

Evaluative Monitoring as a Common Link Between Vivid Imagery and Intensive Joy

Perspective

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June 14, 2026

Abstract

Recent work has documented a marked decline in visual imagery vividness from adolescence to adulthood, suggesting that important aspects of internally generated experience undergo substantial developmental change. Independently, many adults report that certain forms of intense childhood-like joy become increasingly difficult to access after adolescence. Despite their apparent developmental parallels, these phenomena are typically studied separately.

This perspective argues that both may reflect consequences of a broader and largely neglected developmental transition affecting openness to internally generated experience.

Within the proposed regime theory, vivid imagery and intensive joy are viewed as closely related manifestations of a permissive cognitive state characterized by reduced evaluative monitoring and increased experiential openness.

The framework further suggests that developmental increases in monitoring, evaluation, anticipation, and optimization progressively restrict access to this state.

If correct, the regime, here called ease, may represent an important but largely unrecognized object of investigation for affective neuroscience and developmental psychology. Beyond providing a potential explanation for the parallel decline of vivid imagery and intensive joy, the framework generates testable predictions regarding developmental trajectories, individual differences, and interventions capable of restoring access to both phenomena in adulthood.

Table 1: Conceptual illustration of the proposed developmental transition.

Childhood	Adolescence / Adulthood
Low evaluative monitoring	Increased evaluative monitoring
Ease regime accessible	Ease regime restricted
Vivid imagery	Reduced imagery vividness
Intensive joy	Reduced accessibility of intensive joy

1 Introduction

Recent work has reported a marked decline in visual imagery vividness from adolescence to adulthood, accompanied by a reduction in the proportion of individuals reporting highly vivid imagery and an increase in those reporting weak imagery (Gulyás et al., 2021). Furthermore, biological maturation during adolescence appears to be associated with lower imagery vividness, suggesting that the phenomenon may be linked not only to aging itself but also to developmental processes occurring during the transition to adulthood (Gulyás et al., 2021).

In contrast, another commonly reported developmental phenomenon has received relatively little scientific attention. Many adults describe certain forms of intense childhood-like joy as becoming progressively less accessible after adolescence. Although such reports are widespread in autobiographical accounts and everyday discourse, the phenomenon remains poorly characterized and lacks a coherent developmental framework.

At present, these two observations are generally considered independently. The decline of vivid im-

agery is usually discussed within the context of mental representation, imagery, and memory research (Isaac & Marks, 1994; Pearson et al., 2015), whereas changes in positive affect are typically studied through frameworks centered on reward, mood, or emotional regulation. As a result, the possibility that both phenomena may reflect different manifestations of the same developmental transition has received little attention.

The present perspective is partly motivated by the Regime Theory of Joy framework (Morin, 2026b), which proposes that access to certain forms of intense positive experience depends on a permissive cognitive configuration characterized by reduced evaluative monitoring and increased openness to internally generated experience. Within this perspective, both vivid imagery and intensive joy may depend on conditions that become progressively less accessible during development.

Accordingly, I propose that the developmental decline in imagery vividness and the reduced accessibility of childhood-like joy may arise from overlapping underlying mechanisms. Specifically, I suggest that both may reflect a broader shift in the organization of internally generated experience occurring during adolescence and early adulthood. This hypothesis is motivated by the observation that conditions associated with the re-emergence of childhood-like joy can also be accompanied by unusually vivid imagery, perceptual completion phenomena, and the subjective reappearance of experiential qualities often associated with childhood (Morin, 2026a).

While the present proposal remains speculative, it generates several empirically testable predictions and may provide a useful framework for integrating findings from developmental psychology, imagery research, memory studies, affective science, and the proposed ease regime.

2 Joy as Suspension of Optimization

Joy is defined here as a state characterized by amplified sensory experience and thoracic pleasure, whose accessibility and intensity increase in the presence of low-optimization (low Z) cues and decrease in the presence of high-optimization (high Z) cues. Low-optimization cues include stimuli associated with play, spontaneity, permissiveness, non-instrumental engagement, and reduced evaluative demands. High-optimization cues include stimuli associated with performance, efficiency, monitoring, evaluation, and goal-directed control. Within this framework, joy is not defined by positive af-

fect alone, but by a specific configuration in which sensory salience is enhanced while optimization-related processes are temporarily reduced.

