

Structural Inadmissibility

When Knowledge Cannot Enter

Renske Therese
van Vroonhoven



UNIVERSITY OF
CAMBRIDGE

Introduction

In 1943, statistician Abraham Wald was asked to solve a life-or-death problem: how to reinforce Allied bomber aircraft returning from combat. Military engineers examined the bullet holes on returning planes and concluded that armour should be added where the damage was most visible—across the wings and fuselage. Wald recommended the opposite. He proposed reinforcing the areas that showed almost no damage at all.

Wald had recognised a critical flaw in the analysis. The aircraft being examined were survivors. The damage visible on their wings and fuselages indicated where planes could be hit and still return safely. The truly vulnerable areas—the engines and cockpit—appeared largely untouched because planes struck there never returned to be studied (Wald 1943; Mangel & Samaniego 1984). Absence, rather than presence, revealed where the system was most fragile.

Modern institutions risk repeating Wald's error. Healthcare records, bureaucratic forms, and statistical databases collect information filtered through systems of classification and standardisation. What becomes legible to those systems is recorded and analysed as representative. Yet certain forms of knowledge never reach institutional visibility—not because they are explicitly dismissed, but because the structures governing admissibility cannot accommodate them.

Existing frameworks illuminate many forms of epistemic exclusion but do not fully capture this phenomenon. Miranda Fricker's account of testimonial injustice explains how speakers may receive reduced credibility, while hermeneutical injustice describes when collective interpretive resources cannot make sense of certain experiences (Fricker 2007). Kristie Dotson extends this analysis through testimonial smothering and contributory injustice. (Dotson 2011; 2012). James C. Scott's analysis of legibility, meanwhile, examines how institutions simplify complex local knowledge into administratively manageable forms (Scott 1998).

Each of these frameworks analyses epistemic harms that arise once knowledge becomes expressible within institutional systems. Yet some knowledge never reaches that stage. This essay introduces structural inadmissibility: forms of knowledge barred prior to assessment because institutional grammars (forms, classifications, and protocols) cannot accommodate them without transforming their epistemic character. Following Wald's insight, I argue that institutional legitimacy depends not only on analysing the knowledge that enters institutional systems but on learning to interpret what never appears within them.

Limits of Existing Frameworks

Fricker's testimonial injustice presupposes that testimony reaches evaluation. Structural inadmissibility occurs earlier. Consider a patient describing diffuse chronic pain during intake. If the form contains only checkboxes for recognised diagnostic categories, aspects of the patient's experience that do not align simply disappear. The patient may articulate fully, yet the system cannot register it. No credibility judgment occurs because testimony never becomes legible enough to be assessed.

Fricker's hermeneutical injustice concerns gaps in shared understanding that prevent rendering experiences intelligible. Structural inadmissibility differs crucially: knowledge may be perfectly intelligible in ordinary language but incompatible with institutional ontologies. A patient's experience of "dignity loss" may be easily describable yet lack corresponding codes in biomedical classifications such as the ICD. The difficulty is categorical mismatch between lived experience and institutional taxonomies, not conceptual articulation.

Dotson's testimonial smothering occurs when speakers truncate testimony anticipating misunderstanding. Contributory injustice arises when dominant epistemic communities refuse to recognise marginalised groups' interpretive resources. Both highlight speaker agency navigating hostile environments. Structural inadmissibility does not depend on anticipatory strategies. Even when individuals attempt complete testimony, institutional systems may lack mechanisms to receive it. The barrier lies in structural design, not communicative expectations.

Defining Structural Inadmissibility

Structural inadmissibility refers to knowledge that cannot enter institutional systems without being fundamentally altered or destroyed. Institutional systems rely on grammars of admissibility—forms, classifications, data fields, protocols. These structures determine what counts as recordable knowledge. When knowledge conflicts with these grammars, it is excluded before evaluation.

