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Conceptual Paper

Common-sense thinking and decision making

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Abstract: Common-sense thinking (CST) is proposed as the dynamic, situation-responsive application of common-sense knowledge rather than the mere possession of static facts. This conceptual article distinguishes two modes of CST. System A applies an already adequate representation of a familiar situation, whereas System B becomes important when that representation must be constructed, adapted, or reconsidered. The distinction concerns the amount of situation-specific construction required rather than simply the speed or effort of reasoning. CST is related to, but distinguished from, neighbouring constructs and research traditions, including practical intelligence, executive functions, rational thinking, metacognition, wisdom, adaptive expertise, and Naturalistic Decision Making. Its central decision-theoretic contribution is the proposal that CST also functions at a meta-decision level: recognising when unaided judgement is adequate and when a problem requires more explicit structuring and decision analysis. Examples from scientific reasoning and professional practice illustrate how context-sensitive practical judgement may operate, while structured decision methods are viewed as complements to rather than replacements for such judgement. The framework is explicitly conceptual and remains to be empirically validated. Testable propositions are proposed concerning System B reasoning, individual differences in recognising the limits of unaided judgement, and the appropriate transition from informal judgement to structured decision analysis.

Keywords: Common-sense thinking, Practical intelligence, Decision making, Meta-decision making, Structured decision analysis, Adaptive reasoning

1. Introduction

This article is ultimately about common-sense decision making. But to discuss that, we need to first understand the underlying concept of common-sense thinking (CST). It is sometimes thought of as an all-purpose ability to make sound judgements in everyday situations, transcending any one domain of knowledge. In simple terms, it could mean using sound and prudent judgement based on a simple perception of the situation or facts. This goes beyond formal education or specialised training. It involves the capacity to draw on basic, widely shared knowledge and intuition to solve real-world problems. For example, what about knowing not to touch a hot stove or to save money for a rainy day? It does not require high academic training, but rather a general awareness learned through experience. Still, it is not CST. Common sense is thought of *as all the knowledge about the world that we take for granted but rarely state out loud*, i.e. the broad background understanding that any typical person has accumulated by adulthood. It includes a grasp of physical realities, social norms, and practical consequences. The

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concept of common sense encompasses all this, but much is common-sense knowledge, i.e. the facts and relations that are shared static knowledge of a general nature. The stove example above is common-sense static knowledge but does not require much dynamic thinking to be applied. So while certainly common-sensical, it is not what we mean by CST.

The relation of CST (process) to the broader concept of common sense (outcome) is similar to the relation between design and design thinking. Design is defined as the purposeful arrangement of elements to achieve a desired function, outcome, or experience, balancing constraints, requirements, and sometimes creativity. Design thinking, however, is the process of design distilled from its many instantiations and codified as a method. So design focuses on creating for a known problem within defined constraints, applying conscious thought to achieve a functional solution. Design thinking, on the other hand, approaches more general problems through human-centred inquiry, by uncovering underlying needs before proposing solutions. Analogously, CST is the core process when applying common-sense knowledge to a non-trivial situation.

Despite its name, common sense is not necessarily widely shared or easy to pin down. Recent empirical work likewise suggests that collective common sense is limited rather than universal [1]. What counts as sensible judgement may also vary with context, culture, and experience. This is particularly true for social norms, expectations, and judgements, which may be regarded as self-evident in one cultural or organisational setting but not in another. CST should therefore not be understood as applying a universal catalogue of "sensible" responses, but as reasoning from background knowledge that is itself partly shaped by the context in which it has been acquired [2]. This article therefore treats common-sense thinking (CST) not as a stock of widely shared knowledge, but as the dynamic use of such knowledge in judgement and decision making. The paper makes three conceptual contributions. First, it separates common-sense knowledge from CST as a reasoning process. Second, it proposes two modes of CST: System A, the rapid application of familiar background knowledge to a situation, and System B, the more flexible construction and revision of reasoning when the situation is unfamiliar or complex. These labels are deliberately distinct from System 1/System 2 because the distinction concerns modes within CST rather than a general partition of cognition. Third, and most importantly for decision making, the paper develops CST as a meta-decision capability: the ability to recognise when intuitive judgement is adequate and when a decision should instead be subjected to structured analysis. The argument is conceptual rather than empirical. It proceeds by distinguishing CST from adjacent constructs and then examining its implications for descriptive and structured decision theory. The paper concludes by considering the limitations of the framework and directions for its empirical operationalisation.

2. The nature of CST

It is important to distinguish between two modes of CST, here called System A and System B. The distinction bears some resemblance to Systems 1 and 2 described by Kahneman [3], but is not equivalent to it. Whereas System 1/System 2 concerns broad modes of cognitive processing, System A/System B distinguishes modes within CST according to how much situation-specific construction of the problem and its consequences is required. System A is the everyday common-sense thinking that seems effortless and that most people display a good command of. Using System A thinking seems almost trivial and is done without most people ever consciously reflecting on it. This is not to suggest that System A operates without calculations or contemplation, that would be incorrect. Rather, these processes often occur rapidly and largely at a subconscious level. For example, if you drop a knife, your immediate reflex is to catch it. However, your consequential System A quickly projects the likely outcomes of doing so. If the knife has a sharp edge, System A "sees" the risk of injury and advises against catching it. It can be almost like a visual slide show or film with a few frames. If it instead is a table knife, you may get a little messy but not hurt by catching it. Rather, if the floor is scratch-prone, you prevent a dent if you catch or at least deflect the table knife. System B, on the other hand, becomes important when the situation cannot be handled adequately by applying an already familiar representation, and relevant relations and consequences instead have to be constructed, combined, or reconsidered for the situation at hand. System B therefore becomes particularly relevant when familiar representations are insufficient and more substantial situation-specific reasoning is required. Failure to distinguish those two different manifestations of CST is a major factor behind the sometimes confused discussions and debates on common sense and the lack of it in some contexts.

