice does not force soothing; it titrates contact, consent, and safety.

Shame predicts a hostile self

Shame is not only a thought about the past. It can become a predictive field. The person anticipates rejection, detects ambiguous expressions as contempt, withdraws before contact, and then experiences the absence of support as confirmation. Self-attack may function as pre-emptive control: if I punish myself first, no external judgment can surprise me. Substance use may offer temporary escape from the predicted self, then generate events that deepen the prediction.

Self-compassion is associated with lower psychopathology, and compassion-focused interventions show promising effects, but causal pathways remain incomplete. A trial targeting shame in substance-use treatment illustrates potential clinical relevance without establishing a universal mechanism. [121, 123]

FLOW HIJACKED PROPOSITION — Compassion may alter the field in which the self is predicted.

This can mean several things: reducing the expected punishment attached to honest disclosure; making bodily distress less diagnostic of defect; increasing the credibility of repair after harm; providing social signals that widen the next action; or allowing responsibility without global self-erasure. Compassion does not mean removing consequences, denying injury, or protecting a person from every boundary. It changes the conditions under which accountability can lead to repair rather than renewed capture.

Family response matters here. Rejection can increase shame and isolation; unbounded rescue can protect the addictive loop from consequence; contempt can make use more likely; stable boundaries with continued human recognition can preserve both safety and future possibility. There is no single family script, especially where violence, coercion, or child safety is involved. Compassion is not the suspension of discernment.

The person still knows what matters tomorrow. Love has not disappeared. Intelligence has not disappeared. The memory of loss has not disappeared. Yet immediate relief is the only behaviorally real option.

Incentive salience helps explain why the cue pulls. Habit learning helps explain why the sequence is fluent. Allostasis and stress explain why non-use may feel bodily costly. Interoception explains how a state is sensed and interpreted. Temporal discounting and future simulation explain why later outcomes recruit weakly. Salience and attention explain why the field becomes selective. Identity explains why the episode can confirm a global story. Social ecology explains why another person's presence, a locked door, money, a meeting, stigma, or a safe place changes the transition. No single layer is sufficient.

FLOW HIJACKED SYNTHESIS — The problem is not necessarily that alternatives objectively do not exist. The problem is that, under particular system states, those alternatives may cease to be experientially accessible enough to compete.

Meditation may matter here, when it does, not because it abolishes craving. It may increase the functional distance between craving and the transition that historically follows it. That distance can be only seconds: sensation, recognition, breath, naming, contact, delay, leaving the environment, calling someone, eating, sleeping, or remembering a future. Seconds can be a new branch.

The practice is not heroic self-control by an isolated will. The branch may depend on treatment, medication, housing, money management, community, family boundaries, reduced access, sleep, and a body no longer in withdrawal. The “inner” distance is partly built outside the person.

LIVED FIELD — Craving occurs without immediate action. Fear occurs without constructing the whole future around it. Shame is felt without becoming identity. Sadness occurs without proving that possibility has disappeared. Pleasure occurs without needing to be preserved. Discomfort occurs without immediate escape.

Chapter 17 • Flow Hijacked: The Conditional Capture Model

PROPOSED SYNTHESIS — Psychological freedom does not necessarily mean the disappearance of craving, fear, pain, desire, or difficult thoughts. It may instead mean that these states possess less monopoly over what happens next.

The theory has eight linked constructs:

Craving as State-Space Compression — an urge can reduce the effective availability of competing trajectories.

Freedom as Dynamic Mobility — the capacity to enter, dwell, leave, return, and redirect as conditions change.

Freedom as Accessible State Space — more viable futures remain able to organize action under perturbation.

Meditation as Training of Transition Dynamics — practice can rehearse what follows capture, not merely prevent capture.

Equanimity as Reduced Behavioral Capture by Perturbation — sensitivity remains while obligatory coupling decreases.

Identity as a Metastable Coordination Pattern — continuity supports action without becoming ontological imprisonment.

Recovery as Re-Expansion of Possibility — futures, roles, relationships, and actions regain functional reachability.

Liberation as Reduced Obligatory Coupling Between Internal State and Behavior — an internal event no longer determines the next action by itself.

These are emerging Flow Hijacked concepts. They are not established scientific terminology. Their value depends on operationalization and failure conditions.

Candidate measurements

A rigorous research program could combine ecological momentary assessment, passive sensing with consent, behavioral tasks, qualitative interviews, social-context mapping, and dynamical modeling. Candidate outcomes include:

conditional probability of use after craving at matched intensity;

latency from perturbation to habitual action;

number and viability of generated alternative actions;

future-event specificity and emotional credibility;

dwell time in rumination, shame, or threat states;

recovery time after attentional capture;

context-sensitive transition entropy, distinguished from noise;

flexibility of identity language without loss of commitment;

change in transition probability when support enters the field;

ability to tolerate interoceptive arousal while preserving valued action.

