THËÖRŸ ÖF VÏRTÜË

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ÄBSTRÄCT

This paper proposes a radical reinterpretation of *Virtue Ethics* and its four cardinal virtues—wisdom, justice, temperance, and courage—as temporally distinct cognitive faculties. Drawing from Theory of Mind, Cognitive Science, Complexity Theory, and more, this *THËÖRŸ öf VÏRTÜË* (*TöV*) offers a recursive framework of ethical reasoning that integrates reason♦, memory♣, anticipation♥, and adaptability♠. Departing from deontological, consequentialist and dualist traditions, TöV positions virtue as a function of adaptable mental faculties, applicable to both human agents and computational systems, such as AI. The framework also introduces new conceptual tools—such as *MÜ Theory*, *Situational Logic, Calibration Processes,* and *Swarmetics*—for understanding how individual reasoning scales into cultural evolution. The paper concludes by outlining implications for decision making strategies, psychology, AI alignment, Educational Models, and more.

Keywords: *Cognitive Science, Virtue Ethics, Complexity Theory, Memetics, Artificial Intelligence*

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1. ÏNTRÖDÜCTÏÖN

Everything you know is a lie until you understand it. But once you understand it and try to explain it, all you say becomes a lie again, because we communicate from mind to words and understand from words to mind. Only when others understand your message does it become their truth. Then they can explain it in their own words. It becomes like a *telephone game*, through a chained process of cultural transmission. Truth gets easily lost under believes, metaphors and superstitions. To understand truth, one must use abstract thinking to reframe already known concepts, remove labels, and forget assumptions.

Moral frameworks are poorly explained and transmitted, because they are built around abstract rules, outcomes, and/or cultural idiosyncrasies. Even *Virtue Ethics*, often considered a well-grounded model, lacks logical foundations. It offers a list of virtues (most often four), but no reasons. It says: "You should be wise, just, temperate, and courageous"—but does not convince on why *these* four, or how *they connect* to each other and to goodness. But isn't *Virtue Ethics* wise enough to challenge itself?

This *THËÖRŸ öf VÏRTÜË* (or *TöV*) begins from this theoretical gap. It proposes that the four cardinal virtues from Virtue Ethics are not arbitrary moral ideals, but correspond to four forms of intelligence, or abilities, used in reasoning. These are not moral traits, like wisdom, justice, temperance, and courage —in the sense we understand them now—, but mental frameworks for good decision-making. I represent these four abilities with the same words in capital letters with umlauts[1]:

♦ = *WÏSDÖM,* ♣ = *JÜSTÏCË,*
♥ = *TËMPËRÄNCË,* ♠ = *CÖÜRÄGE.*

These four abilities operate across time: current reason♦, experience about the past♣, future balance♥, and constant change♠. They are the basis of ethical action, not by tradition, but by structure. Human flourishing, in this framework, requires the calibration of these four skills, not the repetition of predefined behaviors.

This paper introduces the *TöV* framework by first defining each reconstructed virtue and the conditions under which they operate. To explain this framework, it is necessary to make use of certain new tools that will be briefly introduced along the subsections of the framework. First♦, the framework presents a non-dualistic framework of choice, to be called *MÜ Theory*; secondly♣, it applies these to decision-making through *Situational Logic*, a four-by-four matrix of cognitive outcomes and choices; thirdly♥, it explains how *Calibration Processes* develop through imbalance; and finally♠, this paper introduces *Swarmetics*, a system explaining how cultures succeed or fail based on imitation and rejection of cognitive structures.

By doing so, *TöV* aligns *Virtue Ethics* with findings from Decision Theory (including risk, ambiguity, and bounded rationality) and Cognitive Science (*Memetics*, covering moral cognition, emotion, and development). It is not a moralistic thesis based on belief or tradition, but a logical model for good decision-making. *TöV* aims to describe how the human mind can make better decisions by learning how to think using four simultaneous but distinct frameworks. The aim of this paper is to be directional, not dogmatic; to represent how different disciplines are converging towards a combined goal, but they fail to align with each other.

