PROJECT A.W.A.K.E

Activation-Assisted Wakefulness and Awareness through Knowledge of Emergent Drift

Phase 1 Experimental Protocol

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Pushkar Wagh
The Painsparc Company Research Department
The Painsparc Company
Pune, India

***Abstract*—Project AWAKE is an exploratory research initiative investigating whether self-recognition of cognitive drift can be accelerated through structured cognitive training environments.**

The project focuses on a fundamental observation common to both contemplative practice and metacognitive research: human cognition frequently alternates between awareness, drift, recognition, and return.

Phase 1 evaluates two competing approaches. The first employs a static stillness protocol based on sustained observation of a minimal visual anchor. The second introduces a period of cognitive activation using Rapid Serial Visual Presentation (RSVP) followed by abrupt stillness. The central objective is to determine whether activation-to-stillness transitions function as a useful scaffold for increasing Self-Caught Recognition Events (SCREs).

This document defines the pre-registered experimental protocol, hypotheses, measurements, limitations, and evaluation methodology for the first phase of Project AWAKE.

I. Document Purpose

This document establishes the first official experimental protocol of Project AWAKE (Activation-Assisted Wakefulness and Awareness through Knowledge of Emergent Drift).

Project AWAKE is an exploratory research initiative investigating whether self-recognition of cognitive drift can be accelerated through structured cognitive training environments. The project focuses on a fundamental cognitive cycle commonly observed in both contemplative practice and metacognitive research:

$$\text{Awareness} \rightarrow \text{Drift} \rightarrow \text{Recognition} \rightarrow \text{Return}$$

The primary objective of Phase 1 is to evaluate two competing approaches for facilitating SCREs. The first approach employs a static stillness environment containing minimal external stimulation. The second approach introduces a period of cognitive activation followed by abrupt stillness, with the aim of determining whether activation-to-stillness transitions function as a useful training scaffold.

This document defines the research problem, hypotheses, experimental design, measurement methodology, limitations, and evaluation criteria associated with the first phase of the project. The results will determine whether further investigation and larger-scale experimental validation are warranted.

II. Background

Human cognition is not a continuous state of conscious awareness. During everyday experience, attention frequently shifts between periods of active awareness and periods of unconscious cognitive processing.

A common pattern observed across both contemplative traditions and modern cognitive research can be described as:

$$\text{Awareness} \rightarrow \text{Drift} \rightarrow \text{Recognition} \rightarrow \text{Return}$$

In this cycle, an individual begins in a state of conscious engagement, gradually drifts into automatic or self-generated cognitive activity, eventually recognizes that the drift has occurred, and subsequently returns to the intended object of attention.

The duration between drift and recognition appears to vary significantly between individuals. Some may remain absorbed in thought for extended periods before becoming aware of the drift, while others recognize the transition much more rapidly. Contemplative practices, such as focused-attention meditation, have long suggested that this recognition process can improve through repeated practice.

This observation raises a fundamental question. If individuals become better at recognizing cognitive drift over time, what exactly is improving? Is awareness itself becoming stronger, or is a distinct internal monitoring mechanism responsible for detecting the loss of awareness?

Recent discussions in metacognition, mind-wandering research, and cognitive control suggest that recognition of drift depends upon a monitoring mechanism capable of detecting discrepancies between an intended attentional state and the currently active cognitive state. Project AWAKE investigates whether this specific recognition mechanism can be trained, measured, and experimentally evaluated.

III. Related Work

Project AWAKE builds upon established literature across cognitive psychology, neuroscience, and contemplative studies. The phenomenon of mind-wandering, formally characterized by Jonathan Schooler and others, highlights the frequent decoupling of attention from perceptual inputs. The brain's Default Mode Network (DMN) is strongly implicated in this self-generated cognitive activity.

Furthermore, research into meta-awareness—the explicit knowledge of the current contents of thought—demonstrates that individuals frequently lack awareness of their own cognitive drift. Focused attention meditation studies suggest that this meta-awareness can be cultivated, reducing the latency between drift and recognition.

Finally, Rapid Serial Visual Presentation (RSVP) paradigms are well-documented methods for controlling cognitive load and inducing specific attentional states, providing a robust operational foundation for the activation phases utilized in this experimental protocol.

IV. Research Problem

The central problem investigated by Project AWAKE concerns the nature of cognitive drift recognition.

