Coaching for Wisdom
How to Apply System 3 Thinking to Overcome Doubt, Dilemma, or Disruption

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Abstract

Wisdom has historically been defined as a sought-after virtue, and the essence of good judgement. We need wisdom now, more than ever to thrive and to seek to create a better world. Intelligence and creativity alone are no longer enough to solve the wicked problems of our era. Coaches and mentors seek to make a positive, meaningful, and enduring difference in the world, and I contend that the highest calling for coaches and mentors must be to develop a practice of wisdom for themselves and their clients. The psychology of wisdom offers deep philosophical and experimental insights into what distinguishes wise thinking from other kinds of thinking, and what 'products' to expect from engaging in such thinking. I believe this constitutes a clear foundation for what it means to coach for wisdom. Several evidence-based approaches are proposed including system 3 thinking, the T3 Profile, and the WISE framework for developing a practice of coaching for wisdom.

Keywords: *wisdom, psychology, system 3 thinking, decision making, coaching, mentoring*

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Introduction

We live in treacherous times. The COVID-19 global pandemic of 2020 – 2021 triggered fear, anger, anxiety, social polarisation, distrust of government institutions, supply chain disruptions, labour shortages, socio-economic erosion, and sharp geo-political shifts. We are witnessing the biggest land war in Europe since VE day, 1945. Global climate change appears irreversible, and Artificial Intelligence could become a dystopian nightmare. How can coaches and mentors make a meaningful difference in this environment?

Some would argue, as American management consultant Margaret Wheatley (2017) has that 'we can no longer solve the global problems of this time at large scale levels.' We need to create 'islands of sanity' that evoke and preserve our best human qualities for future generations.

I take a more optimistic view drawn from the field of wisdom psychology, which I have been following for nearly two decades (Webb, 2005). Understanding wisdom and how to apply it is, I believe the highest calling for coaches and mentors. Organisational psychologist and consultant Richard Kilburg (2000, 2006) agrees. "When coaching is done well, it should deliberately promote wisdom in clients, particularly when applied to leaders of private

enterprise, government, community, and political organisations whose decisions impact the global community."

Wisdom is a way of understanding the world. It's about seeking the ultimate causes and effects of events. It's a virtue and a personal good – intrinsically rewarding and something to be sought after. It is a human resource that is involved in many facets of successful human development. It applies not only to our lives as individuals, but to societal functioning. It refers to time-tested universal knowledge that guides our behaviour.

Wisdom is the integration of the emotional, intentional, and cognitive aspects of human abilities in response to life tasks and problems. It's a balance between the opposing interests that we find, and it relieves us from intense emotional involvement. It allows us to detach and to match our actions to what is going to be in the best interests of all concerned. It involves both our intelligence and our creativity, as well as our knowledge. Wisdom, by its very definition, should not be used towards the achievement of dark ends but to achieve a common good. Wisdom is a unique, complex, multi-component human trait. It involves dynamic and balanced integration of various components. It's greater than the sum of its parts. It's purposeful. It seeks to enhance the wellbeing of the self and of society (Webb, 2021).

In my research and practice I've deliberately limited the application of wisdom to decision-making under conditions of doubt, dilemma, or disruption (see 'Max's Dilemma', Appendix 1). This has given rise to coaching interventions which deliberately foster wise responses in clients and invite coaches and mentors to develop their own wisdom practice (Webb, 2008).

Decision making

We like to see ourselves as naturally good decision-makers. But the tendency to think we are much better at things than other people is called self-attribution bias. American neuroscientist David Eagleman (2011) points out that the human brain has evolved to solve problems that are mostly social in nature, but it's not so good at logic. Heuristics, logical fallacies, and cognitive biases have all evolved as shortcuts to thinking because of the way our social decision-making has evolved. And there are over 180 identified cognitive biases which influence the quality of our decision-making.

The dual process theory of decision-making contends that we utilise two systems of thinking. The first is an intuitive-experiential style, which is automatic, effortless, fast and based on immediate 'gut feelings'. The second is an analytical-rational style that is intentional, effortful, logical, reason-oriented, slower and more deliberate (Epstein et al., 1996). These were later popularized by Kahneman (2011) as system 1 ('thinking, fast'), and system 2 ('thinking, slow').

In everyday situations we rely on system 1 thinking because it is automatic, fast, and experience based. We use our gut feel to quickly arrive at a decision that "feels right". We shift to system 2 thinking when we need to slow down and analyse information to deduce a solution.

Intuitive kinds of problems (e.g., interpersonal issues) respond best to system 1 thinking, and rational kinds of problems (e.g., balancing a budget) respond best to system 2 thinking.

Coaches and mentors activate system 1 thinking in their clients through the use of images, metaphors and narratives. And they activate system 2 thinking through the use of abstract symbols, words, and numbers.

A different way of thinking

In 2010 in conjunction with the University of Wollongong under a grant from the NSW Department of Innovation and Technology, my colleague, Dr Barry Partridge and I developed a validated survey for measuring system 1 and system 2 thinking in decision-making - the DPS (Decision Processing Survey). Moreover, we discovered a 'system 3' which was statistically distinct from system 1 and 2. We theorized that this was a measure of wisdom-related thinking.

