

Evaluative Monitoring and Access to Intense Positive Affect: The Minimal Z-Reduction Task Framework

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Abstract

Some adults report reduced access to certain forms of intense positive affect, but the mechanisms underlying these changes remain unclear. The present framework proposes that evaluative monitoring may function as one constraint shaping access to such experiences.

The Minimal Z-Reduction Task (M-ZRT) is introduced as a constraint-based probe framework designed to examine whether transient reductions in evaluative coupling alter access conditions for intense positive affect while preserving behavioral engagement.

The framework is organized around three perturbation families, suspension, openness, and salience, each intended to transiently reduce evaluative capture while minimizing anticipation, comparison, optimization, and procedural learning.

Rather than predicting gradual scaling, the framework predicts discontinuous transitions, sensitivity to measurement during induction, weak dependence on task performance, and partial dissociation between reward magnitude and affective access.

The central claim is not that intense positive affect disappears, but that the conditions permitting access to it may change as evaluative processes increasingly shape ongoing experience.

Introduction

Some adults report reduced access to certain forms of intense positive affect and experiential richness, although the mechanisms underlying these changes remain unclear.

Several aspects of internally generated experience, including access to intense positive affect, appear to change across the lifespan (Gulyás et al., 2025; Addis et al., 2008).

The present framework proposes that access to these experiences may be constrained partly by evaluative monitoring processes. To examine this possibility, a probe framework was developed with the goal of transiently reducing monitoring pressure while preserving behavioral engagement.

This framework is referred to as the Minimal Z-Reduction Task (M-ZRT). The M-ZRT is not intended as a fixed intervention or induction method, but as a constraint-based probe framework designed to test whether transient reductions in evaluative coupling alter access conditions for intense positive affect.

The framework is organized around three perturbation families: openness, salience, and suspension. These classes target partially distinct processes while sharing a common objective: reducing the probability that ongoing experience is immediately recruited into evaluation, optimization, corrective control, or action-oriented processing. This interpretation is broadly consistent with accounts linking monitoring-related processes to control allocation, performance regulation, and action updating (Bush et al., 2000; Holroyd and Yeung, 2012; Shenhav et al., 2013).

Suspension perturbations briefly interrupt ongoing evaluative continuity from within active behavior. Openness perturbations aim to maintain incomplete or unresolved representations without immediate closure. Salience perturbations transiently alter the importance assigned to stimuli without introducing explicit goals or sustained monitoring.

Importantly, these perturbations are intentionally constrained in duration, context, and repetition. Repeated deployment across daily life may increase anticipation, comparison, environmental monitoring, optimization, or explicit introspection processes, thereby increasing corrective pressure and reducing compatibility with the framework (Wilson and Schooler, 1991; Schooler, 2002).

Suspension perturbations differ operationally because they are embedded within ongoing activities characterized by continuous engagement, transient events, and rapid state changes. Their function is to disrupt evaluative continuity from within an active context rather than outside it.

The framework predicts that successful transitions should not simply increase pleasure. Instead, they should alter access conditions, producing changes in access to positive affect, perceptual vividness, and the relationship between ongoing experience and evaluative control. This distinction is motivated by the possibility that accessibility constraints may partially dissociate from reward magnitude or motivational intensity alone (Berridge and Robinson, 2003; Treadway and Zald, 2011).

1 Functional Interpretation of Evaluative Monitoring

Evaluative monitoring is treated as a functional construct rather than a localized neural process. Within the present framework, it refers to interacting processes that increase coupling between perception, evaluation, and action selection, including corrective monitoring, comparative evaluation, performance tracking, and pressures toward optimization or closure. This construct is intentionally broad and operational rather than taxonomic.

Accordingly, evaluative load (Z) is interpreted as the aggregate influence of these processes on behavioral control and evaluative coupling. Terms such as monitoring pressure, corrective pressure, and evaluative recruitment are used as functional descriptors of partially overlapping processes rather than distinct constructs.

