

Towards a Relational Framework of Practical Wisdom, Flow State, and Intellectual Character for Leading in Dynamic Complexity – An AI-Assisted Critical Interpretive Synthesis

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Keywords

Phronesis
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Abstract

This study explores the relationality of practical wisdom, flow state, and intellectual character for leadership in dynamically complex contexts. In a world undergoing rapid, disruptive change, leaders need effective strategies to navigate uncertainty. Introducing AI-assisted Critical Interpretive Synthesis as methodological approach, the neo-Aristotelian model of phronetic moral decision-making, the triarchic theory of cognitive disposition and flow state theory, augmented by self-determination theory served as synthesised theoretical foundation for the study. The advanced AI's ability to access and analyse vast datasets was merged with the principles of CIS to draw insightful conclusions and generate propositions. The findings offer a relational framework integrating these constructs and a series of practical recommendations for leadership application. Despite limitations, the proposed framework represents a novel theoretical contribution to leadership studies in the face of dynamic complexity. Future research may explore empirical validation of the framework, its potential interactions with other individual and contextual factors, and further investigation of the role of flow state in promoting practical wisdom and cognitive disposition in leadership. The aim is to advance practical wisdom and intellectual character in leadership practitioners navigating our uncertain future.

1. Introduction

Making wise decisions in dynamic complexity has always been a leadership imperative, becoming even more accentuated with the global pandemic that was characterised by life-altering decisions made by government-, health-, security- and business leaders. Although vast disagreements about which decisions are best are prevalent, the outcomes of these decisions can have far-reaching consequences (Kristjánsson, Fowers, Darnell & Pollard, 2021).

It is thus no surprise that wisdom, a topic of interest to moral philosophers for centuries, is increasingly the focus of social science research (Swartwood, 2020), and moreover, interest in the intellectual virtue of *phronēsis* or ‘practical wisdom’ has been escalating within the domains of psychology, philosophy, professional ethics and education (Kristjánsson et al., 2021). Steyl (2020), adds that “*phronēsis* has never been a more popular topic of conversation in business ethics than it is now” and Jakubik (2020) states that practical wisdom is experiencing renewal in contemporary leadership and management literature.

‘*Phronesis*’, an intellectual virtue based on Aristotle's thinking in Book VI of the *Nicomachean Ethics* (Aristotle, ca. 350 B.C.E./1925), involves deliberation that is grounded in values, concerned with practical judgement, and informed by reflection, is pragmatic, variable, context-dependent, and oriented toward action. It goes beyond analytical, scientific knowledge (*episteme*) and technical knowledge or know how (*techne*) and it involves judgements and decisions made in the manner of a skilful social actor (Flyvbjerg, 2006). Nonaka and Toyama (2007) conceive of *phronesis* as a concept that synthesises “knowing why” as in scientific theory, with “knowing how” as in practical skill, and “knowing what” as a goal to be realised. *Phronesis*, thus, according to Hamaya and Oya (2013), is a capability of finding the “right answer” for the overall good in a given context and a *phronetic* leader is a leader who has this capability. In terms of the abilities that constitute *phronesis*, Nonaka and Toyama (2007) refer to (i) making a judgment on “goodness”, (ii) sharing contexts with others to create a shared space of knowledge, (iii) grasping the essence of particular situations/things, (iv) reconstructing the particulars into universals and vice-versa using language/concepts/narratives, (v) using any necessary political means well to realise concepts for the common good and (vi) fostering *phronesis* in others to build a resilient organisation.

Steyl (2018) argues that Aristotle’s seminal work on *phronēsis* provides much more conceptual scaffolding for businesspersons (and leadership in the context of this study) than is typically acknowledged. Against this backdrop and questioning whether contemporary leaders have the intellectual character to effectively navigate the complex, chaotic and unpredictable times, let alone an uncertain future, Oosthuizen (2022), drawing on Sternberg’s (1999) triarchic theory of intelligence augmented with Aristotle’s three intellectual virtues of *episteme*, *techne* and *phronesis*, developed the “Triarchic Theory of Cognitive Disposition” which, as an integrative framework represents the intellectual character required to navigate the complex present and uncertain future.

Drawing on the views of Grossman (2020), it is argued that the cultivation of practical wisdom and intellectual character in leadership depends on understanding of malleability of wisdom and intellectual character-related characteristics, which has implications for leadership development and assessment. In

considering this malleability, or plasticity, the question beckons whether positive psychology and specifically, flow state could serve as catalyst in developing practical wisdom and intellectual character in leadership and management practitioners?

‘Flow’ is an optimal psychological state that has been described extensively by Csikszentmihalyi (1975, 1990, 1993) and substantiated by others in a variety of settings, including work, education, leisure, and sports. Flow is an intrinsically enjoyable state and is accompanied by an order in consciousness whereby the person experiences clarity of goals and knowledge of performance, complete concentration, feelings of control and feelings of being totally in tune with the performance (Jackson & Marsh, 1996). Ilies, Wagner, Wilson, Ceja, Johnson, DeRue and Ilgen (2017) posit that flow experiences are associated with high levels of focus, concentration, action, and progress, and Bertram (2022) asserts that “life’s purest and most deeply satisfying moments come when we tap into a state of consciousness (flow). The experience of being in flow comes when the past is suddenly forgotten, the future is irrelevant, and the mind is plunged into “the deep now” – a heightened state of effortless presence wherein we are able to learn at accelerated rates and perform at our best.” Wimmer, Buzady, Csesznak and Szentesi (2022) analysed the relationship between flow theory, leadership skills, in particular, decision-making skills and found decision-making approaches could support flow-promoting leadership, albeit that intuitive thinking has a stronger relationship with it.

This study therefore sets out to establish the relationality of practical wisdom, flow state and intellectual character for leading in dynamic complexity, with the ultimate intent to develop a relational framework to advance practical wisdom and intellectual character in leadership and management practitioners.

2. Problem Investigated

Human history, to a large extent, is a chronicle of wars, miseries, economic instability, poverty and socio-political turmoil. Nonetheless, mankind has always been in pursuit of the best possible arrangement that can serve as a remedy for the problems of humanity. Throughout human history, plans have been set forth by leaders with the promise happiness and prosperity for all (Khan, Wang & Ali, 2021). Central in this chronicle is the world of commerce and industry with all its various organisational arrangements and leadership structures. Extending into the present, contemporary times are characterised by dynamic changes across all business platforms, introducing disruption and change (e.g., exponential technological progress) that are increasingly challenging organisational leaders in navigating the associated complexity and uncertainty to remain competitive and relevant (Sundaram, Ziade & Quinn, 2020). In addition, the world is broken; people are growing increasingly disenchanted with the institutions on which they depend; they can’t be trusted; they fail to give people what they need (Schwartz, 2011).

Considering the global (and localised) state of affairs, it is argued that contemporary organisational leaders lack the wisdom and intellectual character to effectively navigate the complex, chaotic and unpredictable times we find ourselves, let alone an uncertain future (Oosthuizen, 2022). Two matters are apparent, namely Aristotle’s sunesis (judgement) and gnomē (discernment). As far as judgement is concerned, it is obvious when considering just how much is reliant on a leader’s ability to collect and process information from

others (Steyl, 2018). As social, political beings, humans rely one another for all sorts of testimony, including promises, opinions, advice, support, criticism, and descriptions, to name but a few. This would not be problematic if leaders were dispositioned to articulate true things about right action and thriving, but many of them simply are not. In terms of discernment, the misapplications of specific moral rules in particular situations are also evident (Steyl, 2018).

