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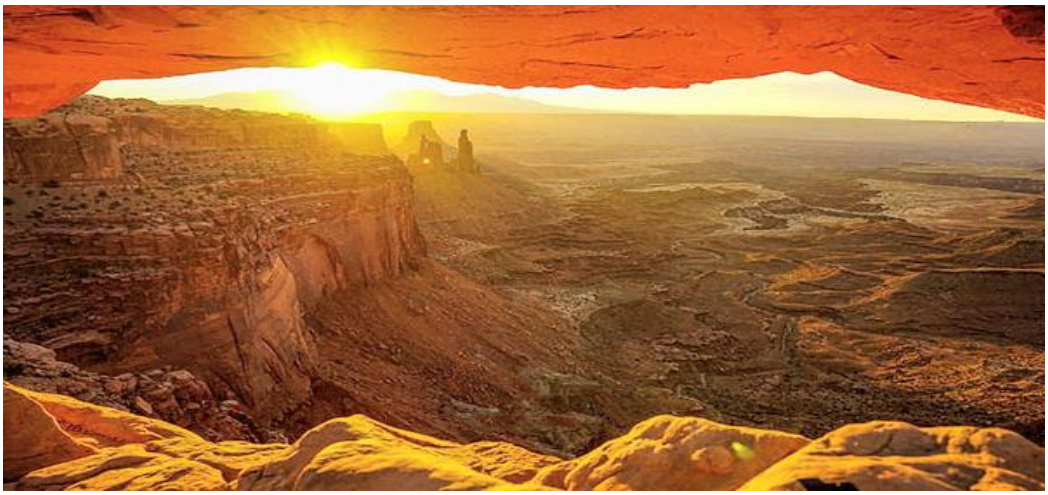

REPRESENTATIONAL MEASUREMENT FAILURE IN HEALTH TECHNOLGY ASSESSMENT

THE NETHERLANDS: THE DUTCH CONTRIBUTION TO NONSENSE ON STILTS IN HEALTH TECHNOLOGY ASSESSMENT

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INTRODUCTION

This Working Paper is not motivated by dissatisfaction with a particular national HTA system, nor by disagreement over policy preferences or distributive ethics. It is motivated by a far more fundamental concern: the obligation to defend the epistemic achievements of science since the Scientific Revolution against their quiet abandonment in contemporary health technology assessment. The issue addressed here is not whether HTA should inform decisions, but whether it may continue to claim scientific legitimacy while rejecting the conditions that make scientific knowledge possible.

Since the seventeenth century, scientific progress has depended on a single, non-negotiable principle: numerical claims must be constrained by the empirical structures they purport to represent [1]. Measurement is not the assignment of numbers for convenience; it is the lawful mapping of observable relations onto numerical systems such that arithmetic preserves meaning. This insight, developed through physics, astronomy, chemistry, and later formalized in representational measurement theory, marks the boundary between science and numerology [2]. To reject it is not to modernize science, but to regress behind it.

Health technology assessment now stands at precisely this boundary. Across jurisdictions, HTA routinely performs arithmetic on quantities whose measurement properties have never been established. Utilities are multiplied, aggregated, and compared. Composite indices are treated as magnitudes. Simulation outputs are presented as evidence. Yet when confronted with the axioms that determine whether such operations are admissible, HTA increasingly responds not with refutation or revision, but with redefinition. Measurement is displaced by deliberation. Falsifiability is softened into "decision support." Scientific constraint is replaced by procedural legitimacy. The seminal contribution of Stevens in 1946 for allowable arithmetic and the scales of measurement is of no consequence or just unknown [3] .

The Dutch case is exceptional not because it departs from this pattern, but because it articulates it most clearly and exports it most effectively. Dutch HTA does not merely inherit measurement failure through silence or diffusion of responsibility. It theorizes it. It justifies arithmetic without measurement by appeal to pluralism, social values, and deliberation. In doing so, it provides an epistemic template that other HTA systems can adopt to neutralize measurement critique without abandoning quantitative authority.

This Working Paper is therefore obligatory. If the Dutch contribution to HTA is left uninterrogated at this level, the rejection of representational measurement axioms will be normalized as sophistication rather than recognized as epistemic rupture. The progress of science since Galileo, Newton, and their successors was not a matter of replacing judgment with numbers; it was a matter of discovering when numbers mean something. To abandon that discovery while continuing to use arithmetic is not methodological pluralism. It is the rejection of normal science.