The psychometric idea of a third system of thinking has found a corollary in the neurobiology of wisdom which proposes that brain structures associated with "balance" are important for wisdom-related performance (Lee and Jeste, 2019). Participants who completed moral reasoning dilemmas while undergoing fMRI, and who showed higher wisdom scores on a psychometric assessment, demonstrated greater engagement of the Default Mode Network (DMN) for moral-personal conditions (Jeste and Lee, 2019).

Whilst the DMN is normally associated with "wakeful rest" when daydreaming and "mind-wandering", it is now known to contribute to elements of experience that are related to external task performance, such as when an individual is thinking about others, thinking about themselves, remembering the past, and planning for the future (Sormaz et al., 2018). Stark et al. (2018) suggest that the DMN may help orchestrate both hedonic (pleasure) and eudaimonic (well-being) brain states.

Similarly, Baltes & Freund (2003) suggest that the thinking processes of wise decision-making could be a 'meta-heuristic' - an orchestration of Systems 1 and 2 thinking. According to Meeks and Jeste (2009), wise thinking is 'balance' between the proverbial father-like thinking and the proverbial mother-like thinking, and also between cognition and emotion, between the oldest and the newest parts of the brain. The DMN may be a useful 'neuro-correlate' to distinguish modes of thinking more aligned with wise reasoning and decision-making than with system 1 and system 2 thinking.

System 3 thinking is further supported by assessments of wisdom-related thinking. The Stein Institute for Research on Ageing at the University of California San Diego developed the San Diego Wisdom Scale (SD-WISE), which measures wisdom across six dimensions including: social advising, emotion regulation, pro-social behaviours, insight, tolerance for divergent values, and decisiveness (Thomas et al., 2017). Researchers from the Berlin Wisdom Paradigm group developed the Brief Wisdom Screening Scale (BWSS), which measures the wisdom-related performance criteria of: rich factual knowledge, rich procedural knowledge, lifespan contextualism, value relativism and tolerance, knowledge about handling uncertainty, together with the dimensions of self-transcendence, mindfulness, and compassion (Glück et al., 2013). And Brienza et. al. (2017) developed the four-factor Situated Wise Reasoning Scale (SWIS), which assesses dimensions such as: weigh-up uncertainty and change, intellectual humility, search for integration and compromise, and engage others' perspectives.

In 2018 - 2019 I drew from the validated items of the DPS, SD-WISE, BWSS, and SWIS to construct the T3 Profile, a measure of system 3 thinking. An initial scale of 36 items was formed from each of the 9 elements of wisdom, randomized, with positive and negative directions, scored on a 5-point rating scale.

Verified data from 114 data sets was originally tested for multivariate normality, revealing all items on the questionnaire to be normally distributed with only one outlier (Schermelleh-Engel, et. al., 2003). The first model was hypothesized to comprise 9 latent constructs, with each construct thought to be measured by four different latent variables. The factor analysis was conducted by observing the variance-covariance matrix with full information maximum likelihood (ML) estimation on SPSS Amos program version 24 (Chou, et. al., 1991).

Investigation of factor loadings, structure coefficients and latent covariation and correlation led to a 7-factor solution as the best model according to Hu and Bentler's (1999) strategy for assessing fit. However, the results of a follow up confirmatory factor analysis with more data sets suggested 6 latent constructs which could be explained by just 18 items with sufficient discriminant power (Jackson, et. al. 2009).

These included: *focus* (items relating to task attention); *life experience* (items from self-transcendence and openness to new experience); *decisiveness* (items about readiness to make decisions and readiness to give advice); *compassion* (items from self-compassion and insight); *emotional regulation* (items about controlling emotions as well as peace of mind), and; *tolerance for divergent values* (items connected with accepting others' morals and values, insight into the reasons for one's actions, and openness to diverse viewpoints).

