Decision-Making Under Uncertainty in Entrepreneurship: Intuition, Symbolic Cognition, and Reflective Tools

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Abstract—**Entrepreneurial decision-making differs from traditional management decisions. There is an inherent lack of historic data for the new venture, as it typically involves innovation and out-of-routine products or services. Market conditions are unknown, open-ended parameters, unsupported outcomes makes it nearly impossible to rationally predict outcomes. This literature review focuses on finding tools and frameworks that can support decision-making in uncertainty for entrepreneurs. The review will look into the micro-process of decision making. It shall span studies from entrepreneurship, decision science, psychology, and organizational behaviour. The findings of the review shall highlight - the process of good entrepreneurial decisions is more about reflection and gaining clarity, coherence, adaptability and learning over calculated outcomes.**

This study also highlights disciplined intuition as the primary resource for decision-making as the entrepreneur's experience and ability to recognize patterns is more useful in negotiating bias and emotional attachment. It is important to reiterate that structured reflection, an examination of symbolic approach to sense making using archetypes, metaphors or storytelling is necessary stages of this decision-making process. This framework is characteristically useful for an ethically framed prompt system rather than predictive conclusions. The chapter concludes by highlighting research gaps and explaining why qualitative research is well suited to studying these reflective decision-support practices in startup settings.

I. Introduction

1.1 Introduction

Good decision-making is a highly desirable entrepreneurial capability. For founders and early-stage entrepreneurs, it is a difficult capability to acquire, as the decision-making parameters differ from the rationalized conditions of traditional businesses. Their higher emotional involvement, pressures of investment stakes influence their decisions, unlike traditional decision-making models that use rational parameters, zero assumptions and calculable probabilities. As a result, it is difficult to identify the actual decision-making process that entrepreneurs follow (Baldacchino et al., 2015; Dane & Pratt, 2021).

This lack of a conformist decision-making model in entrepreneurship is further reiterated by researchers in the field of management and organizational studies. They concur that entrepreneurial decision-making is a complex cognitive process that involves experience, intuition, logic, emotion and context-based interpretation (Blume & Covin, 2015; Rezaei & Gholami, 2021). Their studies show that entrepreneurs learn from action and act based on the situation, unlike traditional models that rely on prediction, marking a recognizable shift in interpretation. Prescriptive models that consider the decision-making process in the framework of -descriptive and interpretive inquiries - are no longer applicable. The contemporary approach focuses on the decision-making process: when parameters are uncertain.

Contemporary research has since established intuition as an 'uncertain' decision-making factor and an important entrepreneurial cognition factor, superseding earlier interpretations of intuition as irrational or unscientific influence. Intuition is now recognized as a complement to analytical reasoning during time constraints since it quickly uses experience-based pattern recognition (Dane & Pratt, 2021). At the same time, this cognition factor could be erroneous as it could be biased, carry emotional distortion or superiority. To counter this bias, scholars propose that intuition should be disciplined and structuring- impulsive action should be replaced with reflective decision processes.

Another spectrum of cognitive tools like symbolism and metaphors are now increasingly being used in the field of organizational behavior- leadership development, coaching and design thinking. These tools are known to externalize tacit knowledge derived from narratives, or imagination and common structures to trigger reflective insight (Tsoukas, 2005; Suing, 2023). A popular framework in the use of symbolic and metaphor-based, externalized tacit knowledge is Tarot-based decision frameworks. It is regarded as a symbolic cognition that does not follow the predictive or divinatory process but reflective prompt system. It helps in narrative sensemaking, which is very important for perceiving contexts through symbolism(McElroy, 2004; O'Brien, 2019).

The nascent startup ecosystem opens new scope for interpreting such frameworks, since the environment lacks predictive content or quick feedback cycles to improve decision making. Only experimentation and tactile-pattern recognition offer optimization options in entrepreneurial cognition (Sarasvathy, 2001). The strength of these frameworks is to leverage uncertainty and not to eliminate it, offering exciting new pathways for decision-making.

In conclusion, the literature will include studies on entrepreneurship, decision-making theories, psychology, organizational behavioral theories, and symbolic cognition concepts for further studies. This chapter focuses on:
(a) decision-making theories on uncertainty in entrepreneurship;
(b) using intuition as a cognitive resource and its limitations;
(c) framework on symbolic cognition, metaphor, and archetypes in building sensemaking mechanisms; and
(d) Use of tarot in decision-making in a reflective and non-predictive support framework along with ethical gaps or empirical in the use of this methodology.

1.2 Decision-Making Under Uncertainty

Economists and management theorists have commonly studied decision-making as a rational process. The parameters used in these models are certain, factual and predictable, allowing linear calculation of available potential to optimize utility. On the other hand, the rational approach cannot be applied for scenarios that are uncertain, especially innovation-based industries and entrepreneurial activities. Tsang (2004) and other behavioral decision-making theorists, point out that such rational models cannot accurately represent decision-making in complex and ambiguous environments.

In the irrational approach, there is bounded rationality, and decision-makers have limited cognitive capacity and time constraint. As a result, there is heavy reliance on heuristics or mental shortcuts that simplify complexities, but runs the risk of introducing bias (Dane & Pratt, 2021). As bounded rationality is the norm and not an exception, founders do not have readily available historic data to arrive at decisions (Blume & Covin, 2015).

Scientific studies have since established that in an uncertainty, entrepreneurs depend on iterative learning within the environment, experiment and also consider satisficing behavior to arrive at decisions (Ward, 2010; Goodwin, 2022). The wireframe for decision making in uncertainty is - speed, adaptability, and coherence, not predictive analysis. As a result, more studies are needed to understand the intuitive and interpretive processes of entrepreneurial decision making as a part of academic analysis.