At its core, CST is the human capacity to make sensible presumptions about everyday situations and react with appropriate judgement. This means having a vast store of background knowledge about how the world works, from physical principles (e.g. that heavy objects can crush lighter ones) to social expectations (e.g. understanding other people's likely intentions and beliefs). Humans acquire an enormous amount of this common-sense background knowledge from an early age about objects, people, animals, and basic routines of life. Unlike encyclopaedia facts or academic theories, such background knowledge deals with general truths (water quenches thirst, friends expect loyalty, a dropped glass will likely break) that are broadly true across contexts. This background knowledge can support either mode of CST. System A is largely intuitive and fast, whereas System B requires more substantial construction or adaptation of the situation representation.

System B is the reasoning part of common sense: the ability to use that background knowledge in a flexible, situation-appropriate way. CST System A is largely

intuitive and fast. However, speed and deliberateness are typical characteristics rather than defining criteria: the A/B distinction concerns primarily whether an adequate representation can be readily applied or must instead be substantially constructed or adapted. We draw almost immediate conclusions that feel obvious without any analysis. For instance, if we see someone shivering in light clothing, we immediately infer they are cold and ought to put on a jacket. Such inference appears effortless. We effortlessly understand narratives and predict likely outcomes in daily life because of an underlying web of common-sense understandings (sometimes called folk psychology and naïve physics in cognitive science).

It is important to note that common sense is not infallible. It can be biased or mistaken in novel scenarios. But as a cognitive ability, it is essentially our general-purpose tool for navigating life's myriad unstructured problems. Unlike formal logical reasoning, which uses abstract rules, common-sense reasoning tends to be contextual, experience-guided, and pragmatic. It might tell us, for example, that if a deal sounds too good to be true, it probably is. This is a conclusion drawn from diffuse real-life examples rather than a mathematical proof. In summary, common sense is the blend of general world knowledge and practical reasoning that allows humans to operate across domains with a baseline of good judgement.

Figure 1 summarises the proposed relationship between common-sense knowledge, the two modes of CST, and the later meta-decision of whether unaided judgement is sufficient or should be supplemented by structured analysis.

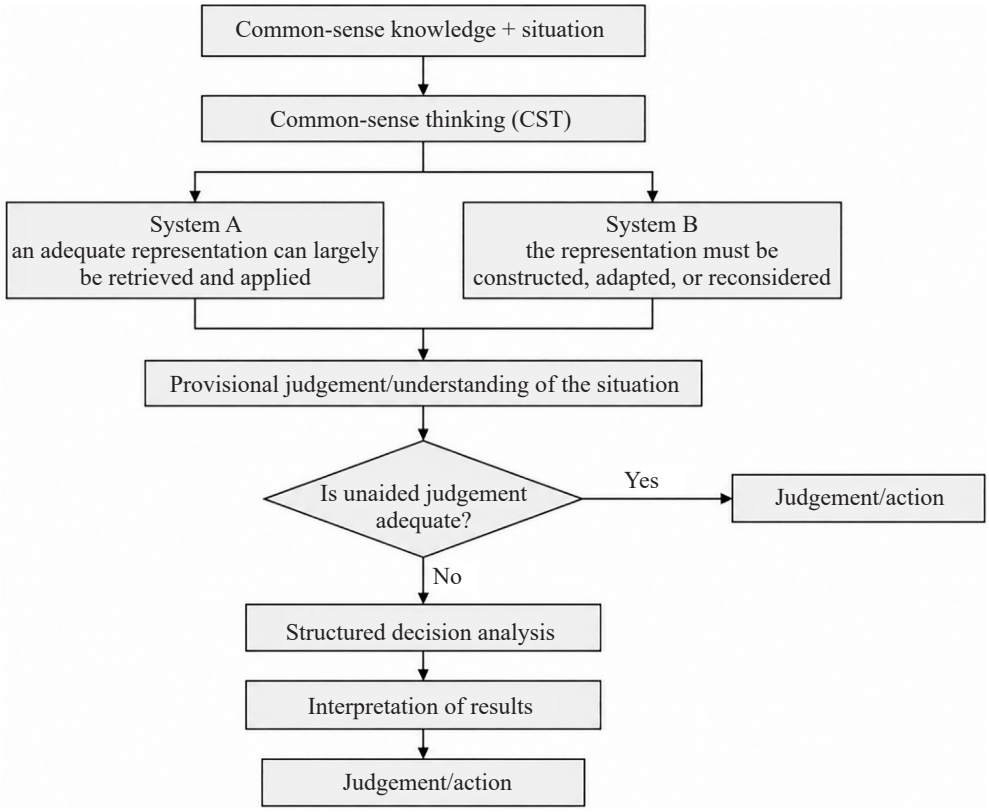


Figure 1. Conceptual overview of CST. Common-sense knowledge provides background material for System A or System B reasoning. The resulting understanding also supports a meta-decision about whether unaided judgement is adequate or whether structured analysis is required

3. Beyond book smartness

CST can be contrasted with the type of intelligence measured in school exams or Intelligence Quotient (IQ) tests, sometimes called book smarts or academic intelligence. High IQ or academic prowess does not guarantee strong System B common sense in real life. Cognitive psychologists have long observed that some people who excel in analytical problem-solving can still make poor everyday decisions or show startling lapses in overall judgement. Research on practical intelligence has shown that conventional intelligence tests and measures of tacit knowledge capture partly distinct aspects of performance in real-world settings [4-5]. Related work on rational thinking points in the same direction. Stanovich [6] and others who study reasoning have found that standard IQ tests fail to capture many good-thinking skills needed for rational decision-making in daily life. Those tests focus mostly on abstract problem-solving and knowledge recall,

which correlate with academic and professional success up to a point. But they fall short of the full set of skills that would come under the heading "good thinking". Measures of analytical intelligence do not capture all of the abilities involved in practical judgement. Thus, someone can be a brilliant mathematician or physicist and still make poor judgements in situations requiring practical, context-sensitive reasoning.