Exacerbating matters from a scholarly perspective, is the critique of Schram (2012) that social science is hopelessly lost if it persisted in seeking to emulate the natural sciences with a quest for theory-driven abstract knowledge of universal rationality. Flyvbjerg (2001) argues a case for phronetic social science, which rejects the fact–value distinction prevalent in mainstream social science and rather focus on answering four critical questions related to enhancing practice wisdom: (1) where are we going? (2) who gains and who loses, by which mechanisms of power? (3) is it desirable? and (4) what should be done? (Flyvbjerg 2001:162).

Considering that leadership behaviour originates from cognitive processes, the significance of a general mental capability, involving the ability to reason, plan, solve problems, think abstractly, comprehend complex ideas, learn quickly and learn from experience, is evident (Oosthuizen, 2022). Cognition can be understood from a functional-analytical perspective that involves complex environment-behaviour relations, as well as in terms of information processing that mediates those environment-behaviour relations (occurring simultaneously). Furthermore, thinking dispositions denote the characteristics that animate, motivate, and direct abilities toward good and productive thinking and are recognised in the patterns of one's frequently exhibited, voluntary behaviour. It not only directs a leader's strategic abilities, but helps to stimulate relevant content knowledge as well, bringing that knowledge to the fore to better inform the context playing out. Important though, unlike desire, dispositions are supplemented by behaviour and thus assume the requisite ability to carry out that behaviour. In contrast to habitual routines, dispositions invoke a general class of responses rather than specific actions. Collectively, the presence and force of these dispositions make up our intellectual character (Oosthuizen, 2022). The appropriate cognitive disposition – intellectual character – to effectively lead organisations in these challenging and demanding times is subsequently pivotal.

3. Research Objectives

The primary objective of the study is to develop a relational framework of practical wisdom, flow state, and intellectual character for leading in dynamic complex contexts. The secondary objectives in support of the primary objective are:

- to investigate the relationship between practical wisdom and cognitive disposition;
- to investigate the relationship between practical wisdom and flow state;
- to investigate the relationship between flow state and cognitive disposition; and
- to investigate the mediating effect of flow state between practical wisdom and cognitive disposition.

4. Literature Review

Wisdom (prudence), courage (fortitude), moderation (temperance) and justice (liberty) are the main human virtues. The goal of wisdom is to achieve human excellence and the common good, not only for individuals but also for society as a whole. The role of wisdom becomes increasingly important in crises and disasters. For instance, wisdom-based ethical and moral decisions were and are the foci of such things such as the financial crisis of 2008, various human crises e.g., immigration into Europe in 2015, political disputes, wars, environmental catastrophes, pollution and the recent COVID-19 pandemic (Jabunik, 2021).

Dynamic complexity is a property inherent in complex systems wherein the relationships and interactions among its constituents evolve over time due to internal and external factors. This change results in unpredictable outcomes that cannot be accurately forecasted based on historical data alone. It presents a dilemma, particularly in situations that require strategic planning and problem-solving, because its effects, often negative, are not immediately observable and typically manifest when it's too late for optimal intervention (Ata & Perks, 2014).

It is, however, albeit imperative, not only in crises and disasters where wisdom becomes increasingly important. Considering the contemporary context of exponential technological progress which in its velocity, breadth, depth, and systems impact is transforming entire systems, within and across companies, industries, society, and countries, that is challenging leadership and management orthodoxies to the core (Oosthuizen, 2022). In addition, contemporary business leaders and managers must make decisions daily about, among others, staff, contracts with vendors and suppliers, short- and long-term strategies, the organisation and structure of their companies, investments in research and development and numerous financial matters. Making judgements in a complex, globalised marketplace that is constantly changing requires well-honed savvy and skill (Wolcott, 2020) and for that matter, wisdom.

Questioning the process through which people in leadership positions arrive at judgment in circumstances marked by ambiguity, surprise, and conflicting values, Shotter and Tsoukas (2014) argue that the dominant rationalist orientation prevents leaders from appropriately grasping vital features of the hermeneutical developmental process involved in reaching a judgment. In particular, the role of emotions, moral agency, language use and, especially, the selective and integrative nature of perceptual processes, are ignored far too easily. Shotter and Tsoukas (2014:224) subsequently make the case for a particular notion of judgment understood as Aristotelian “phronesis” (practical wisdom) and argue that phronetic leaders, are individuals who, in their search for a way out of complexities, “have developed a refined capacity to intuitively grasp salient features of ambiguous situations and to constitute a “landscape” of possible paths of response, while driven by the pursuit of the notion of the common good.”

FLyvbjerg, Landman and Schram (2012) assert that intelligent social action requires phronesis, to which the social sciences can best contribute and not the natural sciences with their emphasis on ‘epistemé’ (universal truth) and ‘techné’ (technical know-how). Phronesis is deemed as the “most important of the intellectual virtues, because it is needed for the management of human affairs, including the management of epistemé and techné, which cannot manage themselves.”

Oosthuizen (2022) perceive cognitive processes as the bedrock of leadership and management behaviour, which highlight the centrality of a leader's general mental capability, involving the ability to reason, plan, solve problems, think abstractly, comprehend complex ideas, learn quickly and learn from experience. Cognition, De Houwer, Barnes-Holmes and Barnes-Holmes (2017:134) posit, is functional-analytical (involving complex environment-behaviour relations) as well as information processing that facilitates those environment-behaviour relations.

Ritchhart (2002:21) referred to thinking dispositions as “characteristics that animate, motivate, and direct abilities toward good and productive thinking and are recognised in the patterns of one's frequently exhibited, voluntary behaviour”. Dispositions not only direct a person's strategic abilities, Ritchhart (2002) theorises, but help to stimulate relevant content knowledge as well, bringing that knowledge to the forefront to better inform the situation at hand: “Unlike desire, dispositions are supplemented by behaviour and thus assume the requisite ability to carry out that behaviour. In contrast to habitual routines, dispositions invoke a general class of responses rather than specific actions. Collectively, the presence and force of these dispositions make up our intellectual character” (Ritchhart, 2002:21).

Oosthuizen's (2022) “Triarchic Theory of Cognitive Disposition” postulates that there are three distinct domains (with three sub-domains each), which, as an integrative whole, represents the intellectual character required to navigate the complex present and uncertain future, namely (*ibid*):

- ***Episteme-Analytical Intelligence*** (Complexity Intelligence + Inquiry Intelligence + Critical Intelligence) refers to the ability to: identify and solve complex problems; synthesise information to develop and evaluate options and implement solutions; self-direct learning and thinking; remaining relevant; use logic and reason to identify strengths and weaknesses of alternative approaches to problems; critically reflect on assumptions about the drivers of change's impact on society and, influencing continuous, sustainable learning.
- ***Techne-Creative Intelligence*** (Futures Intelligence + Adaptive Intelligence + Creative Intelligence) implies the ability to: inspire constructive, foresight-infused dialogue that enable innovation emergence; adapt to internal and external changes; redirect strategic orientation and follower behaviour; tolerate uncertainty and able to cope in challenging situations spawned by change. Creative abilities, originality and initiative that drives and realises innovation, alternative thinking that develops new ideas and solutions to opportunities and challenges and ability to shape a culture of experimentation, tolerance for failure and new purpose innovation.
- ***Phronesis-Collaborative Intelligence*** (Emotional Intelligence + Ethical Intelligence + Collaborative Intelligence) refers to the ability to recognise and regulate emotions in self and others, emotional strength to exercise the will to accomplish goals in the face of opposition, process and integrate thoughts and feelings and relate to self and others. Ethical conduct and moral attentiveness through cognitive reflection on morality, alert to moral issues for which adequate morality is yet to be established and develop new ethical norms that contributes to a better society. Ability to create positive,

hope-filled narratives that enable people to participate in and benefit from transformations and change, challenging traditions no longer adequate for longevity.