The purpose of this paper is to show that the Dutch HTA framework constitutes a self-protecting belief system, a memeplex, that cannot defend itself against the standards of science because it has placed those standards out of bounds [4]. This is not an accusation. It is a diagnosis. And it must be

made explicit, because systems that cannot be falsified cannot learn, cannot correct error, and cannot contribute to the evolution of objective knowledge.

SECTION I

THE DUTCH MEMEPLEX

To understand the Dutch contribution, if that is the correct term, to contemporary health technology assessment, it is not sufficient to catalogue methodological choices or institutional procedures. What must be examined instead is the structure of belief that renders those choices stable, self-justifying, and resistant to scientific challenge. The most appropriate framework for this examination is the concept of a memeplex, as articulated by Richard Dawkins: a constellation of mutually reinforcing ideas that propagate not because they are true, but because they protect one another from refutation.

The Dutch HTA framework exhibits all the defining characteristics of such a memeplex. It is internally coherent, institutionally replicated, normatively defended and, most importantly, epistemically closed. Challenges based on representational measurement theory do not fail within this system because they are incorrect; they fail because the system has redefined the domain in which correctness is assessed. Measurement axioms are not rebutted. They are declared irrelevant.

The foundational move that enables this closure is the reclassification of HTA itself. Dutch HTA does not present itself as a measurement enterprise constrained by admissibility conditions. Instead, it presents itself as a deliberative decision framework informed by evidence. At first glance, this appears modest and pluralistic. In practice, it performs decisive epistemic work. Once HTA is framed as deliberation rather than measurement, the axioms that determine whether numbers represent empirical attributes no longer function as constraints. They become optional philosophical positions rather than governing rules.

This reclassification allows arithmetic to proceed without measurement. Utilities are multiplied by time. Composite indices are aggregated across individuals. Model outputs are compared and ranked. None of these operations are defended by demonstrating scale properties, invariance, or dimensional homogeneity. Instead, they are justified by appeal to usefulness, precedent, and societal relevance. The question “Is this quantity measurable?” is replaced by the question “Does this number support decision making?” The substitution is subtle but fatal to scientific accountability.

Within the memeplex, this substitution is reinforced through a set of secondary beliefs that stabilize the core move. One such belief is that HTA necessarily involves plural values and therefore cannot be bound by strict measurement rules. Another is that uncertainty and complexity justify the use of approximations. A third is that deliberative processes can compensate for technical limitations. Each of these beliefs appears reasonable in isolation. Together, they form a self-sealing structure in which measurement failure becomes not a defect to be corrected, but a condition to be managed.

This is where the memeplex departs most sharply from the trajectory of normal science. Since the scientific revolution, impossibility has functioned as a signal for methodological revision. When

quantities cannot be measured under existing rules, new measurement models are developed or claims are abandoned. Representational measurement theory, conjoint measurement, and Rasch models all emerged from this logic. In Dutch HTA, the logic is reversed. The impossibility of lawful measurement is taken as confirmation that HTA must rely on deliberation. Failure does not trigger revision; it triggers justification.

Thomas Browne's paradox—*"I believe it because it is impossible"*—captures this reversal with unsettling precision. Within the Dutch HTA memeplex, the fact that utilities lack ratio properties does not undermine their use; it confirms the need for normative balancing. The fact that latent constructs cannot be shown to possess invariant structure does not lead to rejection of arithmetic; it legitimizes plural judgment. Impossibility ceases to be a scientific warning and becomes an epistemic asset. The fact that the Rasch framework is the only basis for transforming observations to interval scores is entirely unknown [5] [6] .

The memeplex is reinforced institutionally through guidelines, training, and professional norms. Methodological guidance articulates the deliberative framing explicitly. Educational programs train analysts to implement models rather than to interrogate admissibility. Peer review rewards technical refinement while treating foundational critique as misplaced. Over time, the absence of measurement axioms becomes invisible. They are not argued against because they are no longer recognized as relevant.

Crucially, the memeplex does not survive by suppressing dissent. It survives by reclassifying dissent. Measurement critique is interpreted as philosophical overreach, category error, or misunderstanding of HTA's purpose. This is the defining feature of epistemic closure. A system that can absorb all criticism by redefining it as irrelevant cannot be corrected from within. It does not need to defend itself against normal science because it has placed normal science outside its jurisdiction.

