ChatGPT

Coherence as the Epistemic North Star

Introduction. *Coherence* – the state of internal consistency and integrative harmony among beliefs – has long been treated as a compass for truth. Immanuel Kant observed that without an assumed systematic unity among our judgments "we would have no coherent use of the understanding, and… no sufficient mark of empirical truth". In other words, we presume the world *makes sense*, and we strive to make our understanding of it likewise free of contradiction. This essay treats coherence as an "epistemic North Star," examining how the drive for cognitive consistency operates at multiple levels of human experience. From neural mechanisms that detect dissonance, to the formation of identity-defining beliefs, to the dynamics of tribal echo chambers, coherence serves both as a motivating drive and a constraining framework. At the same time, we consider the **limitations** of coherence – how multiple mutually incompatible yet coherent systems can coexist, implying that consistency alone cannot suffice as truth – and how an emphasis on multi-level coherence might reinvigorate disciplines like philosophy and improve public discourse. The analysis draws on cognitive neuroscience, psychology, sociology, and epistemology to provide a rigorous, multi-faceted understanding. What emerges is a picture of coherence as a deeply psychological need and epistemic virtue whose proper cultivation, tempered by empirical humility, is essential for sound reasoning and healthy intellectual communities.

Coherence in Brain and Mind: Cognitive Dissonance as Drive and Constraint

Human brains are **prediction engines** wired to seek coherence between expectations and reality. The influential theory of *predictive processing* holds that the brain continuously generates predictions about incoming sensory information and minimizes any *prediction errors* (surprises) through adjustments [1]. This neurocomputational framework aligns with classic psychological observations: when our perceptions or actions violate our expectations or beliefs, we experience an uncomfortable *error signal* that demands resolution. In social psychology, such a state is famously termed *cognitive dissonance* – the mental distress caused by holding incompatible cognitions or behaviors. Leon Festinger's original formulation (1957) described how, for example, a person who **"simultaneously [holds] two or more contradictory cognitions"** (e.g. *"I value health"* vs. *"I smoke"*) will experience an aversive tension and be motivated to resolve it. The brain's error-monitoring circuits play a key role in this process. Neuroimaging studies have shown that the **anterior cingulate cortex (ACC)** – an evolutionarily ancient region associated with conflict monitoring and pain – reliably activates when a person is undergoing cognitive dissonance. In dissonance paradigms, ACC activity tracks the *degree* of conflict on a moment-to-moment basis, essentially acting as an alarm bell that rings when the mind's contents are incoherent. This "uh-oh" signal spurs engagement of frontal cortical networks to resolve the discrepancy. Indeed, experiments capturing the aftermath of difficult choices (which induce dissonance between "I liked option A" and "I chose option B") find that frontal regions including the ACC and lateral prefrontal cortex correlate with the extent of ensuing belief change. The uncomfortable signal drives us to *do something* – change our attitude, seek new information, or rationalize – in order to restore mental consistency.

Importantly, coherence is not only a drive but also a **constraint** on cognition: the brain doesn't *merely* prefer consistency, it requires a working level of it to function. Predictive-processing theorists note that a

hierarchical brain must maintain *multi-level coherence*, from low-level perception up to abstract belief, because prediction errors cascade upward [2]. If lower-level sensory signals radically contradict higher-level expectations, the system either updates its model or, if update fails, experiences ongoing confusion or distress. Thus, coherence-seeking is built into our neurobiology as a dynamic equilibrium process. It pushes us to avoid prolonged, unresolved contradiction – which is experienced as anxiety or confusion – by either changing the world to fit our expectations or changing our expectations to fit the world. In this sense, coherence functions as a *homeostatic drive* in cognition, akin to how the body strives for physiological equilibrium. We are intrinsically motivated to resolve tensions among our thoughts, perceptions, and actions.

Yet this same drive acts as a cognitive **constraint** that can bias how information is processed. Because dissonance is aversive, the mind may preemptively filter or distort incoming data to *preserve* its existing internal coherence. In the predictive brain account, strong *priors* (pre-existing beliefs) can lead to selective attention – effectively down-weighting or explaining away sensory evidence that contradicts the model. For instance, a person with a deeply held belief may literally *not see* disconfirming observations, or find ways to reinterpret them so the belief remains intact. The result is a kind of self-sealing cognitive system that resists certain errors at the cost of increased **confirmation bias**. Neuroscientists have noted this downside: *"when dissonance arises between generative models and sensory input,"* humans can often explain it away through biased sampling of information. In other words, our brains are so driven to reduce error signals that, especially at higher cognitive levels, we might rather **ignore** or rationalize away conflicting evidence than sit with incoherence for long. Coherence thus can serve truth – by motivating error correction – but can also undermine truth when maintaining a pleasant fiction feels easier than overhauling a mental model. Throughout the rest of this essay, we will see this double-edged sword of coherence at work: it is a fundamental engine of learning and meaning-making, yet it can lead whole groups into isolated "realities" if not counterbalanced by other epistemic virtues.