2. FÖÜNDÄTÏÖNS

TöV occupies a unique position at the intersection of *Classical Ethics*, *Rationalist Epistemology*, *Cognitive Psychology*, *Cybernetics*, and *Complexity Theory*. It bridges the philosophical pursuit of virtue with emerging scientific paradigms that model cognition, learning, adaptation, and self-organization. Although *TöV* was developed independently, related research supports the link between ethics and other scientific disciplines such as *Cognitive Science*, *Psychology*, *Linguistics*, *Sociology*, *Computer Science*, *Mathematics*, and *Physics*.

Socrates, Plato and Aristotle established the foundations of *Virtue Ethics*. Socratic dialogues like *Meno*, *Euthyphro*, and *Charmides* deconstructed moral concepts to reveal their lack of definition, often ending in *aporia*—a state of philosophical doubt (Plato[O], 2003). His disciple, Aristotle, later systematized the virtues and centered moral growth towards *human flourishing* (Aristotle[B], 2009). Despite this framework's lack of formal structure and constant *aporias*, progress has been minimal, to the point that Western Philosophy is accused of being "a series of footnotes to Plato" (Whitehead[U], 1978).

Although *Virtue Ethics* re-emerged in contemporary philosophy in the mid-20th century, particularly after Anscombe[A] (1958) assessment of modern moral philosophy, it remains theoretically fragmented. Arguably, this revival has not sufficiently integrated findings from scientific disciplines, leaving fundamental questions unaddressed. This paper readdresses these issues and proposes a new conclusion: *Virtue Ethics*, as understood through *TöV*, is the only fully-rational moral framework.

[1] The symbols next to each *VÏRTÜË* (♦, ♣, ♥ and ♠) are used over this document to hint towards that *VÏRTÜË* (*WÏSDÖM*, *JÜSTÏCË*, *TËMPËRÄNCË* and *CÖÜRÄGE*, respectively).

TöV does not look at ethics in isolation, but as an extension of the latest scientific understanding: It can help understand how many areas of the universe coexist. As the latest *Cognitive Science* has evolved into an interdisciplinary domain that unifies *Psychology*, *Neuroscience*, and *Decision Theory*, so ethics also shall help in these domains needed by understanding human reasoning. For instance, dual-process models of moral judgement, as suggested by the works of Kahneman[J] (2011), highlight a split between distinct types of thinking. The idea of different thinking processes is key to understand human ethics.

TöV modernizes *Virtue Ethics* by bringing it back to connect with latest the academic models:

- ***Behavioral Science*:** *TöV* is grounded in modern behavioral theories, like those of Kahneman[J] (2011), who distinguishes between intuitive and deliberative systems of thinking. It helps explain the origin and solution of behavioral biases.
- ***Cognitive Science*:** Metacognition, as the understanding of one's thought processes, is the key message of *TöV*. It takes inspiration on cognitive theories like *conceptual blending*—as per Fauconnier & Turner[G] (2002)—, which provide a compelling framework for how one creates thoughts by blending meanings.
- ***Complexity Science*:** Chaos Theory, quantum physics, and pattern formation echo *TöV*'s claim that virtue must be dynamically balanced across changing states. Morin[N] (2008) developed the idea of complex models and Kauffman[K] (1995) the idea of self-organization, both aligning towards the adaptive, decentralized collective intelligence.
- ***Cybernetics*:** The study of feedback and recursive cycles, as developed by Wiener[T] (1948) is related to the systemic calibration functions that one observes in *TöV*.
- ***Memetics*:** *Swarmetic Theory*, a core part of *TöV*, models cultural ethics in an environment of *memetic* competition and convergence—as proposed by Dawkins[F] (2016) and developed by Blackmore[E] (1999)—, shaped not only by values but by feedback systems, imitation and complexity.
- ***Artificial Intelligence* (AI):** AI models are based on models of human thought, therefore *TöV* is also connected to computational models such as *Bayesian cognitive models* and *artificial neural networks*.
- ***Linguistics*:** *Swarmetic Theory* suggests one adapts by sharing (linguistics) innovations in waves, like in the *Wave Model of Linguistic Innovation* as explained by François[H] (2014) and Heggarty, Maguire & McMahon[I] (2010).