The success of the Dutch memeplex also lies in its adaptability. By presenting itself as pragmatic, reflective, and value-sensitive, it avoids the appearance of dogmatism. Yet this adaptability is precisely what allows it to persist. The memeplex does not insist that utilities are ratio measures in a strict sense; it insists that strictness is unnecessary. It does not claim that QALYs measure reality; it claims they inform decisions. The arithmetic remains intact, while its epistemic obligations are dissolved.

This adaptability gives the memeplex evolutionary advantage. It allows HTA to maintain quantitative authority without assuming scientific risk. Numerical outputs can be generated, compared, and institutionalized without exposure to falsification. When challenged, the system retreats into deliberation. When defended, it advances arithmetic. The result is a belief system that is simultaneously numerate and non-scientific.

What distinguishes the Dutch case from other jurisdictions is not the presence of these elements, but their explicit articulation. In many HTA systems, measurement failure persists through silence, fragmentation, or diffusion of responsibility. In the Netherlands, it is theorized. The guidelines openly acknowledge the limits of measurement while continuing to authorize arithmetic. This openness does not mitigate the problem; it entrenches it. By naming deliberation as the solution to

measurement impossibility, the system forecloses the possibility that measurement might instead be repaired or that arithmetic might need to be abandoned.

Once installed, the memeplex becomes self-replicating. Guidelines cite prior guidance. Academic work cites guidelines. Decision makers cite both. Each layer reinforces the others, and none is tasked with defending admissibility. Representational measurement theory has no entry point because the system no longer recognizes admissibility as a criterion. The belief system does not evolve because it has no mechanism for error correction.

This is why the Dutch HTA framework cannot defend itself against normal science. It does not engage in refutation because refutation presupposes shared standards. Those standards to include measurement axioms, falsifiability, admissible arithmetic have been quietly set aside. What remains is a closed epistemic loop in which numbers circulate without empirical constraint, insulated by normative language and procedural legitimacy.

To describe this structure as a memeplex is not rhetorical excess. It is analytical precision. The Dutch HTA framework persists not because it has solved the problem of measurement, but because it has made the problem unaskable. That is the defining characteristic of a successful belief system and the reason it poses such a profound challenge to the integrity of science-based assessment.

SECTION II

A MEMEPLEX FOR ALL SEASONS: EXPORTING MEASUREMENT FAILURE

The significance of the Dutch HTA memeplex does not lie primarily in its national consequences. It lies in its portability. Unlike systems in which measurement failure persists through institutional inertia or tacit assumption, the Dutch framework offers something far more powerful: a theorized justification for arithmetic without measurement that can be adopted by other jurisdictions without structural reform. It is this exportability that makes the Dutch contribution consequential for global HTA.

At the core of this exportability is the memeplex's capacity to resolve cognitive dissonance. Across HTA systems, practitioners confront the same problem: they rely on utilities, QALYs, composite indices, and simulations that cannot satisfy the axioms of representational measurement, yet their institutional authority depends on producing quantitative outputs. The Dutch framework offers a solution that requires no confrontation with this contradiction. It allows systems to retain arithmetic while renouncing the obligation to justify it scientifically. Measurement failure is not denied; it is reframed as inevitable and therefore irrelevant.

This reframing travels easily because it does not require alignment on technical details. It requires only acceptance of a narrative: HTA is not measurement, but decision support; numbers do not represent empirical magnitude, but inform deliberation. Once this narrative is adopted, representational measurement axioms lose their status as admissibility conditions and become optional philosophical preferences. This move can be made in any jurisdiction, regardless of

institutional structure, because it operates at the level of epistemic framing rather than policy design.

The influence of this memeplex can be observed in the increasing prominence of deliberative language across HTA systems that otherwise differ markedly in governance and procedure. Concepts such as contextual judgment, severity weighting, proportional shortfall, and societal values are invoked to supplement or override quantitative outputs. While these concepts are presented as refinements, their deeper function is protective. They provide a mechanism through which arithmetic can continue even when its measurement foundations are challenged. The numbers remain authoritative, but responsibility for their validity is displaced into committee process.

This dynamic is evident in the way HTA bodies increasingly treat cost-effectiveness results as inputs rather than claims. By redefining quantitative outputs as merely one element in a broader deliberation, systems insulate those outputs from falsification. If a model result is criticized on measurement grounds, the response is not correction but deflection: the result was never meant to be definitive. Yet the same result continues to structure thresholds, negotiations, and access decisions. The arithmetic is softened rhetorically but hardened institutionally.