Identity, Belief, and the Dissonance of Self-Concept

Beliefs do not float free in the mind; they are often **entangled with our identity** and sense of self. This linkage has a neural basis. The *ventromedial prefrontal cortex (vmPFC)*, a region at the core of the brain's **Default Mode Network** (active during self-referential thought), serves as an integrative hub that attaches personal meaning and value to information. Neuroimaging research shows that vmPFC consistently activates when we reflect on our traits, preferences, and values, and it appears to *"assign personal value or significance to self-related contents,"* helping to construct and stabilize our self-representations. In simpler terms, the brain makes many of our beliefs *about us*. Political or religious convictions, moral values, even preferences for lifestyle or profession – all can become incorporated into the self-concept encoded in the Default Mode Network. This neurological linking of belief to identity has profound implications for coherence and dissonance: when a belief is challenged, it is *not* just an abstract proposition at stake, but something bound up with one's core narrative. The result is that **cognitive dissonance** in such cases can trigger intense defensive reactions. A challenge to a deeply held belief (e.g. evidence that one's political stance is misguided or one's religious doctrine is flawed) produces dissonance not only between two ideas, but between *new information* and the *self*. Psychologically, this is experienced as a threat to one's integrity or sense of who one is. Consequently, the drive for coherence now works in service of *self-defense*. Rather than calmly updating the belief, the individual may engage in **motivated reasoning** to dismiss the discordant information and *rationalize* the original belief. Neuroscientific studies support this pattern: when people are confronted with information that disconfirms their political beliefs, emotional and identity-processing regions (including vmPFC and limbic areas) often show heightened activity, correlating with resistance to

changing the belief. The mind rallies its reasoning powers not to seek truth, but to *preserve narrative consistency* and psychic comfort.

This phenomenon has been dubbed **"identity-protective cognition."** As Dan Kahan and colleagues describe, individuals unconsciously reject or discount evidence that contradicts the dominant beliefs of their group or personal identity. For example, a devotee of an anti-vaccine ideology whose self-image is "a skeptic of corrupt medicine" will treat contrary data (say, a new large-scale study confirming vaccine safety) as suspect or false – not through careful analysis, but via an almost automatic defensive filter. The **ventromedial PFC** likely contributes here by weighting evidence according to its *personal significance*: information that threatens the self-tagged belief feels *less credible* or salient, whereas information that reinforces the self-belief feels compelling. In this way, coherence is maintained not by unbiased assimilation of facts, but by **controlling which facts penetrate** the fortress of the self. Cognitive dissonance still operates – the individual feels tension if they even consider that their belief might be wrong – but rather than resolve it by adjusting the belief, they resolve it by *attacking or dismissing the source of dissonance*. This is the classic pattern of self-justification and rationalization that Festinger noted in doomsday cults whose prophecies failed: rather than admit "we were wrong," members often reinterpret the failure in a way that *saves the belief* (e.g. "our faith averted the apocalypse") and thereby save face and identity.

On the other hand, coherence's pull can also enable genuine **growth and revision** of the self under the right conditions. If an individual's psychological security is high enough – or their social environment supports change – encountering a glaring dissonance between belief and reality can catalyze profound self-reflection. The same ACC alarm that signals *"something is wrong"* can drive a re-examination of core assumptions. For instance, a scientist who holds a theory as part of her identity (seeing herself as *"the champion of Theory X"*) may fiercely resist discrepant data at first. But if the evidence accumulates and the norms of her profession value truth over ego, she may reach a tipping point where maintaining internal coherence *necessitates* a self-revision: she updates the theory or drops it, and in doing so reshapes her own intellectual identity. Neuroimaging hints that the vmPFC, beyond protecting the self, is also involved in such updates – it helps integrate new, personally relevant information and can recalibrate the value of beliefs when one *chooses truth over comfort*. In effect, the mind can perform a **self-coherence realignment**, acknowledging a past wrong and assimilating the new belief into a revised narrative ("I was wrong; now I see more clearly"). This process is often emotionally painful – a testament to how disruptive incoherence is to the psyche – but it is also at the heart of intellectual honesty and moral growth.

The tension between **defensive coherence** and **truth-driven coherence** in identity and belief highlights a pivotal lesson: coherence per se is neutral; everything depends on *what* we are striving to cohere *with*. If one's standard is to remain consistent with one's *prior self*, coherence will serve bias. If instead one's standard is to align beliefs with an *independent reality*, coherence will serve truth – even if that means a temporary incoherence as the self-concept reshuffles. The next sections examine how these dynamics play out collectively, in groups and communities, and how certain practices and social structures can tilt the balance toward truth-oriented coherence rather than mere comfortable consistency.

Tribal Epistemics: Coherence and the Filtering of Reality

When coherence operates at the level of a **group**, it becomes a powerful social force – one capable of constructing entire worldviews and sometimes insulating them against correction. *Tribal epistemics* refers to the phenomenon in which communities evaluate information based on its alignment with group narratives and values rather than its objective merits. In such contexts, **coherence-preserving filters** often distort

reality: any fact or argument that challenges the tribe's foundational story is ignored, discounted, or explained away, while any claim that reinforces the story is amplified and uncritically believed. The result is an **echo chamber** – an information environment in which every piece of data seems to confirm the group's worldview, because contradictions have been systematically filtered out.

Public discourse in recent years offers many salient examples. Anti-vaccine communities, for instance, center on a narrow value (distrust of pharmaceutical authority and a desire for "natural" health). This core value becomes a filter: coherent tribal belief demands that any study finding vaccines safe *must* be flawed or part of a conspiracy, whereas anecdotes about vaccine harms are eagerly integrated. An extreme *rationalist* sect might do the opposite – elevating logical coherence as the sole value and dismissing evidence from emotion or tradition as irrelevant, thereby perhaps blinding itself to moral or aesthetic truths that don't fit its favored framework. Fundamentalist religious groups may treat their scripture or doctrine as the supreme coherence criterion; any scientific or historical information incompatible with a literal reading *must* be false (be it fossils suggesting an old Earth, or textual scholarship on the evolution of holy texts). And of course, political echo chambers (whether on the left or right) routinely exhibit this pattern: **"Information is evaluated based not on [universal] standards of evidence… but on whether it supports the tribe's values and goals and is vouched for by tribal leaders. 'Good for our side' and 'true' begin to blur into one."** In the words of commentator David Roberts, we start living in "two universes" of belief, where each side's narrative is internally coherent but mutually incompatible.

