



National Tile and Stone Authority

NTSA Forensic Principles Series

Challenge Your Own Opinion Before Someone Else Does

Why the Best Time to Find a Weakness Is Before Deposition

We have investigated failures in which the first explanation appeared to fit almost everything.

A tile floor may sound hollow in broad areas, contain loose pieces, and show cracking near transitions. Inadequate mortar contact becomes an obvious theory. It is familiar, technically plausible, and easy to explain.

Then removal exposes a more complicated assembly.

Some pieces show limited contact. Others show substantial transfer. Several separations occur at a different interface. The first theory may explain part of the distress, but not the entire pattern.

The opinion becomes stronger only after the expert stops asking how to prove the theory and starts asking what would prove it wrong.

That habit supports another essential forensic principle:

Challenge your own opinion before someone else does.

The First Explanation Is a Working Theory

Experience allows an expert to recognize familiar patterns quickly. That is one of its greatest values.

It is also where discipline becomes most important.

The first plausible explanation should guide the investigation, not end it. It is a working theory that must be compared with the physical evidence, the project history, the test results, and the conditions that do not fit.

A theory may be reasonable and still be incomplete. It may explain one area but not another. It may identify a deficiency without establishing causation. It may fit the visible condition while failing at the concealed interface.

The danger begins when the expert becomes invested in being right.

Once that happens, the investigation can quietly shift from testing the theory to protecting it.

Confirmation Bias Can Begin Quietly

An expert does not need to be dishonest or consciously acting as an advocate to favor a developing opinion.

Once a theory begins to fit, supporting evidence naturally receives attention. A conflicting observation may appear unimportant. An inconvenient test result may be treated as an exception. A missing fact may be supplied by an assumption that seems reasonable.

The retaining party may also have a well-developed theory before the expert becomes involved. That theory may identify the right questions, but it should not determine the answers.

The expert must deliberately interrupt that process by asking:

What evidence does not fit this explanation?

What should be present if the theory is correct?

What finding would make the theory less likely?

Which part of the opinion depends on an assumption rather than an established fact?

Those questions are not signs of doubt. They are part of a reliable investigation.

A Theory Should Make Testable Predictions

A causation theory should do more than sound plausible. It should predict what the investigation is likely to reveal.

If a particular mechanism is said to have caused the failure, the expert should consider where the distress should occur, which interfaces should show evidence of that mechanism, what physical pattern should be present, and whether the timing and distribution are consistent with it.

The evidence may not display every predicted feature. Construction assemblies are affected by workmanship, materials, exposure, use, and repairs, and more than one mechanism may be operating at the same time.

But a theory that repeatedly fails to predict the observed evidence should not be preserved merely because it was the first explanation offered.

When testing is unavailable or the assembly has changed, the limitation should be stated. Missing evidence does not allow the expert to assume that the predicted condition once existed.

Look for Evidence That Does Not Fit

Contradictory evidence can be more informative than additional evidence that merely supports the preferred theory.

A crack that does not align with the proposed source of movement, a sample that separates at a different interface, or an area that contains the same alleged deficiency without the reported distress may require the opinion to be narrowed or reconsidered.

One inconsistent finding does not automatically defeat an otherwise well-supported explanation. It may reflect a local condition, a repair, a different construction sequence, or a separate mechanism.

It still must be addressed.

The expert should not explain away an inconvenient finding before determining whether it is actually inconsistent with the theory. The correct question is not, "How can this be made to fit?"

The correct question is, "What does this finding require us to reconsider?"

Compare Reasonable Alternatives Fairly

Challenging an opinion does not require the expert to test every imaginable cause.

The alternatives should be reasonable, technically possible, and connected to the observed condition. Remote possibilities do not deserve the same weight as explanations supported by the project history and physical evidence.

The important point is to apply fair and proportionate scrutiny to each meaningful alternative.