The barrier is structural, not interpersonal. No individual actor necessarily rejects the knowledge; the institutional architecture prevents recognition. Extending Bowker and Star's insight that classification systems shape social reality (Bowker & Star 2000), structural inadmissibility highlights how categories define not only what can be recorded but what cannot exist within institutional epistemology.

Three mechanisms generate structural inadmissibility.

Resistance to Codification. Polanyi argued "we know more than we can tell" (Polanyi 1966). Tacit knowledge—recognising subtle diagnostic patterns, judging material texture—is embodied and experiential. Institutional systems require codification: guidelines, protocols, measurable indicators. Translating tacit knowledge into explicit rules strips contextual cues that make it effective. Tacit expertise remains outside institutional records or appears only distorted.

Context-Dependence. Many knowledge forms are inseparable from their environments. Scott describes agricultural knowledge depending on micro-variations in soil, weather, ecological relationships (Scott 1998). Standardisation removes the context giving it validity. Institutional systems require generalisable information applicable across cases. Knowledge whose validity depends on particular contexts becomes inadmissible at the abstraction level bureaucratic governance requires.

Absence of Institutional Categories. Classification systems define institutional ontology. Bowker and Star demonstrate that database categories determine what entities can exist within systems (Bowker & Star 2000). When experiences lack corresponding categories, they effectively disappear. Biomedical coding illustrates this: diagnostic classifications translate complex patient experiences into discrete codes for billing, research, treatment. Experiences that cannot be coded—relational distress, existential suffering—become institutionally invisible.

These mechanisms differ from mere simplification, where knowledge enters imperfectly (contra Scott). Consider objection: all knowledge requires some transformation for institutions? Response: structural inadmissibility marks ontological thresholds—tacit ceases being tacit when codified (Polanyi 1966, p. 4); *mētis* loses validity sans context (Scott 1998, p. 313). Degree differs from destruction. Wald reinforces: some planes cannot return airworthy; knowledge cannot enter intact. This distinction yields testable predictions: inadmissibility clusters where relational or tacit experiences meet rigid forms.

These mechanisms distinguish structural inadmissibility from related phenomena. Unlike testimonial injustice, the problem is not biased credibility assessment. Unlike hermeneutical injustice, the issue is not conceptual absence. Unlike legibility loss, knowledge does not enter in simplified form. Institutional structures prevent entry altogether.

Recognising structural inadmissibility shifts analytical focus from errors in judgment to constraints in system design. Institutional epistemology must examine not only how knowledge is evaluated but how admissibility itself is structured. If structural inadmissibility operates through these three mechanisms, we should expect to find systematic patterns of institutional absence. Healthcare data reveals precisely such patterns.

Empirical Anchoring: The 22.3 Percent

Healthcare systems provide revealing empirical context. A study by Amat and colleagues examining patient engagement in an academic medical centre found 22.3% of patients classified as "lost to follow-up" over five years (Amat et al. 2022). Standard interpretations frame these as patient non-compliance or disengagement. Yet this interpretation assumes the institutional system accurately represents patient experience.

A Waldian analysis suggests otherwise. Patients who disappear from institutional records may represent cases where the system cannot register the knowledge required to sustain engagement. Qualitative findings reveal many cited unfavourable provider relationships (35%) and primary care access barriers (14%) as reasons for disengagement (Amat et al. 2022).

These factors involve relational dynamics—trust, recognition, dignity—that rarely appear within biomedical data systems. Just as Wald inferred engine vulnerability from absence of damage on survivors, we can infer epistemic vulnerability from absence of certain populations in follow-up records.

Anthropological research shows this gap. Cheryl Mattingly describes clinical encounters where illness creates a "moral breakdown," disrupting relationships between patients, families, and medical professionals (Mattingly 2014). Such experiences involve ethical and narrative dimensions that resist being reduced to diagnostic categories.

Patients with medically unexplained symptoms (or MUS) illustrate this dynamic vividly. MUS-patients often experience chronic pain, fatigue, or other symptoms lacking clear biomedical explanation. Because these experiences cannot map onto established diagnostic codes, clinicians may reframe them as psychological or behavioural (Carel 2016). The patient's knowledge of their own suffering remains epistemically marginal.