These **tribal filters** exploit the mind's drive for consistency in a collective way. Within an echo chamber, **social consensus** provides powerful reinforcement: if everyone I trust *says* X is true and Y is false, then my own acceptance of that narrative maintains both logical coherence (all the pieces of the story fit together with no contradiction) *and* social coherence (no conflict with my peers). Meanwhile, any dissenting data can be attributed to the malice or ignorance of *outsiders*, thus quarantining the dissonance. Psychologically, belonging to such a group can be deeply satisfying – it offers a clear, unified account of the world and a sense of certainty and camaraderie. But the epistemic cost is high: the group may become **untethered from reality**, persisting in beliefs that are systematically false or one-sided. For example, climate change denial communities have constructed a coherent counter-narrative (climate science is a hoax, data are manipulated for nefarious ends) and actively *"sample their information environment to find further evidence for their prior beliefs,"* while dismissing mainstream scientific research. The worldview holds together internally – any new climate phenomenon is fit into a conspiracy frame – but it diverges more and more from empirical fact. Such is the *power* and *peril* of coherence at all costs.

Healthy intellectual communities, by contrast, balance coherence with other critical values to avoid the trap of sealed-group thinking. In science and reason-based communities at their best, beliefs are not only tested for internal consistency but also for **correspondence with reality and openness to refutation**. Philosopher Karl Popper famously argued that falsifiability – the capacity for a claim to be proven wrong by evidence – is a non-negotiable virtue of any truth-seeking system. A theory that protects its coherence by explaining away every anomaly (rendering itself unfalsifiable) has ceased to be a scientific hypothesis and become, in effect, a dogma or closed narrative. As one modern critic put it, *"falsifiability is [treated by some today] as a quaint relic,"* but a *discipline that cannot be falsified is perilously close to a religion or a game, rather than a truth-seeking endeavor*. Therefore, a **healthy epistemic community** will insist on mechanisms that disrupt mere coherence-preserving echoing. This includes cultivating *empirical humility* – an awareness that one's models could be wrong and that reality has the final say. In practice, scientific institutions implement this through norms like peer review and replication, which serve as semi-formalized "devil's advocate" systems to poke holes in any claim too neatly aligned with an incumbent theory. Indeed, as an observer

noted in the context of scientific culture, *"no other discipline gives so much credit to those who debunk well-established beliefs"*. Dissent and anomaly-seeking are rewarded precisely to prevent a comfortable consensus from calcifying into a self-confirming illusion.

We can say, then, that robust communities seek a **polyvalent coherence** – they strive to make their beliefs cohere not just with themselves, but with *the world* and with a plurality of critical viewpoints. Such communities uphold multiple *epistemic virtues*: logical consistency, yes, but also **evidence-responsiveness, falsifiability, and openness to dialogue**. If one value system begins to dominate (for instance, coherence without evidence, or evidence without any integrative coherence), the community corrects course. Consider how the best scientific attitudes combine **organized skepticism** (demanding that claims withstand attempts to falsify) with **institutionalized curiosity** (welcoming surprising findings) and an ongoing effort to synthesize results into a coherent theoretical framework. Coherence is still prized – scientists want their equations and models to fit together elegantly – but not at the expense of accuracy. A hypothesis that is internally coherent but "practically pointless" or empirically empty *"falls short of [the] aim"*. By holding *both* coherence and empirical adequacy as ideals, such communities avoid the fate of many ideological tribes that become sealed off in logically tight but factually loose worlds.

The **social structures** that support this balance often explicitly encourage dissenting voices and methodological pluralism. Universities, in principle, are designed as forums where many frameworks contend and must justify themselves. Traditional debate formats require opposing arguments to be considered, preventing a one-sided coherence. Even within organizations, techniques like *red teams* or *devil's advocacy* roles are used to prevent groupthink – a practice we will examine in the next section. By contrast, structures that undermine balanced coherence are those that penalize dissent and reward only conformity. Many authoritarian or cult-like groups, for example, enforce a strict coherent doctrine and shun critics (exiling them as heretics or traitors). These systems can achieve remarkable internal consistency, but only by **enforcing silence** around any internal contradiction. Such coherence is brittle: it cannot adapt or accept nuance without shattering. Truly resilient knowledge communities, like ecosystems, maintain diversity and dynamic tension; their coherence is a flexible, evolving equilibrium rather than an imposed uniformity.

In sum, *tribal epistemics* warns us that coherence pursued in a narrow, value-monistic way (only one value or perspective allowed) leads to epistemic distortion. The antidote is **coherence tempered by pluralism** – an intellectual culture that demands consistency *and* permits continual questioning of that consistency from multiple angles. The next section turns to the individual and small-group practices that can cultivate this kind of adaptive coherence-seeking mindset.

Heuristics for Honesty: Practices that Promote Coherent Thinking

If left to our default cognitive habits, we humans often chase coherence in the quickest ways possible – embracing confirming evidence, explaining away dissonance, and shoring up our existing narratives. However, through conscious **heuristics and techniques**, we can train our minds to seek *deeper* coherence, even at the cost of short-term discomfort. A number of time-honored practices in critical thinking and dialogue serve essentially as *antidotes* to the biases described above. They introduce strategic friction into our reasoning, forcing us to confront contradictions and broaden perspectives so that our beliefs become more internally consistent *and* better aligned with reality. Here we discuss a few such practices: **Devil's Advocacy, Steel-manning, Socratic questioning, and self-falsification**, examining how each pushes the mind toward more robust coherence – and what social conditions encourage their use.