From a research standpoint, this distinction overlaps with what psychologists call practical intelligence: the ability to apply knowledge effectively in real-world situations, drawing substantially on tacit knowledge acquired through experience [5, 7]. Practical intelligence is discussed more systematically in Section 6; the point here is simply that analytical ability and practical judgement are related but not interchangeable.

Thus, academic intelligence reflects the ability to learn, analyse, and solve difficult problems, often in specialised domains, whereas common-sense intelligence (and thus thinking) reflects the ability to reason effectively across everyday situations. The academically bright individual might master calculus or symbolic logic, but the System B common-sensical individual excels at interpreting social context, spotting practical pitfalls, and making prudent decisions without relying on formal analysis. In short, effective real-world reasoning involves abilities not captured by IQ alone [4]. In a System B sense, common sense encompasses these real-world judgement calls and adaptive forms of thinking that standardised tests do not capture.

4. Street smartness

Another term often mentioned alongside common sense is *street smart*. Street smart usually refers to practical savvy in navigating real-world challenges, especially in rough or unpredictable environments. It is related to traditional common sense but with much more emphasis on shrewdness and situational awareness. One way to differentiate them is that common sense draws on broadly shared background knowledge, whereas street smarts relies more heavily on specialised tacit knowledge acquired in particular social or practical environments. Depending on the familiarity of the situation, street-smart reasoning may involve either System A or System B CST. The distinction lies more in the knowledge base than in the mode of thinking. A street-smart person typically knows how to read social cues, avoid dangers or scams, and get by in the real world using resourcefulness and instinct. In essence, street smarts is common sense in action under challenging conditions. It is particularly relevant in unfamiliar or potentially risky social and practical environments.

Both common sense and street smarts rely substantially on tacit knowledge: the kind of knowledge that, as Polanyi [8] formulated in *The Tacit Dimension*, we can know more than we can tell. Such knowledge is typically acquired informally through experience and may be difficult to articulate explicitly. In street smarts, much of this knowledge is specific to particular social or practical environments, which helps explain why someone may be highly street-smart in one setting yet much less so in another.

In everyday terms, common-sense knowledge is relatively broad, whereas street smarts involves more specialised tacit knowledge for navigating particular real-world contexts. Either may support System A or System B reasoning depending on the situation. Both differ from theoretical knowledge in that they are context-dependent, learned informally, and often tied to action. An academically brilliant person might know the theory of combustion, but it is System A that advises you not to pour water on a grease fire. Similarly, a street-smart individual might not compute probabilities explicitly, but they have an instinct for when someone is trying to con them, drawn from years of dealing with people. Researchers have also used situational judgement tests and scenarios to capture aspects of this kind of practical knowing-how. All this underscores that common sense is rooted in experience-based intuition as much as or more than abstract reasoning.

5. Analytical thinking

It is illuminating to contrast common sense with analytical thinking. Highly analytical thinking proceeds from explicit principles and rigorous steps, for example deducing a conclusion from premises in mathematics or following a scientific method. System B, by contrast, is often informal and driven by context. Humans often rely on heuristics (mental shortcuts or rules of thumb) that usually, but far from always, yield reasonable results. These heuristics are essentially distilled common-sense observations. For instance, one heuristic is the representativeness heuristic: judging likelihood by how representative something is of a known pattern (which is why a person might intuitively suspect a cheating scenario if something feels off). Such gut feelings are not foolproof or strictly logical, but they are part of our common-sense toolkit that works well in typical situations. Decision scientists like Gigerenzer et al. [9] have argued that simple heuristics can be surprisingly accurate and useful, dubbing them fast-and-frugal ways of reasoning that can perform well, and under some conditions as well as or better than more complex strategies. In many cases, common sense aligns with practical logic, a kind of rough-and-ready reasoning that, while not rigorous, is well suited to everyday life's requirements.

As seen above, common sense also includes commonly held knowledge, which is something static and different from thinking, which is dynamic. History is full of examples where common-sense beliefs turned out wrong under scientific scrutiny (e.g. the once-common-sense idea

that the sun revolves around the Earth).

6. Psychological theories

Researchers from both psychology and cognitive science have proposed various theories and models to explain what underlies common-sense thinking. Whereas the preceding sections contrasted CST with familiar notions of academic intelligence, street smartness, and analytical thinking, this section places CST more systematically in relation to established psychological constructs. Here are a few key frameworks and constructs that relate to this domain-general reasoning ability:

Practical Intelligence: Sternberg's triarchic theory of intelligence breaks intelligence into analytical, creative, and practical components [7]. Practical intelligence is defined as the ability to adapt to, shape, or select environments to meet one's goals. It involves applying knowledge to real contexts and is measured via tacit knowledge and situational judgement [4-5]. For example, a tacit knowledge test for business managers might ask what the best way is to handle an employee problem, measuring insight gained from experience rather than academic knowledge. Their practical-intelligence measures provided incremental prediction of Master of Business Administration (MBA) performance beyond Graduate Management Admission Test (GMAT) scores and undergraduate Grade Point Average (GPA) [10]. Practical intelligence is thus a psychological cousin to common sense. It formalises the concept as a measurable skill set based on real-world problem-solving and wisdom-in-action.

Fluid vs. Crystallised Intelligence: There is a well-established difference between fluid intelligence (the capacity to solve novel problems, think logically and see patterns in new information) and crystallised intelligence (accumulated knowledge and facts) [11]. Common sense draws on both in different ways. When encountering a new situation, one uses CST (fluid reasoning) to interpret it flexibly (like solving a new puzzle) but also pulls heavily from crystallised knowledge of similar past situations and general world facts. In fact, the resulting common sense could be seen as an interplay of fluid problem-solving with crystallised life knowledge. A person with high fluid intelligence might learn rules quickly, but without sufficient worldly experience (crystallised content), they could still make unwise choices. Conversely, someone with vast experience (high crystallised knowledge) but very low fluid reasoning might struggle to apply that knowledge in new ways. Traditional IQ tests emphasise fluid reasoning in abstract contexts, whereas common sense emphasises applying learning to concrete reality.