What makes the Dutch memeplex especially influential is its normative respectability. It does not present itself as anti-scientific. On the contrary, it presents itself as reflective, transparent, and ethically sensitive. By acknowledging uncertainty and plural values, it appears more sophisticated than systems that rely on rigid thresholds. This appearance of sophistication is precisely what allows the memeplex to propagate. It offers other HTA systems a way to appear epistemically humble while avoiding epistemic accountability.

The memeplex also aligns neatly with the professional incentives of HTA practice. Analysts are rewarded for producing models, refining sensitivity analyses, and engaging stakeholders, not for questioning admissibility. Institutions are rewarded for procedural legitimacy and policy relevance, not for measurement coherence. The Dutch framework validates these incentives by declaring foundational critique unnecessary. It reassures practitioners that they are not neglecting science; they are transcending it.

This reassurance has consequences. Once the Dutch framing is adopted, measurement critique is no longer perceived as a scientific challenge. It is perceived as an attempt to impose inappropriate rigor on a value-laden enterprise. Critics are cast as misunderstanding the nature of HTA rather than identifying error. In this way, the memeplex spreads not through argument, but through redefinition of the rules of engagement.

The global uptake of this framing has produced a convergence of rhetoric across HTA systems that masks continued divergence in institutional form. Agencies as different as NICE and national authorities in Europe and Australasia increasingly emphasize deliberation, context, and modifiers alongside quantitative analysis. This convergence is not evidence of methodological maturation. It is evidence of memeplex replication. The same epistemic move of arithmetic without measurement, protected by deliberation appears under different administrative guises.

The effect is cumulative. As more jurisdictions adopt the framing, it acquires the authority of precedent. Measurement critique becomes not merely inconvenient, but anachronistic. Representational measurement theory is treated as an academic curiosity rather than as the foundation of quantitative reasoning. The memeplex thus achieves a form of epistemic dominance: it defines what counts as a reasonable question in HTA.

This dominance has a critical side effect. By insulating quantitative claims from refutation, the memeplex halts the evolution of objective knowledge within HTA. Models may become more complex, data sources more numerous, and processes more inclusive, but the underlying quantitative claims cannot be proven wrong. Error is absorbed into deliberation. Disagreement is resolved procedurally rather than empirically. Learning is replaced by accommodation.

This posture stands in direct contradiction to a position articulated at the very birth of modern science. From its founding in the early 1660s and the granting of its Royal Charter, the Royal Society of London adopted as its governing principle the motto *Nullius in verba*: "take nobody's word for it." The meaning was unambiguous: no claim, however authoritative, elegant, or widely endorsed, could be accepted unless it was empirically evaluable. Assertions were to be treated as conjectures, not conclusions; authority was to yield to observation; and knowledge was to advance only through exposure to refutation. This principle was not rhetorical flourish but an explicit rejection of scholastic closure. By insulating its quantitative claims from empirical failure, the HTA memeplex abandons this foundational commitment, replacing the discipline of testable claims with procedural assent and thereby severing itself from 350 years of the scientific tradition

The Dutch contribution to this state of affairs is not that it introduced measurement failure but that it normalized and legitimized it. By articulating a coherent justification for abandoning admissibility while retaining arithmetic, the Dutch framework provided a template that others could adopt without appearing unscientific. It transformed a liability into a virtue.

This is why the Dutch memeplex is a memeplex for all seasons. It can be invoked to justify thresholds or to relax them, to defend models or to contextualize them, to claim rigor or to disclaim it. Whatever the institutional need, the core belief remains intact: numbers may be used without being measured. That belief now circulates globally, embedded in guidelines, training, and professional identity.

The result is a worldwide HTA discourse that increasingly resembles a closed system. Quantitative outputs proliferate, but none are exposed to decisive test. Critique is redirected into values discussion. Measurement axioms are displaced by process. The Dutch memeplex does not merely survive in this environment. It thrives, because it offers exactly what contemporary HTA demands: authority without vulnerability. Claims without consequences.

In exporting this framework, the Netherlands has made a decisive contribution, not to the science of measurement, but to the institutionalization of its rejection into pseudo-science. That contribution explains why measurement failure now appears not as an anomaly to be corrected, but as a settled feature of HTA practice that has to be challenged for those with no notion of the axioms of representational measurement. . It is this global consequence that makes the Dutch case impossible to ignore and renders this Working Paper necessary rather than optional.