Devil's advocacy is the classic exercise of arguing *against* a position one actually holds (or that holds sway in one's group). The term originates from the Roman Catholic Church's canonization process, where the *advocatus diaboli* was appointed to build the strongest case against sainthood for a candidate, ensuring that inconvenient facts or alternative interpretations were not overlooked. In personal or organizational reasoning, playing devil's advocate means *"mentally switching sides"*. One deliberately asks: *What if my current belief is wrong? What evidence would prove it? What counter-arguments have I been avoiding?* Under such **cross-examination**, cherished assumptions are stress-tested. This technique is essentially a simulation of cognitive dissonance – one willingly induces a confrontation between one's belief and an opposed viewpoint. The benefit is a reality check on coherence: any internal contradictions or weak links in one's reasoning are more likely to surface when one tries to argue the opposite side. If our attachment to our "pet beliefs" resists this process (as it often will, pulling us back to the comfort of certainty), having an external *devil's advocate* – a friend or colleague tasked with challenging us – can help. Studies in decision-making have found that assigning a formal challenger improves outcomes by mitigating confirmation bias. By normalizing dissent, devil's advocacy prevents a group's consensus from going untested. The goal is not mere contrarianism, but to ensure that the *space of possibilities* has been scanned for alternatives, and that the favored conclusion truly holds up against the strongest objections. In doing so, one either ends up more confident in the belief (having seen it survive the ordeal) or one revises it, thereby achieving a new, more coherent position that accounts for issues previously ignored.

Steel-manning is a closely related, but distinct, exercise: whereas devil's advocate focuses on *critiquing one's own position*, steel-manning focuses on *strengthening the opposing position*. It has been called *"the opposite of the straw man"*. Instead of caricaturing your opponent's argument to easily knock it down (the fallacious straw-man tactic), you do the reverse: *reconstruct your opponent's argument in its strongest, most persuasive form*. One guide suggests imagining that the counterargument is being presented by *"the smartest person you know"* rather than someone easily dismissed. What points would *they* emphasize? How might they shore up any weak premises? By actively *bolstering* the case against your own view, you again induce a productive clash of ideas. Steel-manning serves coherence by forcing you to integrate insights from alternative frameworks. Perhaps in the process of steel-manning, you discover that the "enemy" actually has a valid concern or a piece of the truth your original stance was missing. At minimum, you ensure you're not defeating a trivial or irrelevant version of the opposing view. The result is a discussion where **each side addresses the best version of the other**, which greatly increases the chance that any remaining disagreement points to genuine, substantive tension in the issue (not merely misunderstanding or ignorance). A community that prizes steel-manning is one oriented toward *finding the truth*, not just "winning" the argument. It implicitly acknowledges a key epistemic humility: *our initial take might be wrong or partial, so let's articulate the objections as convincingly as possible.* If our view still stands, it will be on firmer ground; if not, we will learn something.

Another venerable tool is the **Socratic method** or Socratic questioning. This is a disciplined form of inquiry that proceeds by posing a sequence of open-ended questions designed to probe assumptions, definitions, and logical implications. Named after Socrates' dialogues in Plato's works, the method compels an interlocutor (or oneself) to *articulate* their implicit beliefs and check for consistency. For example, Socratic questioning might start with a person's confident claim (*"Virtue is doing what the gods love"* in one of Plato's dialogues), then ask, *"What if the gods disagree? Can they love different things?"* – forcing the person to refine or rethink the claim. The power of this approach is that it **unearths hidden contradictions or vagueness** in our thinking by systematically examining each step of reasoning. In modern psychotherapy (notably cognitive-behavioral therapy), Socratic questioning is used to help clients challenge irrational beliefs: by asking *"What evidence supports this thought? What evidence contradicts it? What assumptions am I making?"*,

the therapist guides the client to see inconsistencies between a catastrophic belief and reality. Socratic dialogue thereby increases coherence in two senses: it aligns beliefs more closely with evidence, and it brings a person's various beliefs into greater alignment with each other (eliminating self-contradictions). It is, fundamentally, a **self-corrective dialogue**, often arriving at insight not by providing new facts but by revealing that one's current beliefs cannot all be true together. In educational settings, this method teaches students the habit of critically interrogating their own ideas – a habit that, once internalized, amounts to having an "inner Socrates" continually test propositions for coherence and adequacy.

Finally, **self-falsification** can be considered a personal commitment to *actively seek out* disconfirming evidence for one's own hypothesis. This is the essence of the scientific method when applied to individual reasoning. Instead of waiting for an external devil's advocate or opponent, one *plays skeptic* on one's own theory. A scientist designs experiments specifically to reveal if their favored explanation fails; analogously, an individual might deliberately expose themselves to sources of news from the opposite political bias, or attempt to replicate the calculations that a contrarian analysis uses, *with the goal of finding an error*. This practice is admittedly unnatural – it requires overriding the emotional gratification of being "right" in favor of a higher-order motive to get it *really* right. Yet it is a muscle that can be strengthened with training and norms. Intellectual integrity cultures (for example, certain rationalist communities or rigorous academic labs) explicitly valorize those who *change their mind* in response to evidence. When a person publicly says, "I predicted X, but experiment Y showed me wrong, so I'm revising my model," it is treated not as embarrassment but as **honorable progress**. Such positive reinforcement is crucial: it creates a safe space in which individuals can let go of personal attachment to particular beliefs, reducing the ego threat of self-falsification. Over time, one can even derive a kind of pleasure from being shown wrong, as it means one has *learned something new*. The net effect is to keep one's belief system coherent *with reality*, not just internally coherent by papering over holes.