Cognitive Flexibility and Executive Functions: From a cognitive psychology perspective, executive functions (higher-order control processes managed by the frontal lobes) are important for CST. Executive functions include abilities like working memory (holding and mentally manipulating information), inhibitory control (suppressing impulses or irrelevant info), and cognitive flexibility (shifting one's thinking or approach as needed) [12]. Cognitive flexibility, in particular, is key to applying CST across domains. It allows a person to adjust to new rules or to see a problem from multiple angles. For instance, take an example from classical thinking: imagine driving in a foreign country. One must suppress the habit of driving on the familiar side of the road (inhibition), keep track of new signage (working memory), and flexibly adapt to different traffic rules and behavioural norms. This is a very practical mix of executive skills that manifest as using your cognitive abilities to avoid accidents. Thus, while common sense is not usually defined in neuropsychological terms, its exercise likely depends on an intact and active executive system enabling us to plan, foresee consequences, and adapt strategies on the fly. These executive capacities may therefore provide cognitive support for CST.

Rationality and the Reflective Mind: Stanovich has argued for a model separating intelligence from rational thinking. He notes that standard intelligence (the algorithmic mind) does not guarantee what he calls rationality, the ability and disposition to think logically when it matters, avoid cognitive biases, and make decisions that align with one's goals [6]. In effect, he is pointing to a common-sense component of cognition: being able to reason through everyday problems and not be led astray by irrational quirks. He coined the term dysrationalia for the failure to behave rationally despite adequate intelligence. In a sense, that could be interpreted as a lack of CST capability. Stanovich argues that rational thinking can be assessed separately from conventional intelligence and that such assessment should cover reasoning and decision-making processes not captured by IQ tests [6]. This provides an important point of contact with CST, although rationality and CST should not be treated as equivalent constructs. Although this work uses the term rationality rather than common sense, it covers much of the same territory: judgement, avoidance of illogical thinking, and prudent decision-making in real-world contexts. This work therefore overlaps with CST in its concern with judgement, reflection, and correction of poor initial responses, without establishing CST as an independent cognitive domain.

At a somewhat different level, Naturalistic Decision Making (NDM) provides a closely related research tradition rather than a directly comparable cognitive construct. NDM studies how experienced decision-makers act in complex, uncertain, and time-pressured real-world environments, with the Recognition-Primed Decision model emphasising recognition of familiar situations and mental simulation of plausible courses of action [13-14]. This converges strongly with CST in its emphasis on experience, context, tacit knowledge, and workable rather than formally optimal responses. The difference is mainly one of scope and function. NDM is primarily concerned with expertise-based decision-making in particular domains, whereas CST is proposed here as a more general

reasoning capacity that also includes recognising when familiar or intuitive reasoning is no longer adequate. In that respect, the present framework extends beyond naturalistic intuition to the meta-decision of when more explicit structuring and analysis are required.

Taken together, these frameworks and research traditions shed light on different aspects of the abilities relevant to common-sense thinking. They suggest that common sense is a composite of cognitive skills: part experiential knowledge, part flexible problem-solving, part self-regulation and rational judgement. No single theory (yet) fully encapsulates common sense, but together they paint a picture of a mental toolkit that allows individuals to learn from experience, adapt to diverse situations, and make sound decisions that pure analytic intellect or rote knowledge alone might not guarantee. Table 1 summarises the relationship between CST and the principal neighbouring constructs discussed above and later in the paper. The overlaps are substantial, but the concepts address different questions.

Table 1. Comparison of CST with neighbouring constructs

Construct	Primary focus	Relation to CST	Main distinction from CST
System 1/ System 2	General modes of cognitive processing, particularly automatic versus effortful processing	Both may participate in common-sense reasoning	System A/B concerns modes within CST and is distinguished by the amount of situation-specific construction required, rather than primarily by speed or effort
Practical intelligence	Effective application of knowledge to real-world problems	Strongly overlaps with CST, particularly System B	Practical intelligence emphasises successful real-world performance and acquired tacit knowledge; CST focuses more specifically on the reasoning process through which common-sense knowledge is applied
Executive functions	Cognitive control, including working memory, inhibition, and cognitive flexibility	Provide important cognitive capacities supporting CST	Executive functions are general control mechanisms rather than common-sense reasoning itself
Rational thinking	Reasoning and judgement that avoid biases and support goal achievement	Overlaps with CST in reflective judgement and correction of poor initial responses	Rationality is typically evaluated against standards of good reasoning, whereas CST is characterised here as a context-responsive process that may operate without explicit normative analysis
Metacognition	Monitoring and regulating one's own cognition	CST has a metacognitive component, particularly when assessing whether one's present mode of reasoning is adequate	Metacognition concerns cognition about cognition generally; CST also includes first-order interpretation and judgement about the external situation
Wisdom	Sound judgement integrating knowledge, experience, values, and consequences	Wise judgement will often involve CST	Wisdom is a broader evaluative concept, commonly incorporating value and ethical dimensions that are not definitional components of CST
Adaptive expertise	Flexible application and modification of expertise in novel situations	Closely resembles System B when familiar responses must be adapted	Adaptive expertise is normally discussed in relation to expertise within a domain, whereas CST is proposed as a more domain-general reasoning capacity

The purpose of the CST concept is therefore not to replace these established constructs. Rather, it identifies a particular reasoning process cutting across several of them: the situation-responsive application of common-sense knowledge. Its distinctive role becomes especially important in decision making when this reasoning is extended to the metacognitive question of whether unaided judgement remains adequate or whether a more structured mode of analysis is required.