In summary, *TöV* integrates ethics (or decision-making) with the latest interdisciplinary innovations. As a result, *TöV* stands not only as a reformulation of *Virtue Ethics* but as an interdisciplinary logic for individual, collective and societal flourishing. Its sequenced architecture of decision—across reason♦, memory♣, anticipation♥, and adaptability♠—enables the ethical calibration of individuals and groups in dynamic environments. By uniting ethical theory with empirical models of intelligence, *TöV* also offers a foundational methodology for ethically aligned artificial agents, educational renewal, and a future of better decision-making.

3. FRÄMËWÖRK

TöV proposes a cognitive-ethical framework composed of four primary faculties—*WÏSDÖM*, *JÜSTÏCË*, *TËMPËRÄNCË*, and *CÖÜRÄGE*—each representing a distinct mode of decision-making abilities in different temporal mindsets. Each of these abilities echoes not only to a classical virtue but also to a specific way of thinking. Whereas traditional ethical models center on outcomes (i.e., *consequentialism*, e.g., *utilitarianism*) or duties (i.e., *deontology*); like *Virtue Ethics*, *TöV* structures morality as an internal process. The moral focus is within the relation of thoughts before deciding. These virtues function not as *moral categories* but as *cognitive abilities*—trainable, measurable, and applicable in different scenarios.

This is how to reinterpret the virtues:

♦ ***WÏSDÖM*** as the ability to acquire knowledge through present understanding.

♣ ***JÜSTÏCË*** as the ability to interpret and evaluate knowledge from past observations.

♥ ***TËMPËRÄNCË*** as the ability to anticipate future harmony and guide decisions accordingly.

♠ ***CÖÜRÄGË*** as the ability to act decisively under uncertainty and facilitate continuous change.

These four faculties are needed for holistic ethical judgment. When isolated, each fails. The four faculties align in a temporal decision loop. This loop operates as a recursive model in which to analyze each decision through these four perspectives. Thus the virtues are not just philosophical abstractions but teachable skills—suitable for educational programs, applicable with AI models, and functional within organizations.

Consequently, this framework is the conceptual backbone for *TöV* and all its applications, spanning disciplines such as *Cognitive Science*, *Linguistics*, *Psychology*, *Artificial Intelligence*, and *Education*. The subsequent sections will delve into each of these four faculties in brief, examining how they may be explained and assessed at both individual and collective levels.

♦ *WÏSDÖM*

Knowledge begins in ignorance. Thus, understanding must first emerge from a conscious awareness of what is not yet known. Let's imagine an estate of pure ignorance; at birth, for example, the human mind is blank, free of expectations and beliefs—a state of cognitive zero… In this state of unknowing, a newborn is free of social conditioning and previous experience. It is in this original clarity; one encounters the purest form of *WÏSDÖM*. It is not the accumulation of knowledge, but the capacity to understand choices.

The problem in these situations of ignorance is that one tends to judge choices as per the outcome, not per the process used to decide. Good outcome is good; bad outcome is bad. One may decide dualistically, despite decision-making is non-dualistic; it is not inherently moral or immoral, but directional. This quadratic understanding of alternatives is what will be called ***MU Theory***, where choices may be:

- **Right choices (*PÖSÏTÏVË* = ☺):** Choices that take us closer to our purpose.
- **Wrong choices (*NËGÄTÏVË* = ☹):** Choices that take us farther from our purpose.
- **(Un)lucky choices (*RÄNDÖM* = 💣):** Choices that, randomly, take us closer or farther to/from our purpose.
- **Indifferent choices (*NËÜTRÄL* = 😐):** Choices that make us no farther nor closer to our purpose.

To express these four types of choices, one can use the semantic concepts of *PÖSÏTÏVË*, *NËGÄTÏVË*, *RÄNDÖM*, and *NËÜTRÄL*, respectively. *PÖSÏTÏVË* indicates something that is helping; *NËGÄTÏVË* is something that is hindering; *RÄNDÖM*

is uncertain or unclear; *NËÜTRÄL* is something that makes no difference. Thus, one can perceive that the measurement of *WÏSDÖM* also relates to the maximization of *PÖSÏTÏVË* decisions:

$$♦_{t=0} = \frac{\Delta\, d\,(\,☺_{t=0}, ☹_{t=0}, 💣_{t=0}, 😐_{t=0})}{\Delta\, ☺_{t=0}}$$

Note: PÖSÏTÏVË = ☺; NËGÄTÏVË = ☹; RÄNDÖM = 💣; NËÜTRÄL = 😐

Here, *WÏSDÖM* (♦) is represented as the ***function d*** (representing decision) maximizing *PÖSÏTÏVË* decisions (☺) on at each situation. Then *WÏSDÖM* implies a focus on present optimization; it makes you take more *PÖSÏTÏVË* choices, follow more *PÖSÏTÏVË* patterns, make yourself in more *PÖSÏTÏVË* circumstances for the *objective* that one is seeking. However, *WÏSDÖM* is insufficient to define what the right objective is; it makes *PÖSÏTÏVË* decisions in the present, through understanding.