When considering the illustration of Grossmann et al. (2020:107) highlighting the different psychological characteristics narrated by scientists when describing working definitions of wisdom (Figure 1), various commonalities between practical wisdom and Oosthuizen’s (2022) cognitive dispositional theory for leading in dynamic complexity are evident. Figure 1A illustrates the working definitions in research, and Figure 1B describes key characteristics of wisdom for navigating life’s challenges. Categories are color-coded by sub-types representing cognition, equanimity/self-control, metacognition, moral aspirations, self-transcendence, and general individual differences/traits. The bar charts represent percentages for each category.

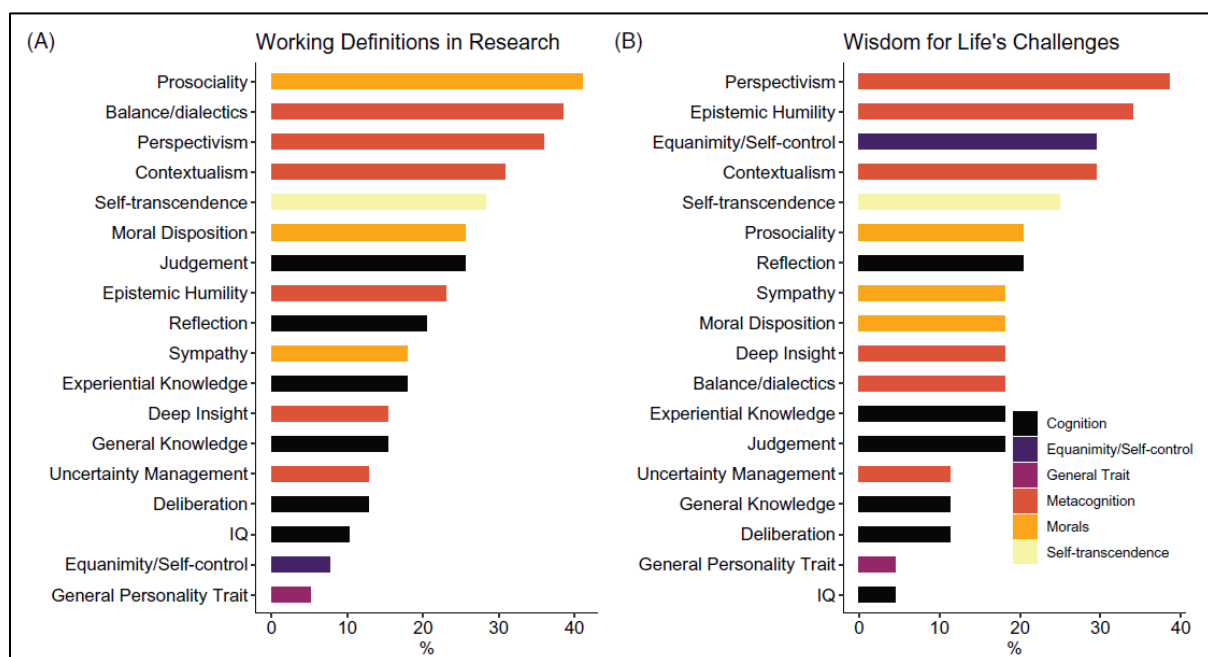


Figure 1: Working definitions of wisdom and characteristics of wisdom for navigating life (Grossmann et al., 2020:107).

In terms of developing practical wisdom and the requisite cognitive disposition for our times would imply assessing where a leader is at in relation to these constructs, identify the shortcomings, and proactively immerse in interventions to shift the prevailing ‘mental configuration’ to the desired configuration. Eagleman (2015) observes that the brain is a relentless shapeshifter, constantly rewriting its own circuitry, and because individual experiences are unique, so are the vast, detailed patterns in neural networks. Because they continue to change over the course of a person's life, individual identity is a ‘moving target’; it never reaches an endpoint.

Referring to experimental evidence that suggests malleability in core features of wisdom, which has implications for assessment as well as development, Grossman (2020) states that insights about systematic malleability of practical wisdom suggest innovative ways to assess practical wisdom in leadership and management practitioners and shed light on unique design pathways for evidence-informed interventions and development. From this premise, it is argued that flow state, referring to short-term peak experiences

characterised by absorption, enjoyment, and intrinsic motivation, and positively related to various indicators of performance (Bakker & van Woerkom, 2017), may be used by leadership and management practitioners to proactively create optimal experiences in pursuit of practical wisdom and intellectual character growth.

Dietrich (2004:47) asserts that “a flow state ensues when one becomes so deeply focused on a task and pursues it with such passion that all else disappears, including a sense of time or the worry of failure.” Nakamura and Csikszentmihalyi (2002:90) posit that the conditions of flow include (1) perceived challenges, or opportunities for action, that stretch (neither overmatching nor underutilising) existing skills; a sense that one is engaging challenges at a level appropriate to one’s capacities and (2) clear proximal goals and immediate feedback about the progress that is being made. Under these conditions, experience seamlessly unfolds from moment to moment, and one enters a subjective state with the following characteristics (*ibid*):

- Intense and focused concentration on what one is doing in the present moment;
- Merging of action and awareness;
- Loss of reflective self-consciousness (i.e., loss of awareness of oneself as a social actor);
- A sense that one can control one’s actions; that is, a sense that one can in principle deal with the situation because one knows how to respond to whatever happens next;
- Distortion of temporal experience (typically, a sense that time has passed faster than normal); and
- Experience of the activity as intrinsically rewarding, such that often the end goal is just an excuse for the process.

Schmidt (2010, p. 605) further explains that from the pursuit to understand intrinsically motivated activity, flow refers to a state of optimal experience characterised by total absorption in the task at hand, thus a merging of action and awareness in which the individual loses track of both time and self. The flow state is experientially positive, and out of the flow experience emerges a desire to replicate the experience. Ilies et al. (2017) concur that flow experiences are associated with high levels of focus, concentration, action, and progress, and in a study on flow at work and its effects on well-being, found that a type of experiential well-being, i.e., flow, was positively related to measures of declarative well-being, and that the fulfilment of individuals' needs for competence and autonomy partially mediated the influence of flow on declarative well-being outcomes.

5. Theoretical framework

Piaget (1973:250) asserted that “a day will come when the psychology of cognitive functions and psychoanalysis will have to fuse in a general theory which will improve both through mutual correction and starting right now, attempting to prepare for that prospect by showing the relation that could exist

between them.” In this study, a fusion of theories is also pursued in an attempt to determine the relational extent of practical wisdom, flow state and intellectual character.

The nature and scope of this study transcends multiple research foci, hence consists of three themes, namely *phronesis* (practical wisdom), cognitive disposition (intellectual character) and flow state. Subsequently, four theories will serve as synthesised foundation for the study, namely, (1) the neo-Aristotelian model of phronetic moral decision-making (Kristjánsson et al., 2021), (2) the triarchic theory of cognitive disposition (Oosthuizen 2022), (3) flow state theory (Csikszentmihalyi, 1990), augmented by (4) self-determination theory (Bakker & van Woerkom, 2017).