The effectiveness of these **coherence-enhancing heuristics** depends greatly on social support. A lone individual can practice them to some degree (e.g. journaling with self-questioning, or making a habit of reading opposing viewpoints), but their real power is unlocked in a community that normalizes and rewards such behavior. For instance, the "**Devil's Advocate**" technique historically was a formal office in the Church – an institutionalized role. In modern settings, one finds echoes in corporate or government "red team" exercises where a subgroup is assigned to rigorously challenge the plan developed by the main group, thereby preventing groupthink. Likewise, the **Socratic method** thrives in environments like law schools or philosophy seminars, where participants mutually agree to be governed by reason and to not take probing questions as personal attacks. If instead the culture punishes those who ask inconvenient questions (labeling them disloyal, or "shaking the boat"), then Socratic inquiry will be suppressed and surface-level consensus will triumph over genuine understanding. **Steel-manning** and good-faith argumentation flourish in communities with intellectual charity – where members assume their interlocutors may have insight and are not foes to be defeated at any cost. Online forums that set rules encouraging users to summarize the opponent's argument to that opponent's satisfaction before responding are a small-scale example of structuring for steelmanning. And of course, **self-falsification** is bolstered in environments that emphasize *truth over ego*. A scientist working in a field with robust replication practices is far more likely to actively test her own results (since she knows if she doesn't, someone else will). In contrast, if she works in a field or industry that only cares about confirmation and positive results, the incentive to self-critique is minimal.

By cultivating these practices, both individually and institutionally, we effectively train coherence to serve as a truth-guiding star rather than a complacency-enabler. We invite productive dissonance in small doses, as a

vaccine against the unhealthier dissonance of major error. Each heuristic is a way of acknowledging that *our native sense of coherence can be myopic*, and thus we must continually widen the context – consider the opposite, question the unquestioned, welcome the contradictor – to achieve a *richer, more resilient coherence*. In a very real sense, these practices are **metacognitive: they are coherence-checks on our own pursuit of coherence.**

The Limits of Coherence: Pluralism, Truth, and the "Tapestry" of Human Knowledge

Thus far we have extolled coherence as a guiding ideal, but it is critical to recognize its **limitations**. Coherence is *necessary* for truth – any true account of the world must ultimately hang together without internal contradiction – but it is **not sufficient**. A belief system can be perfectly self-consistent and still be entirely detached from reality or morality. As one observer succinctly noted, *"coherence is necessary, but not sufficient, for truth. A belief can be internally consistent and still not map onto reality"*. This is evident in numerous domains. Euclidean geometry is coherent and so is non-Euclidean geometry; they are internally consistent frameworks, yet they describe different possible realities – our physical universe happens to favor one (non-Euclidean, in general relativity) over the other in large-scale structure. In fiction and mythology, richly coherent worlds can be constructed (Tolkien's Middle-earth has its own consistent history and laws, for example) but they are not *true* in the empirical sense. In psychology, a paranoid delusion can form an internally logical narrative (every random coincidence *fits* the story that "the government is after me"), and yet the story is false. **Multiple coherent frameworks can exist that are mutually incompatible**, a fact that confronts us with pluralism at many levels.

Modern society is a tableau of such plural coherent systems. We have **multiple religions, ideologies, and cultural worldviews** – each largely coherent internally, yet contradicting each other on fundamental points. A creationist's universe (6,000 years old, overseen by a particular deity) is a radically different "story" of reality than a naturalist's universe (14 billion years old, evolving by impersonal laws), yet each is coherent on its own terms, able to explain observations through its lens (albeit with much straining in one case). Liberal democracy and authoritarian nationalism represent divergent political-coherence systems, each with their own internal logic and values. This **pluralism** is an undeniable feature of the human condition, especially in a globalized world: never before have so many disparate coherent narratives rubbed shoulders. It gives rise to what we might call the *paradox of coherence*: *How can multiple, incompatible coherent systems all claim legitimacy?* If coherence were our only standard, we would be at a loss to choose among them – each can point to its internal consistency as "proof" of righteousness. This recognition is part of why 20th-century thought saw challenges to naive notions of a single unified truth (Nietzsche's "perspectivism," for example, or Kuhn's observation of incommensurable scientific paradigms).

One response to this pluralism has been **relativism or fragmentation** – the idea that each coherent viewpoint is valid "for its own believers," and there is no overarching truth. David Bohm, the physicist-philosopher, lamented the "fragmentation" of thought and society into disparate coherent sub-worlds, yet he also suggested that perhaps each fragment contains *some* insight. Bohm sought a higher-order integration, a *"new tier of coherence that envelops those plural truths into a higher-order system"*, akin to a synthesis. Philosophers like Jürgen Habermas, coming from a different angle, believed that through **communicative rationality** – open dialogue governed by mutual respect and reason – diverse value systems could find common ground or at least *overlapping coherences* that allow coexistence. He did not deny value pluralism, but envisioned a discourse ethics where contradictions are worked through towards

some form of agreement or at least understanding. These thinkers were grappling with a core limitation of coherence: it *tends toward monism*, the idea that everything should form one consistent whole, but the lived world presents *irreducible multiplicity*.

