

RESEARCH ARTICLE

Reconstructing the Unseen: Psychosis

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Abstract

When criminal responsibility turns on a past psychotic state, the expert is asked to infer what can no longer be directly observed. Unlike competence assessments, criminal responsibility evaluations are inherently retrospective and vulnerable to many issues such as missing records, witness unreliability, and cognitive bias. Contemporary forensic guidance increasingly favors transparent, multi-source assessment over unstructured narrative judgment. Prioritize records proximal to the offence, including collateral accounts. Examine behavior before, during, and after the act. Use structured tools cautiously to support auditability. No tool removes uncertainty or replaces expert judgment. Neurobiological findings and AI-assisted record review may support evidence organization, but neither can directly determine responsibility. The most defensible opinion explicitly defines the material-time window, tests competing explanations, links psychopathology to legally relevant capacities, and clearly states evidentiary limits. Retrospective reconstruction should be presented as a disciplined inferential process, not retrospective certainty.

Keywords: Forensic Psychiatry, Psychosis, Criminal, Review.

1. Introduction

Psychotic disorders are a clinically and legally important issue in justice-involved populations. Studies consistently show that psychotic illness is not rare in these settings. An updated meta-analysis from 43 countries estimated the pooled prevalence of “any psychosis” in prison populations at 4.1%, although heterogeneity across settings was substantial. Even this proportion represents a considerable number of defendants whose mental state may become legally decisive in criminal proceedings. [1]

Criminal responsibility evaluations differ from competence or fitness assessments in a crucial way: they are retrospective. Criminal responsibility opinions require reconstruction of the defendant’s mental state at the time of the alleged offence. This temporal

gap makes such evaluations methodologically more fragile and epistemically complex. [2,3] Turkish forensic psychiatry data demonstrate the same structural pattern. In a retrospective series, the average interval between the alleged offence and psychiatric evaluation was approximately 1.6 years. Consequently, evaluators often must form opinions without contemporaneous clinical observation of the mental state at the material time. [4]

This delay amplifies the influence of incomplete collateral data, witness reliability problems, and memory distortion. For this reason, forensic psychiatry guidelines consistently emphasize that the strength of an expert opinion depends heavily on the quality of underlying factual sources and the transparency of the evaluation method. [2,3,5]

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Importantly, the risks are bidirectional. Failure to recognize genuine psychotic illness may lead to unjust punishment, whereas over-attribution of psychopathology may result in inappropriate exculpation or diversion. Modern forensic guidance therefore emphasizes methodological transparency, structured assessment, and explicit management of cognitive bias rather than rhetorical certainty. [2,3,6,7]

1.1 Conceptual Framework and Debate

Retrospective psychosis reconstruction can be defined as a structured expert opinion. It evaluates whether psychotic symptoms were present during a specific period in the past. It also considers the likely severity of these symptoms and their phenomenological characteristics. The analysis examines how these symptoms may have influenced the person’s behavior at the material time. Finally, it assesses whether this relationship meets the legal threshold for diminished or absent responsibility within the relevant jurisdiction. Criminal responsibility guidance likewise requires an opinion on mental disorder at the material time and its nexus with legally relevant capacities. [3,8]

Its limits should be stated explicitly. Past psychosis cannot be observed directly. It is inferred from records, collateral accounts, self-report, and behavior. The resulting opinion depends on data completeness and source credibility. It cannot be stronger than its evidentiary base. Guidelines accordingly require clear reporting of information sources and assessment limitations. [3,5]

