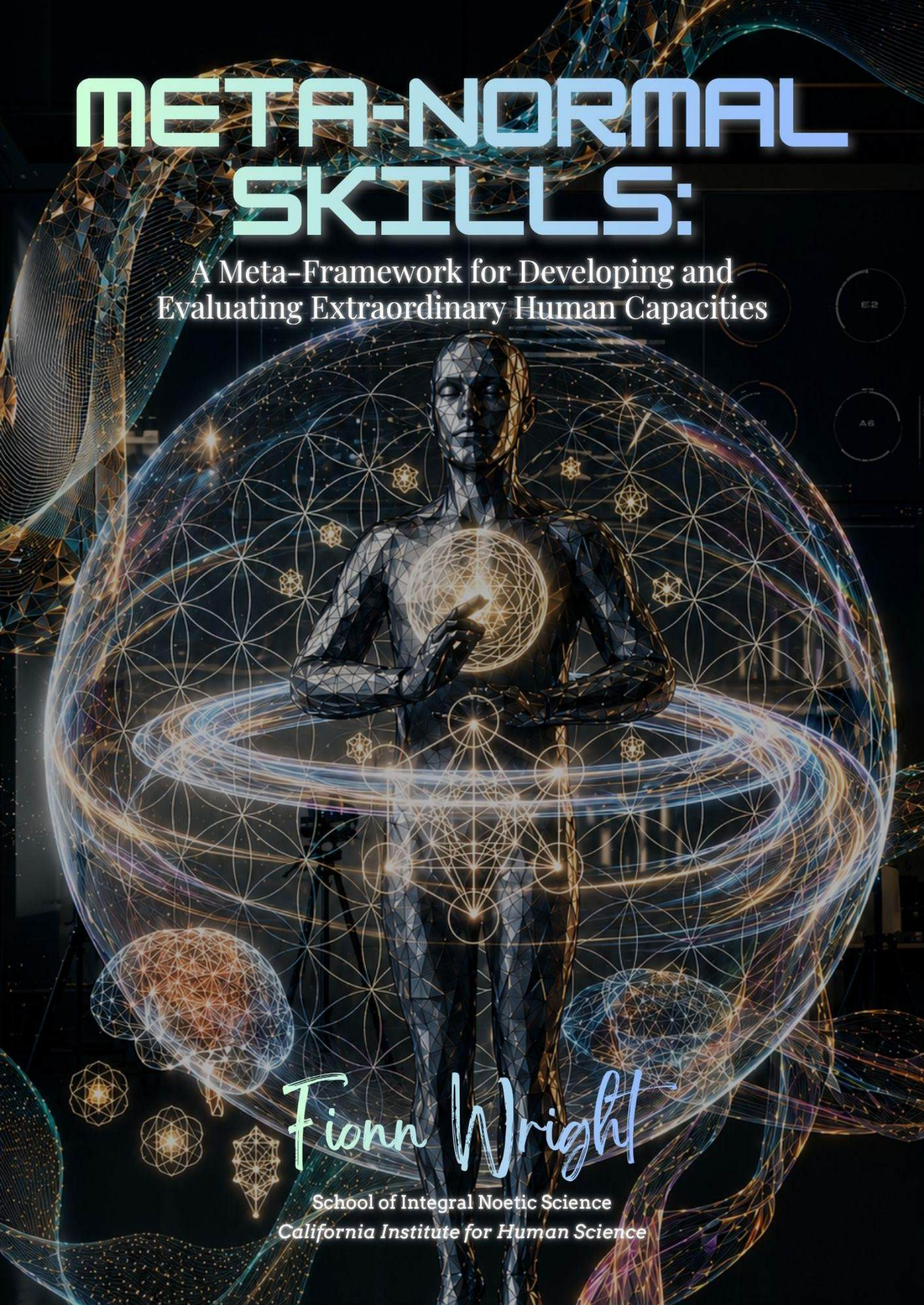
META-NORMAL SKILLS:

A Meta-Framework for Developing and Evaluating Extraordinary Human Capacities



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Discovery begins with the awareness of anomaly, i.e., with the recognition that nature has somehow violated the paradigm-induced expectations that govern normal science.

— Kuhn, 1970

Good theories fall flat in the irrefutable face of reality. As Kuhn (1970) points out, 'discovery begins with the awareness of anomaly'; this does not imply that 'nature has somehow violated the paradigm-induced expectations,' but rather that 'normal science' does not fully account for all of nature. Across cultures and historical periods, reports of extraordinary human capacities, ranging from heightened perception and voluntary control over physiological processes to abilities described as exceeding ordinary human potential, have persisted with notable consistency in religious, contemplative, and ethnographic records (Kripal, 2010; Murphy, 1992; White, 1996). Modern scientific research on a range of extraordinary capacities demonstrates statistically significant occurrences among the general population, with certain individuals outperforming others, and a number of these capacities having been shown to be more prevalent in those who have long-term contemplative practice or specific training experience (Cardeña, 2018; Radin, 2018). In contemporary discourse, such phenomena are frequently polarized between reductive interpretations that frame them as ontologically impossible, epistemic illusion, or methodological error, and uncritical perspectives that construe them as evidence of supernatural forces, magical superpowers or non-rational cosmologies (Cardeña, 2018; Kripal, 2010). This polarization between reductionist dismissal and uncritical supernaturalism has constrained the development of rigorous, integrative research into extraordinary human capacities by shaping ontological agendas, epistemic standards, and methodological boundaries in ways that marginalize a range of potentially valid epistemologies, ontologies and methodologies (Cardeña, 2018; Walach, 2020).