Box. Does the brain always optimize?

A potential objection is that the brain is always optimizing in some form (friston, 2010, clark, 2013). The present framework does not dispute this claim. Rather, it distinguishes between background biological optimization and explicit evaluative optimization. Organisms continuously regulate physiology, perception, and behavior, but the processes emphasized here involve evaluation, comparison, correction, anticipation, and performance monitoring.

Several observations appear consistent with the possibility that intensive, childhood-like joy is sensitive to optimization-related cues. For example, increasing the technical quality of a video beyond a certain point may reduce the intensity of joy, whereas lower-resolution versions sometimes produce the opposite effect. While higher resolution improves objective visual fidelity, it may simultaneously increase the perception of technical refinement, optimization, and instrumental design. It may not be anxiety that blocks joy, but anticipation, comparison, evaluation, and the persistent need to optimize.

A distinctive feature of intensive joy is its apparent independence from specific tasks, goals, interests, or personally meaningful content. Unlike flow, curiosity, nostalgia, or awe, the state does not appear to require engagement with a particular activity, question, memory, or object. Instead, a wide range of otherwise ordinary stimuli may become affectively amplified once access to the ease regime is established. This suggests that the primary determinant of the state may not be the external stimulus itself, but the cognitive regime through which it is experienced.

A recurrent personal observation is that medication intake is frequently followed by a marked reduction in the accessibility of joy, as shown in figure 1. This effect appears to occur across diverse substances, even after the ingestion of compounds not typically associated with central nervous system effects, including common vitamin supplements. The reduction is often rapid and may persist for several hours.

While anecdotal and requiring systematic investigation, the apparent breadth of the effect raises the possibility that the phenomenon is not linked to a specific pharmacological mechanism but rather to a more general process associated with evalu-

ative processing. Future studies could determine whether medication intake itself, independent of pharmacological class, influences the probability of accessing intensive joy or its collapse.

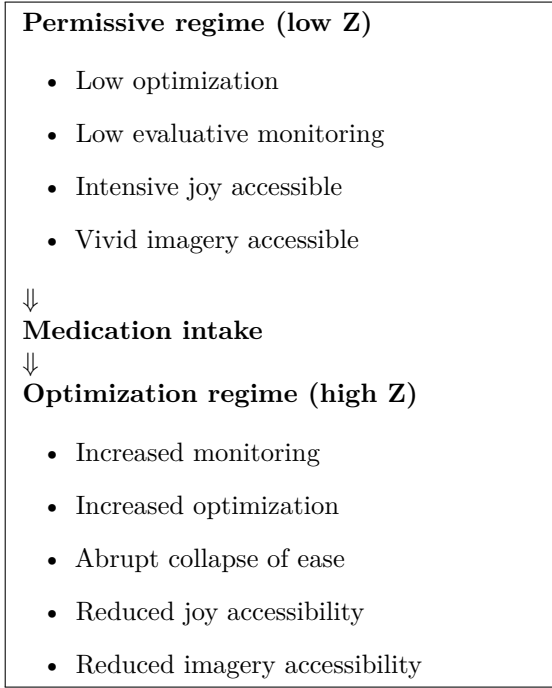


Figure 1: Illustrative hypothesis. In individuals who still retain access to the permissive regime, often younger individuals, medication intake may act as a regime-shifting event associated with increased optimization and reduced accessibility of joy and vivid imagery.

A similar line of reasoning emerged when considering the apparent association between childhood environments and joy. One possibility initially considered was that the presence of young individuals might directly facilitate access to the state. However, this interpretation faces an immediate difficulty: adults who spend large amounts of time around children, such as teachers, do not necessarily report increased access to childhood-like joy. A possible alternative is that the effect depends not on age itself, but on the interpretation of the surrounding environment. Young individuals may function as cues associated with reduced optimization, play, spontaneity, and non-instrumental behavior. In contrast, the same environment may be perceived by adults primarily through the lens of supervision and workload, thereby producing the opposite effect.