This cognitive distortion creates the illusion that our choices are free, while repeating patterns never decided. *WÏSDÖM* is not about knowing more; it is about forgetting what no longer serves the present moment. It is the capacity to subtract the irrelevant. To develop *WÏSDÖM*, one must reject what is known without understanding (i.e. one's believes), be willing to suspend judgment, willing to create new categories, and the courage to challenge assumptions. The wise are not those who have read the most, but those who can think without presumption. This acknowledgment of unknowing should not be confused with ignorance. It is readiness to make *PÖSÏTÏVË* decision. *WÏSDÖM* arises —not as memory of the past, nor as projection of the future, but as pure, present understanding. This defines the faculty of *WÏSDÖM*.

Therefore, *WÏSDÖM* is not a passive state of knowing—it is an active mental posture: the orientation toward clarity, the capacity to perceive without illusion, and the readiness to act in alignment with what the present moment demands.

♣ *JÜSTÏCË*

As we grow, this initial *WÏSDÖM* clarity is gradually reduced, as experience becomes memory; memory becomes opinion; opinion solidifies into dogma… Slowly, our perception is controlled by judgments and assumptions. We see through the eyes of our past, of other people—our families, our schools, our friends, our believes... What was once understanding becomes imitation.

Traditionally, "Justice" has been seen as fairness, lawfulness, or moral duty. But in *TöV*, it is redefined as a cognitive faculty—the ability to evaluate present situations by drawing from and interpreting past experiences. This faculty is termed *JÜSTÏCË*: The ability to make the best *judgement* based on past observations.

Rather than reward or punishment, *JÜSTÏCË* represents a pattern-recognition engine in the mind. As described in the case of autism-like behaviors by Baron-Cohen[D] (2020), we learn to find patterns through experience of "if A and B, then C" patterns. It encodes the logic of previous outcomes into usable insights, aligning memory meaning. This process is formalized in the *TöV* framework through ***Situational Logic***, a sequential understanding of four types of situations (*PÖSÏTÏVË*, *NËGÄTÏVË*, *RÄNDÖM*, and *NËÜTRÄL*) with four types of choices (also *PÖSÏTÏVË*, *NËGÄTÏVË*, *RÄNDÖM*, and *NËÜTRÄL*). It is a decision system based on the calibration of historical patterns—Bayesian in logic and experience.

$$♣_{t=0} = \frac{\Delta\, d\,(\,☺_{t=(-n,-1)}, ☹_{t=(-n,-1)}, 💣_{t=(-n,-1)}, 😐_{t=(-n,-1)})}{\Delta\, ☺_{t=0}}$$

Note: PÖSÏTÏVË = ☺; NËGÄTÏVË = ☹; RÄNDÖM = 💣; NËÜTRÄL = 😐

When this *Situational Logic* is applied recursively, then one can basically try to maximize our success based on previous experience. *JÜSTÏCË* can be represented as the ***function d*** (representing decision) maximizing *PÖSÏTÏVË* outcomes on which one makes decisions based on any experience (from t=-n to t=-1) which are either *PÖSÏTÏVË*, *NËGÄTÏVË*, *RÄNDÖM*, or *NËÜTRÄL*.

JÜSTÏCË is also the source of most of humanity's cognitive biases. We believe that what we see is what is real. We assume our judgments are fair because they feel familiar. But our memory is not a recording device—it is an editor, a storyteller, a biased narrator; nor do we have enough information, or we can interpret fully. Our minds reinforce what we expect, and we mistake repetition for truth.