One possible resolution is a stance of **integrative pluralism** – accepting that our "coherent wholes" might ultimately be parts of a larger, still-emerging mosaic. Rather than a single seamless system of truth, we might have a patchwork quilt of systems, each internally coherent and locally valid, which overlap and can even conflict, yet each illuminating some facet of reality. *"We may have to live with a tapestry of coherent patches rather than a one-piece seamless cloth,"* as one analysis phrased it [3]. In this view, coherence remains an ideal, but a **nested** or **layered** one: we aim for maximum coherence *within* each domain and then seek meta-coherence between domains where possible, without forcing a premature total unification. For example, physics may maintain coherence internally, and theology maintains coherence in its own terms; an integrative pluralist would not mash them into one system hastily, but might seek a higher coherence where science and spiritual values can dialogue (acknowledging they speak different "languages" of explanation). The *price* of this approach is living with ambiguity and some **degree of incoherence** at the global level – admitting that human knowledge is incomplete and even fundamentally limited such that not everything will neatly align. The *benefit* is avoiding false syntheses or the tyranny of a single perspective claiming to be the only coherent truth.

It is here that we see clearly: coherence, by itself, cannot be our sole North Star; it must be guided by reality and by *humility*. The **necessary complement to coherence is correspondence** (fit with facts) and **pragmatic usefulness** (the ability to guide effective action). A completely coherent but factually untrue belief system is, in a practical sense, a kind of intellectual artifice – impressive perhaps, but dangerous if mistaken for reality. This is why, returning to our earlier discussion, the ideal regulative principle for knowledge is often articulated as **"coherence *plus*."** As an academic report on philosophical methodology put it: *"one could have a very coherent formal theory that is nonetheless disconnected from reality – e.g. a perfectly consistent fantasy world. That's why the coherence ideal must span further: consistency plus meaningful correspondence to the world (empirical adequacy) plus applicability (pragmatic usefulness) plus alignment with humane values."*. In other words, coherence remains *foundational* – without consistency, we can have no truth – but it must be **anchored and constrained** by empirical input and by human value considerations. These additional guardrails ensure we do not build what one author called *"beautiful but empty logical castles."* A system can be perfectly coherent yet empty of life or relevance; by demanding evidence and ethical/pragmatic relevance, we raise the standard for what counts as a *good* coherent system.

The **pluralism of coherent systems** also teaches another lesson: tolerance and the importance of dialogue. If we acknowledge that many groups find meaning in different coherent narratives, then imposing one absolute coherence (short of demonstrable empirical truth) is more likely to breed conflict than wisdom. A contemporary ethos emerging in some circles is *metamodernism*, which finds a "both/and" appreciation for the interplay of multiple perspectives. It encourages a mindset that *"finds beauty in [the] dance: coherence emerging from chaos, and new coherence growing from the fertile soil of contradiction."* Instead of fearing contradictions, the metamodern spirit sees them as opportunities for creative synthesis or deeper understanding. This ethos resonates with the scientific concept of hypothesis generation: often, when data don't fit theory (an incoherence), it's precisely the moment of discovery – indicating a *new* theory is needed that will eventually make sense of the anomaly. Thus, the presence of multiple coherent yet conflicting systems could be viewed not only as a problem, but as a **fertile tension** that drives inquiry. The key is to approach it with a mindset that values coherence *while recognizing* it may come in stages or layers.

In practical terms, an educated mind in the 21st century may need to hold **provisional pluralism**: being conversant in multiple frameworks (scientific, philosophical, cultural), using coherence as an internal guide within each, but also being willing to shift or translate between frameworks. For example, one might understand both a religious moral outlook and a secular humanist outlook, each coherent internally, and navigate public discourse in a way that seeks *common coherent ground* (perhaps in shared values like compassion or fairness) without insisting that one system wholly subsume the other. This kind of integrative thinking demands intellectual flexibility – a comfort with a degree of uncertainty and a hope that over time, through dialogue and exploration, a *broader coherence* might emerge. Even if it never does fully, simply preventing the violent clash of incomprehension between systems is a victory for reason and peace.

To sum up, coherence is a **necessary guiding star** but a *fallible* one. We must follow it, but with eyes open to the horizons of experience it does not yet illuminate. We turn now to consider how this insight might be applied to reinvigorate fields where coherence has been undervalued or misused, notably academic philosophy and our fractured public discourse.

Coherence as Corrective: Reorienting Philosophy and Public Discourse

In contemporary academic philosophy and in the public sphere, a chorus of critics has noted a crisis of legitimacy. Philosophy, once heralded as the "love of wisdom," is accused in some quarters of devolving into scholastic gamesmanship – *"an insular enterprise more concerned with self-referential puzzles and verbose rationalizations than with illumination or practical relevance."* Public discourse, on the other hand, is seen as increasingly fragmented, polarized, and dominated by spin or tribal narratives, undermining the shared rational basis for democratic decision-making. While these two domains are quite different, a common thread can be traced in their malaises: a **failure to cohere** meaningfully with either broader human understanding (in the case of philosophy) or with shared reality and values (in the case of public discourse). Some scholars have proposed that a renewed focus on *multi-level coherence* could act as a remedy – a way to restore **orientation** and trust in these realms. Let us examine what this might entail.