Taken together, these observations are consistent with the broader hypothesis that access to joy is reduced by cues signaling optimization, evaluation, performance, or instrumental goals, while cues suggesting spontaneity, permissiveness, or the

temporary suspension of optimization may facilitate access, as shown in table 1.

Table 2: Illustrative examples of low-Z and high-Z cues.

Stimulus or situation	Low Z	High Z
Child seeing another child	✓	
Teacher seeing children		✓
Distant horizon	✓	
Large office building		✓
Small jewel or marble	✓	
Traffic sign		✓
Cartoon character	✓	
Movement interpreted as ‘I am the author of this’		✓
Movement interpreted as ‘it happened’	✓	
Question answered		✓
Question allowed to remain open	✓	

The distinction is not assumed to be intrinsic to the stimulus itself. The same event may function as either a low or high-optimization cue depending on the interpretation. For example, a movement experienced as “I am the author of this” may increase evaluative monitoring and optimization, whereas the same movement interpreted as “it happened” may reduce authorship-related monitoring.

Intensive joy appears unusually resistant to boredom. One possible reason is its high degree of experiential diversity. Rather than remaining phenomenologically stable, the state fluctuates between at least two distinct modes, a lower-energy "being moved" mode characterized by emotional richness and familiarity, and a higher-energy "energetic" mode characterized by amplified sensory salience, both mediated by thoracic pleasure. In addition, the state exhibits substantial variation in perceptual texture, imagery, and affective tone across time. This combination of texture diversity, unpredictability, and occasional explosive increases in intensity may contribute to its remarkable resistance to habituation compared to more conventional positive affective states.

The framework does not attempt to replace affective neuroscience, reward theory, or predictive processing. It proposes a narrower access hypothesis: some positive states may fail to appear not because the reward system is absent, but because the control context prevents entry. The simplicity of the proposed Z variable should not be mistaken for simplicity of the underlying neural implementation.

3 Vivid Imagery as Increased Openness

One possible interpretation of vivid mental imagery is that it reflects a state of increased openness to internally generated representations. Within this perspective, vividness is not merely a fixed cognitive trait but may vary according to the accessibility of internally generated perceptual content. States characterized by greater openness would therefore be expected to facilitate richer, more stable, and more perceptually detailed imagery.

This possibility is supported by repeated self-observations in which brief openness-oriented exercises performed during non-instrumental computer activities were followed by a temporary increase in imagery vividness lasting from several minutes to several hours. The effect was not associated with deliberate imagery training, mnemonic strategies, or attempts to improve imagery performance. Instead, the increase appeared after activities designed to reduce optimization, suspend immediate goal pursuit, and encourage openness toward ongoing experience. Although anecdotal, these observations suggest that imagery vividness may be dynamically modulated by cognitive states rather than solely reflecting stable individual differences.

Recent developmental findings are broadly compatible with this interpretation. In a large cross-sectional study, visual imagery vividness was found to decline progressively from adolescence to adulthood, with the highest vividness scores observed in younger participants and a continuous reduction between approximately 12 and 25 years of age (Gulyás et al., 2021). Furthermore, biological maturation within adolescence was associated with lower imagery vividness, suggesting that the phenomenon is linked not only to chronological age but also to maturational processes. These findings indicate that highly vivid imagery may represent a developmental default state that gradually weakens as maturation progresses.

From personal observations, small objects that appear difficult to optimize, such as marbles, gemstones, decorative jewels, colored beads, or similar visually simple items, often seem particularly effective at increasing vivid recollection-like experiences. Exposure to such objects can be accompanied by unusually realistic and immediate experiential re-instantiation, characterized less by remembering the past than by the sudden return of a familiar perceptual texture. One possible interpretation is that these objects possess high perceptual salience while carrying little instrumental value, allowing internally generated representations to emerge with reduced interference from evaluative processes.