1.2 Comparative Methods Table

Table 1. Comparative Methods Table

Approach to retrospective psychosis reconstruction	Typical inputs	Strengths	Limitations / failure modes
Unstructured clinical judgment	Interview + selective records	Flexible; Captures nuance	Bias-prone; Low inter-rater reliability; Weak data–opinion transparency
Structured instruments (e.g., R-CRAS, DIASS)	Standardized ratings tied to legally relevant constructs	Improves consistency; Makes reasoning more auditable; Shared evaluator language	Still retrospective; Depends on source quality; Risk of misuse as diagnosis rather than structure
SPJ + hypothesis testing (ACH-style)	Multi-source evidence + explicit competing hypotheses	Reduces confirmatory bias; Shows why evidence fits/does not fit each hypothesis	Time- and documentation-intensive; No true ground truth
File-review-only reconstruction	Records, collateral, digital traces; no direct exam	Sometimes unavoidable; Stronger with contemporaneous records	Conclusions must be narrow; Highly dependent on record completeness/credibility; Adversarial sampling risk

This creates a risk of circular reasoning if bizarre conduct is treated as either a clue or a proof of it. A safer approach is multidisciplinary, differential, and bias-aware, rather than relying on single-marker certainty. Forensic assessment literature warns that the mental-disorder evidence can mislead when conclusions outrun method and data quality. [7,9]

For that reason, current models increasingly frame retrospective reconstruction as a structured, hypothesis-driven exercise rather than a narrative defense of one conclusion. Structured professional judgment approaches recommend checklists, a “mental-state-at-the-time-of-the-offense model”, explicit weighting of evidence, and testing of competing explanations such as psychosis, intoxication, anger, or revenge. Criminal responsibility guidance similarly expects consideration of alternative hypotheses and a transparent rationale for preferring one account over another. [3,6,7]

Legal standards vary, but many Western insanity frameworks focus on cognitive impairment (understanding/appreciation). Some systems also consider volitional impairment or impaired behavioral control at the time of the offence. DIASS was developed to help organize the translation from clinical findings to legally relevant capacities, while professional guidance stresses that the expert informs the court rather than decides the ultimate legal issue [2,8].

Convergence with neuroimaging/biomarkers	Clinical data + neuroimaging/other tests	May reduce uncertainty; Emphasizes cross-domain coherence	Risk of reverse inference; Limited individual-level translation; Risk of over/under-interpretation
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Sources: forensic practice guidelines and structured assessment literature. [2,3,8-14]

2. Mechanistic and Scientific Discussion

Psychosis is a clinical syndrome rather than a single-test finding. ICD-11 describes schizophrenia and other primary psychotic disorders as “involving significant impairment in reality, with delusions, hallucinations, disorganized thought or speech, disorganized behavior, and often negative symptoms”. [5] Pathologizing culturally sanctioned beliefs or experiences, and language/interpreter problems may distort symptom assessment. [15]

Neurobiological models can support plausibility but cannot reconstruct a past mental state by themselves. The aberrant salience framework links dopaminergic dysregulation to the abnormal assignment of significance to otherwise neutral stimuli. Later syntheses connect diverse risk factors to presynaptic striatal dopamine dysfunction. These models help explain how psychosis can produce internally coherent but false beliefs, but retrospective case attribution remains a forensic inference rather than a biomarker readout. [14,16,17]

Psychopathology is also dynamic over time. Meta-analytic data from first-episode psychosis show that diagnostic shifts are not rare across longitudinal follow-up, and remission is common enough to be clinically meaningful. A later stable or apparently well presentation therefore cannot confirm or exclude psychosis at the material time. [18,19]

2.1 Data Sources Table

Table 2. Data Sources Table

Data source	Contribution	Key limitations
Defendant interview	Symptom narrative; Subjective meaning; Timeline anchoring	Recall bias; Strategic reporting; Impaired insight
Medical/psychiatric records	Closest-time objective mental state evidence	May be absent/superficial; Setting bias
Police interviews/statements	Time-stamped behavior and speech	Interrogation effects; Intoxication; Limited clinical depth
Collateral informants	Baseline function; Prodrome; Change detection	Bias; Loyalty conflicts; Memory distortion
Digital traces	Time-stamped cognition/affect proxies; Consistency checks	Context gaps; Interpretation bias; Performative behavior