Follow up factor analysis with over 200 data sets in 2020 confirmed the 6 dimensions of the T3 Profile (see figure 1).
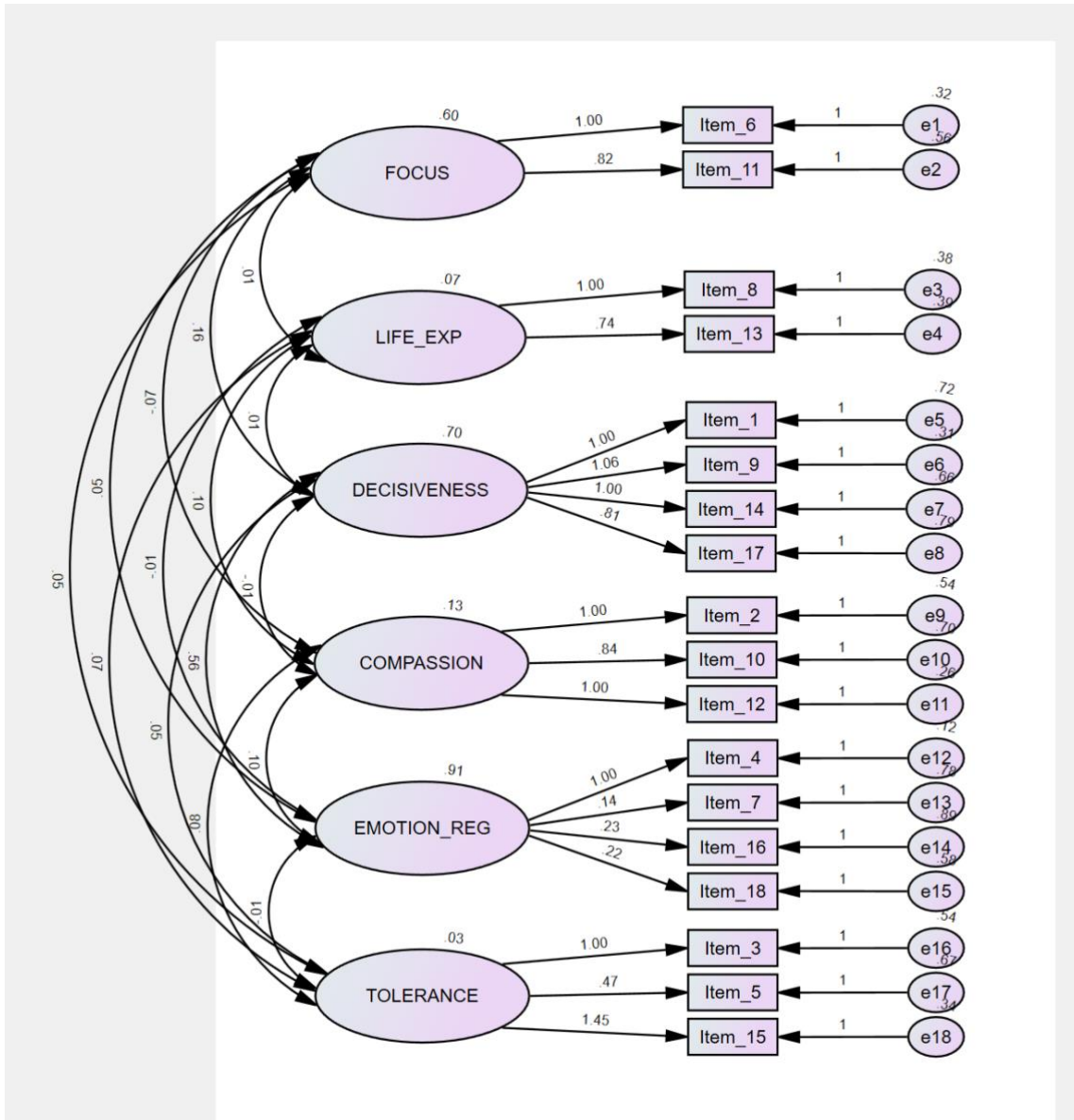
Figure 1. Factor analysis of the T3 Profile

The T3 Profile is an open-source self-rating survey of the 6 dimensions of system 3 thinking which may be accessed for free here: www.peterjwebb.com

High rating across all 6 dimensions is hypothesized to describe an individual who has an increased likelihood of using system 3 thinking effectively when faced with doubt, dilemma, or disruption. Medium or low rating for one or more of these dimensions is hypothesized to mitigate an individual's capacity to think and act effectively when faced with doubt, dilemma, or disruption.

Coaches can facilitate wisdom-related thinking and decision-making through enhancing the 6 dimensions of system 3 thinking:

Focus

System 3 thinking requires sustained, focused attention on meaningful tasks and activities, balancing mental activity with mental control. Cultivating the ability to focus in the midst of noise has been found to enhance productivity and minimize stress (Webb & Lee-Bates, 2015), and mindfulness meditation is viewed as a pathway to wisdom (Karunamuni & Weerasekera, 2019).

Life Experience

Life experience is a necessary but not a sufficient condition for System 3 thinking (Baltes & Staudinger, 2000). However, wisdom offers protection in adverse times (Ardelt & Jeste, 2018) and wise persons are more likely to reflect on their own life lessons and the lives of others to make sense of what it means to live a good life, and to offer practical and non-judgmental advice to others (Ardelt, 2005). Coaches, drawing from the field of positive psychology, may demonstrate ways in which the client can curate memories and appreciate the course of their own life as a useful guide to what it means to live a flourishing life (Keyes & Haidt, 2003).

Decisiveness

An important capability of System 3 thinking is having the paradoxical ability to acknowledge uncertainty and ambiguity whilst managing to make quick and effective decisions. Under complex conditions decision-making is a series of experiments with iterative learning potential. Coaches can help build this competency in clients through fostering the techniques of a growth mindset to speed up decisiveness (Dweck, 2006), while at the same time balancing decision speed with a recognition of the "mind traps" that often befall people (Garvey Berger, 2019).

Compassion

Compassion is an all too often missing dimension of decision-making. Compassion is the capacity to face the collective problems of humanity (or oneself) and strive to do whatever is possible to help. Wisdom cannot exist without compassion. Coaches can encourage self-compassion (Pommier, 2011; Neff, 2015), or suggest training exercises as a means of fostering compassion (Weng et al., 2013).