1.3 Intuition in Entrepreneurial Cognition

According to (Baldacchino et al., 2015), intuition is defined as a quick-paced, pattern recognition process that is seemingly non-conscious and relies on prior experience and contextual awareness. As a result, it cannot be considered as irrationality. Instead, intuition is key to decision makers to integrate complex cues rapidly, especially when it is not possible to deploy analytical or calculated evaluations.

Intuition is the primary driver for entrepreneurs to recognize opportunity and give a structure or form a venture to execute the innovative idea using strategic pivots (Blume & Covin, 2015). The more experienced entrepreneurs have higher-levels of intuition as their internal pattern recognition process is repeatedly exposed to feedback as well as uncertainty (Ward, 2010).

Nevertheless, intuition cannot be the sole factor in decision-making, as it is not reliable. It is strongly influenced by emotional attachment, identity investment or confirmation bias (Tsang, 2004). Researchers have therefore concluded that intuition needs to be structured or formalized by externalizing intuitive impressions. This creates a scope for detailed examination of factors that drive intuition and can also be questioned further, and refined (Dane & Pratt, 2021).

1.4 Effectuation and Entrepreneurial Sensemaking

One of the most reliable empirical methods to understand entrepreneurial decision-making in uncertainty is Effectuation theory. According to Sarasvathy (2001), effectuation theory provides a foundational framework that uses factors such as - considering the quantum of affordable loss, commitment of stakeholders and the potential opportunities that these actions shall bring. It eliminates the need for predefined goals and predictive analysis that are otherwise needed for the process of decision-making.

The assumption-basis in effectuation theory is that adaptive action will eliminate uncertainty and not analysis. Similar studies establish that it is intuition that gives entrepreneurs effective reasons, given that there is no historical data on outcomes (Sardana, 2007).

Another empirical study, done by Tsoukas (2005), explains that it is very easy for entrepreneurs to interpret ambiguous scenarios by narrative construction and retrospective interpretation. Every founder’s personality will define the narrative about the venture, describing the context for risks, perceptions of legitimacy and opportunity (Fiss & O’Connor, 2017). Aligned with this theory is Tarot’s narrative logic, which focuses on interpretation rather than prediction.

1.5 Symbolic Cognition and Archetypal Frameworks

The process of using images, narratives and metaphors to structure thought is called Symbolic cognition. Empirical studies show that it is easier to understand intangible concepts like risks, identity or strategy as a metaphor, rather than an analytical process (Tsoukas, 2005).

For entrepreneurial thinking that focuses on innovation and restructuring of existing ideas, symbolic tools trigger associative thinking and creative recombination (Suing, 2023). This feature can be attributed to Tarot-reading as well, since it is a narrative creation based on archetypal imagery and follows a structured sequence. As a result, the structure guides entrepreneurs towards reflective interpretation and forsake unbounded free association (McElroy, 2004).

The concept of archetypal symbolism is well explained by psychologist Jungian's theoretical framework. Similarly, studies by (Reese, 2010) reveal that human perception and behavior is shaped by universal symbolic patterns embedded in the collective unconscious or archetypes. Latest management studies too reflect on the use of archetypal frameworks in leadership development and values alignment.These theories suggest the reflective engagement process as a strong reiteration in leadership development over metaphysical belief (Barnum, 2021; O'Brien, 2019).

1.6 Tarot as a Reflective Decision-Support Framework

Empirical studies suggest the use of tarot-reading in economic ecosystems is in reality, a metaphorical mirroring process and not divine powers. The paraphernalia of tarot-reading, namely cards and spreads, become symbolic prompts for entrepreneurs to externalize internal dialogue. It enables entrepreneurs to focus on concerns, priorities, and assumptions (McElroy, 2004).

When symbolic cues are integrated into relational positions, they result in narrative explanation. It also becomes the process to process ideas and concepts of gut-feelings into a structured hypothesis that can be tested and examined (Dane & Pratt, 2021; Elbanna, 2022).

Such reflection will offer better clarity, regulate emotions and confident decision making (Taneja & Mahey, 2022).

1.7 Creativity, Learning, and Adaptation

Creative-thinking and ideating are core features of entrepreneurship. The critical aspect of creativity is being able to recognize opportunity in the existing solution matrices and innovate further. The use of symbolic tools will help in cognitive search and encourage thinking out-of-the-box or divergent thinking. It also helps in reframing dominant assumptions (La Pira, 2008).

The process of reflection gives entrepreneurs an opportunity to reinterpret their experiences, reconsider their emotion, and rework strategy based on available feedback (Rezaei & Gholami, 2021). The use of tarot as a tool for reflection will encourage learning engagement for adaptive cognition over static planning.

1.8 Risk, Emotion, and Bias

Entrepreneurial decision-making is, often, driven by passion, emotions, personal as well as financial pressures. The emotional makeup of the founder, namely fear and hope will influence risk perception and judgment (Dane & Pratt, 2021).

The use of symbolic tools will directly lead to emotional cognition. It eliminates the risk of bias as emotional responses are based on tarot imagery that act as informational cues. But, it is important that reflexive framing is imposed, since symbolic tools may unfortunately lead to confirmation bias or magical thinking (Tsang, 2004; Ganzin et al., 2020).

1.9 Cultural and Ethical Considerations

Tarot imagery carries culturally embedded meanings that vary across contexts. Responsible use requires sensitivity, informed consent, and explicit framing as a symbolic—not predictive—tool.

Ethical legitimacy depends on maintaining decision-maker agency. Tarot must function as a conversation partner rather than an authority figure. Interpretation remains the responsibility of the entrepreneur, not the symbol.

1.10 Tarot as a Boundary Object

Alternatively, tarot is ideal for communications between teams within the entrepreneurial ecosystem. It is easier for team members to use symbolic reference points to discuss their concerns such as misalignment or risk. It becomes an effective dialogue-tool without involving the individual becoming defensive.