The framework does not assume a specific neural implementation. Instead, it predicts that elevated evaluative load increases the probability that incoming signals are rapidly recruited into correction, prediction, optimization, or action-oriented processing rather than remaining transient perceptual events.

Under permissive conditions, reduced recruitment is predicted to weaken immediate corrective pressure and may allow stimuli or partially unresolved information to remain available longer before rapid recruitment into action-oriented processing.

Behaviorally, this shift is expected to manifest as reduced next-action pressure, weaker corrective momentum, and decreased pressure toward optimization or rapid resolution.

Rather than proposing isolated regional changes, the framework treats these transitions as transient changes in the relationship between perception, evaluation, and action selection.

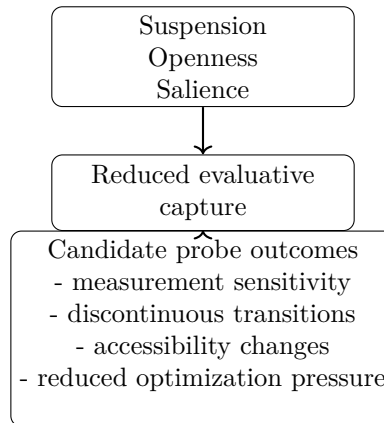


Figure 1: Conceptual organization of the M-ZRT framework. Probe categories are hypothesized to transiently reduce evaluative capture and generate discriminative outcome patterns rather than fixed effects.

The three categories should not be interpreted as equivalent contributors. Their relative importance remains unresolved.

Testable predictions.

- Increased evaluative load should predict reduced probability of threshold transitions even when reward magnitude is unchanged.
- Behavioral manipulations that transiently reduce monitoring pressure should increase access probability without requiring stronger rewards.
- Successful transitions should produce discontinuous rather than linear changes in subjective intensity and duration.
- Repeated measurement, optimization, or explicit tracking during induction should reduce entry probability by increasing evaluative recruitment.

2 Rationale for Multiple Probe Categories

The use of multiple probe categories is not intended to maximize efficacy through accumulation or optimization. Instead, it reflects the possibility that evaluative monitoring may progressively capture repeated procedures.

Repeated exposure to a single probe may increase anticipation, comparison, performance tracking, or procedural learning, thereby transforming the probe itself into an object of evaluation.

Multiple probe categories are therefore included to reduce excessive coupling between access attempts and any single behavioral pattern. Their role is not to identify an optimal intervention, but to maintain variability in how evaluative continuity is transiently disrupted.

Under this interpretation, diversity functions primarily as protection against procedural capture rather than as additive treatment intensity.

Rare, Brief, and Non-Central

All examples described below are intended to remain rare, brief, and non-central events embedded within light ongoing activity. Their role is not to replace the activity, but to occur within it without becoming goals, procedures, or objects of sustained evaluation.

Formulation

Within the present framework, the wording of a perturbation is not assumed to be neutral. Small differences in formulation may substantially influence whether an action is represented as a task, a goal, a comparison, an experiment, or a negligible event. Consequently, the same behavioral action may differ in its compatibility with the framework depending on how it is framed internally. Formulations are therefore treated as candidate experimental variables rather than simple descriptions of behavior.

Table 1: Examples of alternative formulations for the same micro-movement

Formulation	Potential influence on evaluative monitoring
Without Second Attempt	Discourages repetition and corrective completion.
Nothing to Compare	Discourages effect-checking and before/after evaluation.
Almost Nothing	Frames the action as negligible rather than important.
No Preferred Movement	Discourages optimization of movement selection.
Already Enough	Reduces pressure to improve or refine the action.
No Best Version	Reduces search for an ideal implementation.
It Happened	Shifts attention away from deliberate control and authorship.

3 Suspension

Suspension perturbations involve brief reductions in next-action pressure. Examples include stopping an action, noticing a nearby detail, acting without a reason, treating opposite options as equally acceptable, starting before the optimal moment, or allowing something usually treated as central to become background and unimportant.