For instance, bias is magnified by traumas—whether sudden or chronic—, which embed strong emotional charges into memory. These distortions can reshape our interpretation of situations long after the original event. For someone betrayed, every new connection might carry suspicion. For someone abandoned, even kindness might feel threatening. In *TöV*, trauma distorts the *JÜSTÏCË* grid, leading to ethical misfires: avoidance where trust is needed, aggression where understanding would suffice.

This perspective aligns with Kahneman[J] (2011) framework of *System 1* and *System 2* thinking. *System 1*—fast, automatic, intuitive—is where trauma and habit dominate. *System 2*—slow, reflective, deliberate—requires effort and re-evaluation. *JÜSTÏCË* is the ability to use *System 1* effectively but activating *System 2* (i.e. *WÏSDÖM*) to avoid prejudice, or assumption. Behavioral economics shows how such biases (availability, anchoring, framing…) distort economic and moral decisions alike.

Consequently, ethical judgment involves more than the possession of experience; it requires a critical awareness of the quality and reliability of that experience. *JÜSTÏCË* entails the deliberate re-examination of conclusions drawn from prior experience, particularly when those conclusions may have been influenced by bias, trauma, or incomplete information. It requires an awareness of the limitations inherent in one's interpretive framework, a desire to acquire new information (i.e. curiosity) and a willingness to refine judgments as new evidence becomes available. Far from being a static attribute or an external decree, *JÜSTÏCË* is a methodological process of epistemic review aimed at enhancing the reliability of decisions based on experience.

Human beings acquire knowledge and moral intuitions primarily through experience, yet such experience is not always a reliable guide. *TöV* proposes that *JÜSTÏCË* is not merely the accumulation of experiential data, but a cognitive faculty that evaluates the validity of those experiences through structured reasoning and information gathering.

This challenge is captured by the concept of *Situational Logic*, which cross-maps four types of choices (*PÖSÏTÏVË*, *NËGÄTÏVË*, *RÄNDÖM*, and *NËÜTRÄL*) with the same categories of situational context. These combinations yield a matrix where decisions can be revalued based on their certainty and outcome. In particular, research in *Bayesian inference* and

other related computational methods offer a framework for understanding this virtue.

Thus, *JÜSTÏCË* is not reducible to fairness as defined by outcomes or institutional norms. Rather, it is another decision-making virtue: The capacity to good decisions from considering every past experience. It is about judging one's experience rather than being fair or just to other people.

♥ *TËMPËRÄNCË*

TËMPËRÄNCË, historically also framed as moderation or self-discipline—a virtue of restraint, is here redefined as a cognitive virtue acquired through the capacity to simulate futures, identify imbalance before it arises, and adjust actions to maintain long-term coherence. It is strategic foresight, grounded in understating of relationships within systems. This virtue functions as an internal calibration system—one that projects value beyond reality, within our imaginary capacities.

$$♥_{t=0} = \frac{\Delta f_{t=(1,m)}\left[\, d\left(☺_{t=(-n,-1)}, ☹_{t=(-n,-1)}, 💣_{t=(-n,-1)}, 😐_{t=(-n,-1)} \right)\right]}{\Delta\, ☺_{t=0}}$$

Note: PÖSÏTÏVË = ☺; NËGÄTÏVË = ☹; RÄNDÖM = 💣; NËÜTRÄL = 😐

Here, *TËMPËRÄNCË* represented as the ***function d*** (representing decision) maximizing *PÖSÏTÏVË* outcomes on which to make decisions based on the interpretation of any future expectation, represented as ***function f***, at time m based on any experience (from t=-n to t=-1) which are either *PÖSÏTÏVË*, *NËGÄTÏVË*, *RÄNDÖM*, or *NËÜTRÄL*.

In contrast with *JÜSTÏCË*, where we learn about something from experience, *TËMPËRÄNCË* translates that experience into new situations. We extrapolate, and this creates new knowledge. It is the constructive application of memory that forms this anticipation of future possibilities. Here's where the mind interacts with the world in ***Calibration Processes*** to bring back itself into a preferred situation, creating and endless loop between change and adaptation: We perceive, we anticipate, we decide… We perceive, we anticipate, we decide… We perceive, we anticipate, we decide… But here again we can find biases of anticipation of the sort created in financial bubbles or herd behaviors.