5.1 Neo-Aristotelian model of phronetic moral decision-making (APM)

The APM (Figure 2) proposes a philosophically grounded, psychologically practicable model of wise (*phronetic*) decision-making that conceives of morality in pragmatic terms and views moral considerations as informed reason. It expounds two main sources of moral motivation, namely, one emerging from specific virtues and one that emerges from the blueprint function of phronesis. Furthermore, it illustrates how those motivations are synergistically integrated, and how the blueprint function is increasingly refined in the light of experiential knowledge. It also provides a nuanced account of the balancing of reason and emotion. (Kristjánsson et al., 2021:252).

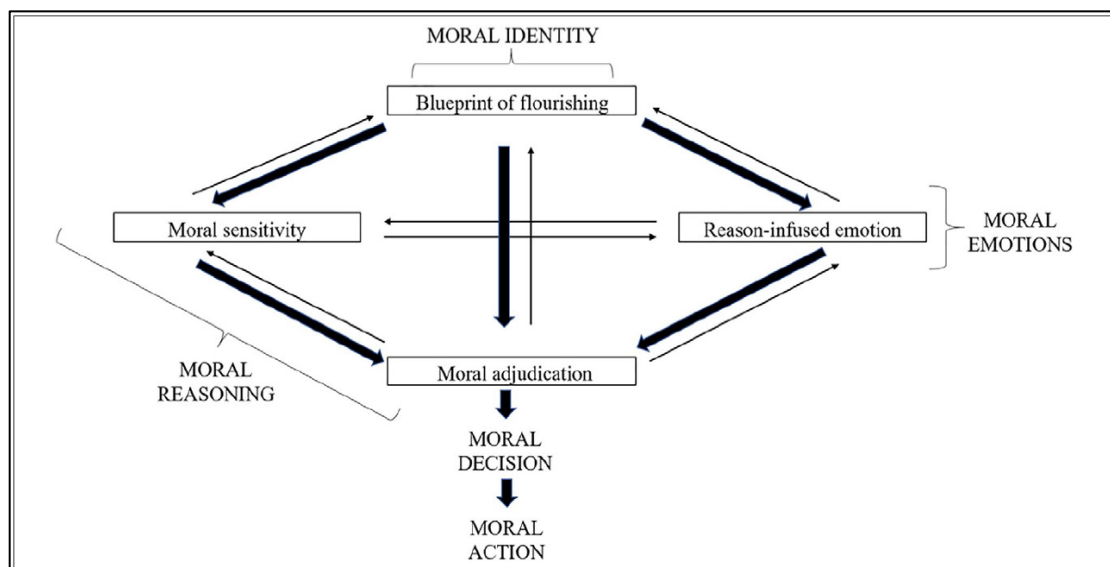


Figure 2. A neo-Aristotelian model of phronetic moral decision-making (Kristjánsson et al., 2021:248)

5.2 Triarchic theory of cognitive disposition

The Triarchic Theory of Cognitive Disposition (Figure 3) postulates that there are three distinct domains (with three sub-domains each), which, as an integrative whole, represents the intellectual character required to navigate our ‘complex today’ and ‘uncertain tomorrow’. These are (1) Episteme-Analytical Intelligence (consisting of Complexity Intelligence, Inquiry Intelligence, and Critical Intelligence), (2) Techno-Inventive Intelligence (consisting of Futures Intelligence, Adaptive Intelligence, and Creative Intelligence),

and (3) Phronesis-Synergic Intelligence (consisting of Emotional Intelligence, Ethical Intelligence and Collaborative Intelligence) (Oosthuizen, 2022).

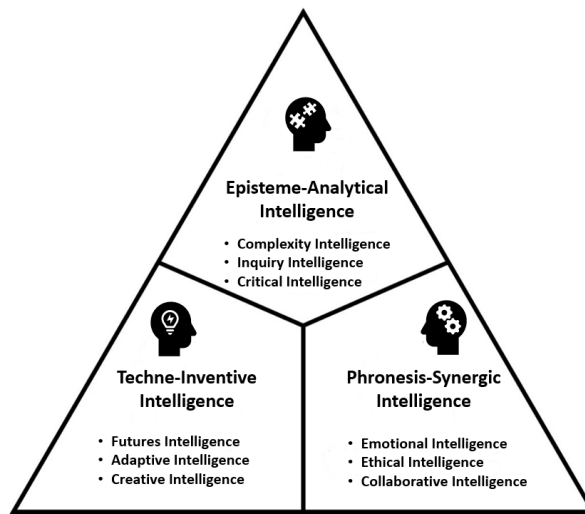


Figure 3: Triarchic framework of intellectual character (cognitive disposition) (Oosthuizen, 2022)

5.3 Flow theory

Mihaly Csikszentmihalyi’s flow model has advanced scholars’ understanding of the experience of deep engagement, along with the individual and contextual factors that may promote it (Schmidt, 2010). The model has implications for both research and practice, and has seen application in fields, including education, psychology, psychiatry, anthropology and business (Schmidt, 2010:605). Ilies et al. (2017) concur that flow experiences are associated with high levels of focus, concentration, action, and progress and the postulate in this study is that it holds promise for developing phronesis and intellectual character (Figure 4).

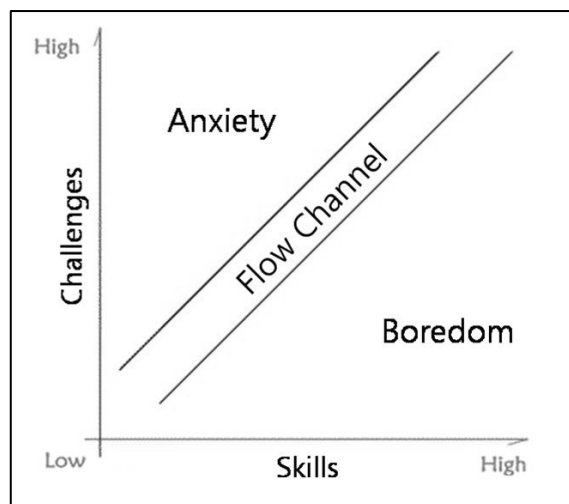


Figure 4: Flow state model. Flow is experienced when perceived opportunities for action are in balance with the actor’s perceived skills. Adapted from Csikszentmihalyi (1990).

5.4 Self-determination model of flow

In an organisational context, research has predominantly focused on situational predictors of flow – including challenge job demands and resources. Bakker and van Woerkom (2017) propose that leaders may also proactively create their own optimal experiences. Self-determination theory is used to argue that all human beings have basic needs for autonomy, competence and relatedness, as well as an inherent tendency towards proactivity and growth (Figure 5). The postulate is that leaders may use four self-determination strategies to satisfy their basic needs, facilitate flow experiences, and, in turn, increase job performance: self-leadership, job crafting, designing work to be playful, and strengths use. Furthermore, factors within the organisational context (e.g., human resource practices and leadership) as well as personal resources (e.g., self-efficacy and optimism) moderate the effectiveness of these strategies.