When used for dialogue, tarot can be used the same way as visual canvases and metaphor-based tools, much as organizational management. It is a powerful tool that provides archetypal depth as well narrative freedom.

1.11 Use of Tarot in Entrepreneurship Education

Using tarot in entrepreneurship education provides scope for reflective judgment, backed by analytical processes (Krogh & Bach, 2021). It provides a pathway to use symbolic tools in experiential learning when there is ambiguity or uncertainty.

It could prove to be a specialized educational tool as well-framed exercises can help students develop intuitive and interpretive competence, in addition to analytical practices. Tarot can also be used as a method to overcome belief-based thinking.

1.12 Research Gaps

The areas of non-analytical cognition, intuition, and sensemaking have been receiving due academic examination in recent years. However, there is a research gap that needs to be addressed.

The very first research gap is the focus on intuition as an individual cognition, failing to examine the process of intuition externalization, articulation while making real-time decisions (Baldacchino et al., 2015; Dane & Pratt, 2021). There is a need for more exhaustive studies to explain the micro-processes involved in the transformation of abstract/vague intuitive impressions into action.

The second research gap is, the lack of empirical research on symbolic and metaphor-based tools for the purpose of disciplined or structured intuition. Thus far, studies have established the use of effectuation and sensemaking theories for the interpretive nature of entrepreneurial decision-making. They reiterate the use of cognitive strategies or heuristics, but do not provide sufficient theories to explain the use of symbolic artefacts in entrepreneurial cognition.

The third research gap is assuming emotion to be a bias or a background noise and not considering emotion as an input for reflective judgment. Although, there is a sufficient body of work to establish the symbolic reflection interaction with emotional regulation, bias awareness, and decision confidence under uncertainty (Rezaei & Gholami, 2021).

The fourth research gap is the lack of deeper insight into collective sensemaking leveraging symbolic tools. The studies thus far have only considered boundary objects and visual artefacts operating in the organizational contexts. They do not establish the interaction of symbolic systems in improving discussions, dialogue or alignment.

In conclusion, there is a broad empirical research in considering tarot-based decision making by deploying archetypal decision-support frameworks. Thus far, tarots are typically explained in academic works as a tool for spiritual engagement, therapy and creative entertainment. Its use in the organizational context for reflection, and decision-making within the non-predictive decision-support is needed for cognitive entrepreneurial option optimization analytics.

Thus, we see a need for qualitative interpretive research in using symbolic artefacts for entrepreneurs to arrive at conclusive business decisions. The purpose of this paper is to establish the process of using intuition in a disciplined manner to build narrative articulation and reflective engagement to generate strategies under uncertain conditions.

1.13 Conceptual Integration and Methodological Justification

In this chapter we formalize the idea of tarot as a mediating artefact between intuitive cognition and reflective articulation. The end goal is to establish the fact that the quality of the decision can be described by its coherence, adaptability and clarity and not just mathematical predictiveness.

The approach to bridge the research gap is implementing qualitative methodologies to interpret the nature of symbolic cognition and the patterns entrepreneurs follow to construct meaning as actions. In the following section, the qualitative study design is discussed.

1.14 Intuition, Expertise, and Entrepreneurial Experience

Researchers when examining intuition have primarily focused on the role of experience in helping entrepreneurs gain intuitive judgment. This could be misleading as the nature of intuition is not limited or structured/uniform cognition feature. The intuition could be due to various other factors such as the environment or landscape to which the decision-maker belongs or be under the influence of feedback loops (Baldacchino et al., 2015). At the macrolevel, researchers have also established that intuition-levels differ in entrepreneurs. In more experienced individuals, the quality of intuition is far higher, especially in industries that have higher uncertainty and complexity.

Researchers have found that early-stage founders are mostly likely to depend on their intuition over analytical reasoning, experiential depth, and hold cognitive bias, emotional projection, and overconfidence (Tsang, 2004). On the other hand, entrepreneurs with experience are likely to have intuition that is calibrated due to internalization of market signals, investor response, stakeholder pressures and contextual signals (Ward, 2010; La Pira, 2008). The seasoned entrepreneur is seen to seamlessly switch from intuitiveness to analytics and reasoning as and when the situation changes.

The distinctive transitions between intuitive and rational-thinking opens a window to opportunity for tarot-driven decision-making. Quite often, first-time founders are likely to be influenced by symbolic tools towards unfounded intuition, as they do not depend on reflective discipline. In such scenarios, using tarot as a mechanism to elicit, and not as a decision-providing process becomes relevant. Tarot-based cognition will help entrepreneurs to slow-down their thinking process, support assumption articulation, as well as looking at explicit intuitive impressions. Although tarot cannot be a substitute for expertise, it can be a very effective tool to mediate between reflective sensemaking and experience of the individual.

1.15 Dual-Process Cognition and Affective Judgment

The use of intuition by entrepreneurs in decision-making can be effectively explained using dual-process theories of cognition. In these frameworks, two systems are considered. The first is the faster, affect-laden processing or system1 and the second a slower, analytical reasoning process or system 1. The dual-process, according to researchers, is an effective approach to decision-making as it will consider the results of both and integrate the results, instead of choosing either system(Dane & Pratt, 2021).

The preliminary process to entrepreneurial decision-making begins with an appraisal. This step is mostly intuitive, as there it is a cognitive exploration of the likely risks, opportunity and even misalignment, ending in intuitive analysis and validation of the desired goals. While there is not much cognitive superiority in this process, the signals that entrepreneurs look for are - excitement, anxiety, or resistance(Rezaei & Gholami, 2021). But the crucial factor here is to ensure that the entire intuitive-process follows reflective-discipline.