Where *WÏSDÖM* creates insight from the present and *JÜSTÏCË* extracts meaning from the past, *TËMPËRÄNCË* models potential futures. It anticipates, rather than reacts. This places it in direct conceptual lineage with the idea of *Anticipatory Systems Theory* proposed by Rosen[Q] (1985), which asserts that intelligent behavior must include internal models of the future to inform current action. *TËMPËRÄNCË* does precisely this—anticipating dissonance before it arises, then subtly altering behavior to preserve harmony.

This anticipatory mechanism is deeply tied to how the human mind constructs meaning across time. Fauconnier & Turner[G] (2002) introduce their theory of *Conceptual Blending*, which explains how humans unconsciously combine elements from multiple mental spaces—typically the past and present—to construct imagined futures. This process is foundational to language, creativity, and narrative thinking. But it is also applicable on how we extrapolate what we know to anticipate future circumstances: Our sense of what might happen is shaped by which memories we blend, which fears we amplify, and which values we carry forward.

It also embodies the principles of second-order cybernetics, as explain by von Foerster[R] (2003), where the self becomes part of the system it seeks to influence. The anticipatory mind observes not only the world, but it reacts within it. *TËMPËRÄNCË* thus functions as a self-referential *calibration process*, continuously updating projections in response to dynamic conditions.

However, anticipation has a shadow form. In clinical psychology, as seen in the works from van der Kolk[R] (2014), it is well known that anticipatory processing, when dysregulated, becomes a core driver of Post-Traumatic Stress Disorder (PTSD). It is *TËMPËRÄNCË* without calibration. A forecasting system that is often wrong and cannot be turned off. This is how emotional delusions are formed: Anticipation creates feelings, and one values those feelings as signs of right or wrong. In PTSD, this manifests as a persistent sense of threat, even in safe environments.

TËMPËRÄNCË, when calibrated, differentiates signals from noise, to anticipate without overreacting; it teaches us to anticipate harmony, not to become victims of our own forecasts. As such, it is not a passive state of self-control, but actively calibrating decisions toward long-term goals, by understanding that we are part of an interconnected system. Within the TöV model, it stands as the calibrator of future impact in an interconnected system. "Nothing too much".

♠ *CÖÜRÄGE*

To understand *CÖÜRÄGE* within the *TöV* framework, it is essential to introduce a few concepts from *Complexity Theory* and *TöV*-specific terminology.

From *Complexity Theory*, one can define (Ladyman, Lambert, Wiesner[L], 2013):

- ***Complex Systems*:** A system composed of many components that may interact with one another.
- ***Complex Adaptive Systems* (CAS):** A Complex adaptive system, in that the individual and collective behavior mutate and self-organize as response to changes.

TöV introduces additional concepts:

- ***Swarmetics*:** The study of Swarmetic Systems or Systems with Swarmetic entities.
- ***Swarmetic behavior*:** A type of behavior that aligns *WÏSDÖM*, *JÜSTÏCË*, *TËMPËRÄNCË*, and *CÖÜRÄGE*. Equivalent to "virtuous behavior".
- ***Swarmetic Systems*:** A Complex Adaptive System which contains *MÜMËNTÖ*, Swarmetic Entities, and Swarmetic behavior.
- ***MÜMËNTÖ*:** This is human essence (i.e. *selem Elohim*).
- ***Swarmetic Entities*:** Members of a Swarmetic System that show Swarmetic behavior.

Swarmetic entities are dynamic groups where people learn, adapt, and evolve together. They function through constant feedback, emergence, and non-linear interactions. Within them, they compete to improve themselves and to imitate what works.

Examples of *Swarmetic Systems* and their entities include:

Swarmetic System	Swarmetic Entities
Languages	English, Spanish, French, Japanese…
Folklore	Rural, country and local folklore…
National cultures	Chinese, Western, British, Christian…
Religions	Christianity, Judaism, Islam, Buddhism…

Swarmetic entities have a process of collective improvement♠ by imitation♣, anticipation♥, and selection♦; they behave collectively towards an ideal goal by group-selected success.