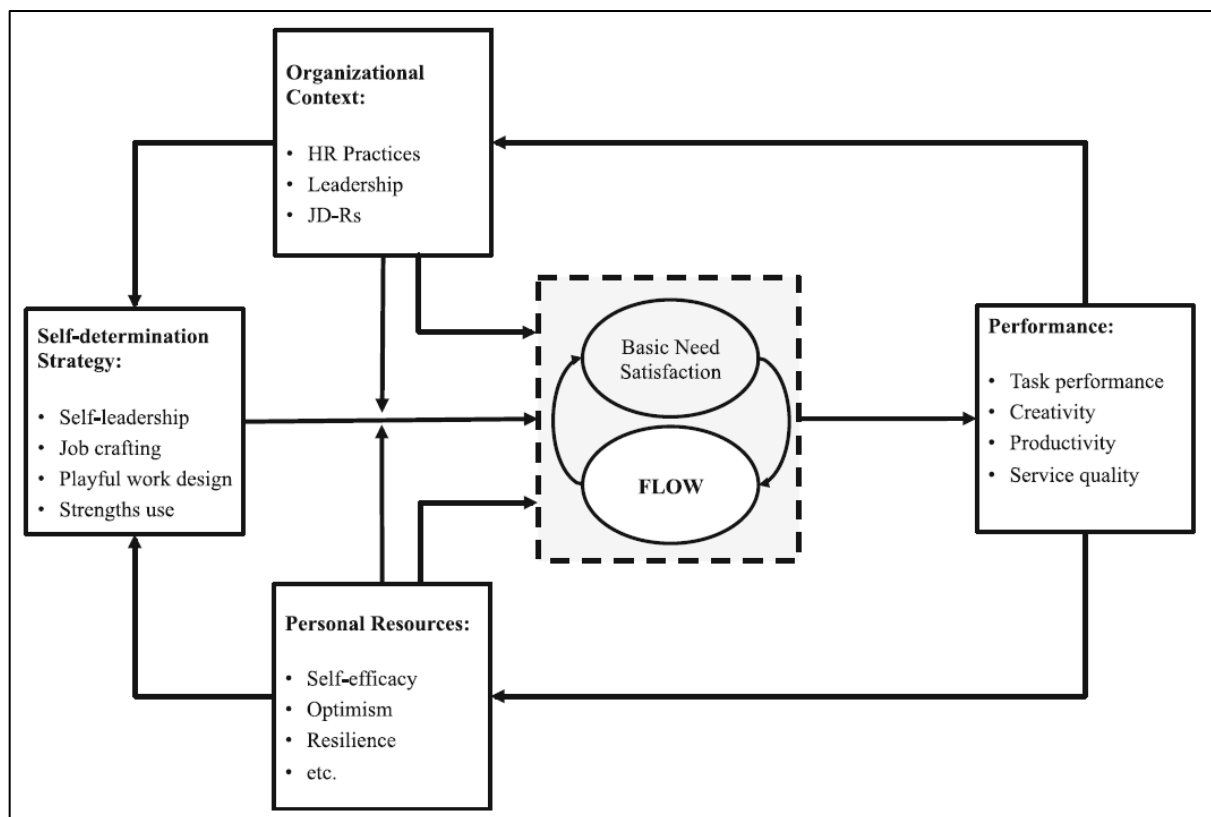


Figure 5: Self-determination model of flow. Note. *JD-Rs* = *job demands and job resource* (Bakker & Woerkom, 2017).

6. Propositions and conceptual framework

In contemporary business practices, interest in practical wisdom is gradually growing due to the need for shifting from exclusively rational, calculative, profit-oriented, and financial goals in business to moral and ethical values. Management and leadership practices guided by practical wisdom can have significant impact on the prosperity and well-being of people, organisations, and societies (Jabunik, 2021).

Within the context of the Fourth Industrial Revolution (4IR) characterised by rapid technological advancements and increasing transformation in the way society works, lives, communicates, and travels, Oosthuizen (2022) set out to find answers to how organisational leaders should orientate themselves to navigate 4IR. The challenges and opportunities associated with 4IR highlighted the potential future impact

on leadership and management practice, pronouncing the need to understand the requisite “intelligence configuration” needed by top management to effectively navigate 4IR. Oosthuizen (2022) determined the exogenous latent variables that predict cognitive disposition as endogenous latent variable for effective navigation of 4IR, and produced the “Triarchic Theory of Cognitive Disposition” which, as an integrative framework (Figure 6) represents the intellectual character required to navigate the complex present and uncertain future. The findings indicated similarities with some elements of phronesis in the taxonomy derived for a Delphi study. Thus, a first proposition is presented as follows:

Proposition 1: Practical wisdom positively relates to cognitive disposition.

Shotter and Tsoukas (2014) argue that phronesis finds expression in the “ability to allow for the fluid, indeterminate nature of the circumstances in which we must act, and to accept that, each time we act, we must, in a sense, start afresh.” The implication is starting from an initial, albeit unique uncertainty, and by pushing into it, imaginatively explore it in all its details and nuances to arrive at an overall intersubjectively intelligible sense of its meaning. That sense will not merely be the outcome of a practical reasoning but, more important, will be ethically discerning.

Drawing on the work of Bakker and van Woerkom (2017), stating that research has predominantly focused on situational predictors of flow in an organisational context, it is proposed that leaders may also create their own optimal experiences. Self-determination theory is applied to argue that all leadership and management practitioners have basic needs for autonomy, competence, and relatedness, as well as an inherent tendency towards proactivity and growth. Bakker and van Woerkom (2017) propose four self-determination strategies to satisfy their basic needs, facilitate flow experiences, and, in turn, increase their performance (including practical wisdom in this study), namely, self-leadership, job crafting, designing work to be playful and strengths use. The next proposition is subsequently framed as follows:

Proposition 2: Practical wisdom positively relates to flow state.

In seeking to synthesise dispositional types in literature, Ritchhart (2004) conceptualised six broad categories of dispositions, and grouping these dispositions into three overarching categories, namely, (1) creative thinking: looking out, up, around and about (open-minded; curious), (2) reflective thinking: looking within (metacognitive) and (3) critical thinking: looking at, through and in between (seeking truth and understanding; strategic; sceptical). Oosthuizen’s (2022) Triarchic Theory of Cognitive Disposition to navigate contemporary complexity and the uncertain future consists of (1) Episteme-Analytical Intelligence (Complexity Intelligence, Inquiry Intelligence, and Critical Intelligence), (2) Techne-Inventive Intelligence (Futures Intelligence, Adaptive Intelligence, and Creative Intelligence) and (3) Phronesis-Synergic Intelligence (Emotional Intelligence, Ethical Intelligence, and Collaborative Intelligence).

Kotler (2021) refers to “flow triggers”, and states that researchers have to date identified twenty-two different flow triggers (individual and group triggers combined) that all share one common denominator: “flow follows focus.” The flow state can only arise when all attention is directed at the present moment, and flow triggers drive attention into the now. Individual triggers include curiosity / passion / purpose, autonomy, complete concentration, risk, novelty, complexity, unpredictability, deep embodiment,

immediate feedback, clear goals, challenge / skills ratio, and, creativity / pattern recognition. The third propositions, therefore, is the following:

Proposition 3: Flow state positively relates to cognitive disposition.

The mediator

The aforementioned propositions present the relations of practical wisdom, flow state and cognitive disposition. Proposition 1 proposes that practical wisdom has a positive relationship with cognitive disposition, and proposition 2, from a self-determination perspective accelerates the practice of flow and proposition 3, impacts cognitive disposition. In considering whether flow state has a mediating effect in the relationship between practical wisdom and cognitive disposition, a next proposition is proposed, namely:

Proposition 4: Flow state acts as a mediator between practical wisdom and cognitive disposition.