Within academic philosophy, a "pathology" identified by critics is fragmentation and lack of cumulative progress. The field has splintered into hyper-specialized sub-disciplines, each pursuing problems often divorced from one another and from any larger picture. Analytic philosophy, for instance, sometimes *"pursues ever finer technical coherence in subfields cut off from any larger vision,"* whereas parts of continental philosophy revel in pluralism to the point of denying any stable truth. The result is that philosophy as a whole can appear directionless – or worse, "untethered," indulging clever arguments that connect to nothing beyond themselves. In a report examining these flaws, the authors diagnose that the discipline *"accidentally reward[s] incoherence"* by not holding work accountable to external standards, allowing brilliant but reality-averse minds to thrive in what becomes a "sanctuary for clever madness". The proposed antidote is stark: to **fundamentally alter philosophy's ultimate aim (telos)** and norms by making *coherence* – **"at multiple levels"** – the regulative ideal. This means philosophers would *"make their North Star the increasing coherence of our understanding, across logical, semantic, pragmatic, and even ethical dimensions."* Rather than celebrating obscurity or novelty for its own sake, philosophy would ask of every contribution: does this *integrate* with our best existing knowledge? Does it clarify concepts across contexts (semantic coherence)? Does it lead somewhere useful or at least meaningful for life (pragmatic coherence)? Does it align with humane values and lived experience without hypocrisy (ethical coherence)? In practice, this vision calls for many changes: renewed emphasis on **logical clarity** and consistency in arguments (no internal

contradictions or undefined terms); an expectation that each subfield's insights not contradict those of another without addressing the discrepancy (e.g. a philosophy of mind that does not ignore what physics or biology say about nature); and an insistence that purely theoretical constructs eventually connect back to something testable or experienceable (no "uncashed cheques" of insight that never redeem in reality). In short, the field would transform into *"the discipline of disciplined thought"* aimed at constructing an ever more coherent worldview from the disparate pieces of knowledge humans have.

Such a reorientation around coherence is not about reverting to some rigid system-building (the era of grand metaphysical *ism*s) – advocates stress that *"coherence is not a final destination; it is a vector"*, a direction of continual improvement. It acknowledges that ultimate truth may be out of reach, yet maintaining direction toward fewer contradictions and greater integration is what makes philosophy *valuable*. If philosophy fails to do this, coherence proponents warn it will remain *"either mere historical pageantry or recursive pathology,"* neither of which justifies its existence. On the other hand, if philosophy succeeds in this mission, it could regain public and academic legitimacy as the place where **synthesis happens** – where the natural sciences, social sciences, arts, and ethics all find a forum to be reconciled into a coherent understanding of the human situation. This is an inspiring vision: philosophy as the great integrator, with coherence as its North Star guiding it out of the labyrinth of specialization and self-indulgent critique. Notably, this prescription for philosophy mirrors what we identified as healthy practice in science and discourse: it couples coherence with empirical and pragmatic guardrails. Indeed, the proposal includes adopting quasi-scientific norms *"transparency, falsifiability, peer review by broader communities – but adapted to conceptual work"*, to *"weed out"* the most egregiously self-indulgent speculations. Philosophy journals might prioritize work that *solves* a problem or clarifies a longstanding confusion over work that simply invents a new theory for novelty's sake. Conferences could reward interdisciplinary work that shows coherence between, say, ethics and cognitive science. The overall effect would be to **re-couple** philosophy with the rest of knowledge and life, undoing its insulation. If successful, this could indeed restore a measure of public trust: non-philosophers might again see philosophy generating insights that *cohere* with scientific findings and everyday experience, rather than abstruse wordplay or endless internecine debates.

Turning to **public discourse**, a coherence-based corrective would look somewhat different but shares the spirit of reintegration. Public discourse suffers not from too much fragmentation of subfields, but from *polarization, misinformation, and the collapse of shared standards*. Here, the lack of coherence is evident in the way basic facts are contested and each camp operates in its own bubble of narrative (as discussed under tribal epistemics). The remedy would involve re-establishing some *common coherence framework* for public facts and dialogue. This is admittedly a monumental challenge – essentially, how do we rebuild a collective reality principle in a post-truth era? A coherence-oriented approach would insist on **consistency and accountability** in rhetoric and policy across the board. For instance, if a political actor argues X in one context and ¬X in another (because it suits their interest each time), a coherence watchdog would relentlessly call this out. Media and civil society could treat logical inconsistency and hypocrisy as seriously as they (ideally) treat factual inaccuracies. Just as fact-checking has become a norm for verifying correspondence with reality, we might envision **"logic-checking"** becoming a norm for verifying consistency of arguments. This could expose politicians who change narratives depending on the audience, or parties that hold double standards, thereby creating public pressure for more coherent platforms. It is harder to lie or obfuscate when blatant contradictions are highlighted in headlines: e.g., *"Candidate claims to champion local decision-making but supports federal override in case Y – incoherent stance."* While spin-doctors rely on short attention spans to avoid such connections being made, a coherence ethos in journalism would doggedly connect the dots.

Moreover, public discourse could benefit from **multi-value orientation** similar to what we described for intellectual communities. A democracy must balance values like liberty, security, equality, tradition, innovation – any one of which, if absolutized, creates a distorted picture. Healthy discourse would thus **acknowledge multiple legitimate referents** and seek policy that, if not maximizing all, at least *considers* all. Incoherence in public debate often arises when one side refuses to concede any merit in the other's concerns. A coherence-guided dialogue would push participants to integrate opponents' valid points (much as steel-manning does). For example, in a debate on pandemic policy, one side's value on personal freedom and another's on collective safety need to be coherently balanced in a solution, not treated as mutually exclusive absolutes. The resulting policy (say a nuanced set of health measures with personal choice aspects) might *not* be perfectly coherent within either pure ideological framework, but it is coherent in a **higher-order sense** – it acknowledges and addresses a wider spectrum of facts and values, avoiding the hypocrisy of claiming to care about one good while sacrificing another unnecessarily. This is analogous to the philosophical integration: it's about creating a larger narrative in which previously opposing considerations find a logical place.