The dual-cognition theory is easily applicable to tarot-based reflection, since there is a distinctive and parallel use of both cognitive systems at the same time. The first system, in tarot-based decision-making process is visual imagery activating associative and affective cognition. The second system uses interpretive dialogue that leverages conscious reasoning and narrative devolution. The dual-processing system aptly describes the metacognitive awareness that entrepreneurs have in understanding nuanced, and sub-layered emotions like fear of loss that will influence the decision-making process.

1.16 Risk, Uncertainty, and the Emotional Labour of Entrepreneurship

There are other recognizable facets of entrepreneurial decision-making, namely cognitive judgment and emotional labour. The inference-processes in the entrepreneurial setup are unlike standard organizational decision-making processes as it is based on unlikely, unconventional factors which are abstract or intangible, like personal financial exposure, reputational risk, and identity investment. There is a substantial influence of emotions such as fear, hope, guilt, and attachment during the entrepreneurial decision-making journey (Rezaei & Gholami, 2021).

Earlier, management and organizational studies worked on the assumption that emotion when used as a parameter to analyze decision-making process could emerge as a source of bias. Therefore, emotion was not included in most studies, in order to minimize bias. Lately, this approach has changed, and researchers are beginning to use emotional responses to pick informational cues. They now include factors such as hidden tensions, misalignment, or ethical discomfort to examine emotion as a decision-making driver in entrepreneurial setup(Dane & Pratt, 2021). This transition to a newer approach also challenges the quality of interpretation of emotion as a decision-making parameter.

At the macrolevel, it is seen that tarot becomes a symbolic tool to tap the emotional dimension in decision-making. The response to tarot images is most likely to be an affective-form of response that may reveal concerns or motivations not immediately visible with analytical reasoning. By adopting a framework to analyze the emotional responses for many factors such as human awareness of risk tolerance, ability to commit to immediate action and better decision-making.

1.17 Critiques: Superstition, Magical Thinking, and Bias

A critical study of academic work on tarot-driven decision-making reveals a bias - many theorists are skeptical of the outcome. They argue that business decisions should be free of superstition, illusory pattern recognition, and magic (Tsang, 2004). When viewed in this perspective, symbolic tools may enforce cognitive biases such as assuming a meaning, even when there is no such occurrence.

Additionally, spiritual entrepreneurship researchers, Ganzin et al. (2019; 2020) propound that performative-occurrence forms the cornerstone of such belief systems. They drive entrepreneurial action by formalizing interpretation and expectation. As a result, it could lead to overconfidence and even confirmation bias, when not examined.

A comprehensive critique of tarot-based decision-making reinforces the need for epistemic framing. This archetype asset should be positioned as symbolic sensemaking practice and not for purposes of prediction. The legitimate attribute of tarot-based decision-support increasing reflection, hypothesis generation and dialogue generation. It should not exist as a means of metaphysical frame, as it would lead to poor quality decision-making.

1.18 Cultural Context and Interpretive Variability

The use of tarot in the business environment raises the need to understand the interpretative-depth of tarot imagery. These images are often understood in a variety of historical and cultural perceptions, along with social contexts. Where they are positive in certain social settings, may be apocalyptic in others. As a result, researchers need to consider the spectrum of interpretation in symbolic assets for research as well as practice.

Studies show that entrepreneurial cognition is part of a larger framework of culture-based inferences, societal rules, values as well as institutional environments, and exposure to symbolic systems. This implies, interpretative variation should not be a limitation but a feature of symbolic cognition.

In order to achieve the desired theoretical framework in tarot-based decision-support, qualitative methodologies need to be adopted. An area of study needs to focus on the possible diversity in how entrepreneurs from diverse contexts engage with tarot imagery. The scope of interpretive influences on decision framing can also be studied,to define meaning and a co-construct.

1.19 Tarot as a Boundary Object in Decision Conversations

Apart from individual reflection, another aspect in which tarot can be functional is as a boundary object. In this form, it will encourage communication within entrepreneurial teams. It serves as a shared reference point for multiple perspectives and encourages flexible solutions.

It can prove to be highly effective in interpretation of risks, as the entrepreneurial members often differ about the risks the venture shall combat and overcome factual disagreement. As it improves articulation of perspectives, tarot imagery supports collective sensemaking and personal reflection. By using tarot as a boundary object, it can be used like other organizational development tools for visual canvases and metaphor-based exercises.

1.20 Consolidating Perspectives on Intuition, Symbolism, and Entrepreneurial Decision-Making

In this section, we consider the reviewed literature on concepts of entrepreneurship, decision science, organizational theory, and symbolic cognition to arrive at the conclusion that decision-making in uncertainty is based on interpretation, is an emotionally charged process and experiential.

The review leads to three important findings. The first finding is the increased use of intuition as a legitimate cognitive resource even in uncertain entrepreneurial circumstances. But intuition as a decision-support tool makes best impact only when it is made visible and examined. The second finding is that sensemaking by the founders and decision-makers involves a spectrum of active interpretation - narrative hooks, metaphors, and retrospective framing. The third finding, is the use of tarot as a symbolic and artifact-based tool to encourage reflection.

Although there is considerable overlap in the concepts, it remains largely fragmented. Primarily researchers consider intuition as a cognitive process. On the other hand, sensemaking literature looks at it as a narrative construction while symbolic cognition studies focus on mainstream entrepreneurship research. In the process the literature is diverse and there is no cohesive body of work that explains how entrepreneurs arrive at decisions within the uncertain business environment. Considering this diversity it is important that tarot-based reflection is introduced to better understand the use of intuitive interpretation. As a symbolic and non-predictive artefact, it offers a structural framework to arrive at intuitive responses. It better integrates sensemaking with narrative dialogues and engaging emotional responses within a reflective framework. Besides it does not appear as an alternative epistemology but integrates theories for the sub categories of discipline in tuition interpreta effectuation.

In conclusion, this section successfully links the traditional foundational theories with research gaps and the latest contributions in the area of intuitive entrepreneurial decision-making along with empirical and theoretical justifications.