Emotional Regulation

A critical capability of System 3 thinking is to recognize feelings, yet not be overwhelmed by them. Control over emotions is not the same as the absence of emotions but, rather, having control over the intensity and variation in them. David (2016) distinguishes between emotional rigidity (getting hooked by negative thoughts, feelings and behaviours) and emotional flexibility (being flexible with thoughts and feelings), as a means of responding optimally to everyday situations.

Tolerance for Divergent Values

Petersen and Seligman (2004) founded the Values in Action Institute after classifying 24 character strengths and six virtues that are likely to ground day-to-day behaviour. Acceptance of the diversity in strengths offers an opportunity to understand why someone else might rely on strengths that are different to one's own. The key to System 3 thinking appears to be having strong values 'weakly held', which means being more prepared to change one's mind if new information presents itself.

System 3 thinking is a more 'considerative' way of assessing information and arriving at a decision. It involves thinking about how to balance a variety of interests in the short and long-term, especially when dealing with complex and poorly defined problems that have multiple, unknown solutions. Examples of this would be deciding on a career path, leaving a relationship, making the least worse business decision, or solving long-lasting conflicts among family members.

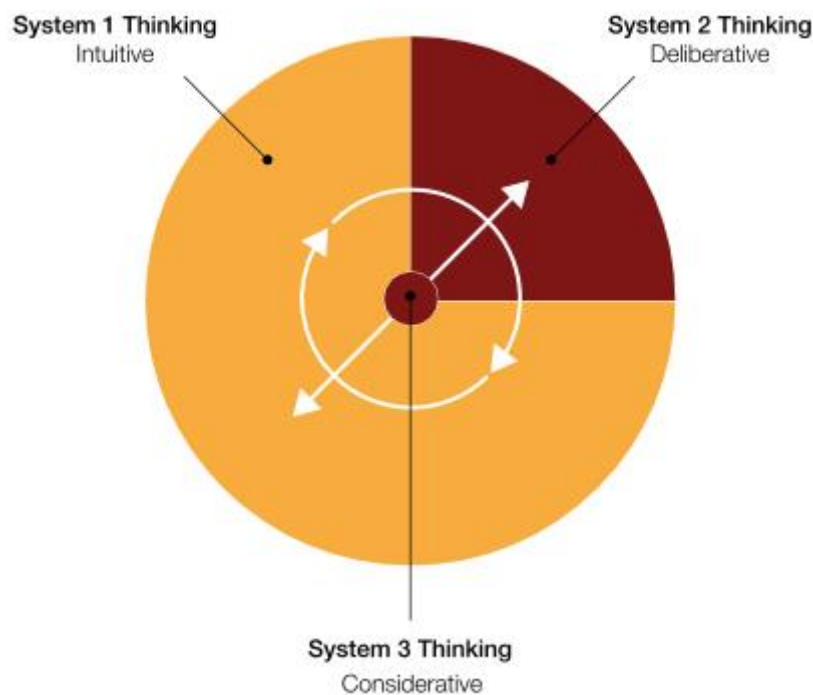System 3 thinking is only activated when we are facing doubt, dilemma, or disruption (see Figure 2).

Figure 2. System 3 thinking balances system 1 and system 2 thinking.

The WISE framework

I see the coaching dialogue as a journey from one place of identity to another place (Webb, 2008). The Pitjantjatjara people of central Australia remember the song lines which enable them to find water in the desert. The stories are a kind of compass. When our clients are facing a crucial decision, they may feel lost in the desert and it's our job as coaches and mentors to help them cross their desert and find a deeper source of meaning, a wellspring

of wisdom. That's why a decision-making framework is an important compass to use in coaching for wisdom.

Grossmann (2017) formulated a model of wise reasoning and a constructivist perspective on teaching wisdom. His framework of wise thinking in everyday life included: **W**eigh up uncertainty and change, **I**ntellectual humility, **S**earch for integration and compromise, **E**ngage others' perspectives. I adapted some of these questions for coaching and mentoring and came up with a WISE template of my own (Webb, 2018).

Subsequently, I have incorporated the Heath Brothers (Heath and Heath, 2013) more pragmatic approach to making better choices – the WRAP process: **W**iden your options: uncover new possibilities and consider them simultaneously through multitracking; **R**eality-test your assumptions: ask disconfirming questions, zoom in and out; **A**ttain distance before deciding: shift perspective and clarify core priorities; **P**repare to be wrong: prepare for bad outcomes as well as good ones.

Modifying these descriptors led me to a revised WISE template for applying system 3 thinking to help make effective decisions in complex circumstances (Webb, 2021). It helps to circumvent logical fallacies and cognitive biases, enables us to consider likely consequences in the short- and long-term, and it challenges our thinking to find outcomes which are more likely to benefit the common good:

W- Widen your view

Time pressure pushes us into grasping the first viable option. Often, there seems to be a stark choice - choose A or B. It requires much less effort to narrow the field down to a simple duality of options and then choose the least disruptive one. However, the truth is that there are many alternative scenarios that exist in "possibility land" (O'Hanlon and Beadle, 1997). We just have to step back, take some time, and widen the scope of our search for different approaches to the issue.

Useful coaching and mentoring questions include:

- "Instead of either/or, whether/or not, what other options are there?"
- "What is most important to you right now"
- "In what ways could your opinion be incorrect?"
- "Who has solved this problem before (Google it)?"