The constructs should be compared against simpler predictors: craving intensity, symptoms, executive function, delay discounting, income, treatment access, and social support. If they add no explanatory or predictive value, they should be revised or abandoned.

What freedom is not

Freedom is not maximal choice at every moment. It is not the inability to commit. It is not emotional blunting. It is not permanent calm. It is not immunity to biology or history. It is not private serenity purchased by ignoring injustice. It is not a peak state. It is not proof of metaphysics.

Freedom is structured mobility in a real ecology. A person can be constrained and still gain agency; agency can grow and still require help. A system can learn that an urge is important without treating it as sovereign.

The Eastern terminology should enter the wider architecture only when it improves discrimination or generates a better question.

Ask Flow Hijacked

Add a response layer that distinguishes internal event, capture, identity claim, and next-state options. A useful answer should ask, “What has become difficult to access right now?” rather than merely rate urge intensity. Incorporate clear safety routing and never prescribe meditation as a universal response.

Addiction and Recovery

Assimilate Craving as State-Space Compression, relief as a short executable path, and Meditation as Training of Transition Dynamics. Preserve pharmacology, withdrawal, treatment, harm reduction, and structural context. Recovery becomes re-expansion of possibility, not proof that craving has ended.

Psychotherapy

Map therapies by how they alter transitions: exposure and inhibitory learning, behavioral activation, metacognitive recognition, acceptance, compassion, relational repair, environmental restructuring, and identity reconstruction. Do not relabel therapies with Buddhist terms when the original vocabulary is clearer.

Depression, PTSD, OCD, and ADHD

Use dynamic restriction only as a comparison dimension. Depression: future affordance and low-vigor basins. PTSD: past threat with present control. OCD: obligatory uncertainty-reduction loops. ADHD: context-sensitive regulation, salience, task initiation, and switching. Preserve distinct diagnostic evidence.

Psychiatric Drugs and Brain Dynamics

Medication can alter thresholds, dwell times, salience, arousal, and learning opportunities, but the same drug does not impose one trajectory on every system. Avoid using contemplative language to encourage medication discontinuation or to moralize pharmacological support.

Consciousness and Decision Making

Add the distinction between content entering consciousness and content acquiring control. Connect conscious access, meta-awareness, agency, and future simulation without claiming that awareness outside a self has been scientifically demonstrated.

Recovery Identity and Social Ecology

Make Scaffold, Not Prison a central identity principle. Model communities and relationships as regulatory participants that can widen or narrow state space. Add compassion as a potential modifier of predicted selfhood, with boundaries and accountability intact.

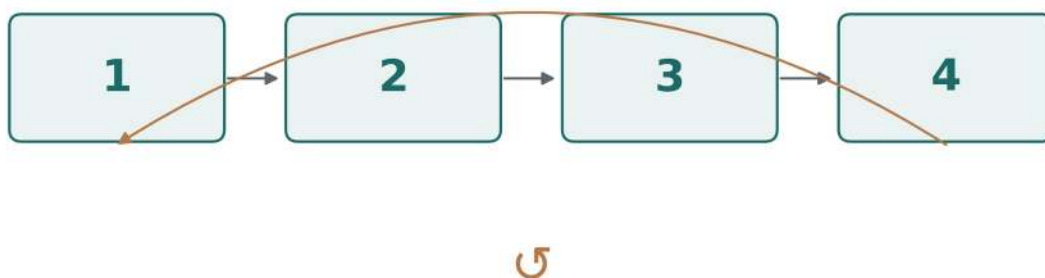
Brain Atlas

Avoid a “craving center.” Show distributed interactions among salience, interoception, memory, reward learning, stress, attention, and control. Each atlas view should state that a circuit map is one scale of explanation, not the person.

The **Flow Hijacked Conditional Capture-Release Model (CCRM)** integrates the monograph’s distinctions without claiming that they are one mechanism. It is a multilevel model of conditional transition. Its central proposition is simple:

FLOW HIJACKED HYPOTHESIS — Under particular configurations of context, body state, cue, learning history, social field, and temporal horizon, the accessible action space can compress until one policy receives disproportionate control over what happens next.

The proposed cascade is:



Four-stage conditional cascade with recursive learning loop.

Figure 2. Conditional cascade: (1) context, body state, and cue; (2) affective valuation, prediction, precision, and salience; (3) affordance narrowing and policy capture; (4) action, relief or reward, prediction-error reduction, and learning. The return arrow indicates that consequences alter the next cycle’s conditions. Conceptual model, not a settled biological sequence.