SECTION III

FALSIFICATION AND THE EVOLUTION OF OBJECTIVE KNOWLEDGE

The final and most consequential implication of the Dutch HTA memeplex is its rejection of falsification as the engine of scientific progress. This rejection is not expressed as hostility toward science, nor as denial of evidence. It is expressed through a far more effective maneuver: the redefinition of quantitative claims such that they are no longer vulnerable to being wrong. Once this maneuver is in place, the evolution of objective knowledge, understood in the Popperian sense, comes to a halt [7].

For Popper, in the tradition of the Royal Society, the defining feature of science was not verification, consensus, or usefulness, but falsifiability. Scientific claims advance knowledge only insofar as they expose themselves to possible refutation. Measurement plays a critical role in this process because it operationalizes falsification. A claim expressed numerically is not scientific because it uses numbers; it is scientific because the numbers preserve empirical relations in such a way that the claim can fail when confronted with observation. Arithmetic without admissible measurement is therefore not merely sloppy, it is epistemically inert.

The Dutch HTA framework explicitly breaks with this tradition; it rejects normal science. By framing HTA as deliberative decision-making rather than as a knowledge-generating enterprise, it severs the connection between quantitative claims and refutation. Model outputs, cost-effectiveness ratios, and QALYs are no longer treated as conjectures about the world that might be false; they can never be false. They are treated as inputs to discussion. Once a quantitative output is positioned in this way, falsification becomes irrelevant by design. A claim that cannot be wrong cannot contribute to the evolution of objective knowledge; this is discarded.

This is not a subtle philosophical shift. It is an inversion of the logic that has governed scientific inquiry since the scientific revolution. In Popper's account, failure is productive. When a theory fails empirical test, it is revised or abandoned, and knowledge advances. In the Dutch HTA framework, failure is managed rather than exploited. When arithmetic is shown to violate measurement axioms, the response is not to abandon the arithmetic or repair the measurement. The response is to contextualize the result within deliberation. Error is absorbed, not eliminated.

The consequence is that HTA outputs become immune to decisive critique. A cost-effectiveness estimate cannot be shown to be false, because it is not claimed to be true in any strict sense. A QALY calculation cannot be invalidated, because it is framed as one perspective among many. Simulation results cannot be rejected, because they are presented as explorations rather than predictions. Yet despite this retreat from truth claims, these outputs continue to structure real decisions. Thresholds are negotiated. Prices are set. Access is restricted or granted. Arithmetic governs outcomes, even as it is insulated from refutation.

This insulation has profound implications for learning. In a Popperian framework, disagreement leads to sharper tests and better theories. In the Dutch HTA framework, disagreement leads to further deliberation. There is no mechanism for convergence on error because error has no formal

status. Competing models are not adjudicated by empirical adequacy, but by plausibility and acceptability. The system can therefore become more complex without becoming more accurate. Sophistication replaces correctness.

This explains why Dutch HTA and the systems that adopt its framing can evolve procedurally while remaining epistemically static; it is the easy way out. New modifiers are introduced. New deliberative criteria are articulated. New stakeholder processes are added. But none of these developments bring the system closer to admissible measurement. They merely add layers of interpretation that further distance arithmetic from empirical constraint. Objective knowledge does not grow; it is displaced.

From the standpoint of the evolution of science, this is not neutrality. It is regression. Prior to the scientific revolution, numerical reasoning often served rhetorical or administrative purposes without empirical discipline. The scientific revolution consisted precisely in discovering that numbers must obey rules if they are to mean anything. Representational measurement theory formalized this insight in the twentieth century, specifying the conditions under which quantities exist and arithmetic is lawful. To reject these conditions while retaining arithmetic is to abandon the central achievement of modern science.

The Dutch HTA memeplex does exactly that. It retains the authority of numbers while discarding their obligations. It speaks the language of evidence while denying the criteria that make evidence testable. It invokes uncertainty not as a reason to improve measurement, but as a justification for abandoning it. In doing so, it removes HTA from the Popperian tradition of conjecture and refutation and places it in a different epistemic category altogether; the category of pseudo-scientific nonsense.