I – Interrogate reality

We make assumptions and jump to conclusions too readily. Is the reality I'm seeing the same as the reality you're seeing? Acknowledging the context and the "territory" within which the issue sits is an important prerequisite to knowing how best to evaluate the various options and which tools to use. Simple, complicated, complex, confused, and chaotic contexts each call for different responses (Snowden and Boone, 2007).

Useful coaching and mentoring questions include:

- "What would have to be true for each of these options to be the best possible choice?"
- "What's the biggest obstacle to this being the right decision?"
- "What am you prepared to give up for this option to become a reality?"
- "In what ways could this response fail?"

S - Sense what is emerging

Contrary to intuition or System 1 thinking, we need a way to move past the fluttering of emotion and allow a deeper understanding of the nature of the issue. Scharmer (2013) calls this 'presencing' - observing the problem and sitting with it to see what insights emerge. The more complex the issue, the more we need to pay attention to emergent properties. Our familiar tools and resources for "fixing it" won't work (Brougham, 2015).

Useful coaching and mentoring questions include:

- "Imagine it is 6 months from now and this decision is a failure, why did it fail?"
- "What is the essence of this issue (what is your deep knowing)?"
- "What is the best possible future that I am bringing about?"
- "What might other people think or feel who are watching me make this decision?"

E - Enact a way forward

However, it's possible to be too contemplative about the problem and not do anything about it. We need to take action. The best way is through a series of experiments, pilots, or prototypes to explore what will most likely be the best action to take. This is exactly what entrepreneurs do, they "fail forward and fail fast". Only through taking some kind of action will we learn what works and what doesn't – the process of "discovery-driven learning" (Hill, et al. 2014).

Useful coaching and mentoring questions include:

- "What can I start doing, now?"
- "What is an appropriate threshold for me to take action?"
- "In what ways can I experiment or prototype these options?"
- "What can I learn from this?"

The purpose of the WISE framework and related coaching questions is to provoke wise thinking in relation to the decision confronting the leader who is being coached or mentored. Used in this way, it will improve the likelihood that your client will make wiser decisions across a broader range of problems.

I have also found the WISE framework useful in exploring the 'problem space', drawing on Snowden's (2020) Cynefin® model. The problem facing the individual might be predictable, implying they have seen it before and all they need are the resources to solve it. Or the problem might be nonpredictable, which will lead to experimentation and novel solutions. In terms of meaning-making, the problem may be external to the individual and require understanding and mastering the environment in some way. Or the problem may be

internal, necessitating a shift in perception or mindset to change orientation towards the problem.

In this way, coaching and mentoring dialogue could explore the problem space from the perspective of External-Predictable: *Interrogate reality*, which might lead to Internal-Predictable: *Enact a way forward*. When the problem is nonpredictable, the coaching dialogue will need to transition to External-Nonpredictable: *Widen your view*. Options could then be analysed under External-Predictable: *Interrogate reality*, or prototyped through Internal-Predictable: *Enact a way forward*. However, when the problem is an internal one such as making moral choices under complex and uncertain conditions, coaching dialogue can evolve into Internal-Nonpredictable: *Sense what is emerging*, which might suggest further investigation at External-Predictable: *Interrogate reality*, or lead to trialling options through Internal-Predictable: *Enact a way forward* (See Figure 3).
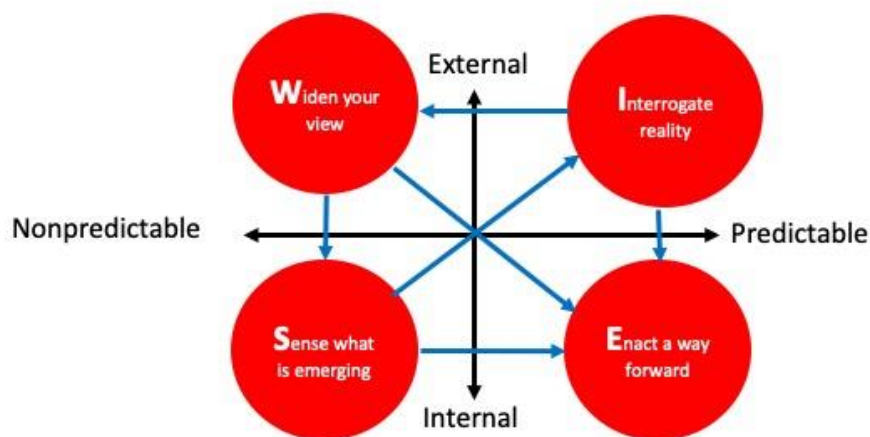

Figure 3. Defining the problem-space

In group decision-making or team coaching I have found it useful to designate each of the perspectives of the WISE framework to team members. For example, team member A might be directed to adopt the position of External-Predictable: *Interrogate reality* throughout the dialogue; team member B could be designated Internal-Nonpredictable: *Sense what is emerging*; team member C could assume the position of External-Nonpredictable: *Widen your view*; team member D would then take the role of Internal-Predictable: *Enact a way forward*. Designated team members could ask the related WISE framework questions to encourage the team to fully explore the problem space before jumping to conclusions. This approach is effective for distributed teams and is well suited to Zoom/Teams meetings.