Tiny Interruption

Description. A tiny interruption is a brief, low-importance disruption of ongoing activity. It may involve a small bodily movement or an environmental interruption. Its role is simply to break continuity.

Anti-ritualization constraints.

- at an irrelevant moment, not when it feels promising,
- no preferred body part,
- no preferred timing,
- do not amplify it to make it more noticeable,
- movement duration not fixed,
- sometimes replace it by drinking a sip of water,
- do not compare for before/after effects,
- Only a few micro-movements are allowed, even if the brain produces thoughts such as: “not enough.”

Variation Anti-novelty

Only allow extremely ordinary movements: a small shoulder adjustment, a brief jaw release, a tiny facial muscle contraction. Nothing original, nothing interesting. The movement should remain ordinary enough that it does not become an event.

Variation Anti-amplification

If a movement reappears across multiple sessions, it should become smaller rather than larger. For example: first session, a visible shoulder adjustment; next session, barely noticeable.

4 Openness

Openness perturbations involve briefly allowing thoughts, images, questions, or possibilities to remain incomplete. Rather than moving toward answers, explanations, decisions, or closure, the individual temporarily leaves the representation unresolved. Examples include unanswered questions, unfinished thoughts, abandoned mental images, or momentary absurd possibilities that are not developed further. Their common function is to reduce pressure toward completion and preserve openness to internally generated experience.

Open Question

Description. Intentionally generate a question that is absurd and poor, possibly related to the immediate environment. The question is not answered. The question must not suggest an action. Examples: “Why does this shadow fall like that?”, “Why does this corner exist?” “Why this ceiling?”, “How this windows?” Do not look for a better question. Do not compare questions. Do not generate alternatives. You may keep the same question(s) across multiple days rather than generating a new one at each session.

Questions are intentionally constrained to avoid immediate resolution dynamics. Questions centered on the self, explicit goals, practical problems, or action-relevant content may rapidly recruit answer generation, planning, or corrective processes. The present framework therefore favors incomplete, low-consequence, or weakly specified questions because they may maintain unrealized possibilities without immediately triggering closure.

Under this interpretation, the purpose of unusual phrasing, fragments, or poorly formed questions is not semantic content itself, but reducing pressure toward response generation and action selection.

Half-question

Generate only the beginning of a question without completing it.

Examples: : “What if...” “Why is it that...” “why that?”

Aborted question

Act as if you accidentally started a question.

Example: “What if...” and nothing.

Phonetic Question

Use something that sounds question-like but carries almost no meaning.

Examples: “What if... mm?” “Why would... uh?”

Paragraph Switch

- Pick an easy-to-read book. Switch to unrelated paragraphs.
- Treat the switch as administrative rather than meaningful.
- Sometimes resume reading at a random point inside another paragraph instead of starting at paragraph boundaries.
- Sometimes switch within the same chapter.
- Sometimes switch to another chapter.

Variation One-Sentence Interruption

Description: Read one paragraph, then read exactly one sentence from another page, then return to the original text. The interruption should stay too small to become a new narrative.

Variation: Fixed Offset Switch

Description: After one paragraph, move exactly +10 pages or -10 pages.

Variation: Hard Boundary Switch

Description: Read one paragraph. Switch to another paragraph from a clearly unrelated section or even another book category.

Exercise: Visual Interruption Switch

Description: After reading one paragraph, briefly look at an irrelevant object or blank space before switching.

5 Salience

Salience perturbations temporarily alter the importance assigned to otherwise ordinary stimuli. Examples include a projectile briefly becoming a visual event, a peripheral detail becoming noticeable without being pursued, a color emerging without comparison, a sound becoming present without deliberate listening, or an ordinary object momentarily acquiring unusual significance. Their common function is not to increase stimulation, but to allow perceptual events to become temporarily salient without being converted into goals, interpretations, rewards, or objects of sustained attention. The event briefly stands out, then dissolves back into ongoing experience.