A proposed capture index

Let π_H denote the policy that has captured the field. A first theoretical index is

$$C_t = p_t(\pi_H) \left(1 - \frac{H_t}{\log N} \right).$$

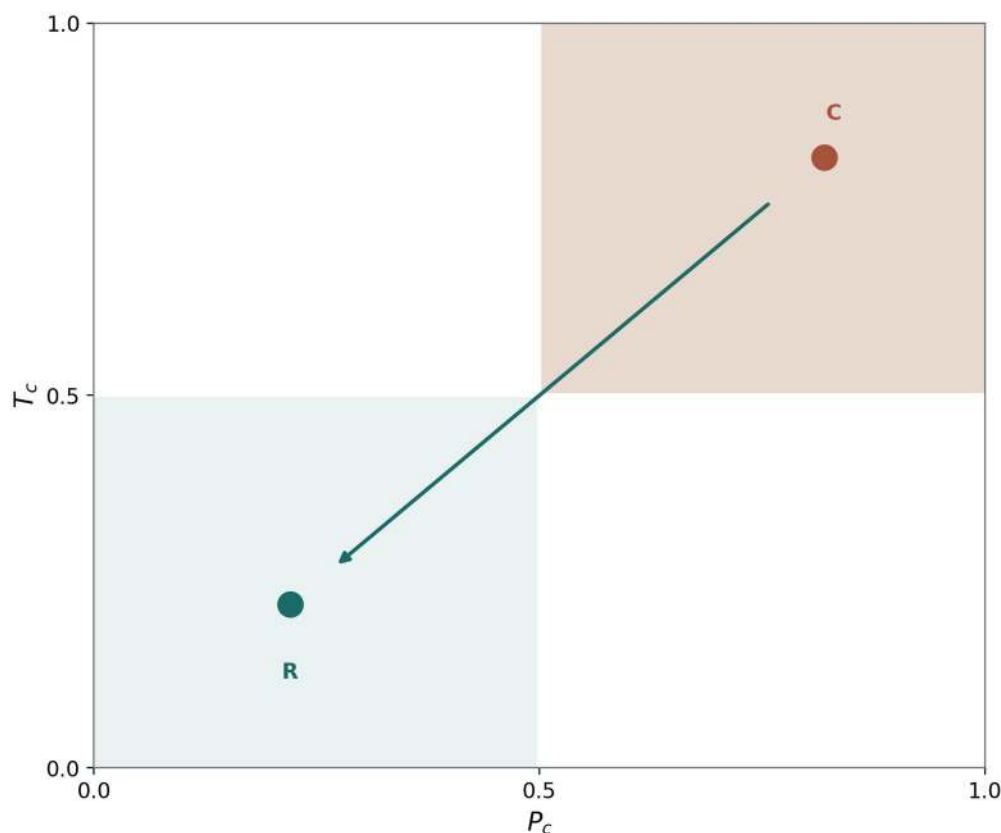
The first factor represents the weight of the captured policy. The second represents normalized concentration of the policy distribution. The index approaches one when a single policy dominates and the distribution is highly compressed. It is deliberately incomplete: it does not encode value conflict, feasibility, temporal horizon, or material coercion. It is a proposed construct, not a biomarker or clinical score.

Craving is not capture

Craving intensity and behavioral capture can dissociate. A person may report an intense urge while maintaining several executable routes—call, leave, delay, eat, take medication as prescribed, enter a meeting, or remain with sensation. Another person may report a moderate urge when money, access, isolation, withdrawal, and habit have already removed nearly every competitor. The second configuration may carry greater near-term risk.

The measurement question becomes: **How many futures are still actionable from here?** Candidate measures include within-person choice distributions, speed and specificity of generated alternatives, ecological momentary assessment, response latency, change after social support enters, wearable physiology with consent, and time-varying models of cue-craving-use coupling.

Two-dimensional compression



Conceptual plane separating policy compression from temporal compression.

Figure 3. Policy compression and temporal compression are related but separable. The most captured region combines few executable actions with weak influence from delayed futures. A release process can move along either axis before subjective craving falls.

The effort trap and release

When the field narrows, the intuitive response is often more internal force: suppression, monitoring, command, and self-threat. Effort can be lifesaving and is sometimes exactly what is required. The hypothesis is conditional, not anti-control. Let u denote control effort. Below a person- and context-specific threshold u^* ,

$$\frac{\partial C}{\partial u} < 0 (u < u^*),$$

so additional effort reduces capture. Beyond that threshold, repeated monitoring or suppression may increase salience, fatigue, rebound, or shame:

$$\frac{\partial C}{\partial u} > 0 (u > u^*).$$

Evidence on suppression is mixed; these equations specify a boundary-condition hypothesis, not a universal law. **Attractor release** names a different intervention logic: change the conditions stabilizing the route. Reduce cue availability; treat withdrawal; alter body state; raise friction; bring another person into the field; restore sleep; increase the relative value of alternatives; rehearse a competing sequence; make a future concrete.