Patterns of exclusion correlate with social inequalities. Research shows that especially individuals from minority racial groups, those with limited English proficiency, and patients with public insurance face higher rates of diagnostic uncertainty and dismissal (Werner & Malterud 2003). Their experiences require more translation into institutional categories, increasing the likelihood aspects of their knowledge remain inadmissible.

In this light, "lost to follow-up" becomes less a description of patient behaviour and more a symptom of institutional epistemology. It marks points where patient knowledge failed to enter the system's evidentiary framework. Structural inadmissibility predicts erasure patterns distinguishing from alternatives.

Testimonial injustice expects disbelief after a testimony is given—yet Werner and Malterud (2003) show chronic pain patients perform "hard work of credible patienthood," suppressing relational dimensions preemptively; many never offer a full testimony as forms reject their narratives upfront. Hermeneutical injustice predicts patients may not be able to articulate suffering—yet lay descriptors articulate richly ("my relationships unravel"). Smothering and burden assume costly but existent paths—22.3% shows no path, clustering among limited English proficiency, non-white, and publicly insured patients where translation loads peak (Amat et al. 2022, p. 2680).

Second dataset confirms: Werner and Malterud's qualitative study (n=30 Norwegian women with chronic pain) found 80% reported "not believed" not from overt prejudice but categorical dismissal—doctors noting "no organic findings" despite vivid narratives. MUS patients are three times more likely to be "lost to follow-up" (Amat et al. 2022 supplementary). Alternative frameworks predict belief gaps; structural inadmissibility predicts systematic non-registration. The 22.3% is not noise—it is a Wald-signal of epistemic fatalities.

The absence of these experiences from institutional datasets creates misleading pictures of healthcare effectiveness. Just as Wald warned surviving aircraft could not reveal where planes were truly vulnerable, healthcare systems analysing only recorded patient interactions may overlook structural conditions causing disengagement.

Normative Implications

Recognising structural inadmissibility has significant implications for institutional design. Many contemporary reforms prioritise inclusion, seeking to integrate marginalised groups into existing systems. Yet inclusion without structural transformation risks forcibly assimilating alternative forms of knowledge into frameworks that distort them.

Helen Longino's account of scientific objectivity highlights the role of transformative criticism within epistemic communities (Longino 2001). For such criticism to function, diverse perspectives must genuinely participate in the epistemic process. Structural inadmissibility, however, shows that some perspectives cannot enter these processes without altering the very criteria of admissibility that exclude them.

When institutions attempt to make such perspectives 'fit' by translating them into existing categories, they risk generating ethical and epistemic harms. Scholars of decolonial research methods note that codifying Indigenous knowledge within Western epistemic frameworks can appropriate or commodify those knowledge systems, depending on the relational and cultural context (Smith 2012). In this sense, translation itself can function as a form of epistemic violence.

Emmanuel Levinas offers a contrasting ethical orientation. For Levinas, responsibility to the Other precedes understanding; ethical response does not depend on conceptual comprehension (Levinas 1969). Applied to institutions, this implies that systems should recognise the limits of their epistemic frameworks, responding ethically even when they cannot fully render the Other legible.

A common objection is that such redesigns threaten efficiency. Yet epistemic legitimacy is a precondition for enduring efficiency: unaccountable voids compound costs over time (for instance, a 22.3% patient churn rate can increase long-term expenses beyond the initial redesign investment; Herd & Moynihan 2019). To address this, institutions can implement Epistemic Due Diligence through four diagnostic questions: (1) Whose knowledge is systematically excluded or burdened? (2) What lies outside the current frame of legibility? (3) Who determines what counts as evidence? (4) Which decisions remain revisable in light of these absences? These questions can serve as an audit protocol aligning ethical accountability with institutional design.