Coaching for wisdom

How is coaching for wisdom different from other forms of coaching? The psychology of wisdom offers deep philosophical and experimental insights into what distinguishes wise

thinking from other kinds of thinking, and what 'products' to expect from engaging in such thinking. Grossmann and colleagues (2020) have proposed a 'common model of wisdom' which combines elements of the most influential models from the psychology of wisdom.

They define wisdom as:

> "Morally-grounded excellence in social-cognitive processing", which means that wise individuals (1) consider different contexts, (2) take different perspectives and consider the short- and long-term effects of their decisions, (3) think reflectively and dialectically, and (4) are aware of the limitations of their own knowledge and of their thinking.

I believe this constitutes a clear foundation for what it means to coach for wisdom, which invites coaches and mentors to adopt the value proposition of 'morally-grounded excellence in social-cognitive processing' and help clients to explore their problem space through (1) considering different contexts, (2) considering the short- and long-term effects of their decisions, (3) encouraging reflective and dialectical thinking, and (4) recognizing the limitations of knowledge and the uncertainty of outcomes.

Coaching for wisdom can also be understood in terms of the '6P theoretical framework' (Sternberg, Glück, and Karami, 2022), which is an effective backdrop for coaching dialogue. Consider: (1) the **P**urpose of wisdom – what is accomplished by using wisdom, (2) **P**ress - what aspects of the environment are pushing the client towards thinking wisely (or unwisely), (3) **P**roblems – the challenges facing the client that require wise judgements, (4) **P**erson – attributes of the client who is seeking to be wise, (5) **P**rocesses – the cognitive and metacognitive, emotional, existential, and possibly spiritual operations of wisdom, (6) **P**roducts – the outcomes of decisions, judgements, problem solutions, and actions (see Appendix 2 for application of the 6P theoretical framework to Max's dilemma).

I propose that the practice of coaching for wisdom is based on the 'common model of wisdom' within the '6P theoretical framework', engaging the 6 dimensions of system 3 thinking in conjunction with the WISE framework to achieve the maximum good or the least harm for the most people and for society, at the moment of choice (Webb, 2021).

Conclusion

In their introduction to a textbook on how to teach wisdom (which could easily be a textbook on how to coach for wisdom), researchers Robert Sternberg, and Judith Glück (2020) emphasize, "no attribute is more important to human well-being and even survival than wisdom". Intelligence is not enough. Crystallised intelligence is knowledge base, but there is no guarantee that the knowledge will be used wisely. Fluid intelligence is the ability to solve novel problems but the challenge is how to apply it. What we need is *adaptive intelligence*, which seeks a common good rather than using intelligence for exclusive individual benefit. Creativity is not enough. Negative creativity is a malevolent influence which produces a net harm to humanity. We need more *transformational creativity*, which seeks change that makes the world a better place.

The ability to lead wisely has been all but forgotten. Wisdom has been valued by humanity for thousands of years and yet it is rarely mentioned in the curriculum of business schools

or in leadership development (Rooney, McKenna, & Liesch, 2010). The most recent disastrous public failures of leadership in government, community, and business have been a stark reminder that we need leaders who will make decisions knowing that the outcomes must be good for society as well as their organisation. They need wisdom (Nonaka & Takeuchi, 2011).

Wisdom is the highest expression of human development, and I believe, wisdom should be the highest expression of our coaching and mentoring practice. The world desperately needs wise coaches and mentors who will consciously and deliberately establish a practice of wisdom for themselves and their clients.

References

Ardelt, M. (2005). How wise people cope with crises and obstacles in life. *ReVision*, 28(1), 7-19.

Ardelt, M. & Jeste, D.V. (2018). Wisdom and hard times: The ameliorating effect of wisdom on the negative association between adverse life events and well-being. *The Journals of Gerontology Series B: Psychological Sciences and Social Sciences*, 73(8), 1374-1383.

Baltes, P.B. & Staudinger, U. (2000). Wisdom: A metaheuristic to orchestrate mind and virtue toward excellence. *American Psychologist*, 55(1), 122-136.

Baltes, P.B. & Freund, A.M. (2003). The intermarriage of wisdom and selective optimisation with compensation: Two metaheuristics guiding the conduct of life. In C. Keyes & J. Haidt (eds.). *Flourishing: Positive Psychology and the Life Well-Lived*. American Psychological Association.

Brienza, J.P., Kung, F.Y.H., Santos, H.C., Bobocel, D.R., Grossmann, I. (2017). Wisdom, bias, and balance: Toward a process-sensitive measurement of wisdom-related cognition. *Journal of Personality and Social Psychology*, 115(6), 1093-1126.

Brougham, G. (2015). *The Cynefin Mini-Book: Am Introduction to Complexity and the Cynefin Framework*. Toronto, Ontario, Canada: C4Media.

Chou, C.-p., Bentler, P. M., and Satorra, A. (1991). Scaled test statistics and robust standard errors for non-normal data in covariance structure analysis: A Monte Carlo study. *British Journal of Mathematical and Statistical Psychology, 44*(2), 347–357. https://doi.org/10.1111/j.2044-8317.1991.tb00966.x

David, S. (2016). *Emotional Agility*. London, UK: Penguin Books.