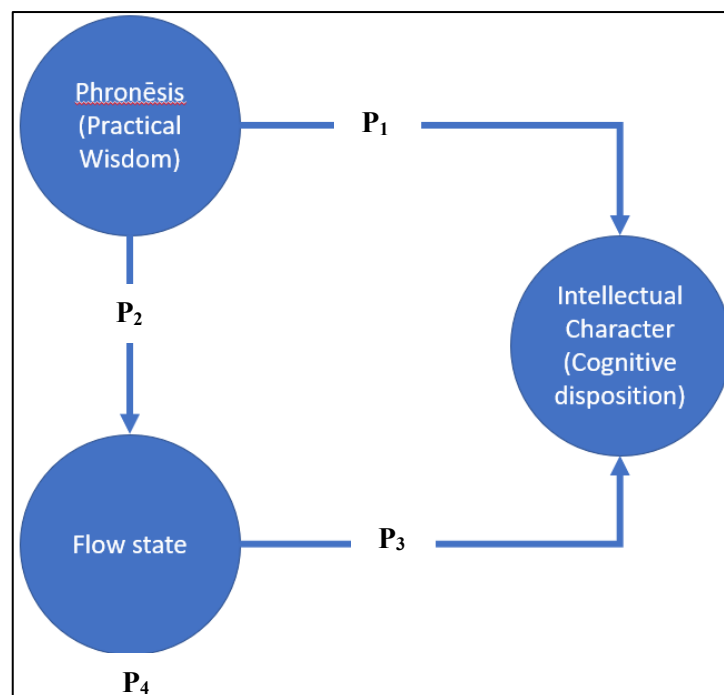


Figure 6: Research framework

7. Research methodology

The methodological approach used in this study is termed by the author as *AI-assisted Critical Interpretive Synthesis*. With this approach, the study integrates the insights generated from the advanced AI language model, ChatGPT-4, developed by OpenAI, in conjunction with the principles of Critical Interpretive Synthesis (CIS). The intent is to merge the advanced AI's ability to access and analyse vast datasets with the principles of CIS to draw insightful conclusions and generate propositions.

CIS starts with an ambiguous and tentatively defined phenomenon; conducts extensive albeit not complete searching; strategically samples from the literature; conducts appraisal and critique of the included literature and, through a process similar to primary qualitative research, aims to produce a theoretical output in the form of a synthesised argument (Dixon-Woods et al., 2005). CIS explicitly sanctions the integration of

qualitative and quantitative evidence through an interpretive process, and a distinguishing feature of CIS is its recognition of the authorial voice in that it does not lay claim to a set of techniques that allows a 'reproducible' synthesis. Instead, the interpretive work required to produce an account of disparate forms of evidence is acknowledged, and it appreciates that alternative accounts of the same evidence might be possible using different authorial voices. However, all accounts should be grounded in the evidence, verifiable and probable, and that reflexivity will be a principal requirement. (Dixon-Woods et al., 2006).

Although Depraetere et al. (2021) argue that the flexibility embedded in CIS hinders its implementation and aggravates concerns about trustworthiness, and that reporting practices of CIS key features are suboptimal, it was deemed contextually appropriate for the purposes of this study. When attempting to pursue a novel methodological path not previously undertaken, especially considering integration between AI and a contemporary research methodology, selection is based on what would allow for such a novel approach. Noteworthy also, is Burger et al. (2023) that asserts using AI in management research can significantly improve the objectivity and accuracy of the results when applied correctly. By augmenting a researcher's capabilities via an automated component to both the research initiation phase as well as the data analysis phase, the potential for human error can be reduced, and better reproducibility achieved. Hence the selection of CIS.

For purposes of the synthesis, purposive sampling was initially applied to select literature that were clearly concerned with aspects of phronesis, cognitive disposition and flow state, partly informed by the scoping running up to the study. Sampling therefore involved a constant dialectic process conducted concurrently with concept generation. As far as determination of quality is concerned, literature that appeared relevant was prioritised, rather than particular study types or literature that met specific methodological standards; hence the application of a low threshold was utilised to maximise the inclusion and contribution of a wide variety of literature at the conceptual level. Data extraction concerned systematically identifying themes pertinent to phronesis, cognitive disposition and flow state. In conducting the interpretive synthesis, a detailed inspection of the literature was the point of departure, gradually identifying recurring themes and developing a critique. Themes were then generated to help develop an argument, comparing the argument developed against the literature, and attempting to specify the reasoning and the relationship with the existing body of knowledge.

In terms of AI-informed analysis, ChatGPT-4 was utilised as an analytical tool, leveraging its vast data training and analytical capabilities. The model is based on a diverse range of sources up to September 2021, ensuring comprehensive access to pre-existing information. This tool was consulted to analyse and understand the context of the research problem, synthesise pertinent information and generate relevant and insightful responses. Subsequent, CIS was employed to review and interpret the AI-generated responses. CIS facilitates a rigorous interpretive, rather than aggregative, form of synthesis, which enables the development of theory and enhances understanding of complex interdisciplinary research questions. This methodology provides a systematic approach to appraise, extract and synthesise data from the AI's outputs.

The integration of AI and CIS means that AI's advanced analytical capabilities are used to access and analyse large amounts of information, while CIS ensures the systematic interpretation of the AI's outputs. This integrated methodology facilitates a comprehensive and nuanced understanding of complex research problems, leading to the generation of well-founded propositions. The integration of AI with CIS allows for an enriched analytical process, promoting an expansive understanding of the research problem. It ensures a balance between AI's capacity for data-driven analysis and human interpretive capabilities, enabling an in-depth exploration of the research question.

However, it is important to note that while AI like ChatGPT can aid in providing information and analysis, they do not replace the need for human interpretation, judgment, and critical thinking. As an AI language model, ChatGPT does not 'know' or 'understand' information in the human sense, and its responses should be seen as information generated based on patterns and relationships in the data it was trained on.

In explaining its own approach, Open.AI (2023) states, "as an AI language model, my method of inquiry when crafting a response involves several steps" (*ibid*):

- **Understanding the user's query:** I analyse the text of your question to comprehend its context and intent. This helps me determine the most relevant information needed to address your query;
- **Retrieving relevant knowledge:** Based on my understanding of the query, I access my pre-existing knowledge base (trained on a diverse range of sources up to September 2021) to gather relevant information. This knowledge includes concepts, facts, theories, and expert opinions across various domains;
- **Synthesising the information:** I synthesise and integrate the retrieved knowledge to create a coherent and logical response. This step may involve drawing connections between different pieces of information, evaluating their relevance, and organising them in a way that addresses the query effectively;
- **Ensuring clarity and coherence:** I strive to present the information in a clear, concise, and coherent manner. This involves proper structuring of the response, use of appropriate vocabulary and maintaining a consistent tone; and
- **Generating the response:** Finally, I generate the response and present it to you. It is important to note that, as an AI model, my responses are generated based on patterns and relationships within the data I've been trained on. I do not possess personal opinions or emotions, and my responses are a product of the knowledge and algorithms that underpin the model"

"It is worth mentioning that my knowledge is limited to the data I have been trained on, and I may not always be up-to-date or aware of recent developments, especially those occurring after September 2021. Moreover, as an AI model, I may occasionally make mistakes or misunderstand the context of a query. I encourage users to verify the information I provide and seek additional sources when necessary" (Open.AI, 2023).

Qasem (2023) found that ChatGPT can act as a potential and useful tool if used wisely and ethically but contrasted the negative aspects of extensive use of ChatGPT's that could lead to "machine-dependence." Care was also taken on behest of Wen & Wang (2023), who warns against using ChatGPT in its current iteration given its evolving limitations and capabilities when it comes to providing reliable information.