Emerging research in neuroscience, psychology, and phenomenology challenges the assumption that human capacities are fixed within physicalist constraints (Kastrup, 2019; Kelly et al., 2007). While studies on meditation, breath regulation, and neuroplasticity demonstrate that individuals can exert measurable influence over systems traditionally considered automatic, including heart rate, immune response, and patterns of brain activity (Benson, 1982; Davidson & Lutz, 2008), it is the phenomenological research on capacities such as remote perception, precognition and telepathy, that seriously challenge commonly held physicalist paradigms (Bem, 2011; Radin, 2018; Vernon, 2021). Emerging paradigms offer coherent alternatives to the physicalist orientation, providing explanations for the causal mechanisms of extraordinary capacities, normalizing their occurrence within comprehensive ontologies, epistemologies and methodologies (Kastrup, 2019; Mossbridge & Barušs, 2017). James' (1912) radical empiricism argued that the full range of human experience must be examined empirically rather than excluded a priori, while Bhaskar's (1978) critical realism argues that, while empirical methodologies are appropriate in certain contexts, it's critical to expand what can be understood as ontologically real outside the limits of empiricism.

This paper introduces the concept of meta-normal skills as a meta-framework (framework of frameworks) for systematically examining human capacities that includes within it empirical, contemplative, phenomenological, contextual, developmental and probabilistic frameworks. Rather than rigidly attaching to any specific ontologies, epistemologies or methodologies, building on the author's universifying meta-theory, it embraces a diversity of orientations, without collapsing into pluralistic or universalist positions, continually orienting towards contextual prioritization (Wright, 2022). Instead of treating these capacities as inherently real

or false, the meta-normal skills meta-framework situates them along a spectrum of contextual validity, ranging from well-documented trainable abilities to contested phenomena, providing a structured approach for development and evaluation, without the need for polarized credulity or skepticism. Central to this meta-framework is the recognition that both human perception and knowledge are developmentally structured and epistemically constrained, allowing us to identify capacities that may appear anomalous in certain contexts but are consistent with developmental patterns in other contexts (Fischer, 1980; Piaget, 1970). Meta-normal skills not only indicate potentially latent human capacities, but viewing them as skills that can be developed has the potential to expand human capacity to respond to complex ecosocial, existential, ethical, and epistemic crises of the global metacrisis (Hedlund, 2021). Cultivating and applying these capacities may not only enhance adaptive, creative, and integrative responses to these crises, but also accelerate paradigm shifts in human epistemologies, ontologies and methodologies, supporting a potential planetary metamorphosis from a metacrisis to a meta-chrysalis (Wright, 2023).

This paper proceeds in seven sections. First, it establishes key definitions, including the meta-framework of meta-normal skills and a three-tier classification of human capacities: accepted, provisional, contested. Second, it reviews contemporary research from a 3rd person objective perspective, drawing from neuroscience, physiology, and experimental psychology to identify empirically supported forms of capacity expansion. Third, it examines traditional contemplative systems of human development from a 2nd person intersubjective perspective, focusing on Yogic, Buddhist, and Daoist traditions, which have long articulated frameworks for cultivating and contextualizing extraordinary abilities. Fourth, the paper introduces the framework of Developmental Range of Perception (DROP) from a 1st person subjective perspective. Fifth, it introduces the Law of Likelihood Approximation (LOLA) as a potential framework for navigating uncertainty and evaluating claims. Sixth, it opens up a preliminary speculative synthesis of these frameworks by applying DROP and LOLA to the analysis of meta-normal skills, addressing the critical challenge of distinguishing signal from illusion. Finally, the paper concludes with a critique, including implications, limitations, and future directions to fully develop these frameworks, emphasizing the importance of maintaining openness and rigor in the study of human potential.

By integrating empirical research, cross-cultural traditions, and original theoretical frameworks, this paper aims to reframe the study of extraordinary human capacities as a legitimate domain of inquiry, one that expands our understanding of what it means to be human while remaining grounded in disciplined, critical investigation. This paper argues that many phenomena historically categorized as supernatural or anomalous can be more rigorously understood as developmentally accessible human capacities, and that their systematic investigation requires a contextual developmental probabilistic meta-framework, expanding the boundaries of legitimate perception and knowledge while maintaining epistemological, ontological and methodological rigor.

Key Definitions and Classification of Meta-Normal Skills

In the context of systematically examining meta-normal skills, capacities refer to underlying potentials or abilities that humans may possess, whereas skills are those capacities that can be systematically developed and refined through practice, training, or contemplation, transforming latent potential into reliably manifest performance (Ericsson et al., 1993). The distinction between capacities and skills frames this paper from a developmental orientation, moving beyond what may emerge naturally to explore what humans may be able to learn through practice. For

the purpose of this paper, meta-normal skills are defined as human capacities that extend beyond conventional baselines of performance and perception, which may be statistically rare yet developmentally accessible through practice. This definition deliberately situates meta-normal skills within the natural range of human potential, avoiding both reductive dismissal and uncritical supernatural framing.

This paper advances two original theoretical frameworks within the meta-framework of meta-normal skills, building upon the author's universifying meta-theory (Wright, 2022). The first framework, Developmental Range of Perception (DROP), is defined as the evolving range of fields, relations, and entities that a system can perceive and interact with, shaped by biological maturation, sensorial attunement, technological mediation, cultural and environmental context, and reflective awareness. The second, the Law of Likelihood Approximation (LOLA), is defined as a contextual framework for evaluating claims by integrating multiple perspectives — subjective, intersubjective, objective, and extended perspectival modes — while maintaining probabilistic rigor. Together, DROP and LOLA offer a contextual developmentally oriented probabilistic ontological, epistemological and methodological foundation for distinguishing between genuine skills and misinterpretation.

Building upon these definitions, meta-normal skills are organized into a three-tier classification reflecting their reliability, empirical support, and developmental accessibility, providing a scaffold for understanding the spectrum of meta-normal skills while facilitating rigorous analysis within empirical, contemplative and phenomenological contexts. The classification of human capacities and skills along a spectrum of reliability and evidence has antecedents in multiple domains, though none integrate a contextual developmental orientation towards epistemological, ontological and methodological considerations in the way proposed here. In evidence-based medicine and psychology, interventions are typically ranked by the strength and quality of evidence, ranging from high-certainty results from randomized controlled trials to anecdotal or unreplicated findings (Guyatt et al., 2008). In parapsychology, researchers have implicitly applied a similar classification; experiments with moderate to strong statistical support, such as selected Ganzfeld studies, might be considered 'accepted' within the community, while findings with inconsistent replication occupy an intermediate, provisional status, and highly anecdotal reports or claims lacking empirical verification are treated as contested (Bem & Honorton, 1994; Radin, 2006). In philosophy of science, Popper's (2002) framework of falsifiability and corroboration and Lakatos's (1970) notion of research programs describe theories as accepted, tentative, or speculative, depending on their empirical support, explanatory coherence, and predictive success. This approach highlights the value of situating capacities along a spectrum that reflects not only observed evidence but also the theoretical and conceptual infrastructure supporting the claims. By aligning this spectrum with developmental range (DROP) and probabilistic evaluation (LOLA), the meta-framework integrates ontological, epistemological and methodological dimensions, situating meta-normal skills within a coherent, systematic, and scientifically defensible model.