An expert should not accept assumptions for the preferred theory while demanding absolute proof from every competing explanation. Nor should an alternative be mentioned in a report only so it can be dismissed without analysis.

Useful questions include:

What other mechanism could produce the same observation?

Which findings favor one explanation over another?

What evidence would make the preferred explanation less likely?

Could more than one mechanism have materially contributed to the condition?

The stronger opinion is the one that best accounts for the full body of evidence, including the evidence that initially appeared inconvenient.

A Correct Deficiency Does Not Prove the Entire Theory

Finding a real deficiency can create false confidence because part of the analysis is demonstrably correct.

Limited mortar contact, an improper transition, inadequate support, or a departure from an applicable instruction may be clearly documented. The deficiency may require repair and may be relevant to the reported failure.

It does not automatically establish that the deficiency caused every documented condition, that it was the sole cause, or that the proposed repair scope follows from causation.

The self-challenge is simple:

Does the deficiency correspond to the location, pattern, interface, and timing of the reported distress?

Are similar deficiencies present in areas that continue to perform?

Does another condition explain the evidence more completely?

A correct observation should not be allowed to carry more of the opinion than the evidence permits.

Do Not Protect the Time Already Invested

The longer an expert has worked on a theory, the harder it can become to abandon it.

Testing may have been performed. Meetings may have occurred. Counsel may have evaluated the case based on a preliminary view. A draft report may already exist.

None of that converts an unsupported opinion into a defensible one.

An opinion should change when the evidence changes. Revising it before the report is issued or before testimony is not a failure of expertise. It is evidence that the analysis remained open to correction.

The more serious failure is recognizing a material weakness and protecting the earlier conclusion because too much time has already been invested in it.

Scope and Cost Do Not Excuse Untested Certainty

Not every assignment permits unlimited inspection, destructive testing, laboratory analysis, or document review.

A preliminary evaluation may be intentionally narrow. Budget, access, timing, and preservation of evidence may restrict what can be done.

Self-challenge must remain proportional to the assignment, but the opinion must also remain proportional to the work performed.

When a meaningful alternative cannot be evaluated within the authorized scope, the expert should identify the limitation and explain what additional work may be needed. The expert should not imply that an alternative was eliminated when it was never adequately evaluated.

A limited opinion can still be valuable.

It becomes vulnerable only when limited work is presented as though it answered a question the investigation did not reach.

Tell Counsel When the Theory Changes

The retaining attorney should learn about a material weakness from the expert, not from opposing counsel during deposition.

When the evidence requires a change, the expert should explain what changed, which finding caused the change, what remains supported, and whether further investigation could resolve the issue.

That conversation may be uncomfortable. It may affect claims, defenses, repair positions, or settlement analysis.

It is still part of the expert's duty.

An expert does not help the client by preserving a theory that will not survive scrutiny. Early bad news allows counsel to make informed decisions. Late bad news may become material for impeachment.

Document the Reasoning That Survived

A final report does not need to become a diary of every theory considered during the investigation.

It should, however, make the reasoning traceable. The material observations, assumptions, limitations, test results, and significant alternatives should be organized well enough for the expert to explain why the final opinion survived the challenge.

Before the report is issued, the expert should be able to answer:

What facts support this opinion?

What facts appear inconsistent with it?

What reasonable alternatives were considered?

What would cause the opinion to change?

Which conclusions are strong, and which remain qualified?

If those questions cannot be answered clearly, the opinion is not yet ready for opposing counsel.

Final Thoughts

The strongest expert opinion is not necessarily the first one reached or the one expressed with the greatest confidence. It is the opinion tested against the evidence most likely to defeat it.

Self-challenge does not require endless investigation. It requires a deliberate effort to identify material weaknesses, evaluate reasonable alternatives, and distinguish established facts from assumptions.

Sometimes that confirms the original theory. Sometimes it narrows or changes the opinion. Each result is preferable to discovering the weakness under oath.

Find the weakness before the opinion is issued.

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