Following the literature review and CIS of the study's central tenets, the theoretical framework (See section 5) was constructed to inform the conceptual framework and associated propositions (See section 6). GPT-4 was then presented with the entire theoretical framework consisting of the neo-Aristotelian model of phronetic moral decision-making (APM), the triarchic theory of cognitive disposition, flow theory, and the self-determination model of flow, along with the propositions, i.e.: Proposition 1: Practical wisdom positively relates to cognitive disposition; Proposition 2: Practical wisdom positively relates to flow state; Proposition 3: Flow state positively relates to cognitive disposition; and, Proposition 4: Flow state acts as a mediator between practical wisdom and cognitive disposition. The following prompt ten enacted GPT-4's interpretation, synthesis and response:

"By applying Critical Interpretive Synthesis (CIS) and your ability to access vast data sets, please evaluate the synthesised reflections of the theoretical framework and propositions, and provide an acceptance or rejection of the propositions postulated, supported by elaborative reasoning for the acceptance or rejection of the propositions."

8. Results and discussion

According to Open.AI (2023), based on the theoretical framework provided, the four propositions presented seem well-grounded and reasonable. The theories of neo-Aristotelian model of phronetic moral decision-making, triarchic theory of cognitive disposition, flow state theory, and self-determination theory appear to be relevant and logically connected to the concepts of practical wisdom, cognitive disposition, and flow state (Figure 7). Consequently, the propositions are accepted, with reasoning provided for each proposition below.

Proposition 1: Practical wisdom positively relates to cognitive disposition.

The relationship between practical wisdom and cognitive disposition is supported by the Triarchic Theory of Cognitive Disposition and the neo-Aristotelian model of phronetic moral decision-making. Both theories share a common focus on ethical and moral aspects of decision-making, which are essential components of practical wisdom. Furthermore, the development of cognitive disposition requires the integration of various types of intelligence, including emotional and ethical intelligence, which are also central to the concept of phronesis. As such, a positive relationship between practical wisdom and cognitive disposition seems plausible. This positive relation is also strongly supported by the findings of Oosthuizen (2022), where the nine subdomains of the triarch's three domains are all underpinned by practical wisdom, and Proposition 1 is therefore accepted.

Proposition 2: Practical wisdom positively relates to flow state.

The relationship between practical wisdom and flow state can be supported by the self-determination theory, which argues that individuals have an inherent tendency towards proactivity and growth and are more likely to achieve flow states when their basic needs for autonomy, competence, and relatedness are satisfied. Since practical wisdom emphasises ethical discernment and the development of virtues, it can contribute to the satisfaction of these basic needs and subsequently facilitate flow experiences. Practical wisdom, the synthesis of “knowing why” as in scientific theory, with “knowing how” as in practical skill, and “knowing what” as a goal to be (Nonaka & Toyama, 2007), aligns with intrinsically motivated activity that Schmidt (2010) describes as flow, a state of optimal experience characterised by total absorption in the task at hand, thus a merging of action and awareness in which the individual loses track of both time and self. Proposition 2 is therefore accepted.

Proposition 3: Flow state positively relates to cognitive disposition.

The relationship between flow state and cognitive disposition is supported by the flow theory and its emphasis on the factors that promote deep engagement and focus. When individuals experience flow, they are more likely to develop the cognitive skills and dispositions needed to navigate complex situations, as they are fully immersed in the task at hand and able to think critically, creatively, and reflectively. This positive relationship between flow state and cognitive disposition aligns with the Triarchic Theory of Cognitive Disposition and its emphasis on the integration of various types of intelligence. In the same way, dos Santos et al (2018) argue that flow state is useful to infuse creativity and imagination, exploratory behaviour, accepting changes and adaptations, focussed intensity, empathy, internal locus of control, perceived usefulness sense of cognitive presence. As such, Proposition 3 is accepted.

Proposition 4: Flow state acts as a mediator between practical wisdom and cognitive disposition.

Based on the acceptance of the first three propositions, it is reasonable to accept the fourth proposition that flow state acts as a mediator between practical wisdom and cognitive disposition. By fostering practical wisdom, individuals can create the conditions necessary for achieving flow states, which in turn can promote the development of cognitive disposition. This mediating role of flow state aligns with the self-determination theory and its emphasis on the satisfaction of basic needs as a facilitator of flow experiences and, subsequently, the development of cognitive skills and dispositions. Similarly, Ilies et al. (2017) found that flow experiences are associated with high levels of focus, concentration, action, and progress, and the realisation of individuals’ needs for competence and autonomy partially mediated the influence of flow on declarative well-being outcomes. Proposition 4 is therefore accepted.

8.1. Towards a conceptual relational framework of practical wisdom, flow state, and intellectual character for leading in dynamic complexity

Based on the theories and propositions presented, a three-dimensional framework that comprises the central tenets of the study, practical wisdom, flow state, and cognitive disposition (or intellectual character) is envisioned. Figure 7 is a schematic representation, followed by a narrative for the conceptual framework.

Practical Wisdom is conceptualised as the foundational dimension in the framework. Practical wisdom, or phronesis, drives the decision-making processes, contributes to ethical discernment, and forms the basis for the development of virtues. It's the catalyst that stimulates both the flow state and the growth of cognitive disposition.

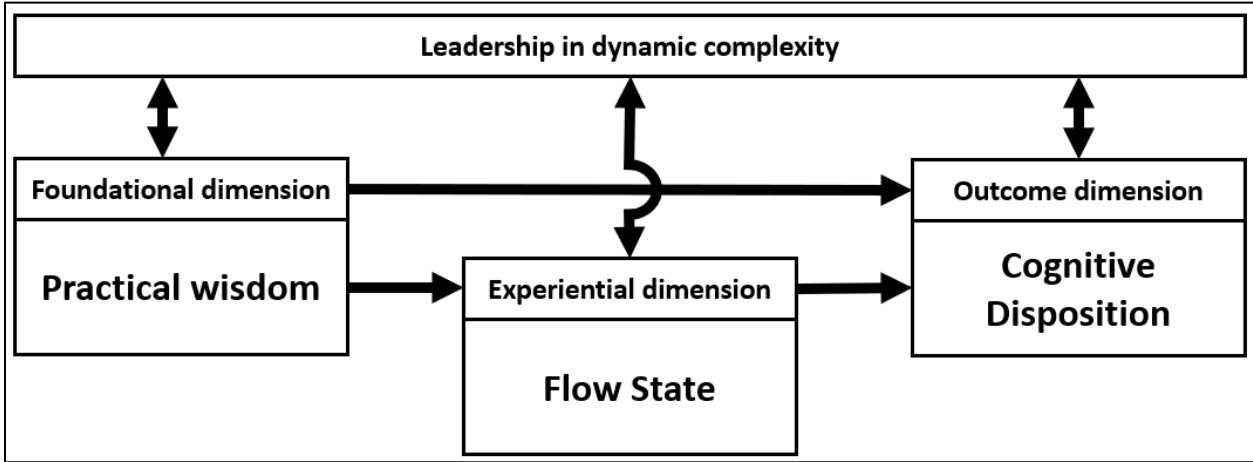


Figure 7: Conceptual relational framework of practical wisdom, flow state, and intellectual character

Flow State represents the experiential dimension in the model, serving as a mediator between practical wisdom and cognitive disposition. When practical wisdom is cultivated, it creates the conditions necessary for individuals to achieve flow states. This state of deep engagement and optimal experience enhances focus, facilitates creativity, and promotes achievement of basic needs (autonomy, competence, and relatedness), thus encouraging the development of cognitive disposition.