Accepted, Provisional and Contested Skills

Accepted skills are those that demonstrate consistent empirical support across controlled studies, exhibit high degrees of replicability, and are supported by known physiological or psychological mechanisms (Benson et al., 1974; Davidson & Lutz, 2008). These abilities are reliably trainable and widely recognized in scientific and clinical contexts. Provisional capacities may have recurring phenomenological reports and partial empirical support or statistical significance, but lack consistent replicability or comprehensive mechanistic

explanation. These capacities often appear under specific developmental, contextual, or state-dependent conditions (Murphy, 1992). Contested capacities are reported abilities for which evidence is inconsistent, weak, or highly disputed, and mechanisms remain largely speculative (Bem & Honorton, 1994; Radin, 2006). While such capacities may be supported by anecdotal, cultural, or limited experimental accounts, their reliability is low, and they are susceptible to cognitive bias, memory distortion, and methodological challenges.

This three-tier system is designed to function as a dynamic spectrum rather than a fixed hierarchy. Skills may move between categories as empirical evidence accumulates, training practices are refined, conceptual frameworks evolve or systemic paradigm shifts occur supporting causal mechanisms. The classification aligns closely with analogous structures in medicine, parapsychology, and philosophy of science, where phenomena are evaluated based on replicability, evidential support, and theoretical coherence (Guyatt et al., 2008; Lakatos, 1970; Popper, 2002). What distinguishes the meta-framework is its integration of the Developmental Range of Perception (DROP) and the Law of Likelihood Approximation (LOLA), which allow for probabilistic developmental evaluation of meta-normal capacities across subjective, intersubjective, and objective domains. This paper provides the conceptual foundation for evaluating extraordinary human capacities in a manner that is both systematic and open, supporting integration of empirical research, traditional contemplative frameworks, and a range of epistemologies, ontologies and methodologies.

Contemporary Research on Meta-Normal Skills

Empirical research in neuroscience, physiology, and experimental psychology provides growing evidence that human capacities extend beyond conventional baselines of perception and performance. This section reviews selected contemporary studies of meta-normal skills, mapping each to the three-tier framework of accepted, provisional, and contested skills.

Accepted Skills

Accepted skills have been consistently documented and experimentally validated. Research demonstrates that trained individuals can exert measurable influence over physiological processes traditionally considered automatic. For example, voluntary regulation of heart rate, blood pressure, and metabolic activity has been achieved through meditation, breathwork, and biofeedback training (Benson, 1982; Davidson & Lutz, 2008). In particular, studies of the Wim Hof Method, which combines controlled breathing, cold exposure, and meditation, show that practitioners can modulate body temperature, immune response and inflammatory markers (Almahayni & Hammond, 2024; Kox et al., 2014). Structured meditation practices have been linked to improvements in emotional regulation, stress reduction, and neuroplastic changes within cortical networks associated with attention and interoception (Tang et al., 2015). Lucid dreaming can be intentionally cultivated and monitored with polysomnography (Stumbrys et al., 2012), and flow states enhance performance under certain conditions (Csikszentmihalyi, 1990). These findings position such meta-normal skills firmly within the accepted tier due to their empirical reproducibility, mechanistic clarity, and trainability.

Provisional Skills

Provisional skills are defined as capacities that exhibit recurring phenomenological reports and partial empirical support but lack consistent replication, stable effect sizes across contexts, or clearly demonstrated pathways for reliable training and development (Cardeña, 2018; Ioannidis, 2005). This category encompasses phenomena traditionally regarded as controversial that have shown to be statistically significant

including telepathy, remote perception, precognition, and telekinesis (Radin, 2013). Experimental and naturalistic studies have reported statistically significant, above-chance effects, alongside persistent cross-cultural and contemplative accounts (Bem, 2011; Cardeña, 2018; Radin, 2018). These findings are often characterized by variability in replication and ongoing methodological debate (Hyman, 2010; Wiseman, 2010). Classifying these capacities as provisional reflects their intermediate status: due to a variety of factors they have not achieved wide acceptance (Hyman, 2010; Popper, 2002). This designation allows for their continued investigation while maintaining critical standards of evidence, acknowledging both the presence of suggestive data and the necessity for a paradigm shift around the causal mechanisms before broader scientific consensus can be established (Cardeña, 2018; Nosek et al., 2018).

Contested Skills

Contested skills are defined as claims that remain largely anecdotal, insufficiently studied, or methodologically limited, and for which underlying mechanisms are not widely understood (Cardeña, 2018). These include reports of extraordinary abilities that may be rare, culturally specific, or susceptible to cognitive, perceptual, and interpretive biases (Gilovich et al., 2002; Shermer, 2011). While such phenomena are documented across diverse cultural and historical contexts, they have not been reliably verified under controlled conditions (Cardeña, 2018). Examples often cited within this category include telepathic influence (mind control), invisibility, levitation, matter transformation (alchemy), teleportation, and chronokinesis (time manipulation) (Kripal, 2010; Radin, 2018). Although some of these claims may share similarities with more extensively studied phenomena, such as telepathy, remote perception, precognition, or psychokinesis, their empirical support and reproducibility are unestablished (Cardeña, 2018; Radin, 2018). From a materialist or physicalist perspective, these capacities are generally considered implausible (Churchland, 2013; Dennett, 2017). Alternative ontologies, including forms of idealism, dual-aspect monism, critical realism and non-dual philosophies, offer causal interpretations that render such phenomena conceptually conceivable and natural (Bhaskar, 1978; Kastrup, 2019; Kelly & Marshall, 2021). These frameworks remain the subject of ongoing philosophical debate and have not yet been widely accepted (Chalmers, 1996; Metzinger, 2009).