This section therefore serves as a conceptual bridge between foundational theories discussed earlier and the more focused articulation of research gaps and contributions that follows. By consolidating insights across multiple domains, it clarifies why examining symbolic decision-support mechanisms is both theoretically justified and empirically necessary within entrepreneurship research.

1.21 Decision Quality in Entrepreneurship: Beyond Outcome Success

One of the most significant challenges in interpreting entrepreneurship decision-making is the definition of a good decision. In the traditional sense of organisational decision-making, parameters and inputs are known, stable and verified. It is possible to predict and infer outcomes based on historic data. On the other hand, there are no historical data or prior outcomes to define the entrepreneurial decision to be good or bad. Thus, evaluating the quality of the decision based on the likely outcome and the risk factors is contrary to the entrepreneurial ecosystem. The decisions are most likely to be made on the basis of exposure of the decision-makers, luck, timing or external pressures (Sarasvathy, 2001; Rezaei & Gholami, 2021).

In contrast, the modern academic approach supports evaluation of entrepreneurial decision making as a process that fulfills many criterias. Reasoning during the process, the assumptions considered in the process of the decision-making, the context and the alignment between values and action. Additionally, these theories suggest that organizations should have the capability to learn and adapt to the market conditions. (Baldacchino et al., 2015; Dane & Pratt, 2021).

This approach is effective, since it does not consider prediction of outcome as the primary goal of the decision. Instead decision-making in the uncertain environment focuses on creation of workable futures by repetitive action, stakeholder engagement, and learning (Sarasvathy, 2001).

Based on the above discussions, a "good" entrepreneurial decision is based on:
(a) The definition of the problem, and its quality

(b) The quality of assumptions considered
(c) The manner in which risk as one of the factors of the venture and is not unconsciously avoided
(d) The use of effective small experiments to establish insights and not be led into irreversible commitments
(e) The inclusion of feedback loops and adaptive learning processes, after actions (Sardana, 2007; Williams, 2017)

It is therefore possible to determine the quality of entrepreneurial decisions with tarot-based reflection. With appropriate framing, it can be defined as a process tool that enhances clarity and coherence, leading to strategic adaptability.

1.22 Heuristics, Bias, and the Discipline of Intuition

Researchers argue that using intuition as a decision-making tool is vulnerable and could lead to a systemic error. The context of the ventures may trigger biases, due to the nature of emotions, time pressures and other risks. Often founders could become control-thirsty, demand conforming and place importance on sunk-cost thinking. Therefore, these patterns are theoretically aligned with heuristics and bounded rationality, emphasizing rapid judgment but likely to be erroneous (Dane & Pratt, 2021; Tsang, 2004).

This problem-area is rightfully addressed by ensuring discipline-based intuitive interpretation. There is a need for a scientific study of it, suggest researchers like Baldacchino et al. (2015) as it will ensure clearer conceptual explanation of intuition and boundary conditions. Dane and Pratt (2021) reiterate that intuition should not be a 'magic factor' but should evolve as a cognitive process that can be tested, in scenarios where stable cues are not available.

The way forward for entrepreneurial decision-making, according to current literature, is to build a hybrid model that leverages intuition, its articulation and a testing-process with experimentation. Such an approach will ensure effectuation and handson integration of data and intuition (Elbanna, 2022; Kiser, 2023). This model is effective for structured elicitation of responses, sensemaking and at the same time integrating with analytic reasoning.

In essence, the hybrid model offers wide scope for application, only when there is reflective discipline. Care should be taken that symbols are not wrongfully considered as authoritative or bias is amplified. The role of tarot as a decision-support tool is in facilitating reflective challenges and not pursuing confirmation. As a result, there is a growing need for explicit framing 0 tarot should operate as a hypothesis-generation tool, and not take on the function of prediction. All interpretations are place-holders or potential and provisional, not final.

1.23 Symbolic Tools as Cognitive Artefacts in Entrepreneurial Work

The use of artefacts in the form of objects, tools has been subjected to various academic studies. The findings point out the substantial use of artefacts to structure thinking or cognition. It is since established that not only do artefacts shape thinking by recording the thoughts, they also ensure recognition of the surrounding stimulus or visuals, all background discussions or dialogues and identifying actions (Tsoukas, 2005). It is habitual for decision-makers to leverage the business canvases, consider growth pathways, available prototypes, and contextual narratives for cognitive scaffolds to support sensemaking and coordination.

Contemporary studies can be integrated to assign tarot the position of a symbolic cognitive artefact. The norm is to engage in widespread analytic artefacts, namely spreadsheets, dashboards, to quantification. Similarly, tarot engages in interpretation. It enables entrepreneurial decision-makers to develop a symbolic form of representing complex, emotionally laden decision problems. It gives them the scope to explore multiple perspectives, similar to Tsoukas (2005) sensemaking approaches, where uncertainty is interpreted and not regarded as information.

The problem-factors of decision-making in entrepreneurial practice have non-quantifiable dimensions. Beginning with establishing founder identity, ethical discomfort, or team communicational dynamics, it extends to motivation, sustaining stakeholder trust and perceptions related to legitimacy. As these factors are subtle and do not directly appear in routing analytical practices, they strategically influence decisions. The solution that helps entrepreneurs to overcome such uncertainty is symbolic artefact. It drives narrative articulation and brings out all of the underlying dimensions into the decision-making process. Thus, tarot, as a framework, can be comparable to prompting, an archetype often used in coaching and qualitative research. The continuous stimuli that are generic in nature, evoke interpretive stories bringing to the forefront the nuanced assumptions and values (Wanless, 2015; Barnum, 2021).