This does not mean that HTA cannot function as governance. Decisions can be made without falsifiable claims. Resources can be allocated through deliberation. But once falsification is rejected, HTA must relinquish its claim to scientific status. It can no longer assert that its quantitative outputs represent knowledge about the world. They represent negotiated positions within an institutional process. To pretend otherwise is to conflate authority with truth.

The most damaging aspect of this shift is that it forecloses reform from within. A system that does not recognize error cannot correct it. Calls to improve data quality, refine models, or expand sensitivity analysis miss the point. These are refinements within a framework that has already rejected the conditions of falsification. Without reinstating representational measurement axioms as admissibility conditions, no amount of procedural enhancement can restore scientific legitimacy.

The destructive Dutch contribution to HTA is therefore not merely methodological. It is epistemological. By normalizing the rejection of falsification while preserving arithmetic authority, it has helped establish a form of assessment that is insulated from the evolution of objective knowledge. This contribution has been widely emulated because it resolves institutional tension. It allows HTA to govern decisively without risking scientific failure. It puts HTA on a pseudo-scientific pedastal.

But the cost is exacting. A discipline that cannot be wrong cannot learn. A system that replaces falsification with deliberation abandons the only mechanism by which science progresses. In Popper's terms, it ceases to participate in the growth of objective knowledge. What remains may be administratively effective and politically legitimate, but it is no longer science.

This is the final indictment of the Dutch HTA memeplex. It does not merely deny representational measurement. It denies the very principle by which knowledge has advanced since the scientific revolution. Once that denial is accepted, *nonsense on stilts* is no longer a metaphor. It is the inevitable outcome.

CONCLUSION

THE DUTCH MEMEPLEX AND THE FAILURE OF DUTY OF CARE

The Dutch health technology assessment framework does not merely adopt questionable methods; it institutionalizes a failure of duty of care. This failure is traceable to the specific outcomes on which reimbursement and access decisions are made and to what those outcomes systematically exclude. By privileging model-generated composite metrics over evaluable clinical and resource-based claims, the Dutch HTA memeplex substitutes administrative convenience for responsibility to patients, physicians, and the health care system itself.

Dutch decision making is dominated by a narrow set of outcomes: preference-weighted quality-adjusted life years derived from ordinal health-state instruments, combined with long-horizon simulation models that project lifetime costs and effects. These outputs are treated as decisive evidence despite the absence of valid measurement, the absence of falsifiability, and the absence of any requirement that claims be evaluated in real patients following market entry. Once accepted, these constructs become immune to correction. No observed pattern of therapy response, adherence behavior, or resource utilization can overturn them, because they are not claims about observable attributes in the first place.

From the perspective of duty of care, this is indefensible. Physicians do not treat QALYs. Patients do not experience preference-weighted utilities. Health systems do not manage lifetime simulations. Yet these abstractions determine which therapies are available, under what conditions, and at what point in the treatment pathway. The lived consequences including delayed access, forced switching, restricted indications are imposed without any corresponding obligation to demonstrate, post-launch, whether the anticipated benefits actually materialize.

What is conspicuously absent from the Dutch framework is a portfolio of credible, evaluable claims tied to defined populations and meaningful timeframes. There is no requirement that manufacturers specify how a new therapy will affect concrete outcomes such as treatment persistence, symptom control, hospitalization rates, adverse events, or disease-specific functional capacity in the first 6 or 12 months of use. There is no expectation that these claims be tested, replicated, or withdrawn if they fail. Instead, decision makers are offered a single composite number that purports to summarize value while foreclosing empirical scrutiny.

This approach does not serve physicians. Clinical decision making depends on knowing how therapies perform in practice: which patients persist, which discontinue, which experience benefit, and which incur harm. A model-based incremental cost-effectiveness ratio provides none of this information. It cannot inform prescribing, sequencing, or monitoring. It cannot be reconciled with clinical experience. As a result, HTA outputs function not as decision support but as decision overrides.

Nor does this serve patients. Patients have a legitimate interest in therapies being assessed on outcomes that reflect their actual experience of treatment. When access decisions rest on imaginary arithmetic rather than observed response, patients are reduced to placeholders in a model rather than beneficiaries of care. Denial or delay of therapy is justified not by evidence of ineffectiveness, but by failure to satisfy an abstract threshold constructed from non-measurable components. This is not patient-centered care; it is procedural rationing detached from clinical reality.