Synthesis and Implications

Mapping contemporary research onto this three-tier framework illustrates that human capacities and skills exist along a continuum of reliability and evidence, rather than a binary ‘possible vs. impossible’ dichotomy. This approach integrates robustly validated skills with emergent capacities, allowing systematic study without overclaiming or premature dismissal. This sets the stage for the next section, which examines traditional Hindu, Buddhist, and Taoist frameworks, where provisional and contested meta-normal skills are often cultivated and contextualized.

Traditional Contemplative Frameworks for Cultivating Meta-Normal Skills

Across human history, contemplative traditions have developed systematic methods for cultivating capacities that extend beyond ordinary human functioning (Murphy, 1992). In particular, Yogic, Buddhist, and Daoist frameworks provide detailed accounts of practices, states, and abilities that correspond closely to the meta-normal capacities identified in contemporary research (Kohn, 2008; Osto, 2024; Wallace, 2007). These traditions offer not only practical techniques but also ontological, epistemological, and methodological frameworks for understanding, contextualizing, and ethically orienting to the cultivation of meta-normal skills (Feuerstein, 2001; Wallace, 2007). The transmission of practices, states, and

experiential reports within teacher-student lineages provides second-person intersubjective evidence, allowing observers to systematically verify and reproduce aspects of meta-normal skills through guided instruction (Kohn, 2008; Wallace, 2007). Yogi Satchidananda (2012) contextualizes these capacities for the modern scientific mind:

"You dive deeply into an object or idea, and it releases its secrets. In a way, scientists have done Samyama on the atomic particles. The particles released their energy, and the scientists got the knowledge of them. They accomplished the truth behind the particles. Samyama is usually done on objects or ideas connected with some results. When the results come, you call them siddhis." (p. 167)

Yogic Frameworks

Classical Hindu yoga, particularly as articulated in the Yoga Sūtras of Patañjali, delineates a structured progression toward extraordinary capacities, known as siddhis, as by-products of deep concentration (samādhi) and disciplined practice (Satchidananda, 2012). The Yoga Sūtras describe a range of such capacities, including refined perception, knowledge of hidden phenomena, mastery over life force and bodily processes, and the ability to perceive distant or subtle objects (Satchidananda, 2012). The Haṭha Yoga Pradīpika also references powers attained through mastery of breath and energy channels (prāṇāyāma) and control of the subtle body (kuṇḍalinī), describing siddhis such as levitation, lightness of body, and control of elemental properties, as arising from sustained yogic discipline (Mallinson & Singleton, 2012). Classical sources regularly emphasize that these capacities are not pursued as ends in themselves but emerge as incidental outcomes of systematic practice grounded in ethical restraint (yama), observances (niyama), posture (āsana), breath mastery (prāṇāyāma), withdrawal of the senses (pratyāhāra), and deep concentration (dhāraṇā, dhyāna) (Satchidananda, 2012). Traditional accounts indicate that competent teachers transmit these practices within a lineage context, providing second-person intersubjective verification as students refine their capabilities (Mallinson, 2018).

Buddhist Frameworks

Buddhist traditions, particularly Theravāda and Vajrayāna systems, describe a wide spectrum of contemplative attainments arising from disciplined meditative practice (Ñāṇamoli & Bodhi, 1995; Gyatso, 1998). In Vajrayāna, advanced practitioners cultivate what are termed 'siddhis', 'riddhis' or extraordinary powers (abhiññā) through visualization, mantra, deity yogas, and meditative absorption (samādhi) (Gyatso, 1998; Trungpa, 2007). Classical Tibetan sources enumerate associated capacities such as refined sensory awareness, mastery over physiological states, precognitive insight, and telepathic understanding as linked to advanced meditative stabilization (rig pa) and energy control (Tummo) practices (Gyatso, 1998). In Theravāda literature, meditative attainments include clairvoyance and mastery of the mind-body continuum (Bodhi, 2000; Ñāṇamoli & Bodhi, 1995). Buddhist frameworks emphasize ethical and developmental prerequisites: capacities are regarded as secondary to liberation (nirvāṇa), grounded in moral conduct and mindful restraint (Bodhi, 2000).

Daoist Frameworks

Daoist contemplative traditions, particularly Neidan (internal alchemy) and related meditation practices, articulate systematic methods for cultivating subtle capacities grounded in the transformation of jing (essence), qi (vital energy), and shen (spirit) (Komjathy, 2013). Foundational internal alchemy texts in the Daoist Canon elaborate on transforming the body's essence and energy into refined realization and longevity, describing the cultivation of subtle capacities in the context of cosmic harmony (Kohn, 2020; Pregadio, 2019). Daoist hagiographical works recount accounts of transcendents (xian) demonstrating extraordinary capacities as by-products of disciplined internal

cultivation (Wong, 2004). Like Hindu and Buddhist contemplative systems, these practices are embedded within ethical, cosmological, and physiological frameworks; capacities arise as incidental outcomes of harmonizing with the Dao, rather than as ends in themselves (Pregadio, 2019).

Synthesis Across Traditions

Across these traditions, capacities are cultivated progressively, often requiring ethical, physical, and mental preparation (Bodhi, 2000; Kohn, 2008; Satchidananda, 2012). This aligns with the Developmental Range of Perception (DROP), in which capacity expansion occurs along a developmental trajectory from latent potential to reliably manifest skills (Murphy, 1992; Piaget & Inhelder, 1969; Wilber, 2000). Capacities are rarely pursued for personal gain; their cultivation is embedded within frameworks that prioritize moral, spiritual, or social benefit (Bodhi, 1999; Pregadio, 2019; Satchidananda, 2012). Many of the capacities considered provisional in contemporary research, such as telepathy, precognition, and remote perception, are extensively documented in these traditions, suggesting cultural and historical convergence on emergent human potential (Kripal, 2010; Radin, 2013). Capacities considered contested, including invisibility, levitation, and matter transformation, are often shared alongside these provisional capacities in contemplative texts as signifiers of more advanced development (Kripal, 2010; Radin, 2013). By integrating these traditions into the meta-normal skills meta-framework, the paper demonstrates that intersubjective traditional contemplative systems converge with contemporary objective research, reinforcing their plausibility and providing practical, ethically grounded methods for cultivation (Kripal, 2010; Radin, 2013).

