

# **The Gettier Grid: A Reflexive Heuristic for Epistemic Volatility**

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## **Abstract:**

A structural model for Gettier cases is proposed, based on four dimensions of epistemic (in)stability: justification, truth, temporal dynamics, and context. Binary coding along these axes enables classification and systematic comparison of epistemically ambiguous cases. The framework integrates perspectival shifts, and temporal dynamics, revealing how these factors produce epistemic failure despite justified true belief.

Case analyses, such as the Student and Charlatan Teacher, demonstrate the model's explanatory reach, heuristic potential, and diagnostic utility. By emphasizing multiperspectivity and interpretive openness, this approach supports a dynamic, reflexive, and context-sensitive epistemology, illuminating the structural mechanisms underlying epistemic luck.

## **Keywords:**

Epistemic Volatility; Epistemic Luck; Gettier Cases; Multiperspectivity; Temporal Dynamics; Contextuality;

## 1. Introduction

Gettier (1963) showed that *Justified True Belief* (JTB) falls short as knowledge, since truth can result from mere epistemic luck (see Gettier, 1963, p. 121). In *Justified True Crisis* (2024; JTC), I argue that dynamic factors—such as change and time—undermine even deductively sound contexts, making a dualistic approach to knowledge necessary.

To uncover the structure of this epistemic disruption, I develop a formalizable, four-dimensional classification system—tracking justification stability, truth stability, temporal dynamics, and context. The heuristic model introduced here is not merely classificatory but analytically reflexive: it reveals how, when, and why epistemic stability breaks down, while accounting for the positioning and the structural conditions under which knowledge fails.

This contribution proceeds by introducing a framework for analyzing Gettier cases, outlining a coding system, and demonstrating its application through selected examples.

## 2. Stability as Structure

The proposed framework introduces a four-dimensional classification of Gettier cases along the axes of justification stability, truth stability, context, and temporal dynamics. This heuristic is constructed from the perspective of observers with progressively expanding access to available—though not exhaustive—information within the epistemic process.

Justification (J) captures whether the basis of the belief remains constant. Stable justification persists even when flawed, maintaining internal consistency. Unstable justification shifts over time due to internal inconsistencies or external disruptions.

Truth (T) tracks the status of the belief's truth. Stable truth entails a traceable and unchanged connection between belief and fact. Unstable truth arises from coincidence, lacking epistemic linkage to the belief-forming process.

Temporal Dynamics (D) identifies when changes in justification or truth occur and layers them in time. In updated cases ( $t_2$ ; unstable), the epistemic state is challenged by new developments, either through narrative time (event-driven change) or at least *epistemic time* (informational update): e. g. Student and Charlatan Teacher (see Schneider, 2024, p. 7). In re-evaluative cases ( $t_3 + t_x$ ; volatile), a second-order reassessment occurs due to additional information. Cases like that of Tom Grabbit are termed not merely unstable but *epistemic volatile*, insofar as they permit original assertions, initially demoted to ignorance, to be subsequently reinstated as knowledge (see Lehrer & Paxson, 1969).

Context (C) refers to external epistemic conditions. Stable context involves subjective or proximate elements such as perception or hallucination. Unstable context introduces novel, objectifying factors that were previously absent and materially shift the epistemic landscape.

The integration of the dimensions yields a four-digit code representing the structural profile of a Gettier case. Each dimension is encoded as follows: Justification (J)—0 = unstable, 1 = stable; Truth (T)—0 = unstable, 1 = stable; Temporal Dynamics (D)—0 = unstable, 1 = volatile; Context (C)—0 = subjective, 1 = objectifying. This results in 16 possible combinations, though not all need to qualify as Gettier cases—for example, there are atypical Gettier cases or verified JTBs that, in dynamic scenarios, do not constitute absolute knowledge.

Each axis demarcates a distinct domain of epistemic vulnerability. Omitting any one obscures a critical path to Gettier-style anomalies. For instance, without temporal dynamics, immediate falsification (e. g., quickly defeated evidence) cannot be distinguished from later

reevaluation (e. g., Tom Grabbit). Likewise, neglecting context blurs the contrast between subjective factors and newly introduced objective realities. Removing truth or justification stability dissolves the boundary between accidentally true and properly anchored beliefs. Hence, all dimensions are necessary to preserve the unique signatures that define Gettier cases. Together, these dimensions capture how JTB and JTC can fail to amount to knowledge in regard to dynamic scenarios. Any scenario can be analyzed by the stability or collapse of its justification, whether its truth is stable or accidental, how time-based shifts alter its status, and how broader contextual changes inject new or evolving evidence. All Gettier cases map onto these criteria, and any novel instance would involve a shift over time in at least one dimension.

Stable justification and truth ( $J = 1, T = 1$ ) reduces the likelihood of Gettier cases, with residual risk arising only from objectifying context ( $C = 1$ ). By contrast, instability in justification or truth—especially when paired with dynamic shifts ( $D = 0$ ) or contextual intrusion ( $C = 1$ )—heightens vulnerability. While time and context could be further refined, the current framework suffices; a deeper dive might consider epistemic stakes and standards.