Dweck, C.S. (2006). *Mindset*. London, UK: Constable and Robins.

Eagleman, D. M. (2011). *Incognito: the secret lives of the brain*. Melbourne, VIC: The Text Publishing House.

Epstein, S., Pacini, R., Denes-Raj, V. & Heier, H. (1996). Individual differences in intuitive-experiential and analytical-rational thinking styles. *Journal of Personality and Social Psychology*, 71(2), 390-405.

Epstein, S. (2010). Demystifying intuition: What it is, what it does, and how it does it. *Psychological Inquiry*, 21, 295-312.

Garvey Berger, J. (2019). *Unlocking Leadership Mindtraps*. Stanford, CA: Stanford University Press.

Glück, J., König, S., Naschenweng, K., Redzanowski, U., Dorner, L., Straßer, I., Wiedermann, W. (2013). How to measure wisdom: content, reliability, and validity of five measures. *Frontiers in Psychology*, 4, 405.

Grossmann, I. (2017). Wisdom and how to cultivate it: Review of emerging evidence for a constructivist model of wise thinking. *European Psychologist*, 22(4), 233-246.

Grossmann, I., Westrate, N.M, Ardelt, M., Brienza, J.P., Dong, M., Ferrari, M., Fournier, M.A., Hu, C.S., Nusbaum, H.C., Vervaeke, J. (2020). The science of wisdom in a polarized world: Knowns and unknowns. *Psychological Inquiry*, 31(2), 103-133.

Heath, C, and Heath, D. (2013). *Decisive*. London, UK: Random House.

Hill, L.A., Brandeau, G., Truelove, E., and Lineback, K. (2014). *Collective Intelligence: The Art and Practice of Leading Innovation*. Boston, MA: Harvard Business Review Press.

Hu, L.T., and Bentler, P.M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling: A Multidisciplinary Journal*. 6(1), 1-55. https://doi:10.1080/10705519909540118

Jackson, D.L., Gillaspy Jr, J.A., and Purc-Stephenson, R. (2009). Reporting practices in confirmatory factor analysis: An overview and some recommendations. *American Psychological Association*, Vol. 14, pp. 6-23. https://doi.org/10.1037/a0014694

Jeste, D.V., and Oswald, A.J. (2014). Individual and Societal Wisdom: Explaining the Paradox of Human Aging and High Well-Being. *Psychiatry: Interpersonal and Biological Processes*. 77(4): 317-330.

Kahneman, D. (2011). *Thinking, Fast and Slow*. New York, NY: Farrar, Straus and Giroux.

Karunamuni, N. & Weerasekera, R. (2019). Theoretical foundations to guide mindfulness meditation: A path to wisdom. *Current Psychology*, 38, 627646.

Keyes, C.L.M. & Haidt, J. (2003). Human flourishing: The study of that which makes life worthwhile. In: C.L.M. Keyes & J. Haidt (eds.). *Flourishing: Positive Psychology and the Life Well-Lived*. American Psychological Association.

Kilburg, R.R. (2000). *Executive Coaching: Developing Managerial Wisdom in a World of Chaos*. Washington, DC: American Psychological Association.

Kilburg, R.R. (2006). *Executive Wisdom: Coaching and the Emergence of Virtuous Leaders*. Washington, DC: American Psychological Association.

Lee, E.E., and Jeste, D.V. (2019). Neurobiology of Wisdom. In: Sternberg, R.J., and Glück, J. (Eds.) *The Cambridge Handbook of Wisdom*. Cambridge, UK: Cambridge University Press.

Meeks, T.W. & Jeste, D.V. (2009). Neurobiology of wisdom: A literature overview, *Archives of General Psychiatry*, 66(4), 355-365.

Neff, K.D. (2015). The self-compassion scale is a valid and theoretically coherent measure of self-compassion. *Mindfulness*, 7(4), 1009-1020.

Nonaka, I., and Takeuchi, H. (2011). The wise leader: How CEOs can learn practical wisdom to help them do what's right for their companies – and society. *The Harvard Business Review*, May.

O'Hanlon, B., and Beadle, S. (1997). *A Guide to Possibility Land: Fifty-one Methods for doing Brief, Respectful Therapy*. New York, NY: Norton.

Peterson, C. & Seligman, M.E.P. (2004). *Character Strengths and Virtues: A Handbook and Classification*. Oxford, UK: Oxford University Press.

Pommier, E.A. (2011). The Compassion Scale. *Dissertation Abstracts International Section A: Humanities and Social Sciences*, 72, 1174.

Rooney, D., McKenna, B., and Liesch, P. (2010). *Wisdom and management in the knowledge economy.* London: Routledge.

Scharmer, C.O. (2013). *Leading from the Emerging Future*. San Francisco, CA: Berrett-Koehler.

Schermelleh-Engel, K., Moosbrugger, H., and Müller, H. (2003). Evaluating the Fit of Structural Equation Models: Tests of Significance and Descriptive Goodness-of-Fit Measures. *Methods of Psychological Research Online*, Vol.8, No.2, pp. 23-74.