Developmental Range of Perception (DROP)

The concept of the Developmental Range of Perception (DROP) has emerged from my own subjective experience of my own development, intersubjectively informed by my work as a coach and meditation teacher. My range of perception has developed over time, as has the DROP of others I have encountered. Humans can expand their perceptual range over time through contemplative practices (Vago & Silbersweig, 2012), through technologies such as microscopes, telescopes, AI (Clark, 2008), as well as substances such as psychedelics (Bache, 2019). DROP extends beyond traditional concepts like Umwelt or the phenomenal field by incorporating development, time, trajectory, and plasticity, showing how perception itself develops (Sebeok, 1980; von Uexküll, 1957).

As a practitioner who experiments with my own experience with a naturally rational and scientific orientation, I am aware that certain expressions or accounts of meta-normal skills are examples of illusions, memory lapses, unintentional memory modification, hallucination, misinformation, and charlatanism, all of which occur to varying degrees across contexts. At this point I tend to orient from a position of curiosity, acknowledging human limitations, not fully believing or knowing anything with 100% certainty, aware of the possibilities of external mental modification, projected experiences, and the possibility, however slight, that I may be living in a simulation akin to Plato's allegory of the cave. Having set that stage, through phenomenological experiments, I have phenomenologically experienced successive development of meta-normal skills, and witnessed them in others, that align with many of the intersubjective pathways within the classical contemplative traditions as well as the objective research (Bodhi, 2000; Kohn, 2008; Radin, 2018). Examples I have experienced include state training for emotional regulation (Gross, 2015), accelerated learning through focused concentration (Tang et al., 2015), the reversal of schizophrenic psychosis (Chadwick & Birchwood, 1994), lucid dreaming and conscious awareness extending the whole way through the sleep cycle from falling asleep until waking (LaBerge, 2014), immunity to extreme cold and sickness through breathing practices

(Almahayni & Hammond, 2024), healing from emotional and physical conditions through awareness practices (Goyal et al., 2014), precognitive dreams and visions (Cardeña et al., 2015), and telepathic intuition and remote sensing of loved ones (Sheldrake et al., 2025). In my experience, all of these meta-normal skills are trainable through deliberate practice. At the time of writing, similar to Aurobindo's (2001) accounts of his experimentation with extraordinary capacities, I have experimented with telepathic influence and telekinesis, and while there may have been minor effects, I have not at this point verified them reliably phenomenologically to my own standards. Aurobindo (1997) puts extraordinary capacities in perspective, viewing them as but a normal occurrence that emerges evolutionarily from genuine mastery on the yogic path:

> *Yogic siddhis. Explain and master their processes, put them in their proper relation to the rest of the economy of the universe and we shall find that they are neither miraculous nor marvellous nor supernatural. They are supernormal only in the way in which aviation is supernormal or motoring or the Chinese alphabet. Nor is there anything magical in them except in so far as magic, the science of the Persian Magi, means originally and properly the operations of superior power or superior knowledge. (p. 16)*

While Aurobindo contextualizes these capacities in a way that makes them seem natural, there are certain capacities that are beyond my historical range of perception. I have not to my awareness experienced contested meta-normal skills such as invisibility, levitation, matter transformation (alchemy), teleportation, or chronokinesis (time manipulation), but I remain open to the possibility that they can be developed by humans in certain contexts. What once started out as deliberate development of skills for my own personal curiosity, has increasingly over time become more motivated for the benefit of others and ultimately for the benefit of all beings, reflecting the ethical dimensions emphasized across contemplative traditions (Bodhi, 2000; Gyatso, 1997).

Based on that experience, DROP emerged out of my awareness in support of the development of humanity, to provide a theoretical foundation for understanding how human capacities expand beyond conventional limits over time. This framework situates meta-normal capacities within a developmental epistemological, ontological and methodological trajectory, emphasizing that while meta-normal capacities can emerge naturally, they can also be skills that unfold with systematic cultivation. DROP draws upon multiple strands of psychological and neuroscientific research as well as philosophical and contemplative reflection. In cognitive science, neuroplasticity demonstrates that the human brain can reorganize itself (Draganski et al., 2004). Studies in contemplative neuroscience indicate that long-term meditation can enhance attentional control, interoception, and emotional regulation (Lutz et al., 2008). Contemporary frameworks in extended cognition and embodied perception suggest that human perceptual and cognitive capacities are not confined to the neural substrate alone but are distributed across the body, environment, and technological tools (Clark, 2008). DROP formalizes this insight by conceptualizing perception as dynamically developmentally structured and contextually mediated, integrating both natural and mediated modes of engagement with reality (Fischer & van Geert, 2014). From a developmental perspective, integrative meta-theorists like Bhaskar (2020), Wilber (2000), and Hedlund and Esbjörn-Hargens (2022), frame human capacities as emerging through layered ontologies and integrative stages of growth, where psychological, ethical, and perceptual dimensions expand in complexity across individual and collective systems. By situating capacities within a developmental range, DROP provides a dynamic framework for evaluating meta-normal skills, enabling researchers and practitioners to identify the stage-dependent nature of capacity acquisition, differentiate between capacities that are trainable and reproducible versus

those that are context-dependent (Fischer, 1980; Fischer & van Geert, 2014). DROP serves as a backbone for subsequent integration with the Law of Likelihood Approximation (LOLA), allowing capacities to be assessed probabilistically while respecting their contextual constraints.