In retrospect, tarot emerges to be a potent form of articulation for entrepreneurs to speak their doubts or the core truth, which they would otherwise find difficult to express. This aspect points to the broader entrepreneurship cognition literature, and aligns with concepts that entrepreneurial action is shaped by emotions, or tacit knowledge, and narrative coherence, and not merely analytic perspectives (Fiss & O'Connor, 2017; Rezaei & Gholami, 2021).

1.24 Tarot and Creative Ideation: Mechanisms of Divergent Thinking

An entrepreneurial venture is typically the result of creativity or out-of-the-box thinking. Exploring the constraints of the industry to derive options, look beyond existing constraints and to find ideas to leverage available resources is the ideal entrepreneurial opportunity. A significant factor of creative entrepreneurship and ideation is the stimuli or prompts which trigger divergence. The use of prompts is very important during early-stage ideation and pivot situations (Suing, 2023). This process can be further reinforced using visual and narrative tools and encouraging the interpretive possibilities. It proves to be an important advantage as it leads to explorative alternatives not typically identifiable in linear reasoning.

Given the advantages of visual archetypes such as tarot's will enable the development of narrative structure for thinking creatively and out-of-the-box. Typically tarot cards can be interpreted to hold deeper, multiple meanings and can be perfectly used to either develop constructive aspects of the project or cautionary dimensions. Such discussions allow the development of several triggers counterfactual reasoning, like risk factors, or if the card is indicating additional, deeper opportunities. It could also allow the decision-makers to mull, if the card is implying different timing in the venture, or if certain factors need to be further examined. Thus, the reasoning questions the current perceptions or thinking using the tarot cards to encourage a wide-range of alternative narratives.

A number of studies, like La Pira (2008) and Suing (2023), suggest that entrepreneurs evolve creative thought using non-linear methods. These methods are not considered to be irrational as they help in overcoming cognitive fixation and lead to development of new frames. In this backdrop it is possible to place tarot in the same tool-set as innovation workshops, incubator coaching, or founder reflection routines. Tarot is easy to use as a tool to work through the ideation process, along with analytic frameworks such as Lean Canvas. The calculated risks that are generated by the latter can be juxtaposed by tarot readings that encourage narrative hypotheses. Further analysis can transform these ideas into experiments, hypotheses and metrics for further development.

As Pegado (2024) argues, symbolic disruption can trigger creative realignment in uncertainty, entrepreneurial creativity can be optimized by leveraging tarot in unravelling uncertain environments for generating better information but improved framing. The direct impact of using tarot in the world of innovative-business building is inducting unexpected symbolic cues to disrupt and focus on dimensions that are not commonly used.

1.25 The Role of Timing and Temporal Sensemaking

A factor that often defines entrepreneurial success is not decision-making but strategic timing. Error in many departments, such as: poor timing is acquiring the right talent or skills-set, determining right price-bandwidth, market debut-timing, or choosing the right channel partners could make or break the entrepreneurial venture. Errors in timing could easily lead the venture into irreversible trajectories. The trigger at this point is how to get the timing right, as existing analytical models cannot accurately define market readiness in an uncertain environment, predict competitor behavior, or internal capacity.

To understand the process of ensuring right timing, research studies suggest the use of intuitive intelligence to arrive at decision competence (O'Brien, 2019). Literature in this area of study shows that decisions cannot be regarded as static choices. It can also be inferred from the studies that decision-competence depends on rhythm, pacing, readiness, and momentum. The use of symbolic cues help in overcoming the temporal nature of events and circumstances. These symbolic systems use various stages or cycles to guide the venture through stages like experimentation, or expansion and consolidation.

In the above context, it is easy to substantiate the use of tarot's narrative sequencing to develop temporal sensemaking. A case in illustration, is the use of a prompt to trigger reflection: can be leveraged for temporal sensemaking without invoking prediction. For example, a reading may prompt reflection on the choices between- action versus planning, pause or to wait, integrate or disrupt. The card-based prompts trigger dialogue around underdiscussed areas such as, emotional readiness of the team, bandwidth of the team, stakeholder engagement and even question the probability of premature scaling. As a result, tarot helps in designing the decision framing stage and the temporal framing, by determining the factors and also the timing and space at which the venture needs to be executed.

1.26 Spirituality, Meaning-Making, and Entrepreneurial Identity

Contemporary literature views entrepreneurship as an identity-creating venture, apart from being an economic source. For many founders, the venture reflects their individual value systems, life goals or commitment to societal needs. These factors are defined as mean-making systems. These drive entrepreneurial performance even during stress, defining the quality of resilience, persistence, and ethical choices. When researchers like Ganzin et al. (2019; 2020) examined spirituality and belief systems, they considered entrepreneurial sensemaking elements and found that they possessed dual nature: generative and bias-inducing.

This factor is true of tarot as it provides symbolic language that can express the purpose, explore alignment options, responsibility and more. It helps in answering entrepreneurial doubts in ventures - are my values intact with the venture? Can this be a sustainable venture? Are any factors being overlooked? These factors cannot be explored in the traditional business frameworks. The use of symbolic tools such as tarot ensures comprehensive articulation scope for entrepreneurs.

Although academic discussion demands an entrepreneurial decision-making framework is well defined, it cannot be used as a truth-claiming tool. While it is significantly useful in identity-related reflection, the use of tarot as a verification tool for metaphysical propositions is not recommended. If it is used as an authoritative tool, it is likely to lose its accountability and encourage magical thinking. Tarot is most effective in ethical facilitation to emphasize consent, agency and critical thinking.

1.27 Ethical Safeguards and Responsible Use in Research and Practice

Research literature on ethical considerations on the use of tarot in entrepreneurship is salient even though it is a symbolic tool that influences beliefs, emotions, and decision confidence. Researchers recommend three safeguards:

Decision-makers should make informed framing and consent should be the first step before designing the proposal. There should be comprehensive understanding that tarot is a useful symbolic reflection tool and cannot be used as a predictive mechanism. The second safeguard is to ensure the preservation of agency preservation. Tarot prompts should not dictate action, it should be the decision of the entrepreneur. The last safeguard is to ensure that adequate time is spent on critical reflection so as to mitigate bias. The process should include encouraging participants to explore multiple interpretations, especially disconfirming possibilities in order to ensure confirmation bias and over-reliance is eliminated.