To implement this, our **institutions** would need to incentivize bridge-building and penalize extreme incoherence. Consider parliamentary systems where a "loyal opposition" exists – there is an institutional role to voice critique (devil's advocate to the ruling party), but also a shared agreement on the rules of the game. If one faction undermines the very rules (e.g., rejects election results or basic norms of evidence in hearings), it's exhibiting epistemic incoherence (wanting the system to work for them but not accepting its constraints). Constitutional checks and media scrutiny must enforce that you cannot have it both ways. On a practical level, civic education could emphasize *critical thinking and logical reasoning* as much as knowledge of history or civics. A populace trained to spot fallacies and contradictions will be more resistant to demagogues who rely on those. Imagine televised debates where a neutral moderator not only checks facts but also points out, *"Your proposal contradicts your stance on issue X last week; how do you reconcile this?"* It might force a higher level of explanation or humility.

Admittedly, **public discourse** will never be as tight and formal as an academic discipline. It thrives on rhetoric, emotion, narrative – elements not strictly coherent in a logical sense but important to human communication. So the call for coherence here must be applied with finesse: it's not to make politics a logic seminar, but to *raise the floor* so that outright contradictions, dishonest doublethink, and willful disregard for consistency become culturally unacceptable. We want a *coherent ethos* where leaders are expected to mean what they say in a broad, enduring sense, not just expediently. Over time, if coherence (plus honesty and evidence) became a north star in public life, we might see trust restored. People trust systems that aren't capricious or self-contradictory. A politics that demonstrates internal consistency (in principles applied across cases) and external consistency (with facts on the ground) would earn back some of the legitimacy that has eroded in the age of cynicism.

In both academia and public life, then, **coherence as a multi-level ideal** offers a path forward. It is not a magic wand – by itself, it solves nothing unless paired with truth-seeking and good faith. But it provides a *directional beacon*. For philosophy, that beacon says: *unify and clarify our shared map of knowledge*. For public discourse, it says: *be consistent, transparent, and integrative in governing our shared world*. These are ambitious goals. Critics might counter that they are naive, given incentives in academia to specialize and in politics to pander. But paradigms can shift. If enough individuals and institutions begin to prize coherence vocally – if journals reward synthesis papers, if voters reward politicians who stick to principled consistency – norms can change. History shows periods of reform where a clarity and integrity of discourse did improve (the Enlightenment's republic of letters; or the mid-20th-century emphasis on bipartisan consensus on basic

facts). In an information age drowning in disparate bits and echo chambers, a renewed focus on coherence might actually be *yearned for* by many – a kind of intellectual homecoming.

Conclusion. In treating coherence as the "epistemic North Star," we have journeyed through the mind's inner workings, our social bonds, and our cultural edifices. Coherence exerts a gravitational pull on thought, from the neuron's predictive circuits up to the collective belief systems of civilizations. It is the source of our aversion to contradiction and the engine of our quest to make sense of the world. Psychologically and neurologically, it drives learning and provides the comfort of understanding – yet it can also mislead, causing us to see patterns that aren't there or cling to comforting delusions. Socioculturally, coherence undergirds the solidarity of tribes and the integrity of sciences alike – yet it can also pit mutually coherent tribes against each other or allow scientific paradigms to become closed-minded. The **ramifications of coherence** are thus Janus-faced: it is both the condition for *rational progress* and a potential source of *systematic error*. Recognizing this duality is key. The task, both individual and collective, is to harness the positive force of coherence – the drive toward unity, intelligibility, and integrity – while bracketing its tendency to seduce us into self-confirming bubbles.

Achieving this balance means coupling coherence with continuous **reality-testing and reflection**. In practice, that translates to cultivating intellectual virtues: curiosity (which drives us to seek new information even if it disturbs our current coherence), humility (which allows us to admit inconsistency and learn), and diligence (which pushes us to actually resolve discrepancies rather than ignore them). It also means structuring our communities – scientific, philosophical, political – in ways that *institutionalize* these virtues: encouraging debate, rewarding self-correction, and building webs of dialogue across different coherent perspectives. If coherence is our North Star, we must remember it is a *guiding* star, not a destination. As with the literal North Star for sailors, one never "arrives" at it; one navigates by it. In epistemic terms, that means we continually adjust our course to reduce contradictions and encompass more of reality into a coherent whole, without ever assuming our current whole is final. Our models should increasingly cohere with each other and with the world – a process of asymptotic refinement.

In closing, coherence as an ideal can restore a sense of **direction and trust** in domains where it has faltered. A philosophy that openly strives for multi-dimensional coherence can regain its role as mediator of the big picture, rather than purveyor of what Nietzsche mocked as "wandering through the many and contradictory philosophies" with no resolution. A public discourse that values coherence can begin to mend the broken conversation of democracy, by finding common logical ground and exposing bad-faith contradictions. Coherence alone will not answer what is *true* or *good*, but it will ensure that our answers do not crumble under internal scrutiny. It acts as a regulative ideal – much as *justice* or *rationality* do – giving us a standard to which we can hold ourselves accountable. In a fragmented world, there is power and solace in the simple phrase, *"Let it all make sense together."* That is the hope embodied in coherence as an epistemic North Star: that by orienting steadfastly toward integrative understanding, we can navigate through chaos and confusion toward a horizon where our minds, our values, and our reality are in dialogue and, ultimately, in harmony.

Footnotes: (All quotations and data are sourced from the referenced materials.)

---

1 2 Frontiers | A Theory of Predictive Dissonance: Predictive Processing Presents a New Take on Cognitive Dissonance
https://www.frontiersin.org/journals/psychology/articles/10.3389/fpsyg.2018.02218/full

3 The Universality and Limitations of Coherence – From Cosmic Generator Function to Rhetorical Tactics.pdf
file://file-FLwSzFGJL1uUzPVokbA3sS