Peripheral Importance Tag

Description: Temporarily allow an irrelevant object to feel unusually important without acting on it.

- Let the object be chosen for an absurd reason: because it is slightly closer, because it is on the left, or because it was blue.
- Assume nothing is expected to return.
- Variant: assume the choice is probably wrong and continue anyway.

Variation: Misfire Accepted

Description: Allow the importance label to attach to the wrong thing, maybe a shadow, a surface, a half-noticed object, or something you cannot clearly identify.

6 Illustrative Cross-Context Session Example

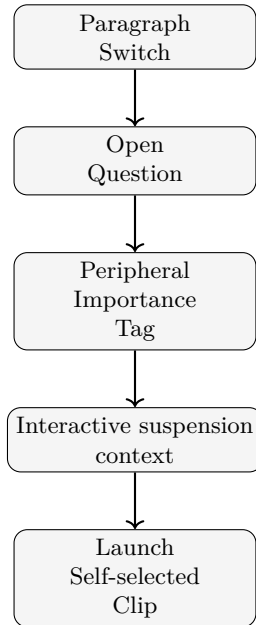


Figure 2: Example structured session workflow.

Experimental Environment Rationale

A fast-paced interactive environment was selected because it combines transient sensory events with continuous engagement while limiting prolonged deliberation. Such environments provide frequent

state changes, rapid perceptual updates, and short-lived stimuli that may reduce sustained evaluative processing.

The environment is not considered theoretically essential. Rather, it serves as an experimental context intended to preserve engagement while limiting optimization, explicit performance tracking, and prolonged self-monitoring.

The framework predicts that similar effects should generalize across environments sharing comparable functional properties, including unpredictability, transient stimuli, continuous engagement, and relatively low requirements for sustained evaluative control.

Short video clips were included primarily as post-session probes of accessibility rather than as core components of the task. Because such stimuli contain dense multimodal information, their role as probes and potential contributors to changes in accessibility may not be fully separable.

7 Task Implementation Example: HUD-Off Gameplay Environment

Functional Constraints

Any admissible implementation should satisfy the following functional constraints:

1. **Low instrumental stakes.** Actions should carry minimal consequences or performance pressure. Strong success criteria or meaningful rewards are predicted to increase evaluative processing.
2. **Brief disruption without prolonged deliberation.** Implementations may introduce short interruptions, hesitations, deviations, or incomplete transitions, but should avoid sustained planning, optimization, or conscious problem-solving.
3. **Minimal proceduralization.** Repeated actions should not stabilize into fixed routines, rhythms, or induction sequences. Implementations that become heavily proceduralized may progressively lose compatibility with the proposed constraints.
4. **Limited evaluation during and after execution.** Participants should avoid immediate checking, retrospective interpretation, or explicit attempts to determine whether the task was performed correctly or produced an effect.
5. **Single-step permissiveness.** Actions should be performable without repetition, refinement, or correction. Once completed, participants should be able to continue the ongoing activity without adjustment.
6. **Implementation independence.** No specific game, object, movement, or setting is theoretically required. Any implementation is treated as interchangeable provided that comparable functional properties are preserved.

8 Alternative Explanations and Discriminative Predictions

Several alternative explanations could account for reports of altered access to intense positive affect during the M-ZRT. The present framework does not assume exclusivity, but generates predictions intended to distinguish competing interpretations.

Novelty-based accounts. Observed effects may reflect novelty, unusual task constraints, or unfamiliar combinations of stimuli rather than threshold-dependent access conditions. Under this interpretation, effects should decrease progressively with repeated exposure and remain strongly coupled to unfamiliarity. In contrast, the present framework predicts repeated failures, discontinuous transitions, and persistence despite repeated exposure.