This classification system yields three benefits. First, it enables a structural diagnosis and second, it enhances comparability by situating cases within a shared formal space—for example, “Fake Barn County” is atypical in exhibiting stable justification and truth yet remains problematic due to an objectifying context (see Goldman, 1976, pp. 772–774). Third, the model accommodates novel or as-yet-unidentified variants, making it a tool for analysis.

### 3. Codes and Perspectives

Despite its accessibility, ambiguity remains inherent to Gettier cases, as illustrated by “Fake Barn County”. This has significant implications for the coding system: it should not be treated as an objectively absolute instrument, but as an epistemically reflexive tool—one that both classifies and invites critical examination of its own presuppositions.

Three core consequences follow: (1) Coding must be context-sensitive: its application should specify the interpretive stance and the assumptions involved. This prevents mechanical use and adds epistemic depth. (2) Rather than seeking a single “correct” code, multiple codings should be juxtaposed to expose the multidimensionality and internal tensions of a case. Such divergences often illuminate the very contours of epistemic instability. (3) Coding serves not as a conclusion but as a point of departure. It enables targeted reconstruction of epistemic failure, contextual shifts, and semantic ambiguity. As such, the system operates heuristically.

The interpretive ambiguity inherent in Gettier cases reveals an epistemological insight: the classification of a case depends fundamentally on how it is read. Different interpretive stances foreground distinct layers of epistemic structure. This is not a contradiction but a reflection of the interpretive openness built into epistemological analysis.

The Student and Charlatan Teacher Case (see Schneider, 2024, p. 7) offers multiple interpretive layers, depending on the observer’s standpoint. From the student’s subjective perspective, the belief that  $2 + 2 = 4$  appears both justified and true. From the perspective of an external analyst, the epistemic structure collapses. From a normatively rigorous epistemological standpoint, the student’s belief—though objectively true—is epistemically deficient. Under stricter norms—reliabilist, safety-based, or causal—the belief fails as knowledge. The justification is unreliable, the student lacks any epistemic control over the truth, and no correction occurs within their cognitive process. The belief may appear justified internally, but

it lacks the external reliability or epistemic responsibility required for knowledge. Depending on the case, additional perspectives may be possible.

Table 1. Perspectives

Perspective	J	T	D	C	Code	Status	Comment
<i>subjective student</i>	1	1	0	0	1100	Knowledge	The justification (J = 1) relies on no mathematical insight and unchallenged trust in the teacher's authority. The proposition "2+2=4" is necessarily true (T = 1), with no temporal dynamics (D = 0) or contextual influences (C = 0). Within this closed epistemic horizon, knowledge appears secure—yet its integrity is illusory, grounded in unexamined trust.
<i>external analyst</i>	0	1	0	1	0101	Gettier Case	Justification fails (J = 0) due to the teacher's unreliability. Though the belief is true (T = 1), the match is accidental. No revision (D = 0), but context shifts (C = 1) as incompetence is revealed. Truth reached by faulty means, exposed from an external vantage.
<i>normatively rigorous</i>	0	0	0	1	0001	No Knowledge	An unreliable source nullifies justification (J = 0); truth is accidental and arguably epistemically void (T = 0). No belief revision (D = 0); context (C = 1) reveals structural unreliability. Result: near-total epistemic failure—under strict norms.

Gettier cases are not mere logical anomalies but epistemic boundary phenomena that hinge on interpretive standpoint and criteria for epistemic failure. Accordingly, the coding system functions not as a final verdict but as an analytic tool—sensitive to ambiguity, perspective, and metatheoretical assumptions. Each coding constitutes an epistemological belief about the structure and depth of epistemic instability.

Turri, Blouw, and Buckwalter's taxonomy—structured by Detection, Threat, and Replacement—captures structural variation among Gettier cases, particularly in terms of how truth-making relations are established, disrupted, and restored. While their framework incorporates temporal features via the dimensions of threat and replacement, it does not explicitly model justificatory dynamics or the perspectival conditions under which epistemic evaluations occur. Moreover, it omits a dedicated treatment of context as an epistemic factor and leaves the semantic structure of belief—whether propositional, objectual, or situational—unexamined. As such, their model is robust but less equipped to diagnose deeper or reflexive forms of epistemic instability (cf. Turri, Blouw and Buckwalter 2017, pp. 242–252).

In contrast, the classification model developed here provides not merely a structural heuristic, but an epistemologically reflexive framework. By integrating justification stability, truth stability, temporal dynamics, and context, it supports a multiperspectival, interpretively open, and diachronically sensitive reconstruction of epistemic instability.

#### 4. Conclusion

The framework developed here advances Gettier analysis by moving from narrative description to structural classification. Through a four-axis model it enables perspectival differentiation and fine-grained comparison of epistemic fault lines.

Epistemic luck is not merely noted but formally dissected: the coding scheme identifies and models its operative mechanisms, allowing both analysis and the systematic construction of novel case types. Central to this is the distinction between stable and unstable constellations, which clarifies when knowledge obtains and when it breaks down.

As a methodological tool, the framework provides a typological and diagnostic matrix for Gettier cases. More broadly, it underpins a dynamic, context-sensitive epistemology—responsive to temporal, perspectival, and structural shifts in the conditions of knowing. In doing so, it offers a procedurally explicit account of how justified belief may, or may not, constitute knowledge under conditions of epistemic instability.

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