Many activities appear to improve attention, concentration, or reaction speed (e.g., video games, sports, memory exercises). These activities require continuous monitoring of the external environment and rapid adaptation to changing conditions. However, the ability targeted by Project AWAKE is fundamentally different: detecting changes within one's own cognitive state.

In traditional tasks, the critical event is external. In Project AWAKE, the critical event is internally generated: realizing that attention has drifted or that awareness has been lost.

This distinction raises two critical challenges:

1) Determining whether internal monitoring can be deliberately strengthened through structured training.
2) Determining whether observed changes transfer beyond the training environment into novel contexts, providing evidence that the underlying monitoring mechanism was strengthened rather than just task-specific performance.

By comparing a stillness-only environment with an activation-to-stillness environment, the project seeks to determine whether activation transitions provide a useful scaffold for accelerating self-recognition.

V. Core Observation

Individuals can remain engaged in cognitive activity (thought, memory, internal dialogue) without recognizing that the engagement is occurring. Eventually, a recognition event occurs—the individual becomes aware that thinking is occurring.

This distinction suggests the existence of at least two separable processes:

1) Cognitive activity itself.
2) Recognition of cognitive activity.

Project AWAKE focuses narrowly on the moment an individual realizes that awareness has been lost—referred to throughout this protocol as a *Self-Caught Recognition Event (SCRE)*.

VI. Project AWAKE

The central hypothesis explored by Project AWAKE is that changes commonly associated with awareness training may be partially explained by improvements in the recognition mechanism rather than by abstract changes in awareness itself.

The experiment evaluates whether the latency between drift and recognition can be reduced through carefully designed transitions (activation-to-stillness) compared to static stillness alone.

VII. Definitions

A. Awareness

Conscious access to current experience and cognitive activity.

B. Attention

The allocation of cognitive resources toward a particular object, task, sensation, thought, or experience.

C. Cognitive Drift

The transition from conscious observation to automatic, self-generated cognitive activity without immediate recognition.

D. Self-Caught Recognition Event (SCRE)

A recognition event that originates internally without any immediate external prompt. The participant independently realizes that drift has occurred and actively reports it.

E. Probe-Caught Recognition Event

A recognition event triggered by an external query or prompt from the experimental system.

F. Internal Monitoring

The process responsible for detecting divergence between the intended attentional state and the current cognitive state.

G. Activation Phase

A period of sustained cognitive engagement designed to increase cognitive activity prior to a stillness phase, primarily induced through RSVP.

H. Stillness Phase

A period containing minimal external stimulation, providing an environment where cognitive drift and SCREs can occur with minimal external interference.

I. Activation-to-Stillness Transition

The abrupt change from a period of cognitive engagement to a period of minimal stimulation (Condition B).

J. Transfer

Transfer is operationally defined as performance changes that remain observable when the activation phase is completely removed.

K. Ramp vs. Crutch

A **ramp** is a training scaffold that assists early development while eventually allowing the mechanism to operate independently. A **crutch** is a training condition that produces little or no observable change once the supporting condition is removed.

VIII. Hypotheses and Success Criteria

A. Hypothesis A: The Stillness Hypothesis

A minimal and stable environment is sufficient for the development of internal monitoring. Repeated exposure provides opportunities to recognize drift naturally, strengthening internal monitoring over time without additional stimulation.

B. Hypothesis B: The Activation-to-Stillness Hypothesis

A period of sustained cognitive engagement followed by abrupt stillness provides a more effective training scaffold. The contrast between activation and stillness makes cognitive activity more observable, leading to more frequent or rapid SCREs.

C. The Ramp vs. Crutch Hypothesis

If activation-to-stillness transitions function as a **Ramp**, observed changes should persist during stillness-only transfer testing. If they function as a **Crutch**, observed changes will diminish or disappear when the activation phase is removed.

D. Phase 1 Success Threshold

Phase 1 will be considered successful, and Condition B superior, if the data meets the following operational thresholds:

1) SCRE frequency increases relative to baseline and exceeds observed changes in Condition A.
2) Transfer performance remains measurably above the initial baseline.
3) SCREs remain distributed throughout observation periods (ruling out immediate transition-prompted clustering).

IX. Experimental Design

Phase 1 is an exploratory comparative study intended to evaluate whether activation-to-stillness transitions influence the recognition of cognitive drift. The dependent variables are SCRE frequency, temporal distribution, self-caught to probe-caught ratio, and transfer performance.