Arousal and activation accounts. Changes in experiential intensity may reflect increased activation, engagement, or motivational state rather than changes in evaluative coupling. The framework predicts that increased activation alone should be insufficient when evaluative pressure remains high, and may even reduce access probability when it increases monitoring or optimization.

Expectancy and learning accounts. Observed changes may emerge through expectancy effects, procedural learning, task familiarity, or beliefs about task efficacy. Under these accounts, performance should gradually improve with repetition and become increasingly reproducible. The present framework instead predicts weak temporal predictability, repeated failures preceding successful transitions, and reduced reproducibility when procedures become stable or optimized.

Attention and engagement accounts. Observed effects may reflect attentional capture, transient absorption, ordinary mood improvement, or increased engagement rather than accessibility transitions. The framework instead predicts qualitative discontinuities, persistence beyond immediate stimulation, and transfer outside the induction context.

Flow-based accounts. Some effects may overlap phenomenologically with flow-like states. However, flow accounts typically predict stronger relationships with performance, optimization, and sustained task engagement. The present framework instead predicts compatibility with low instrumental stakes, reduced optimization pressure, and weak dependence on task success.

Because these alternatives may produce partially overlapping outcomes, qualitative reports should be characterized using multiple dimensions rather than intensity alone. Candidate dimensions include:

- abrupt or discontinuous onset,
- changes in perceptual vividness or experiential richness,
- temporary reductions in corrective, comparative, or optimization pressure,
- reduced pressure toward immediate next-step selection,
- persistence beyond immediate stimulation,
- transfer across contexts rather than confinement to the task itself.

These dimensions are intended as discriminative tools rather than defining criteria and are primarily included to reduce reinterpretation in terms of ordinary mood changes, transient activation, or task engagement.

8.1 Proceduralization Risks

Proceduralization represents a major theoretical failure mode of the M-ZRT. The framework predicts that repeated use of identical sequences may progressively transform constraint-compatible perturbations into monitored procedures. Under this interpretation, stabilization, optimization, or ritualization should reduce rather than improve transition probability.

Participants are therefore instructed to treat examples as interchangeable implementations rather than techniques. Actions should not be interpreted as causal triggers, optimized across sessions, or combined into fixed sequences.

To reduce procedural carryover, participants are encouraged to maintain variability across sessions, avoid explicit effect-seeking or immediate retrospective checking, and treat null sessions as theoretically informative rather than unsuccessful attempts.

More generally, the goal is not to perform the task correctly, but to preserve compatibility with the proposed constraint structure while minimizing procedural capture.

Candidate Outcome Dimensions

Because the proposed change in experiential accessibility is hypothesized to differ from ordinary mood improvement, task engagement, or transient activation, multiple descriptive dimensions may help characterize transitions. These dimensions are not assumed to occur simultaneously and should be treated as candidate outcome variables rather than defining features.

Potential dimensions include:

- **Transition latency.** Estimated time between task initiation and the first recognizable transition-related changes.
- **Abruptness rating.** Subjective rating of whether changes emerged gradually or discontinuously.
- **Perceptual vividness.** Changes in sensory richness, environmental detail, or subjective intensity of perception.
- **Persistence duration.** Estimated duration for which altered accessibility remains detectable beyond the induction context.
- **Planning pressure.** Subjective pressure toward next-step selection, correction, optimization, or action preparation.
- **Transfer across contexts.** Degree to which effects remain confined to the task environment versus generalizing to unrelated contexts.

These dimensions are intended primarily as discriminative tools to separate proposed transition phenomena from gradual mood changes, novelty effects, generalized activation, or task engagement. **Measurement-reactivity prediction.** Introducing explicit monitoring, self-report, performance tracking, or repeated evaluation during induction should reduce transition probability relative to otherwise equivalent conditions.

Threshold-transition prediction. If access conditions involve threshold-dependent transitions rather than gradual accumulation, experiential changes should emerge discontinuously rather than scale smoothly with repeated exposure or increasing intensity.