Snowden, D.J. and Boone, M.E. (2007). A Leader's Framework for Decision Making, *Harvard Business Review*, November 2007.

Snowden, D.J., Greenberg, R., Bertsch, B. (Eds.) (2020). *Cynefin®: Weaving sense-making into the fabric of the world*. Colwyn Bay, UK: Cognitive Edge Ltd.

Sormaz, M., Murphy, C., Wang, H-T., Hymers, M., Karapanagiotidis, T., Poerio, G., Margulies, D.S., Jefferies, E. & Smallwood, J. (2018). Default mode network can support the level of detail in experience during active task states. *Proceedings of the National Academy of Sciences*, 115(37), 9318-9323.

Stark, E.A., Vuust, P. & Kringelbach, M.L. (2018). Music, dance, and other art forms: new insights into the links between hedonia (pleasure) and eudaimonia (well-being). *Progress in Brain Research*, 237, 129-152.

Sternberg, R.J., and Glück, J. (2022). What is wisdom and why is it so important? In: Sternberg, R.J., and Glück, J. (Eds.) *The Psychology of Wisdom*. Cambridge, UK: Cambridge University Press (pp. 3-14).

Sternberg, R.J., Glück, J., Karami, S. (2022). Psychological theories of wisdom. In: Sternberg, R.J., and Glück, J. (Eds.) *The Psychology of Wisdom*. Cambridge, UK: Cambridge University Press (pp. 53-69).

Thomas, M.L., Bangen, K.J., Palmer, B.W., Martin, A.S., Avanzino, J.A., Depp, C.A., Glorioso, D., Daly, R., and Jeste, D.V. (2017). A new scale for assessing wisdom based on common domains and a neurobiological model: The San Diego Wisdom Scale (SD-WISE). *Journal of Psychiatric Research*, 1-8.

Webb, P.J. (2005). Inspirational Chaos: Executive Coaching and Tolerance of Complexity. In: Cavanagh, M., Grant, A.M., and Kemp, T. (Eds.). *Evidence Based Coaching (Volume 1): Contributions from the Behavioural Sciences*. Bowen Hills, QLD: Australian Academic Press.

Webb, P.J. (2008). Coaching for Wisdom: Enabling Wise Decisions, in: D.B. Drake, K. Gørtz, and D. Brennan (Eds.) *The Philosophy and Practice of Coaching* (pp. 161-175), San Francisco, CA: Jossey-Bass.

Webb, P.J. & Lee-Bates, B. (2015). Effects of mindfulness training on workplace performance. *Proceedings of the 11th Industrial and Organisational Psychology Conference*, Australian Psychological Society, Melbourne, Australia.

Webb, P.J. (2018). Coaching for wisdom, in: K. Brush, and I. Sobolewska (Eds.) *8th EMCC International Mentoring, Coaching, and Supervision Research Conference* (pp. 220-231), European Mentoring and Coaching Council, Brussels, Belgium.

Webb, P.J. (2021). *System 3 Thinking: How to Choose Wisely when facing Doubt, Dilemma, or Disruption*. Surrey Hills, VIC: Publish Central. www.peterjwebb.com

Weng, H.Y., Fox, A.S., Shackman, A.J., Stodola, D.E., Caldwell, J.Z.K., Olson, M.C., Rogers, G.M. & Davidson, R.J. (2013). Compassion training alters altruism and neural responses to suffering. *Psychological Science*, 24(7), 1171-1180.

Wheatley, M.J. (2017). *Who Do We Choose To Be? Facing Reality, Claiming Leadership, Restoring Sanity*. San Francisco, CA: Berrett-Koehler Publishers.

Appendix 1

Max's Dilemma

Max is an English teacher and a headteacher of a year-12 class. He has a good relationship with his students. One day, the members of the class tell him that they are having a problem with their new Maths teacher. She does not seem to be particularly good at explaining things, and her answers to students' questions are not very helpful. The students have less than a year until their final exams, and they are worried about failing the Maths exams. Max talks to the Maths teacher, but she is quite defensive. She tells him that she does not think there is a problem, and she says that she is happy to let him teach the Maths classes if he thinks he can do better. Obviously, she is very angry at the students for complaining about her.

What should Max do?

(Sternberg, R.J., Glück, J., Karami, S., 2022)

Appendix 2

The 6P Theoretical Framework

6 P's	Definition	Example
Purpose	What is accomplished by wisdom	Seeking a common good: seeking a solution that benefits Max's students, the Maths teacher, and possibly Max himself
Press	Environmental forces that contribute to wisdom	The students' upcoming final exams combined with the Maths teacher's defensiveness and limited experience
Problem	The challenge facing the person who is seeking to be wise	How to persuade the Maths teacher to find ways to improve her teaching
Person	The individual who is seeking to be wise	Max, with his background, knowledge, experience, and personality
Processes	The mental operations of wisdom	The questions that Max asks the students and the teacher, the conclusions he draws from their responses, and the steps he takes with the students and the teacher in finding a solution
Product	The outcome(s) of wisdom	For the teacher, improved teaching skills and greater self-confidence; for the students, success in the final exams

(Sternberg, R.J., Glück, J., Karami, S., 2022).