Participant count, training duration, recruitment procedures, and scheduling parameters are intentionally excluded from this pre-registration and will be documented separately within the Phase 1 Results Report.

A. Participant Assignment

When multiple participants are available, assignment procedures will be defined prior to data collection and documented in the results report.

B. Initial Baseline Session

Prior to condition assignment, all participants complete a standard Static Stillness initial baseline session. This establishes the pre-training SCRE frequency and allows for precise measurement of subsequent transfer performance.

C. Experimental Conditions

Condition A: Static Stillness Protocol
Participants engage exclusively with a minimal observation environment consisting of a static visual anchor and self-reporting mechanisms.

Condition B: Activation-to-Stillness Protocol
Participants are exposed to sustained cognitive activation via RSVP, followed by an abrupt transition into a stillness environment.

D. Self-Caught and Probe-Caught Reporting

Participants press a designated key immediately upon recognizing a SCRE. To provide a baseline comparison, a small number of randomized probes are introduced. Probe frequency is intentionally minimized to reduce interference.

E. Transfer Evaluation

Following the training period, all participants complete a transfer evaluation session identical to the initial baseline session (Static Stillness Protocol).

X. Condition A: Static Stillness Protocol

Condition A serves as the control condition. Participants are presented with a minimal visual environment consisting of a single static visual anchor. No dynamic visual events are introduced. Participants are instructed to maintain relaxed observation, and upon recognizing cognitive drift, immediately report the SCRE using the SPACE key.

Condition A provides the baseline environment against which Condition B is evaluated.

XI. Condition B: Activation-to-Stillness Protocol

Condition B introduces a structured activation phase before each observation period.

A. Activation Phase

The activation phase consists of an RSVP sequence. Words are presented individually at a fixed rate sufficient to maintain continuous cognitive engagement. Semantic content is not treated as an experimental variable in Phase 1. The RSVP stream serves solely as a cognitive activation mechanism.

B. Transition and Stillness Phase

At the conclusion of the RSVP sequence, the presentation terminates immediately. No warning or countdown is provided. Participants are moved abruptly into the minimal observation environment (identical to Condition A), where they report SCREs.

XII. Session Structure and Numerical Parameters

To ensure precise reproducibility, the following standardized numerical parameters govern all experimental sessions.

A. Protocol Parameters

- **RSVP Rate:** 500 Words Per Minute (WPM).
- **Activation Duration:** 90 seconds.
- **Stillness Duration:** 90 seconds.
- **Cycles per Session:** 6 complete alternating cycles (Condition B) or equivalent continuous stillness blocks (Condition A).
- **Probe Count:** 3 randomized probes per session.
- **Total Session Duration:** 18 minutes.

B. Session Flow

Condition A flows as a continuous 18-minute stillness observation punctuated by reporting and probes. Condition B strictly adheres to the 90s Activation $\rightarrow$ 90s Stillness cycle, repeated 6 times. All reports map to exact system timestamps.

XIII. Measurements

Because drift onset cannot currently be measured directly, all measurements are treated as proxy indicators of internal monitoring performance. Phase 1 assumes that increases in SCRE frequency reflect increased recognition opportunities or reduced recognition latency; this assumption itself remains subject to experimental validation.

A. Primary Measurements

SCRE Frequency:

$$Recognition\ Rate = \frac{Total\ SCREs}{Session\ Duration}$$

Temporal Distribution:
The spread of SCRE timestamps. If SCREs cluster immediately after transition boundaries, the transition functions as an external prompt (Crutch). Even distribution supports internally generated monitoring.

Transfer Performance:
Comparison of transfer evaluation session SCRE rates against the initial baseline session.

B. Secondary Measurements

Self-Caught to Probe-Caught Ratio:
Provides an estimate of how frequently recognition occurs independently of external intervention.

XIV. The Ramp vs Crutch Problem

The distinction between a ramp and a crutch is critical for interpreting results. If SCRE frequency increases during Condition B, participants may simply be sensitive to the structure of the protocol.

Transfer testing is the primary mechanism for resolving this. If observed changes remain present during the stillness-only transfer evaluation session, the evidence supports the Ramp Hypothesis (genuine internal monitoring development). If changes disappear, the evidence supports the Crutch Hypothesis (environment-dependent prompting).