Health systems are equally ill-served. Systems require information on resource use, service demand, and treatment durability; claims that can be tracked, audited, and used for planning. Lifetime simulations provide none of this. They cannot be reconciled with budget cycles, cannot be validated against utilization data, and cannot guide adaptive management. By refusing to require a portfolio of single, evaluable claims for each product submission, the Dutch framework forfeits the opportunity to learn from real-world deployment and to improve future decisions.

The defining hallmark of health technology assessment as a memeplex, nowhere more clearly illustrated than in the Dutch guidelines, is closure. The process is architected to end inquiry, not to sustain it. A model is developed, a cost-effectiveness claim is asserted, a threshold comparison is made, and the evaluative space is closed. Once a technology is labeled “cost-effective” or “not cost-effective,” the framework treats this designation as settled knowledge rather than as a provisional imaginative conjecture awaiting empirical confrontation. The purpose of analysis is not learning, but adjudication.

This logic of closure is embedded at every level. The reliance on lifetime simulation models ensures that claims extend beyond any feasible period of observation. The use of composite outcomes ensures that no single component can be isolated and tested. The absence of post-launch evaluative obligations ensures that once access decisions are made, no systematic re-examination follows. Together, these features create a closed epistemic loop: the framework generates its own evidence, validates its own conclusions, and declares its own completion.

This is not how science operates. In the scientific tradition, closure is provisional and always vulnerable to revision. Claims remain open to challenge as new data emerge, as comparative performance shifts, and as patient populations evolve. The value of a therapy is not something declared once and preserved indefinitely; it is something continually interrogated against observed outcomes. The refusal to build this openness into HTA is not an oversight. It is a design choice.

Duty of care requires the opposite orientation. It requires openness to ongoing re-evaluation of claims in real health systems, using outcomes that matter to clinicians, patients, and planners. It requires comparative performance to be assessed not as a hypothetical projection, but as an

empirical question: how does this therapy perform relative to alternatives in practice, over defined timeframes, in identifiable populations? Closure forecloses this question. Openness demands it.

What is missing from the Dutch framework, and from HTA more broadly is an explicit commitment to a living portfolio of claims for each product submission. Such a portfolio would consist of single, unidimensional, empirically evaluable claims covering clinical response, persistence, resource use, and where appropriate, rigorously measured latent attributes. Each claim would be tied to a protocol, a target population, and a reporting horizon. Crucially, each claim would remain open to confirmation, modification, or rejection as evidence accumulates.

Without this architecture, HTA cannot learn. It cannot correct error. It cannot adapt to heterogeneity in patient response or system context. Instead, it substitutes decisional finality for epistemic responsibility. The result is a system that appears decisive but is informationally sterile; incapable of supporting clinicians, unresponsive to patient experience, and unhelpful to health systems attempting to manage care dynamically.

The choice, therefore, is stark. HTA can continue to function as a closed memeplex, optimizing internal coherence while insulating itself from empirical disruption. Or it can re-enter the scientific tradition by abandoning closure in favor of openness, falsification, and the continuous evolution of objective knowledge. Only the latter is compatible with duty of care. Anything else is not assessment, but administrative storytelling with real clinical consequences.

The central question therefore cannot be avoided: does the Dutch HTA memeplex meet the needs of physicians, patients, or health care systems? The answer, on its own terms, is no. A framework that rejects falsification, denies measurement, and relies on non-evaluable composites cannot discharge its duty of care. Until HTA is rebuilt around empirically testable claims will remain administratively sophisticated but ethically hollow.

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REFERENCES

[1] Wootton D. The Invention of Science: A New History of the Scientific Revolution. New York: Harper Collins, 2015

[2] Krantz D, Luce R, Suppes P, Tversky A. Foundations pf Measurement Vol 1: Additive and Polynomial Representations. New York: Academic Press, 1971

[3] Stevens S. On the Theory of Scales of Measurement. *Science*. 1946;103(2684):677-80

[4] Dawkins R. *The Selfish Gene*. 2nd ed. Oxford: Oxford University Press, 1989

[5] Rasch G, Probabilistic Models for some Intelligence and Attainment Tests. Chicago: University of Chicago Press, 1980 [An edited version of the original 1960 publication]

[6] Wright B. Solving measurement problems with the Rasch Model. *J Educational Measurement.* 1977;14(2):97-116

[7] Popper K. Objective Knowledge: An Evolutionary Approach. Revised edition. Oxford: Clarendon Press, 1979.