7. Scientific thinking

The connection between CST and scientific thinking is deeper than it might first appear. Although science relies on formal methods, systematic experimentation, and often mathematical abstraction, many of its basic reasoning operations have everyday counterparts: observing patterns, proposing plausible explanations, checking them against experience, and revising conclusions when they fail. Scientific methods discipline and systematise these operations in ways that ordinary common-sense reasoning normally does not. In this more limited sense, scientific reasoning can be viewed as building upon and refining

processes that are already present in CST.

Several familiar ideas from the philosophy of science can be interpreted in this light. Popper's notion of falsifiability, for example, formalises the requirement that explanations must remain answerable to evidence rather than merely appear plausible [15]. This has an everyday analogue in revising a common-sense judgement when experience contradicts it. Likewise, Kuhn's account of scientific crises illustrates, on a much larger and institutional scale, what happens when an established way of interpreting observations no longer accommodates accumulating anomalies [16]. The analogy should not be pushed too far, but in both cases a previously workable representation must be reconsidered when it ceases to fit experience.

Moreover, scientific reasoning often relies heavily on what might be called educated intuition, especially at the frontiers where formal theory runs thin. Nobel Prize laureate Feynman emphasised the importance of *guessing* in scientific discovery, followed by rigorous testing [17]. This sequence, first the informed conjecture and then the empirical scrutiny, mirrors the flow of CST: proposing plausible explanations based on prior experience and correcting them in light of reality. The difference is primarily one of discipline and control: everyday CST may stop when an explanation appears sufficiently plausible, whereas scientific practice requires that such plausibility remain open to systematic testing and correction. In some ways, the scientific method represents an institutionalisation of critical CST, where practices such as peer review, replication, and methodological scepticism serve to protect the community from individual biases while maintaining the adaptability and pragmatic spirit of common-sense reasoning.

Importantly, even the methods taught in scientific education rely on foundational cognitive moves that are not alien to everyday reasoning but are sharpened versions of them: observing patterns, inferring causes, proposing tentative explanations, and adjusting beliefs based on new information. Scientific literacy, at its best, is not the memorisation of facts but the cultivation of a refined common-sense view of nature or society. In this light, science does not replace or transcend common sense but seeks to correct its errors systematically while preserving its most vital strength: the capacity to make reasonable judgements in the face of uncertainty. Seen from this perspective, the history and philosophy of science can be read as a long project of making the common sense of the world more precise, more reliable, and more self-correcting without losing its essential character as a deeply human way of knowing.

In *How to Solve It*, Pólya [18] offers an example of how refined CST underlies even the formal disciplines of mathematics and logical problem-solving. Although the book is situated within the context of teaching students how to tackle mathematical problems, the strategies Pólya outlines are recognisable as structured forms of intuitive reasoning, not rigid formal algorithms. Techniques such as guess-and-check, considering a simpler problem and working backwards from the goal, and draw-a-figure reflect deeply human, experience-based ways of thinking that predate and transcend formal schooling. In the present framework, Pólya's heuristics can be interpreted as an attempt to make tacit common-sense problem solving more explicit and systematic, turning everyday problem-solving instincts into teachable methods.

Importantly, Pólya never claimed that his heuristics guaranteed success. Rather, he acknowledged that intelligent problem-solving is an art that requires judgement, flexibility, and an ability to adapt strategies to the context at hand. In this way, his framework mirrors the nature of CST. It is not about slavish rule-following but about intelligently navigating uncertainty, using a combination of accumulated experience, flexible reasoning, and practical intuition. Where formal logic demands strict proofs and certainty, Pólya's heuristics embrace provisional, adaptive reasoning. In the present framework, this can be viewed as a form of critical CST applied within a disciplined domain.

Seen in this light, *How to Solve It* represents the same spirit found in the history and philosophy of science: the effort to refine, discipline, and enhance common sense without discarding its core strength, which is its capacity to make plausible, adaptive judgements under incomplete information. Pólya's work thus stands as a bridge between everyday reasoning and systematic inquiry, illustrating how even the most revered intellectual practices are, at their heart, elaborations on the general human faculty for seeing, guessing, testing, and adjusting that constitutes true common-sense thinking.

In modern cognitive science and educational theory, Pólya's emphasis on flexible problem-solving has parallels with adaptive expertise and situational judgement. As summarised in Table 1, adaptive expertise concerns the modification of established knowledge and procedures when familiar responses are insufficient [19]. Recent review work has further conceptualised adaptive expertise in terms of responding effectively to changing tasks and environments across educational and workplace settings [20]. Continuing variation in how adaptive expertise is operationalised and measured has also been documented [21]. This is also the aspect that makes the concept relevant to System B CST.

Similarly, the study of situational judgement (the ability to size up ambiguous, real-world situations and choose effective courses of action) captures another dimension of refined common sense. In fields as diverse as management, education, and medicine, situational judgement tests are used to measure practical reasoning skills that go beyond pure analytical intelligence. These skills depend not just on knowing explicit rules, but on having an intuitive grasp of context, relevance, and human factors, all hallmarks of CST.

Pólya's heuristics, when viewed through this lens, can be seen as early efforts to scaffold the development of adaptive expertise and situational judgement in students.

Rather than seeking to replace intuition with formulaic logic, he sought to elevate intuition to a higher level of conscious skill, fostering the ability to recognise patterns, shift perspectives, and improvise solutions based on a practical understanding of the structure of problems. Viewed through the present framework, Pólya's work provides an example of expert problem solving that retains an important role for flexible judgement rather than relying solely on fixed procedures. Such expert reasoning remains rooted in general cognitive capacities while being honed through reflection, abstraction, and domain-specific application.

Taken together, these examples suggest that several operations involved in scientific problem-solving, such as generating plausible explanations, testing them, and adapting them when necessary, have counterparts in CST. Scientific reasoning differs in the systematic controls it imposes on these operations. The comparison is therefore one of partial continuity rather than equivalence.

8. Professional domains

CST is potentially important in many professional and real-world domains, where technical expertise must often be combined with contextual judgement. The following three areas—leadership, management consulting, and education—serve as illustrations of how reasoning resembling CST appears in professional practice.