From the previous section, we know how *TËMPËRÄNCË* is the ability to project past experience to understand future harmony. *CÖÜRÄGE* is the ability to change that harmony; it is

the virtue that allows individuals to understand and affect the collective system within their own *Complex Adaptive Systems*, by absorbing right innovations and rejecting wrong believes. These systems resemble memetic environments, where units of cultural meaning—memes—are continuously evaluated, adapted, and replicated.

$$♠_{t=0} = \frac{\Delta \int_{t=0}^{\infty} f_{t=(1,m)}\left[\, d\left(☺_{t=(-n,-1)}, ☹_{t=(-n,-1)}, 💣_{t=(-n,-1)}, 😐_{t=(-n,-1)} \right)\right]}{\Delta\, ☺_{t=0}}$$

Note: PÖSÏTÏVË = ☺; NËGÄTÏVË = ☹; RÄNDÖM = 💣; NËÜTRÄL = 😐

Here, *CÖÜRÄGE* represented as the ***function d*** (representing decision) maximizing *PÖSÏTÏVË* outcomes on which to make decisions based on reinterpreting future expectation (m), represented as ***function f***, into an immediate continuous (from now to eternity), based on any experience (from t=-n to t=-1), which are either *PÖSÏTÏVË*, *NËGÄTÏVË*, *RÄNDÖM*, or *NËÜTRÄL*.

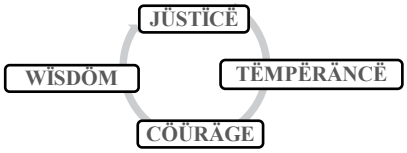
CÖÜRÄGE is a collective action through social context. Culture spreads through memes. Memes do not move in isolation or by sudden breaks; they often propagate in overlapping, wave-like patterns across communities (similar to the *Wave Model of Linguistic Innovation* (François[H], 2014; Heggarty, Maguire & McMahon[I], 2010). Similarly, ethical ideas and behaviors move by imitation waves (i.e., memetically) within Swarmetic Systems. *CÖÜRÄGE* helps individuals recognize which memes to adopt, which to resist, which to ignore, and when to generate new alternatives.

In modern leadership, this form of courage is essential. True leadership is not top-down control; it is the creation of conditions for ethical self-organization. *CÖÜRÄGE* plays this role by inviting coherence and collective alignment. In a world of constant cultural exchanges, cultural waves, and memes, it is doing the right thing even when it is hard. Unlike rigid strength or reactive defiance, true *CÖÜRÄGE* is the art of doing what is right—even when it is difficult, unpopular, or uncertain. It is the virtue of movement, integration, and regeneration.

4. DÏSCÜSSÏÖN

TöV proposes a cognitive reinterpretation of the classical cardinal virtues, reframing Wisdom, Justice, Temperance, and Courage as dynamic faculties of decision-making. This reframing is represented by the same words misspelled as *WÏSDÖM*, *JÜSTÏCË*, *TËMPËRÄNCË* and *CÖÜRÄGE*. This theoretical reconstruction opens a new perspective not only on ethics but on human and artificial cognition. The discussion below explores the significance of the model, its relation to contemporary developments from *Cognitive Science* to *Complexity Theory*, its limitations, and directions for future work.

One can express each of these new virtues as an expression of how to make good decisions.



♣) First, ***JÜSTÏCË*** uses the past to imitate good decisions;

♥) Second, ***TËMPËRÄNCË*** anticipates the future from one already knows;

♠) Then, ***CÖÜRÄGE*** identifies the ideal direction by understanding the Swarmetic trend;

♦) And, only them, ***WÏSDÖM*** can help decide free of bias.

Unlike traditional ethical systems that center on norms (**input**) or consequences (**outcomes**), *TöV* approaches virtue as a cognitive **process** based on different temporal references: present♦, past♣, future♥ and continuous♠. This framing mirrors developments in *Cognitive Science* and *AI Architecture*, where modular, goal-sensitive reasoning is used to balance adaptability with coherence. *TöV* aligns with "*System 1* vs *System 2*" models, *Bayesian reasoning*, and it offers a robust structure for real-time ethical judgments. Therefore, the theoretical approach of *TöV* seems to create a virtuous feedback loop that can achieve a *Swarmetic intelligence*.

Recent work in AI alignment shows a shift towards hybrid ethical architectures that incorporate memory, prediction, symbolic reasoning, and value-based filtering. *TöV* provides new understanding of this approach. Each virtue serves as a counterweight to the others, allowing both consistency and adaptation.