Accessibility-reward dissociation prediction. Manipulations that increase reward magnitude or general activation without reducing evaluative coupling should produce weaker effects on transition probability than manipulations targeting evaluative coupling. Access to intense positive affect and reward intensity should therefore partially dissociate.

9 Discussion

The present framework proposes that access to intense positive affect may depend partly on monitoring-related constraints on access rather than reward magnitude alone. More specifically, it suggests that evaluative processes may constrain access to intense positive affect by altering whether certain experiential states emerge, stabilize, or remain accessible.

Several features distinguish this proposal from accounts centered primarily on reward deficits, motivational changes, or gradual scaling processes. The framework predicts discontinuous transitions, sensitivity to measurement during induction, weak dependence on task performance, and disproportionate effects of manipulations targeting evaluative coupling relative to manipulations targeting reward magnitude alone.

Notably, behaviors resembling the proposed categories frequently occur during childhood play: interruptions without clear purpose, incomplete narratives, and temporary importance assigned to ordinary objects, without implying developmental causality. The present framework does not interpret these observations as evidence, but as heuristic examples of low-evaluative contexts.

Importantly, the framework should not be interpreted as proposing a universal explanation for reduced accessibility to high-intensity positive states. Multiple mechanisms likely contribute, including reward-related processes, fatigue, attentional fragmentation, habituation, motivational factors, and contextual influences. Evaluative monitoring is proposed as one candidate constraint among multiple interacting influences rather than a complete account.

Several limitations remain. The framework is based primarily on mechanistic reasoning and repeated observational patterns rather than controlled experimental evidence. Accordingly, its value depends less on explanatory scope than on whether its predictions generate distinguishable empirical signatures.

Pharmacological modulation remains an open question. Molecules affecting arousal, salience, fatigue, or evaluative processes, including caffeine, may influence accessibility conditions, but this possibility remains speculative.

A central methodological limitation concerns the probe framework itself. Procedures intended to reduce evaluative coupling may progressively become objects of evaluation, optimization, anticipation, or procedural learning. As a result, repeated testing may alter the access conditions under investigation rather than neutrally measure them.

The role of salience also remains unresolved. Salient stimuli may function simultaneously as probes, contextual modulators, and contributors to changes in accessibility, making these functions difficult to separate experimentally. Salience may function primarily as a contextual modulator or probe dimension rather than a necessary contributor.

These limitations motivate the use of discriminative predictions rather than direct mechanistic claims. In particular, threshold-like transitions, measurement sensitivity, proceduralization effects, and dissociations between explicit evaluation and experiential accessibility provide candidate targets for future empirical work.

Under this interpretation, the framework should be viewed primarily as a hypothesis about access conditions and probe design rather than as a complete theory of affective function. More broadly, it suggests that some changes in subjective experience may reflect altered access conditions rather than irreversible loss of underlying capacity.

10 Conclusion

The present framework proposes that reduced access to high-intensity positive states may partly reflect changes in access conditions rather than irreversible loss of affective capacity. Specifically, it suggests that evaluative monitoring may function as an upstream constraint on access to intense positive affect by increasing coupling between perception, evaluation, and action selection.

Under this interpretation, intense positive affect may become difficult to enter not because reward systems fail, but because access conditions increasingly favor evaluation, correction, and anticipatory control.

The framework generates several experimentally testable predictions, including threshold-like transitions, dissociations between valuation and accessibility, sensitivity to measurement during induction, and disproportionate effects of manipulations targeting evaluative coupling rather than reward magnitude.

Importantly, the present proposal should be interpreted as a mechanistic hypothesis rather than an established account. Its value depends less on explanatory scope than on whether accessibility-based predictions prove empirically useful across contexts characterized by reduced access to intense positive affect.

If supported, this perspective would suggest that high-intensity positive affect may sometimes be constrained not only by what experiences are available, but by the conditions that permit access to them.

Declaration of Interest

The author declares no competing interests.

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