8.1 Leadership

In leadership research and practice, concepts adjacent to CST appear under labels such as practical wisdom, good judgement, or business sense. Leadership decisions often require contextual judgement in addition to technical or analytical competence, including attention to people's motivations and short- versus long-term consequences.

Recent research into common-sense leadership has tried to unpack what this means. In a qualitative study of senior executives, participants described common-sense leadership as a multi-faceted approach requiring flexibility, practical decision-making, and a moral compass [22]. Leaders felt that common-sense decision-making often involves ethical judgement, for instance sometimes superseding organisational performance and profitability to do the right thing. In other words, a leader with common sense knows that relying exclusively on quantitative or performance-based considerations might not be wise if it violates basic ethical or human principles. These leaders emphasised integrating people considerations with business needs and ethical judgement. More recent empirical work on practical wisdom in leadership points in a similar direction. Rego et al. [23], for example, operationalised leader-expressed practical wisdom as the capacity for inquiring, judging, and acting in an emotionally regulated way and found empirical support for the construct across field studies and an experiment.

Experienced leaders are often described as relying partly on intuitive judgement developed through repeated exposure to organisational situations. Such intuition may reflect accumulated experience about what tends to work or fail in human organisations. In the present framework, this provides an example of how experience can support context-sensitive judgement without replacing analytical scrutiny.

Within the present framework, leadership also illustrates a second-order use of CST: recognising when familiar rules of thumb no longer fit an unprecedented situation. This involves judging when to retain established practices and when to revise them in light of changing circumstances.

Taken together, these examples suggest that practical judgement can complement analytical and strategic capabilities in leadership, particularly where formal models do not capture interpersonal, ethical, or organisational considerations.

8.2 Management consulting

Management consulting provides a useful example of the interaction between analytical and practical reasoning. Consultants routinely face unfamiliar and incompletely specified problems that require both decomposition and contextual judgement. Recent empirical work supports this combination: Templ and Stadler [24], studying strategy consultants, found a general preference for analytical thinking but also an increasing reliance on intuition with greater seniority and experience, together with attention to cognitive biases and debiasing.

Much consulting problem-solving also begins with relatively simple structuring moves. If a company's profits are falling, for example, an initial common-sense decomposition is to ask whether revenues have decreased or costs have increased before introducing more elaborate analysis. The professional skill lies not simply in applying formal frameworks, but in judging what needs to be structured, which information matters, and when further analysis is warranted.

8.3 Education and teaching

In education, common sense can be framed as the transfer of knowledge and reasoning to practical tasks. Students may perform well on formal assessments yet still need to judge whether an answer is plausible in context. For example, a science teacher may ask students to estimate whether 500 kg is a reasonable weight for a balloon. Problem-based learning provides one route for connecting academic knowledge with practical reasoning.

CST also has a contextual dimension in education: knowing facts is not enough; students must recognise which facts are relevant and how they apply in a particular situation. Schooling can therefore be viewed as helping students refine both their background knowledge and their

ability to apply it beyond the classroom. The relevant aim is not merely to generate solutions, but also to recognise a good solution when one is presented.

9. Descriptive decision theory

Descriptive decision theory has made vital contributions to our understanding of human reasoning. One particularly influential strand of this research has documented the systematic biases and heuristics that can distort decision-making. Taken in isolation, however, this literature can produce an incomplete picture of practical thought, emphasising systematic error more strongly than the adaptive capacities that also characterise human judgement. From the availability bias to the anchoring effect, from loss aversion to the bandwagon effect, a vast catalogue of cognitive distortions has been assembled. In this view, human decision-making appears fragile and persistently irrational, a far cry from the idealised rational agent assumed in classical economics.

Yet this diagnosis, while illuminating, leaves open an important complementary question: how do experience and practical expertise sometimes help people avoid or correct such errors? Far from being uniformly helpless in the face of bias, experienced decision-makers may under some conditions be less susceptible to particular cognitive biases than less experienced individuals. For example, Paulus et al. [25] found crisis experts to be the least susceptible of the groups studied across several bias tasks, although the experts remained significantly affected by anchoring, framing, and bias blind spot. Such findings suggest that experience and practical expertise can provide some resistance to bias without eliminating it. This practical success is less visible in research designs that isolate particular biases under tightly controlled conditions. Such experiments are invaluable for identifying cognitive mechanisms, but their findings should not by themselves be taken as a complete account of decision-making competence in richer real-world environments.

The problem is not that descriptive theory identifies non-existent phenomena. Biases are real, and their mechanisms are well documented. Descriptive research has also increasingly examined decision-making in naturalistic, organisational, and institutional settings, recognising the importance of experience, environment, and task structure. The present argument is therefore not that descriptive decision theory ignores successful reasoning, but that its influential bias-oriented tradition leaves room for a more explicit account of the competencies through which people sometimes avoid or correct such errors. The concern lies in extrapolating from observed biases to a general incapacity for good judgement. Many studies in behavioural economics and psychology highlight the errors made by experimental subjects under controlled conditions, but they rarely capture the broader ecological validity of real-world reasoning, where individuals often have time to reflect, where experience shapes intuitions, and where social and environmental feedback corrects mistaken inferences over time. The laboratory isolation of cognitive phenomena, while necessary for experimental control, abstracts away many of the natural safeguards and adaptive mechanisms that practical reasoning employs.

The framework proposed here suggests that well-developed CST may function as a form of informal debiasing competence. This should be understood as a testable hypothesis rather than an established empirical property of CST. The relevant claim is not that experienced or common-sense thinkers are bias-free, but that some may be better able to recognise conditions in which an initial judgement deserves reconsideration, consultation, or more structured analysis. They sense, at a practical level, when popular opinion is a poor guide to truth; they intuitively sense that the immediate availability of examples does not necessarily reflect base rates; they question first impulses when stakes are high or context is unfamiliar. Their reasoning is not bias-free in a strict sense, but it is bias-resistant in a functional sense: it produces sensible, adaptive outcomes despite underlying cognitive limitations.