Cognitive Disposition (Intellectual Character) is represented as the outcome dimension. The development of cognitive disposition is influenced by both practical wisdom (through direct impact) and flow state (as a mediator). Cognitive disposition represents the integration of Episteme-Analytical Intelligence, Techno-Inventive Intelligence, and Phronesis-Synergic Intelligence, providing individuals with the necessary mindset to navigate contemporary complexity and an uncertain future.

The interconnectedness of the dimensions can be represented by arrows indicating the direction of influence, showing that practical wisdom influences both flow state and cognitive disposition, and flow state influences cognitive disposition. Leadership in dynamic complexity can be presented as an overarching theme that both influences and is influenced by these dimensions. Leaders cultivating practical wisdom can create the conditions necessary for achieving flow states and fostering cognitive disposition within their teams. Simultaneously, leaders can learn and adapt their leadership practices based on their experiences

with flow and the development of their intellectual character, thereby leading more effectively in dynamic complexity. This conceptual framework encapsulates the theories and propositions presented in the study, providing a comprehensive understanding of the relationships between practical wisdom, flow state, and intellectual character in the context of leadership in dynamic complexity.

9. Recommendations

The following recommendations could be useful in applying the conceptualised framework in real-world settings:

- **Leadership development programmes:** Incorporate practical wisdom, flow state and cognitive disposition as key components in leadership development programmes. Workshops, seminars, or courses could be designed to educate leaders about these concepts and provide them with tools and strategies to integrate these elements into their leadership practices.
- **Cultivate practical wisdom:** Encourage leaders to practice practical wisdom by engaging in reflective practices, ethical decision-making exercises, and virtue cultivation. This could involve mindfulness practices, ethical dilemma discussions and mentorship programs that help leaders develop moral sensitivity and reasoned judgment.
- **Foster flow states:** Create working conditions that promote flow states. This could include providing challenging tasks that match employees' skills, clear goal setting, providing immediate feedback and ensuring a balance between work demands and resources. Encourage leaders to develop self-determination strategies such as self-leadership, job crafting, and designing work to be playful, which can facilitate flow experiences.
- **Promote cognitive disposition:** Encourage the development of cognitive disposition by promoting a culture of continuous learning and curiosity, fostering environments that support creativity and innovation, and acknowledging the importance of emotional, ethical and collaborative intelligence in decision-making processes. Use assessment tools to measure and track the growth of cognitive disposition over time.
- **Organisational policies and culture:** Develop organisational policies and culture that support the integration of practical wisdom, flow state and cognitive disposition. This could involve creating ethical guidelines, promoting transparency, offering flexible work arrangements that allow for autonomy, and providing resources and support for continuous learning and professional development.
- **Measure and evaluate:** Establish metrics and methods to measure the extent of practical wisdom, the occurrence of flow states and the development of cognitive disposition within the organisation. This could help in tracking progress, identifying areas of improvement and evaluating the impact of interventions.

These recommendations aim to provide practical ways to integrate and apply the conceptualised framework in organisational and leadership contexts, thereby potentially enhancing effectiveness in leading in dynamic complexity.

10. Leadership implications

The proposed conceptual framework for understanding and promoting practical wisdom, flow state, and cognitive disposition has several significant implications for leadership practice.

Firstly, **reconceptualising decision-making**: Leaders traditionally make decisions based on purely analytical or financial data. Emphasising the role of practical wisdom in decision-making implies incorporating ethical considerations and experiential knowledge. This involves recognising and valuing the importance of ethical discernment, virtues, and pragmatic morality. By doing so, leaders can develop a more holistic decision-making approach that can potentially lead to better outcomes for all stakeholders.

Secondly, **enhancing engagement and productivity**: By understanding and promoting conditions for the flow state, leaders can create an environment where employees can experience deep engagement in their work. When employees are in a flow state, they are not only more productive but also experience higher job satisfaction. This could potentially lead to increased retention, higher team morale and overall improved organisational performance.

Thirdly, **cultivating cognitive flexibility**: By promoting the development of cognitive disposition, leaders can foster a more agile and adaptive workforce. In the face of dynamic complexity and uncertainty, employees with strong cognitive dispositions are likely to be more adept at navigating change, solving complex problems, and innovating. They are also likely to be more resilient in the face of adversity, a critical trait in today's rapidly changing business landscape.

Fourthly, **promoting sustainable leadership**: The synergistic effect of practical wisdom, flow state, and cognitive disposition can contribute to a more sustainable form of leadership. By prioritising ethical considerations, deep engagement and cognitive development, leaders can contribute to a healthier organisational culture and more robust business performance. This balanced approach aligns with the broader societal shift towards sustainable and ethical business practices.

Lastly, **advancing leadership theory and practice**: This framework provides an integrative perspective on leadership, combining elements from different theories. This novel approach can enhance understanding of effective leadership and provide fresh insights for leadership development. It challenges traditional leadership models that emphasise command-and-control or transactional leadership styles and provides a roadmap for developing leaders who can navigate the complexities and uncertainties of the contemporary business environment.

In conclusion, the proposed framework can potentially contribute to the development of leaders who are ethically grounded, deeply engaged and cognitively agile. Such leaders are arguably better equipped to navigate the dynamic complexities and challenges of contemporary organisational life, thereby contributing to the success and sustainability of their organisations.

11. Limitations and suggestions for future research

While the proposed conceptual framework presents a novel integration of practical wisdom, flow state, and cognitive disposition for leadership, it is not without limitations and several areas of future research can be suggested.

Firstly, the conceptual framework is largely theoretical and is derived from a synthesis of existing theoretical models. Empirical validation of the proposed relationships is necessary to demonstrate its practical utility. Future research should employ quantitative, qualitative, or mixed-methods studies to test the proposed propositions and refine the conceptual framework based on empirical findings.

Secondly, while the framework highlights the key roles of practical wisdom, flow state, and cognitive disposition in leadership, there may be other important factors not included in the model. For instance, individual differences such as personality traits, motivation, and past experiences could influence how these constructs manifest and interact. Future research should explore how these and other potential variables interact with the proposed model.

Thirdly, the framework assumes a linear and straightforward relationship between practical wisdom, flow state, and cognitive disposition. However, in reality, the interplay among these constructs may be more complex and dynamic. For example, it may be bidirectional, with cognitive disposition also influencing practical wisdom and the ability to achieve a flow state. Future research could explore these potential reciprocal relationships.

Fourthly, the framework may not account for the influence of contextual factors. The impact of practical wisdom, flow state, and cognitive disposition on leadership may be moderated by factors such as organisational culture, leadership style, and external environmental conditions. Thus, future research should also consider the role of contextual variables.

Fifthly, while the framework proposes that flow state acts as a mediator between practical wisdom and cognitive disposition, there may be other potential mediators or moderators in these relationships. Future studies could explore the role of other potential mediators, such as motivation, self-efficacy, and emotional intelligence.

Lastly, the methodological approach of *AI-assisted Critical Interpretive Synthesis*, is undoubtedly not without flaw; very seldom is a first attempt at anything useful in scholarly endeavours. As noted, pursuing a novel methodological path not previously undertaken, especially when integration AI with normative approaches, one inevitably has to budget for opposition. Nonetheless, an experimental foundation has been set from where improvements can be made considering the impact AI is set to have on the scholarly discourse.

In conclusion, while this conceptual framework provides a promising starting point for understanding and promoting effective leadership in the face of dynamic complexity, there is much scope for further

exploration and validation. It is hoped that it will inspire ongoing dialogue and investigation in this important area of leadership research and practice. Similarly, while the methodological approach has set a foundation for AI-assisted Critical Interpretive Synthesis, there is ample room for further methodological studies on the use of AI in scholarly research.

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