Another aspect that needs to be addressed is that of cultural sensitivity. It should be compulsorily applied, since tarot imagery can typically be interpreted as different meanings. At the same time, studies should not impose symbolic interpretations, if they do not resonate with the decision-makers. If the above safeguards are implemented, the use of tarot decision-making framework will be methodological and ethical risk is reduced.

1.28 Methodological Alignment: Why Qualitative Inquiry Is Necessary

Thus far, researchers have established that imperative methodologies are ideal to frame tarot as a tool for decision-making. Although quantitative research designs can evaluate outcomes, they do not address concepts of constructing the meaning, shifts in the narrative, and emotional changes.

The use of qualitative inquiry addresses concerns of:

- approach entrepreneurs adopt to interpret symbolic prompts
- observe the change in interpretation for problem framing
- if entrepreneurs are able to note emotional tone shifts during reflection
- transition to action commitments using reflections
- follow through with feedback or learning loops to take action

The research design should begin with semi-structured interviews, to identify narrate decision episodes or artifact elicitation by deploying tarot deck for prompting to raise the tacit recognition spectrum. Thematic coding can also be added to identify pattern repetition and to reframe motives, risk articulation as well as getting the timing right (Baldacchino et al., 2015; Fiss & O’Connor, 2017).

1.29 Consolidated Conceptual Model for This Study

Integrating the literature studied thus far, the following four mechanisms can be conceptualized for the use of tarot decision-support framework:

1. **Gain tacit knowledge:** explore symbols to externalize underlying concerns, judgments, and values.
2. **Sensemaking with Narratives:** by interpreting symbolic archetypes, uncertainty can be explained with stories or narratives
3. **Emotional integration:** underlying concerns/responses that are otherwise not interpreted become informative cues
4. **Action orientation:** Feedback and learning loops-driven cycles are based on insights, transforming thoughts into action.

The premise of these four mechanisms is the use of tarot for decision-quality defined by clarity, coherence, adaptability, and learning. However, the emphasis of the findings is that the model will not drive better outcomes deterministically. It shall be used only as a support-decision process in order to ensure its compatibility with theories of effectuation, sensemaking, and disciplined intuition (Sarasvathy, 2001; Tsoukas, 2005; Dane & Pratt, 2021).

1.30 Synthesis of Research Gaps and Contribution of the Study

Thus far, the rigorous review of various research studies, establishes that uncertain market conditions can be explored using the free-thinking intuitive approach of entrepreneurs, symbolic cognition, and sensemaking under uncertainty. Previously, studies have established that entrepreneurial decision-making cannot be made on the basis of rational, analytical parameters. These studies did not answer the broad gap in entrepreneurial decision-making in the areas of intuitive judgment processes, how they surfaced, the parameters by which they are structured, or the use of symbolic artefacts to drive insights into action in real-time.

This study focused on this gap by considering a relatively less-explored framework of tarot for reflective decision-support framework, instead of the traditional predictive system used in organizational and business studies. This study began with the effectuation theory, explored sensemaking literature, and research to find answers for disciplined intuition. In the next stage the study introduced the use of tarot and found substantive evidence of its use as a mediating artefact. Using tarot-reading, entrepreneurs were likely to find extensive options to externalize tacit knowledge, express assumptions and risks, concerns or uncertainty and yet offer a constructive framework.

The research findings of this study brings forth deeper aspects of entrepreneurial cognition literature, in the following ways:

· The role of symbolic prompts during micro-processes in shaping decision framing;

· Established the use of symbolism in interpreting emotional responses, especially underlying and suppressed emotions in the decision-support process; ;

· Investigated the use of tarot for two key decision-making levels during entrepreneurial ventures, first as an individual reflection tool and secondly, in managing collective sensemaking;

· Recognized the significant role of boundaries, like experience of the decision-maker/founder and interpretive orientation when utilizing symbolic decision tools;

In addition, tarot framework improves decision quality by offering clarity, coherence, adaptability, and learning, instead of being a predictive tool. In effect, existing theories on entrepreneurial decision-making are further extended with a theoretical construction on the use of symbolic reflection in disciplining intuition without undermining agency or analytical rigor.

1.31 Entrepreneurial Failure, Reflection, and Learning Loops

Entrepreneurship can be very challenging and the fear of failure is a paradoxical expectation. However, current studies view failure as an outcome that encourages further learning and restructuring or adaptation to achieve projected results. Founders are often confused by the uncertain environment of their industry, information gaps and ambiguity to ensure their success. The true trait of an entrepreneur is to use failure to relearn and go through cycles of feedback, reflection, realignment and action (Sarasvathy, 2001; Rezaei & Gholami, 2021).

In the entrepreneurial-setup, decision-making frameworks need to include a phase for reflective learning. It offers a platform for entrepreneurs to deconstruct their success or failure in a neutral way to rework their assumptions, innovate and recalibrate to avoid mistakes (Williams, 2017). Additionally, founders gain further insights by reflection, driving beyond simplistic explanations to find nuanced understanding of timing, execution, and contextual fit.

In this learning-oriented perspective, tarot-based reflection optimizes micro-processes. Decision-makers can re-evaluate decisions symbolically, as tarot provides ample reflective space for post-decision sensemaking. The advantage of this framework is that it does not solely determine success by defining the outcome, but tracing the narratives, micro-process involved like the emotional responses which determine action. The learning loop approach which tarot offers aligns with effectual logic, but reworks the framework for failure and not as a single or final business decision.