This observation points to a remaining question for descriptive accounts of decision-making: which skills and habits help people recognise and sometimes correct cognitive errors in naturalistic environments? Bias research has mapped many important failure modes; a complementary skills-focused perspective can examine when experience, reflection, and practical judgement help reduce their effects. CST is proposed here as one candidate framework for studying those capacities.

Moreover, many classic bias experiments deliberately use simplified and decontextualised tasks in order to isolate particular mechanisms. This experimental control is a strength for identifying biases, but it can leave out features of everyday decision environments such as repeated feedback, consultation, accumulated experience, and opportunities for reconsideration. Naturalistic research therefore provides an important complement when asking how judgement succeeds or fails outside the laboratory.

In the CST framework, relevant real-world cues may prompt reconsideration, broader consultation, or more careful analysis. For example, a decision-maker may question whether an anchor is arbitrary, whether an emotionally salient event is distorting risk assessment, or whether conformity pressures are displacing substantive evaluation. This proposed capacity does not imply immunity from bias. Recent research found no general effect of metacognitive bias awareness on decision accuracy, but substantial variation in its effects across different cognitive biases [26]. In the present framework, the relevant metacognitive component of CST is therefore more modest: recognising that one's current mode of reasoning may be inadequate and that additional scrutiny or a different decision process may be required.

This critique does not deny the value of biases and heuristics research. Rather, it motivates a complementary

skills-focused question: how do people recognise when an initial judgement should not be trusted? In the present framework, the relevant CST capability is the meta-decision to move beyond intuition when a problem calls for explicit structuring, weighting, or trade-off analysis. The empirical question is whether individuals differ reliably in this discernment and whether such differences predict more appropriate use of structured methods.

In this respect, CST is proposed not only as a first-order decision-making skill but also as a meta-decision capability governing the choice of decision-making mode itself. The proposal is that effective practical reasoning includes recognising when to remain with informal judgement and when to shift toward structured analysis. Seen this way, CST is not rendered obsolete by descriptive findings about heuristics and biases. Instead, the framework asks how people may learn to anticipate, detect, or compensate for some of these vulnerabilities, and how structured methods can support them when informal reasoning is insufficient. Whether such meta-decision capability can be cultivated and whether it improves decision quality are empirical questions for future research.

10. Structured decision analysis

People often conserve mental effort, which can encourage reliance on intuitive judgement and acceptance of superficially plausible answers without deeper analysis. Common sense might advise sticking with what always worked, whereas a structured analysis might reveal that a change in strategy is needed. The ideal is to use CST as a first guide while also being willing to step back and think more systematically when the situation requires it, especially for complex or high-stakes decisions.

While CST forms an indispensable tool for sharp reasoning, it is not an all-purpose tool. There are many domains and situations where the complexity, uncertainty, or stakes of a decision exceed the capacities of intuitive judgement, even when that judgement is finely tuned. In such cases, more structured, systematic forms of decision-making are necessary to extend and support human reasoning. Among these methods, structured decision analysis, including frameworks like pro and con lists and more formal methods such as decision analysis, represents efforts to move beyond the limits of common sense without discarding its essential insights. Recent applications of structured decision analysis in high-stakes real-world settings similarly emphasise explicit objectives, uncertainty, trade-offs, transparency, and stakeholder participation. Robinson et al. [27], for example, report lessons from several natural-resource management cases in which decision analysis was used across agencies and stakeholder groups under substantial ecological and social uncertainty.

At its best, CST allows individuals to make prudent, adaptive judgements across a wide variety of real-world contexts. Yet, CST typically operates by drawing analogies to familiar patterns, using heuristics or analogies and relying on tacit knowledge. These strengths become weaknesses in situations that are completely novel, highly complex, severely multi-dimensional, or where intuitive judgement is clouded by cognitive biases. In such environments, the human mind struggles to hold all relevant factors in working memory, to weigh competing values objectively, and to foresee longer-term consequences. What feels intuitively obvious may lead to serious errors if the situation deviates from the everyday cases for which CST was evolutionarily and culturally tuned.

The practice of structured decision-making arises precisely from recognising these limits. A simple but effective example is the creation of pro and con lists. When faced with a difficult decision, the individual externalises the competing considerations, listing potential benefits and drawbacks explicitly. This basic structuring of a problem already extends the mind's reach. It counteracts the tendency to focus only on emotionally salient factors, and it makes it easier to compare alternatives with greater detachment. Even this primitive form of structuring represents an important cognitive step. It shifts the decision situation from an unstructured, intuition-driven process to a structured analysis.

In more sophisticated settings, structured decision-making evolves into methodologies like probabilistic decision analysis (PDA) or multi-criteria decision analysis (MCDA). There are essentially two factors that complicate CST in more complex situations. The first one is the *P-factor:* Some event is not bound to happen. There is a probability for it to happen that must be considered. The other one is the *M-factor:* The alternative actions available have more than one important aspect or perspective to view them from, i.e. they should be considered under multiple criteria. PDA and MCDA provide methods to handle decisions involving either uncertain events or multiple, often conflicting objectives, where trade-offs must be evaluated and prioritised. In an MCDA process, the decision-maker explicitly defines criteria, assigns weights to reflect their relative importance, scores alternatives against these criteria, and applies systematic procedures to synthesise an overall ranking or choice. This approach allows for a transparent, replicable analysis that goes far beyond what unaided intuition can typically achieve, particularly in complex policy, engineering, and business contexts.

What links these methods back to the core discussion of CST is the proposed meta-decision capability. In the present framework, CST includes recognising when a problem may exceed the bounds of unaided intuition and therefore warrants explicit structuring or systematic analysis. Whether individuals differ reliably in this capability, and whether it predicts appropriate use of decision methods, are empirical questions formulated in P2 and P3 below.