Law of Likelihood Approximation (LOLA)

The Law of Likelihood Approximation (LOLA) is a contextual framework designed to evaluate claims, experiences, capacities and skills that lie at the edges of human perception, creating space for us to explore beyond what is accepted into what is provisional and contested, without the limits of reductionist or naive ontologies, epistemologies or methodologies. While LOLA embraces a diversity of orientations, it is neither strictly pluralistic or universalist, continually orienting towards contextual prioritization without the need to collapse into any static forms. Whereas DROP provides a developmental epistemological, ontological and methodological mapping of human capacities, LOLA provides a probabilistic, evidence-informed epistemology, ontology and methodology for navigating uncertainty and distinguishing signal from noise across the accepted, provisional, and contested tiers of meta-normal skills. What we judge as likely is bounded by what we are capable of perceiving, what we believe to be true and the methods we utilize.

Conceptual Overview

LOLA formalizes the principle that, although humans are constrained by epistemic limitations that prevent complete certainty about the full nature of reality, we can approximate likelihood by integrating multiple perspectives, in this paper focusing on those that are widely accepted: subjective – direct first-person experience (accepted); intersubjective – cultural, anecdotal, and collective knowledge (accepted); objective – empirical, reproducible data (accepted)1. By cross-correlating these perspectives depending on which are within our DROP, LOLA allows practitioners and researchers to assign relative likelihoods to capacities, rather than rigidly categorizing them as true or false, possible or impossible, putting them in a contextual frame (e.g. true or possible for who, to what extent, in which context). This probabilistic approach aligns with Bayesian reasoning (Gelman et al., 2013).

LOLA and Meta-Normal Skills

Applied to meta-normal capacities, LOLA facilitates nuanced evaluation. LOLA provides a likelihood range for accepted, provisional and contested skills due to convergent support across multiple perspectives, including experimental replication, physiological evidence, consistent phenomenology, intersubjective corroboration, cross-cultural contemplative accounts and developmental range. While DROP tracks what skills generally emerge under which conditions, LOLA evaluates how contextually likely a claim is to correspond to genuine capacity. By combining LOLA and DROP, we can distinguish between capacities that are developmentally plausible and supported by intersubjective and empirical evidence, and those that are unlikely under contextual conditions. Traditional contemplative frameworks implicitly utilize LOLA-like reasoning. In Hindu yoga, Patanjali cautions against premature pursuit of siddhis, emphasizing ethical, meditative, and developmental preparation as a means to distinguish genuine capacities from illusions (Satchidananda, 2012). In Buddhist Vajrayana, teachers evaluate students' claims of abhiññā critically, emphasizing corroboration and ethical alignment (Gyatso, 1998). In Daoist Neidan, practitioners monitor physiological and energetic changes over time to differentiate true internal alchemy from misperception (Kohn, 2008). LOLA formalizes these traditional practices within an integrative framework, providing a structured method to navigate uncertainty. By combining DROP and LOLA, researchers and practitioners can map capacities developmentally to identify what is plausible at each stage of training or

maturation, evaluate reliability probabilistically to assign likelihoods to emerging capacities based on convergent evidence, integrate cross-cultural knowledge to situate capacities within historical and contemplative traditions while remaining scientifically rigorous and guide ethical practice to emphasize developmental readiness, moral orientation, and reflective assessment to prevent premature or unsafe engagement.

Synthesizing DROP and LOLA to Analyze Meta-Normal Skills

This section opens up a speculative synthesis between DROP and LOLA frameworks in terms of developing and evaluating meta-normal skills. Given that all three of these are novel frameworks introduced in this paper, a speculative orientation supports openness towards potential integration and application. In the paper's conclusion I will critique this preliminary speculative synthesis and provide directions for further development. LOLA complements DROP by offering a probabilistic, evidence-informed lens, assessing the likelihood that a given capacity reflects a genuine phenomenon rather than misperception, bias, or methodological error. By integrating subjective, intersubjective, objective perspectives, LOLA allows nuanced evaluation of capacities that fall between widely accepted and highly contested extremes (Clark, 2008; Gelman et al., 2013). The integration of the Developmental Range of Perception (DROP) and the Law of Likelihood Approximation (LOLA) suggests that perception and belief do not merely filter an independently given reality, but actively participate in shaping the biological and experiential worlds individuals inhabit (Varela et al., 1991). From a perceptual standpoint, DROP indicates that what an individual is capable of perceiving is developmentally structured, such that training, attention, and cultural context expand or constrain the range of accessible phenomena, aligning with enactive and embodied theories of cognition which argue that perception is shaped through action and engagement with the environment (Noë, 2004; Varela et al., 1991). LOLA supports probabilistic meaning through layered interpretive frameworks, influencing what is taken as real, relevant, or actionable, consistent with Bayesian models of cognition in which perception itself is shaped by prior beliefs and expectations (Clark, 2013; Gelman et al., 2013). These dynamics create a recursive loop in which belief shapes perception, perception shapes physiological and behavioral responses and environmental engagement, and these responses in turn reinforce interpretations of reality.

The interaction between DROP and LOLA highlights a fundamental constraint on human experience: capacities or phenomena that lie outside an individual's current developmental range are less likely to be registered, recognized, or integrated into conscious awareness. As DROP expands through maturation, training, cultural participation, and technological mediation, an individual gains access to previously unavailable perceptual, cognitive, or relational domains. LOLA adjusts the probabilistic assessment of phenomena: events or capacities that remain outside one's DROP are assigned a lower likelihood, not necessarily because they are impossible, but because the epistemic apparatus of the observer, attention, memory, sensory integration, and conceptual frameworks, limit reliable detection and interpretation.2 In this sense, DROP and LOLA function synergistically: developmental limitations constrain awareness, while probabilistic evaluation guides epistemic judgment, creating a dynamic system in which the apparent rarity or impossibility of certain meta-normal skills is partially a function of observer development rather than objective impossibility.