For this reason, forensic guidance prioritizes time-anchored collateral evidence. The AAPL insanity guideline directs evaluators to examine the defendant’s thinking and behavior before, during, and after the alleged offence. It recommends the use of collateral information to test self-report and detect malingering. Evaluators should also review records from medical, school, work, custodial, and personal communication or social media sources close to the offence period. [2]

Structured instruments can improve the auditability of retrospective judgments. Early RCRAS studies reported satisfactory cross-center reliability. Mean kappa values for key decision variables were around 0.80. DIASS was later developed to structure insanity evaluations around legally relevant capacities. Studies reported substantial inter-rater reliability for this instrument. These tools do not replace expert judgment, but they can make reasoning more explicit and reviewable. [10,11]

Real-world uptake of instruments is variable and potentially consequential. In a Norwegian review of 500 criminal responsibility reports, instruments were used in 50% of cases. This does not prove causation, but measurement choices and report structure may shape inference, therefore it should be justified rather than treated as methodological ornament. [20]

Custodial records	Observed behavior; Compliance; Functioning	Institutional effects; Medication; Adaptation
Structured instruments	Standardization; Transparency; Over-reporting flags	Not standalone; False positives; Circularity risk
Neuroimaging/biomarkers	Supportive convergent evidence	Low individual validity; Overinterpretation risk

Sources: AAPL guideline data-source recommendations, CAPL report-writing guidance, and validity-testing literature. [2,3,5,21-23]

2.2 Proposed Structured Framework for Retrospective Psychosis Reconstruction

A structured six-step framework for retrospective reconstruction, progressing from defining the

Table3. Core task

Step	Core task
Step 1	Define the material-time window
Step 2	Map all data sources and weight source quality
Step 3	Reconstruct symptom domains
Step 4	Test alternative explanations
Step 5	Translate findings into legally relevant capacities
Step 6	State uncertainty and evidentiary limits

2.3 Differential Diagnoses and Alternative Explanations

Retrospective psychosis reconstruction should be treated as an error-aware task. The main threats are ordinary but recurrent: confirmation, allegiance, hindsight, cultural, and gender bias. Recent forensic-psychiatry reviews favor structured methods and “considering the opposite” as key safeguards, and broader forensic mental-health literature also highlights confirmation bias, base-rate neglect, and hindsight bias as common error sources. [6]

Memory is reconstructive, not archival. Reactivated memories can become labile and be modified by post-event information, while false memories may be factually wrong yet sincerely believed. In delayed forensic reconstructions, repeated questioning, legal coaching, and emotional retelling therefore create a material risk of distorted recall. [24,25]

Intoxication is both a confounder and often a legal boundary condition. Review evidence indicates that alcohol and cannabis can, under some conditions, increase false memory and suggestibility, depending on dose and delay. It also matters twice in psychosis reconstruction: substances may cause psychotic symptoms and later distort recall. ICD-11 accordingly draws explicit boundaries for substance-induced psychotic disorders. [15,26]

material-time window to integrating evidence into legally relevant capacities while explicitly addressing uncertainty.

Symptom presentation must also be considered. Turkish literature defines simulation (in Turkish “TEMARUZ”) as the intentional production of false symptoms or the deliberate exaggeration of existing symptoms for secondary gain. The Turkish validation study describes M-FAST as a brief structured interview derived from SIRS and suitable for use in high-workload clinical and institutional settings. More broadly, malingering literature defines feigned psychotic symptoms as intentional overproduction for external gain, while guidelines stress collateral verification because genuine illness and exaggeration can coexist. [21,27]

A final pitfall is circular interpretation of validity data: using disputed self-report to explain away deviant validity scores. Recent validity-test literature instead recommends neutral terms such as “over-reporting” or “underperformance,” emphasizes that such tests address report credibility rather than intent, and treats abnormal results as signals for further inquiry and collateral checking. [22,23]