This produces a **control-to-constraint shift**. Early change may sound like *I must stop myself from doing X*. Mature recovery increasingly sounds like *the body, world, relationships, habits, and values have changed enough that X is no longer the overwhelmingly easiest route*. Agency has not vanished. It has been embedded in a better-shaped field.

Six falsifiable predictions

Incremental prediction. Behavioral capture will predict near-term use beyond craving intensity, cue reactivity, delay discounting, and baseline severity.

Alternatives first. Enriching viable alternative rewards will increase action-space entropy before it reliably reduces craving intensity.

Temporal decompression. Episodic future thinking will reduce use partly through increased weight and accessibility of delayed policies, not merely through improved mood.

Decoupling. Acceptance-based training will reduce craving-to-action coupling in some participants even when craving remains present.

Flexibility over level. Within-person transition flexibility and recovery time after perturbation will predict lapse more accurately than a single static activation measure.

Less control required. Durable recovery will be associated with a declining amount of executive effort needed to maintain valued behavior, not only with stronger inhibitory performance.

Failure conditions

CCRM should be revised or rejected if capture measures add no out-of-sample prediction beyond established variables; if estimated entropy mostly reflects random responding; if alternative enrichment changes reports without changing behavior; if the model cannot distinguish material absence from subjective inaccessibility; or if its parameters cannot be measured reliably across time. The framework must also fail ethically if it redescribes deprivation, coercion, or untreated withdrawal as a private cognitive error.

The re-expansion principle

Recovery can now be stated positively:

Recovery $\approx$ re-expansion of accessible futures.

Re-expansion includes behavioral repertoire, temporal depth, social affordances, reliable relief, identity bandwidth, and flexibility of transition. The aim is not a person who never feels an urge. It is a life in which an urge no longer owns the entire next world.

FINAL DESTINATION — Freedom may begin when the appearance of a state no longer determines, by itself, what the person must become next.

A sound can be only a sound. An itch can be only an itch. A craving can be powerful, embodied, learned, dangerous—and still not be an instruction that completes itself.

The deepest contribution of contemplative traditions may not be a catalog of unusual states. It may be their refusal to grant every arising event ownership, permanence, and command. The deepest contribution of modern science may be to show how difficult that refusal can become when learning, stress, drugs, body, memory, social context, and future valuation align. The deepest contribution of dynamical thinking may be to replace a moral snapshot with a trajectory: how did the field narrow, what sustains it, what amplifies it, and which inputs reopen movement?

FINAL DESTINATION — Freedom may begin when the appearance of a state no longer determines, by itself, what the system must become next.

Research Method, Epistemic Audit, and Reading Guide

Evidence acquisition for this edition closed on 10 September 2026. Discovery canvassed 13 literature clusters and returned more than 500 candidate records before deduplication and noise filtering. This is not a claim that every candidate received full-text review. The argument was built from a core layer of systematic reviews, meta-analyses, randomized trials, major mechanistic studies, primary Buddhist texts in scholarly translation, historical scholarship, and foundational mathematical sources. Targeted updating extended through 2026.

The 209-source registry below supports this first monograph. The planned paired monograph will share part of the evidence base; the eventual 300–400-source architecture across both volumes should arise from genuine scope, not bibliographic inflation.

Sources do different jobs. A canonical text establishes what a tradition says, not whether its metaphysics is scientifically true. Historical scholarship establishes context and disagreement, not treatment efficacy. A meta-analysis summarizes a literature while inheriting the limitations of its studies. A mechanistic imaging experiment can constrain a hypothesis without identifying a universal “center.” A mathematical source licenses formal vocabulary, not its clinical application.

Claims were downgraded when findings were heterogeneous, indirect, small-sample, cross-sectional, or vulnerable to construct mismatch. The monograph deliberately forbids the following identities: *tāṇhā is dopamine*; *vedanā is the insula*; *dependent origination is predictive coding*; *meditation turns off the default-mode network*; *addiction is a proven neural attractor*; *acceptance works because prefrontal cortex switches off*.

All Flow Hijacked equations and constructs are proposals. They require preregistration, reliable operationalization, out-of-sample testing, comparison with simpler models, and explicit failure conditions.

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Evidence: Meta-analysis · Domain: Meditation Neuro Meta · extended corpus

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