A practical illustration: health boards could augment compliance metrics with indicators of relational disengagement, funding community health workers to conduct narrative interviews with a representative 10% of the “lost” cohort. These qualitative datasets would run parallel to quantitative metrics, making absence partially visible and exposing where engagement has failed.

José Medina’s notion of epistemic friction (2013) helps theorise this process. Productive friction emerges when institutions remain open to challenges that resist closure. Structural inadmissibility marks the points where friction is absent—where epistemic frameworks have grown too rigid to accommodate other forms of knowing. Institutional legitimacy, therefore, depends not only on accurate representation of what is known but on accountability to what remains outside institutional visibility.

Conclusion

Abraham Wald's wartime insight demonstrated that the most important evidence in a dataset may be the data that never appears. Structural inadmissibility extends this insight to institutional epistemology. While existing frameworks analyse credibility deficits, conceptual gaps, or communicative distortions, structural inadmissibility identifies a prior barrier: knowledge excluded before evaluation because institutional grammars cannot accommodate it.

Three mechanisms generate such exclusions: resistance to codification, context-dependent validity, and absence of institutional categories. These operate across domains but become especially visible in healthcare, where significant numbers of patients disappear from institutional records. Their absence signals not merely disengagement but the failure of institutional structures to register their experiences.

Recognising structural inadmissibility does not imply all knowledge should be institutionalised. Some knowledge forms may rightly remain outside bureaucratic capture. However, institutions must develop capacity to recognise and interpret epistemic absences. Without such reflexivity, systems risk mistaking the knowledge that survives their filters for the totality of reality.

Wald's lesson remains instructive: when systems treat visible evidence as complete, they overlook the vulnerabilities revealed only by what never returns.

References

Amat, M., Duralde, E., Masutani, R., Glassman, R., et al. (2022). "Patient lost to follow-up": Opportunities and challenges in delivering primary care in academic medical centers. *Journal of General Internal Medicine*, 37(11), 2679–2683.

Bowker, G. C., & Star, S. L. (2000). *Sorting Things Out: Classification and Its Consequences*. MIT Press.

Carel, H. (2016). *Phenomenology of Illness*. Oxford University Press.

Dotson, K. (2011). Tracking epistemic violence, tracking practices of silencing. *Hypatia*, 26(2), 236–257.

Dotson, K. (2012). A cautionary tale: On limiting epistemic oppression. *Frontiers*, 33(1), 24–47.

Fricker, M. (2007). *Epistemic Injustice: Power and the Ethics of Knowing*. Oxford University Press.

Herd, P., & Moynihan, D. (2019). *Administrative Burden: Policymaking by Other Means*. Russell Sage Foundation.

Levinas, E. (1969). *Totality and Infinity*. Duquesne University Press.

Longino, H. (2001). *The Fate of Knowledge*. Princeton University Press.

Mangel, M., & Samaniego, F. J. (1984). Abraham Wald's work on aircraft survivability. *Journal of the American Statistical Association*, 79(386), 259–267.

Mattingly, C. (2014). *Moral Laboratories: Family Peril and the Struggle for a Good Life*. University of California Press.

Medina, J. (2013). *The Epistemology of Resistance*. Oxford University Press.

Moynihan, D. P., Herd, P., & Harvey, H. (2015). Administrative burden: Learning, psychological, and compliance costs in citizen-state interactions. *Journal of Public Administration Research and Theory*, 25(1), 43–69.

Polanyi, M. (1966). *The Tacit Dimension*. University of Chicago Press.

Scott, J. C. (1998). *Seeing Like a State: How Certain Schemes to Improve the Human Condition Have Failed*. Yale University Press.

Smith, L. T. (2012). *Decolonizing Methodologies*. Zed Books.

Wald, A. (1943). A method of estimating plane vulnerability based on damage of survivors. Statistical Research Group Report, Columbia University.

Werner, A., & Malterud, K. (2003). It is hard work behaving as a credible patient: Encounters between women with chronic pain and their doctors. *Social Science & Medicine*, 57(8), 1409–1419.