XV. Pre-Registered Predictions

To ensure rigorous evaluation and prevent post-hoc interpretation of data, Project AWAKE pre-registers the following predictions for Phase 1:

- **Prediction 1:** Condition B is expected to produce a measurable increase in SCRE frequency during training sessions compared to Condition A.
- **Prediction 2:** Condition B participants will demonstrate higher transfer performance (sustained SCRE frequency increases) during the transfer evaluation session compared to Condition A participants.
- **Prediction 3 (The Crutch Marker):** If SCRE events in Condition B heavily cluster within the first 15 seconds following the activation-to-stillness transition, the effect will be interpreted primarily as an external prompt (Crutch).
- **Prediction 4 (The Ramp Marker):** If elevated SCRE frequency persists uniformly throughout the 90-second stillness phases and carries over into the transfer evaluation session, the effect will be interpreted as a genuine strengthening of internal monitoring (Ramp).

XVI. Expected Outcomes

All outcomes are considered informative.

- **Outcome A (No Meaningful Difference):** Both conditions produce similar SCRE behavior and transfer performance.
- **Outcome B (Training-Only / Crutch):** Condition B produces superior performance during training but fails to demonstrate transfer above baseline.
- **Outcome C (Strong Transfer / Ramp):** Condition B participants demonstrate sustained changes during transfer testing, fulfilling the success threshold.

XVII. Limitations

- **Indirect Measurement:** The experiment records the moment of recognition, not the moment drift begins.
- **Self-Report:** Relies on subjective participant reporting, susceptible to delayed reporting or accidental inputs.
- **Learning Effects:** Repeated exposure to the testing environment may independently change recognition performance over time regardless of condition assignment.
- **Absence of Physiological Data:** Lacks objective biometric verification (EEG, pupillometry, etc.) of cognitive state changes.

XVIII. Ethics and Disclaimers

Project AWAKE is strictly an exploratory cognitive research protocol.

- **Medical Disclaimer:** This protocol is not intended to diagnose, treat, cure, or prevent any medical, psychiatric, or psychological condition.
- **Voluntary Participation:** All participation is entirely voluntary. Participants may withdraw from the experiment at any time without penalty.

- **Data Privacy:** No personally identifiable information (PII) is required for participation. All recorded session data, timestamps, and inputs are fully anonymized prior to storage and analysis.

XIX. Future Research Directions

Future phases aim to address current limitations by integrating physiological validation (webcam-based eye tracking, pupillometry, EEG), developing adaptive training systems with variable RSVP speeds, and conducting longitudinal mechanism isolation studies to track long-term transfer into everyday attentional tasks.

XX. Conclusion

Project AWAKE investigates whether the mechanism responsible for recognizing the loss of awareness can be trained, measured, and improved. Phase 1 seeks to answer a targeted, experimentally tractable question: Can structured activation-to-stillness environments increase the frequency, speed, or reliability with which individuals recognize their own cognitive drift?

The pre-registered protocol described herein establishes a clear, reproducible, and falsifiable framework. The results will determine whether this methodology represents a promising avenue for understanding and training internal monitoring.

XXI. Version History

Version	Date	Description
0.1 – 0.9	June 2026	Initial concepts, Ramp vs Crutch formalization, and experimental architecture drafted.
1.0	June 2026	Phase 1 Experimental Protocol. Pre-registered predictions, numerical parameters, baseline protocols, and operational definitions finalized.

TABLE I
Project AWAKE Version History

Appendix A: Document Integrity Verification

To maintain research integrity and provide verifiable evidence of chronology and protocol evolution, this document is secured via cryptographic hashing.

Document ID: AWAKE-2026-001
Date of Publication: June 24, 2026
SHA-256 Checksum: Pending Publication Build

XXII. Authorship

A. Principal Investigator

Pushkar Wagh
The Painsparc Company Research Department
The Painsparc Company
Pune, India

Project AWAKE was conceived, designed, and developed by Pushkar Wagh as part of an independent research initiative investigating internal monitoring and the potential trainability of meta-awareness-related processes through structured experimental environments.

B. Citation Recommendation

Wagh, P. *Project AWAKE: Activation-Assisted Wakefulness and Awareness through Knowledge of Emergent Drift — Phase 1 Experimental Protocol*. Version 1.0. The Painsparc Company Research Department, 2026.