Within the DROP/LOLA frameworks, skepticism and rigid disbelief function as developmental inhibitors that reduce the likelihood of meta-normal capacities manifesting or being reliably expressed. From the perspective of the Developmental Range of Perception (DROP), openness,

attentional flexibility, and intersubjective receptivity are critical factors that enable the expansion of perceptual and cognitive capacities; skepticism narrows these factors, constraining the effective developmental range (Fischer & van Geert, 2014). Similarly, from the LOLA perspective, skepticism operates as a strong prior that biases the probabilistic evaluation of subtle or anomalous signals toward null outcomes, lowering the detectability and apparent reliability of these capacities (Cardeña, 2018; Radin, 2013). Empirical evidence indicates that individuals with higher openness and reduced doubt tend to score above chance on telepathy and remote perception tasks, whereas highly skeptical participants often approach null results (Bem & Honorton, 1994; Radin, 2018). Classical contemplative systems further support this, emphasizing that ethical, attentional, and mental preparation is required for the emergence of extraordinary capacities, and that doubt or disbelief obstructs progress (Bodhi, 2000; Pregadio, 2019; Satchidananda, 2012). By explicitly incorporating skepticism as a modulating factor, the meta-normal skills meta-framework accounts for both intersubjective and experimental evidence, highlighting how cognitive and developmental attitudes influence the emergence, reliability, detectability and development of meta-normal skills.

Within the DROP framework, human capacities are constrained not only by perceptual development but also by the plasticity of temporal and spatial domains (Kilgard et al, 2001). Expanding beyond a neuroscientific perspective, temporal plasticity here refers to the adaptive expansion of an individual's ability to perceive, anticipate, and integrate information across time, allowing for extended awareness of past, present, and potential future events (O'Fallon, 2020). Practices such as meditation, lucid dreaming, or advanced anticipatory training can enhance temporal plasticity, thereby increasing the likelihood of detecting precognitive signals or temporal patterns that would otherwise remain inaccessible (O'Fallon, 2020). Spatial plasticity in this context involves the capacity to extend perceptual engagement across nonlocal or remote spatial domains (O'Fallon, 2020). This includes heightened environmental awareness, remote perception, or intuitive tracking, as observed in expert navigators and certain contemplative practitioners, and is supported by structural and functional neuroplasticity in spatial representation networks such as the hippocampus (Maguire et al., 2000). Both forms of plasticity operate synergistically with DROP: as temporal and spatial ranges expand, capacities that were previously improbable become probabilistically more accessible, and LOLA correspondingly assigns higher likelihood to their detection and integration. Capacities that lie outside an individual's temporal or spatial plasticity remain improbable, illustrating that apparent rarity of meta-normal skills is often a function of developmental constraints (O'Fallon, 2020).3 DROP and LOLA support the claim that perception and evaluation do not merely interpret reality but participate in shaping it through a reciprocal process of co-enactment, influencing biological processes, perceptual access, and lived spatiotemporal experience through dynamic interactions among awareness, physiology, and environment (Clark, 2016; Esbjorn-Hargens, 2020; Varela et al., 1991).

Human development provides a natural framework for understanding the emergence and expansion of temporal and spatial plasticity. In early childhood, both temporal and spatial DROP are relatively narrow: children perceive and interact with the world in immediate, concrete, and egocentric terms, with limited capacity to anticipate future events, integrate past experiences, or navigate nonlocal spatial contexts (Piaget & Inhelder, 1969; Vygotsky, 1978). Temporal plasticity expands gradually as children develop memory, planning, and causal reasoning, while spatial plasticity develops in tandem with sensorimotor coordination, environmental exploration, and representational thinking, and adolescence and adulthood provide opportunities for accelerated expansion, as formal reasoning, perspective-taking, and metacognition enable more complex interactions across temporal and spatial

domains (O'Fallon, 2020).4 LOLA assigns lower probabilities to capacities that exceed an individual's current developmental range, explaining why children and early-stage adults are less likely to experience or reliably interpret such phenomena. Deliberate training, cultural practices, and reflective engagement can accelerate the expansion of DROP, effectively reshaping temporal and spatial plasticity and thereby increasing the likelihood of accessing meta-normal capacities over the lifespan (Churchill & Murray, 2020; O'Fallon, 2020).

Within the meta-framework of meta-normal skills, it is proposed that certain contested or highly speculative capacities may be understood as hypothetical extensions of more empirically investigated anomalous phenomena along a developmental continuum of perceptual and agentic complexity. Specifically, provisional skills may represent lower-order or more constrained expressions of a higher-order or broader class of potential human abilities. From this perspective, more extreme or contested claims (e.g., telepathic influence, levitation, teleportation, or chronokinesis) can be interpreted as higher-order or extended forms within the same conceptual domain. This proposition does not assert the empirical validity of such capacities, nor does it imply that developmental progression between them has been established. Rather, it serves as a heuristic within the Developmental Range of Perception (DROP), which models human capacities as emerging across expanding domains of perception, interaction, and influence, shaped by biological, cognitive, and socio-cultural factors. Within DROP, increasingly complex capacities could correspond to expanded ranges of perceptual access and causal interaction with systems beyond conventional sensory and motor boundaries. The evaluation of such claims is governed by the Law of Likelihood Approximation (LOLA), which situates all meta-normal skills along a probabilistic spectrum based on the convergence of subjective, intersubjective, objective, and extended modes of perspectival evidence.5

The meta-normal skills meta-framework emphasizes that capacity cultivation is not value-neutral. Ethical considerations include avoiding premature pursuit of high-level capacities before developmental readiness, maintaining alignment with prosocial or contemplative goals rather than ego-driven demonstration, and ensuring that practices are safe, contextually appropriate, and informed by convergent evidence. By systematically integrating DROP and LOLA into a wider meta-framework, researchers and practitioners gain a dynamic, ethically grounded, and epistemically rigorous method for exploring human capacities that extends beyond the limitations of conventional scientific methods without lapsing into credulity.