This proposed relationship has an important prescriptive implication. Structured decision methods are useful only

if the decision-maker recognises when additional structure is needed. CST and structured decision-making are therefore treated here as potentially mutually reinforcing: CST may contribute to recognising the need for structure, while structured methods extend and discipline practical reasoning.

In this view, pro and con lists and MCDA are simply stops along a spectrum of cognitive scaffolding. The pro and con list externalises considerations but leaves weighting and synthesis informal, relying on the decision-maker's ultimate intuition. MCDA formalises the weighting and aggregation steps, explicitly recognising that human intuitions about trade-offs are often inconsistent and subject to various bias effects. Yet both these methods are rooted in the recognition of a common-sense truth: that complex decisions often defeat unaided intuition, and that systematic reasoning is necessary to extend our minds' reach.

Moving appropriately between informal and structured reasoning resembles the flexibility associated with adaptive expertise. In real-world decision environments, skilled decision-makers constantly move back and forth across this boundary. They use intuition to generate hypotheses and structure problems, then apply structured methods to test and refine their judgements, and then return to intuitive thinking to interpret results in the light of the context. Decision methods like MCDA serve as cognitive amplifiers. They are external supports that enhance the natural faculties of reasoning when those faculties alone are insufficient.

10.1 Limitations and research directions

The account developed here is conceptual. It proposes distinctions and relationships that are intended to organise thinking about CST, but it does not provide a validated measurement instrument or empirical test of the System A/System B distinction. Nor does the present discussion establish that CST is a unitary cognitive ability or that it is independent of neighbouring constructs such as practical intelligence, executive function, rational thinking, or metacognition. These relationships remain empirical questions.

Several parts of the framework nevertheless yield testable propositions:

P1. The greater the need to construct, adapt, or reconsider the representation of a situation rather than retrieve and apply an already adequate representation, the more strongly the reasoning process will exhibit the characteristics here associated with System B.

P2. Individuals will differ in their ability to recognise when unaided intuitive or experience-based judgement has become inadequate, and this ability should be observable independently of performance on the initial judgement itself.

P3. In complex or unfamiliar decision problems, stronger meta-decision capability will be associated with more appropriate shifts from unaided judgement to explicit structuring and decision analysis.

These propositions are intended as starting points rather than as established empirical claims. Their investigation would require suitable operational measures of System A/System B reasoning and meta-decision capability and would allow the conceptual distinctions proposed here to be tested, refined, or rejected.

11. Conclusion

The framework developed in this article treats CST as the situation-responsive application of common-sense knowledge across a wide range of domains. Its central decision-theoretic claim is that CST concerns not only practical judgement within a situation, but also the meta-decision of recognising when such judgement is no longer sufficient and more structured analysis is required. It draws on a broad base of everyday knowledge and flexible thinking strategies that can be applied to almost any real-world decision situation. The discussion has related CST to established constructs such as practical intelligence (tacit knowledge gained from experience), rational reasoning ability, cognitive flexibility and executive control. Together, these constructs illuminate different components of how people make reasonable decisions in complex real-world settings. Indeed, what is obvious to us (do not leave a baby unattended, double-check that the stove is off, and treat others as you would want to be treated) is often only obvious because our minds are equipped with CST and knowledge and intuitions that we largely take for granted.

It is also clear that CST is valued in nearly every arena of life. Employers seek employees with good judgement and initiative and educators aspire to teach it alongside academic subjects. The discussion also suggests that CST should not simply be equated with conventional measures of intelligence. Experience, reflection, and learning from mistakes are plausible contributors to its development, although the extent to which CST can be reliably measured or deliberately cultivated remains an empirical question. As the old saying, often attributed to Voltaire, goes, "Common sense is not so common." The point here is not that some identifiable class of people possesses an infallible practical faculty, but that differences in practical judgement and in recognising the limits of one's own judgement deserve more systematic study.

Research into the abilities related to CST continues to evolve, while the specific framework proposed here remains to be empirically tested. At a more reflective level, CST can be viewed as the art of being sensible, that remarkable human knack for drawing the right conclusion from incomplete information, guided by experience and intuition more than by formal rules. It is at once humble (often appearing as good old common sense) and profound (underlying our greatest practical innovations and daily

survival). By studying it empirically and appreciating its role alongside other types of intelligence, we gain insight into what it really means to be smart in a holistic sense: not just scoring well on tests or possessing knowledge, but being able to apply reason and knowledge wisely in the real world.

A failure to recognise the limits of intuition is a recurrent theme in the literature on cognitive biases and decision errors. In *Thinking, Fast and Slow*, Kahneman [3] reviews numerous ways in which intuitive judgement can be affected by systematic biases, including anchoring and availability effects. Such findings illustrate why an initially plausible judgement may sometimes require further scrutiny. Structured decision-making methods are, in part, defences against these failures. They force explicit enumeration of alternatives, criteria, and trade-offs, counteracting the narrow focus and emotional distortions of intuitive judgement. At the same time, it is important to recognise that structured methods cannot eliminate the need for judgement altogether. Every structured decision method depends on judgements about how to frame the problem, what to include, and how to interpret results. These meta-decisions still require a form of practical reasoning that, at its best, is grounded in refined common sense. Structured methods can improve reasoning in decision making but cannot replace it. Their effectiveness depends on the wisdom with which they are applied.

Thus, CST and structured decision analysis should not be viewed as competitors. The conceptual proposal advanced here is that CST can help identify when unaided judgement remains adequate and when the decision problem calls for explicit structuring, while structured methods can in turn extend and discipline practical reasoning when complexity, uncertainty, or conflicting objectives exceed what unaided judgement can reliably handle. Structured analysis does not remove the need for judgement: problem framing, model construction, and interpretation of results remain human tasks. The broader prescriptive challenge is therefore not to choose between common sense and formal analysis, but to use each where it contributes most effectively to real-life decision making.

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