1.32 Comparison with Traditional Strategic Decision Frameworks

In an attempt to further establish tarot's utility in entrepreneurial decision-making, it is necessary to compare it with existing, traditional frameworks. Typically, investigations using SWOT analysis, financial analytics, Porter's Five Forces and market trends, ensure external analysis along with objective assessment. However, these mechanisms have an inherent assumption that is contrary to the entrepreneurial environment, there is no data stability, there is uncertainty and lack of historical data to interpolate and predict the likely outcomes.

Besides, there is an intrinsic quality in traditional frameworks. Often, internal cognition and emotional influence on decision-making are neglected. This is true for underlying issues such as founder burnout, failure in value alignment, ethical issues and interpersonal tension. Even though these factors powerfully impact the final decisions, these factors are not included in the decision making process by traditional frameworks, relying fully only on analytic findings.

The ideal positioning of tarot is as a pre-tool or a complementary tool and not to replace analytical tools. It helps founders to clarify their decision-making process and to determine why they are doing so, before charting the action. Such a sequential approach, would ensure a rational decision-making approach while ensuring analytical effort. It ensures decisions are internally coherent and contextually grounded.

1.33 Power, Authority, and the Risk of Over-Reliance on Symbolic Systems

Another factor which decision-support tools have to ascertain is the distribution of authority. The innate authority in calculative tools is derived from data, models, and expert validation. Such authority in symbolic tools is derived from meaning and interpretation. Thus, caution should be exercised during the framing phase, as symbolic systems run the risk of displacing agency. The bigger risk in such a situation is that the tool would be assigned responsibility and not to themselves.

The likely displacement in entrepreneurship decision multiplies, in contexts where founders already experience high uncertainty and stress. Such scenarios could lead to over-dependence on symbolic interpretation. It could also result in decision-makers avoiding necessary actions because they are difficult. In the light of this risk, it is very important to emphasize the use of tarot as a facilitative artefact and not as a decision-making source.

A responsible use of tarot would typically be about not using symbols to predict. Their use should be limited to prompt-based inquiry, reflection, and dialogue. The final responsibility of interpretive symbols would remain with the entrepreneur, to draw insights based on contextual knowledge. The entrepreneur would also have to consider stakeholder input, and ethical issues. These practices highlight the strength of tarot in aiding agency decision-support.

1.34 Reflexivity and Researcher Positionality

As the primary advantage of using tarot is reflecting on symbolic archetypes, research activities need to be designed to achieve this purpose. Reflexivity will have to incorporate all of the factors, beginning with researcher's assumptions and experiences, to interpretive frameworks to build data collection and analytic processes. Such a process that does not rely only on objectivity but interpretivist research, ensures transparency and critical self-awareness.

Another notable factor of this study is the use of tarot, not as a belief system, but as a symbolic artefact to elicit reflection is exciting. Tarot-support framework therefore looks at the ways in which participants are engaged, the micro-process of framing prompts and analysis of interpretations. It also needs to be noted that participant reflexivity encourages entrepreneurs to reflect not only on symbols but discuss their reactions to these symbolic outputs. Even abstract factors like skepticism, resistance, or discomfort are also explored in tarot-led frameworks. The value-gained from analyzing responses and gaining meaningful insight into negotiating uncertainty, authority, and meaning in decision contexts, is the hallmark of tarot-support systems.

1.35 Transferability and Boundary Conditions

Although literature review establishes the potential advantages of using tarot-support decision-making, it also draws to the forefront certain boundaries that limit its implementation. There may be some industries, certain entrepreneurial contexts or cultural limitations where tarot may not be the ideal tool. The power-use of tarot should be for reflexive interpretation. It is most useful for working in ambiguous/open-ended situations because of its unique cognitive style in using symbolic or narrative thinking.

Another factor to give some thought is its utility during early-stage decision-making contexts. It facilitates framing, reflexive inputs for founders to arrive at pivot decisions than regulated or data-intensive decisions. By understanding these boundaries, a theoretical rigor is possible, and at the same time ending overgeneralization.

This study, therefore, establishes the unique and specific applicability of the framework and refrains from presenting it as a universally applicable tool. The primary goal of this study is to identify the parameters by which tarot-based reflection supports disciplined intuition and context sensitivity over universal prescriptions.

1.36 Synthesis: Positioning Tarot Within Entrepreneurial Decision Theory

The insight gained from the literature reviewed thus far, permits the positioning of this framework within the larger body of work on entrepreneurial decision making. Tarot-support entrepreneurial decision-making complements effectuation, as it permits action under uncertainty, independent of predictable factors. Secondly, it works with sensemaking theory, by facilitating narrative interpretation and meaning construction. Thirdly, it encourages disciplined intuition and externalization of tacit judgments for reflection.

Tarot is also an essential pre-tool to analytical decision-making that scopes additional factors like emotion or ethical commitment, identity issues, vital inputs that are overlooked in analytics. And its most significant contribution is improving the quality of decision-making process by ensuring there is clarity, coherence, and learning orientation.

1.37 Final Chapter Summary and Link to Methodology

In this chapter, literature review showcases decision theory, effectuation theory, entrepreneurial cognition theory, symbolic cognition, effectuation, creativity, learning, ethics and sensemaking. The findings of the literature review are: entrepreneurial decision-making in uncertain circumstances is ideally explored as an interpretive, emotionally embedded, and iterative process. Rational and predictive analysis would be inconclusive.

The proposal to reframe tarot as a symbolic and reflective decision-support framework is theoretically effective when it is empirically investigated. The paper also found research gaps in exploring the micro-process of using intuition in narrative articulation, and encouraging reflection to determine action for uncertainty.

In the following chapter, the research methodology is explored to establish the interpretivist approach, rationale for the research design, strategy for sample data, the data collection methods,as well as ethical safeguards, apart from analytical procedures for the study.

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