Swarmetic Theory, briefly explained within *TöV*, posits that ethical behavior scales beyond individuals to cultures and groups. This mirrors findings in *Network Theory* and *Memetics*, where successful cultural innovations survive through adaptive feedback loops. The calibration of collective norms (i.e., culture) becomes a matter of systemic self-adapting design.

Future work on this *TöV* will focus on developing the current tools, develop tools for measuring virtue profiles, clarifying future implications, and applying the framework to specific cases. As *TöV* integrates insights from philosophy, *Cognitive Science*, and *Systems Theory*, it offers a promising foundation for next-generation discoveries in innumerable scientific fields.

5. CÖNCLÜSÏÖN

THËÖRŸ öf VÏRTÜË (*TöV*) proposes that *Virtue Ethics* is not just a set of cultural ideas, but also sophisticated system for decision-making. Reframed as *WÏSDÖM*, *JÜSTÏCË*, *TËMPËRÄNCË*, and *CÖÜRÄGE*, the classical virtues represent reasoning across time: Engaging the present♦, learning from the past♣, projecting the future♥, and adapting through continuous change♠.

$$\text{VÏRTÜË}_t = \frac{\Delta\, d\,(\,\text{WÏSDÖM}_t, \text{JÜSTÏCË}_t, \text{TËMPËRÄNCË}_t, \text{CÖÜRÄGE}_t)}{\Delta\ \text{PÖSÏTÏVË}_t}$$

These abilities do not operate in isolation. They form a feedback loop for cognition and decision-making. This loop is mirrored in known models such as the *OODA Loop* (Observe–Orient–Decide–Act), as explained buy Richards[P] (2004), and double-loop learning, as explained by Argyris & Schön[C] (1978), and cybernetic feedback cycles, where the success of action depends on the constant adjustment of beliefs and strategies.

This model also has deep implications for *Psychology*. Imbalances between the virtues often correlate with psychological dysfunctions. For example, trauma may lead to overactivation of *JÜSTÏCË* or dysregulation of *TËMPËRÄNCË*, distorting pattern recognition and anticipation.

In AI, *TöV* clarifies why alignment is so difficult. Without *TöV* tools, agents may be logical, but not ethical because they cannot self-evaluate their basic rules. TöV reframes AI alignment as the challenge of embedding all four cognitive virtues into computational instructions. Minsky[M] (1986) illustrated this as a society of agents creating a purpose through

diversity. Through the understanding of Swarmetics, it is possible to understand that purpose and redirect it if needed.

Mathematically, these dynamics exhibit fractal structure and complex systems behavior as it scales from the individual to the collective through recursive loops of evaluation♦, perception♣, projection♥, and adaptation♠. When one ability dominates, one can hardly make optimal decisions.

This optimal ethical behavior is not about obedience to rules or goals, but the self-regulation of the decision process. It is not widely implemented in *Education*, but it would greatly benefit new generations. To flourish—individually or collectively—each must cultivate minds capable of:

- Understanding clearly in the present♦;
- Interpreting fairly about the past♣;
- Projecting systemic harmony into the future♥;
- Adapting continuously through change♠.

Critics may argue that *TöV* is purely theoretical, in contrast to deontological and consequentialist interpretations where values are predefined. However, *TöV* approach is more robust because it is invariant to circumstances (i.e. facts, customs, and people may vary, but the decision process remains); and, by embedding ethics in a feedback loop, *TöV* avoids assumptions and believes. This makes *TöV* uniquely capable of managing novelty, uncertainty, and complexity.

Artificial intelligence seems to understand facts, or at least react to them, but it is unclear whether it can adapt to creative ideas derived from *MÜMËNTÖ* concepts (e.g., love, humor, desire…). *TöV* offers a blueprint that could help map this gap onto computational architecture, unlike other ethical theories that rely on undefined traits or predefined goals.

In conclusion, ethics based on a logical process offers the most coherent, adaptable, and integrative ethical framework. Where other theories offer ambiguity, *TöV* provides clarity; where others oversimplify, *TöV* explains complexity; and where others assume fixed answers, *TöV* explains self-adaptive improvements. It does not tell us what to does; it shows us how to think about what to do.

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