Taken together, these observations raise the possibility that imagery vividness is sensitive to developmental changes affecting openness to internally generated experience. If so, the well-documented decline in vivid imagery across maturation may reflect more than a change in representational capacity alone. It may also reveal a broader shift in the accessibility of internally generated perceptual states.

4 Developmental Changes in Monitoring

A central proposal of the present framework is that both vivid imagery and childhood-like joy are influenced by a monitoring system whose function is to evaluate, correct, optimize, and regulate ongoing behavior. This system, referred to here as the monitor, is not assumed to be a single neural structure but rather a functional process involved in performance evaluation, error detection, self-assessment, and behavioral optimization.

During childhood, many activities occur in relatively permissive contexts where immediate optimization demands are limited. Play, exploration, imagination, and spontaneous engagement can unfold without continuous evaluation of efficiency, performance, reputation, or future outcomes. Under these conditions, internally generated experience may remain highly accessible, facilitating both vivid imagery and intense forms of joy.

A progressively different environment.

Academic performance, social comparison, reputation management, productivity demands, future planning, and self-monitoring become increasingly prominent. The individual is repeatedly encouraged to evaluate actions in terms of outcomes, correctness, usefulness, and efficiency. From the perspective of the present hypothesis, these repeated optimization demands may gradually strengthen the monitor.

A strengthened monitor would be expected to continuously inspect ongoing mental activity for relevance, utility, and correctness. Such a process may be beneficial for goal-directed behavior, but it could also reduce openness to internally generated representations. Imagery that is incomplete, spontaneous, playful, or not immediately useful may be interrupted or filtered. Likewise, affective states associated with non-instrumental engagement may become less accessible.

Within this framework, the developmental decline of vivid imagery reported in adolescence and adulthood may not solely reflect changes in representational capacity. Instead, it may partly reflect increasing interference from monitoring processes that constrain internally generated experience. The same mechanism could contribute to the reduced accessibility of childhood-like joy. Rather than disappearing because the underlying affective system is lost, joy may become progressively less accessible because the cognitive environment increasingly favors optimization over openness.

This hypothesis generates a simple prediction: conditions that temporarily reduce monitoring should increase both imagery vividness and the probability of accessing childhood-like joy, whereas conditions that intensify evaluation, performance pressure, self-correction, or optimization should reduce both. The frequent co-occurrence of vivid imagery and joy may therefore arise because both depend on a common prerequisite, namely temporary relaxation of monitoring processes.

Box 1. Why a Regime Theory of Joy?

One of the motivations behind *A Regime Theory of Joy* is to reduce the conceptual ambiguity surrounding the notion of joy. The term is often used to describe a wide range of positive states, from mild satisfaction to intense affective experiences, making scientific discussion difficult.

Within the present framework, joy is treated as a specific phenomenon characterized by a distinctive intensive phenomenology, identifiable access conditions, predictable collapse conditions, and a set of associated experiential features.

The framework also proposes an explanation for why access becomes less common during development, and suggests behavioral approaches that may facilitate its re-emergence in adulthood. The present framework proposes that intensive joy is closely coupled to vivid imagery and realistic memory-like experiences. If these components are absent, the reported state may differ substantially from the form of joy described here.

More broadly, the present framework invites reconsideration of the common assumption that joy primarily emerges from self-esteem, challenge, achievement, or large rewards.

Hierarchy proposal

Neuroscience does not explicitly establish a hierarchy among affective states. However, the present framework takes the position that such hierarchies may be inferred from phenomenological properties. Because the joy component of the ease regime combines unusually high positive valence, sensory amplification, vividness, and resistance to boredom, it is proposed as occupying the highest position within the hierarchy of affective states. This proposition remains theoretical, but it provides a clear organizing principle for understanding why individuals may repeatedly seek access to the state despite substantial practical difficulties in maintaining it.