2.4 Clinical and Forensic Implications

Retrospective psychosis reconstruction is most useful to courts when it is methodologically disciplined. Forensic guidance assigns the expert a limited role: to explain psychiatric findings and their functional relevance to the legal test. Retrospective capacity literature draws the same boundary by asking the

expert to describe severity and functional impact rather than decide the legal issue. [2,3]

Assessment quality rises or falls with its information base. CAPL guidance states that a weak, incomplete, or biased factual foundation will produce a similarly flawed assessment. The report should therefore make the chain from sources and findings to inferences and opinion explicit, and should identify missing records, inconsistent collateral, or other limits that constrain conclusions. [3,5]

Report structure is therefore evidentiary, not cosmetic. AAPL and CAPL guidance emphasize documenting confidentiality cautions, the purpose of the evaluation, the sources reviewed, dates, sometimes lengths of interviews, and information. These features allow the parties and the court to test where uncertainty enters the opinion. [2,3,5]

Misclassification risk should also be stated openly. Overcalling psychosis may distort criminal-responsibility opinions, whereas it may obscure the relevance of severe mental illness. Practice guidelines also note that recommended methods not to guarantee accuracy and that different fact patterns and legal standards may require different approaches. This is why transparent methodology is more defensible than rhetorical certainty. [2,3,7]

2.5 Future Perspectives

The next advances are likely to be procedural rather than purely biological. Bias reviews in forensic psychiatry suggest that self-awareness alone is a weak debiasing strategy, whereas structured methods and “considering the opposite” are more promising. This supports standardized workflows, explicit hypothesis testing, and routine documentation of source quality as auditable practice. [6,7]

AI may become a useful support tool, but its chief danger is false authority. Recent work on insanity evaluation suggests that AI could improve inter-subjectivity, yet there is still no accepted ground truth for insanity labels, no agreed accuracy threshold, and no settled ethical safeguards. AI should assist record review and evidence organization, not decide responsibility. [28]

The safer AI pathway is narrow and auditable. NLP can extract symptom-relevant material from large records. It can also organize information for cross-document comparison. However, these outputs should remain descriptive. They should support SPJ/ACH-style reasoning, not replace it. Any deployment

should therefore be explainable, bias-aware, and clearly separated from the final legal inference. [28-30]

Better standards will likely come from multicenter reliability research and wider use of structured procedures where appropriate. RCRAS showed satisfactory cross-center reliability. DIASS was developed and validated to improve consistency and reliability, including across jurisdictions. Norwegian observational data further suggest that instrument use is associated with both diagnostic and forensic conclusions. Method choice itself should be reported as a quality variable. [20]

3. Conclusion

Retrospective psychosis reconstruction is a high-stakes forensic task because it asks experts to infer a past, unobservable mental state and translate that inference into legally relevant functional conclusions. The literature consistently describes this task as “predicting the past.” It is performed under conditions of time delay, uncertain witness credibility, and incomplete collateral evidence. These are not incidental obstacles. They are core features of the method.

What makes the approach credible is method, not rhetoric. First, the material-time period should be clearly defined. The evaluation should then rely on multiple collateral sources. Symptom domains should be described in a structured way, with attention to cultural context. Confounders, especially intoxication, must be assessed systematically. Alternative explanations should be actively tested. Validity and credibility tools may be used, but only cautiously and without circular reasoning. In practice, this means a transparent, auditable chain from sources to conclusions, plus explicit uncertainty bounds and scenario sensitivity.

Looking forward, improvements will likely come from standardized workflows, better reliability research, and carefully constrained uses of AI that enhance evidence visibility without replacing clinical–forensic reasoning. The key requirement is that any innovation be bias-aware, explainable, and court-defensible, strengthening consistency while preserving the expert’s obligation to clearly separate what is known, what is inferred, and what remains uncertain.

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