5 Discussion

The present hypothesis proposes that the developmental decline in vivid imagery and childhood-like joy may arise from a common process: the

progressive strengthening of evaluative monitoring (Botvinick et al., 2001; Shenhav et al., 2013). This monitor is conceived as a functional system responsible for evaluating, correcting, comparing, and optimizing ongoing thought and behavior. While such processes are essential for goal-directed action, they may simultaneously reduce openness to internally generated experience.

Within the present framework, the ease regime is proposed to be necessary for the appreciation of prediction errors. Prediction errors are ubiquitous, appearing in movie cuts, absurd images, unexpected visual transitions, reflections of light, and countless everyday events (Friston, 2010; Clark, 2013). If prediction errors alone were sufficient to produce intensive joy, adults should experience the state frequently. Yet children remain disproportionately attracted to absurd and perceptually novel stimuli. One possible explanation is that prediction errors require access to the ease regime to acquire their affective significance, and that access to this regime becomes progressively restricted during development.

From a medical standpoint, the ease regime may also increase sensitivity to centrally acting substances. Under conditions of reduced evaluative monitoring and amplified sensory processing, the subjective psychological effects of CNS-active medications may become more pronounced, potentially increasing their perceived intensity.

The monitor proposed in this framework should not be interpreted as a single neural structure. Rather, it is hypothesized to emerge from interactions between subcortical state-regulation systems and cortical evaluative networks (Seeley et al., 2007; Menon, 2011). In the present PAG-centered formulation, the periaqueductal gray (PAG) is proposed to act as a principal state variable determining whether experience remains permissive or becomes monitored (Bandler & Shipley, 1994; Keay & Bandler, 2015), while the medial thalamus may regulate the salience of incoming signals (Halassa & Kastner, 2017) and the anterior cingulate cortex and related control networks contribute to sustained evaluation, anticipation, and behavioral correction (Botvinick et al., 2001; Shenhav et al., 2013). Under this view, monitoring is not imposed by a single region but arises from the coordinated coupling of these systems. The core theoretical claim concerns this functional organization, whereas the precise anatomical implementation remains open to further empirical refinement.

This framework also provides a theoretical rationale for the use of the M-ZRT procedure. M-ZRT consists of brief suspension-oriented actions embedded within non-instrumental computer ac-

tivities. Participants occasionally abandon intentions, perform actions without justification, treat alternatives as equally acceptable, or attend to irrelevant details while avoiding attempts to measure outcomes or produce specific effects. From the perspective of A Regime Theory of Joy (Morin, 2026a), the purpose of these interventions is not to directly induce joy or train imagery, but to temporarily reduce optimization-related monitoring. If vivid imagery and childhood-like joy depend on reduced monitoring, procedures of this kind may increase access to both phenomena by promoting openness to internally generated experience.

Future work should determine whether manipulations that reduce evaluative monitoring reliably increase both imagery vividness and joy accessibility, and whether developmental changes in monitoring can account for the parallel decline of these phenomena across maturation.

Conclusion

Recent evidence indicates that visual imagery vividness declines across maturation and early adulthood. Independently, many individuals report that childhood-like joy becomes increasingly difficult to access over the same developmental period. The present perspective proposes that these phenomena may not be independent. Instead, both may reflect the progressive strengthening of evaluative monitoring systems that reduce openness to internally generated experience.

Within this framework, vivid imagery and childhood-like joy are viewed as closely related manifestations of a common underlying condition characterized by reduced optimization and increased openness. The theory predicts that interventions capable of temporarily reducing monitoring should facilitate access to both phenomena, whereas environments emphasizing evaluation, performance, correction, and optimization should suppress them.

Although speculative, this account provides a framework linking developmental findings in imagery research with largely unexplored observations concerning the common complaint of loss of childhood-like joy.

Future studies should determine whether changes in evaluative monitoring can explain the parallel developmental trajectories of these two phenomena and whether targeted interventions can restore access to both in adulthood.

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Morin, Florian, A Regime Theory of Joy: The Ease Regime as a Permissive Control Configuration (May 03, 2026b). Available at SSRN: <http://dx.doi.org/10.2139/ssrn.6711318>