Conclusion and Critique

This paper has briefly introduced the concepts of meta-normal skills, the Developmental Range of Perception (DROP), and the Law of Likelihood Approximation (LOLA) as potentially complementary frameworks for systematically studying human capacities that extend beyond conventional baselines of performance and perception. By integrating objective, intersubjective and subjective perspectives, these frameworks can provide a rigorous yet flexible approach to evaluating capacities ranging from accepted skills to provisional abilities, as well as contested phenomena. The synthesis of DROP and LOLA offers several key contributions: DROP situates capacities along a developmental trajectory, clarifying what can realistically emerge under specific conditions; LOLA provides a probabilistic and multi-perspectival orientation, allowing researchers to evaluate claims without collapsing into credulity or undue skepticism; they create a structured ontology-epistemology-methodology foundation, mapping the terrain of meta-normal capacities while guiding ethical, and practical engagement.

Despite these contributions, the meta-normal meta-framework has several limitations at this point in its development. First, empirical verification remains uneven

across meta-normal skills. While physiological regulation and lucid dreaming have substantial empirical support, provisional capacities such as remote perception, telepathy, and precognition face replication challenges and methodological critiques, with limited research on whether they can be trained or developed through practice. Contested capacities compound these challenges further, with limited evidence outside anecdotal or phenomenological reports. Second, the frameworks are inherently probabilistic and interpretive, meaning that conclusions about rare capacities must remain provisional until there is enough evidence to support wider acceptance. Third, while cross-cultural integration provides rich conceptual scaffolding, there is a risk of overgeneralization or cultural misinterpretation, particularly when translating traditional contemplative practices into empirical paradigms. A central challenge for this meta-framework lies in balancing openness to expanded human capacities that may resist expression in closed loop environments with rigorous epistemic constraints. Critics may argue that the inclusion of provisional or contested phenomena risks overextension beyond available empirical evidence or inadvertently legitimizes speculative claims. This paper addresses such concerns by maintaining a tiered classification system and a probabilistic evaluative framework, ensuring that inclusion within analysis does not imply validation, but rather reflects a commitment to systematically mapping the full range of reported human capacities through objective, intersubjective and subjective domains while preserving methodological rigor. Future directions for research include methodological refinement, quantifiable designations, defined developmental ranges, longitudinal developmental studies, formulaic likelihood measurement, cross-cultural scholarship, and applied practice.

In conclusion, this paper offers a potential additional set of frameworks for the study of extraordinary human capacities as a legitimate, disciplined, and multidimensional domain of inquiry beyond the limitations of empirical validation in closed loop systems. By combining developmental mapping (DROP) with probabilistic evaluation (LOLA), researchers and practitioners gain a rigorous, ethically informed framework for exploring the outer edges of human potential, offering a foundation for ongoing research, cross-cultural dialogue, and reflective practice. With continued refinement, the meta-normal skills meta-framework can be used to engage with the complex global metacrisis, developing and evaluating a more comprehensive picture of human capacities, integrating provisional and contested anomalies into emerging ontologies, epistemologies and methodologies, supporting the development of an expanded range of human potential.

References

Almahayni, O., & Hammond, L. (2024). Does the Wim Hof Method have a beneficial impact on physiological and psychological outcomes in healthy and non-healthy participants? PLOS ONE, 19(3), e0286933. https://doi.org/10.1371/journal.pone.0286933

Sri Aurobindo. (1997). Essays divine and human (Vol. 12). Sri Aurobindo Ashram Trust. https://worksofthemotherandsriaurobindo.org/index.php/01-works-of-sri-aurobindo/03-cwsa/12-essays-divine-and-human/05-the-siddhis-vol-12-essays-divine-and-human

Sri Aurobindo. (2001). Record of yoga (Vols. I–II). Sri Aurobindo Ashram Press.

Bache, C. M. (2019). LSD and the mind of the universe: Diamonds from heaven. Park Street Press.

Bem, D. J. (2011). Feeling the future: Experimental evidence for anomalous retroactive influences on cognition and affect. Journal of Personality and Social Psychology,

100(3), 407–425. https://doi.org/10.1037/a0021524

Bem, D. J., & Honorton, C. (1994). Does psi exist? Replicable evidence for an anomalous process of information transfer. Psychological Bulletin, 115(1), 4–18. https://doi.org/10.1037/0033-2909.115.1.4

Benson, H. (1982). The relaxation response: History, physiological basis and clinical usefulness. Acta Medica Scandinavica Supplementum, 660, 231–237. https://doi.org/10.1111/j.0954-6820.1982.tb00378.x

Benson, H., Rosner, B. A., Marzetta, B. R., & Klemchuk, H. P. (1974). Decreased blood pressure in borderline hypertensive subjects who practiced meditation. Journal of Chronic Diseases, 27(3), 163–169. https://doi.org/10.1016/0021-9681(74)90083-6

Bhaskar, R. (1978). A realist theory of science. Routledge & Kegan Paul.

Bhaskar, R. (2020). Critical realism and the ontology of persons. Journal of Critical Realism, 19(2), 113–120. https://doi.org/10.1080/14767430.2020.1734736

Bodhi, B. (2000). The connected discourses of the Buddha: A translation of the Saṃyutta Nikāya. Wisdom Publications.

Cardeña, E. (2018). The experimental evidence for parapsychological phenomena: A review. American Psychologist, 73(5), 663–677. https://doi.org/10.1037/amp0000236

Cardeña, E., Palmer, J., & Marcusson-Clark, B. (Eds.). (2015). Parapsychology: A handbook for the 21st century. McFarland.

Chadwick, P., & Birchwood, M. (1994). The omnipotence of voices: A cognitive approach to auditory hallucinations. British Journal of Psychiatry, 164(2), 190–201. https://doi.org/10.1192/bjp.164.2.190

Chalmers, D. J. (1996). The conscious mind: In search of a fundamental theory. Oxford University Press.

Churchill, J., & Murray, T. (2020). Integrating adult developmental and metacognitive theory with Indo-Tibetan contemplative essence psychology. Integral Review: A Transdisciplinary & Transcultural Journal for New Thought, Research, & Praxis, 16(1). https://integral-review.org/issues/vol_16_no_1_churchill_and_murray_integrating_adult_developmental_and_metacognitive_theory.pdf

Churchland, P. S. (2013). Touching a nerve: The self as brain. W. W. Norton.

Clark, A. (2008). Supersizing the mind: Embodiment, action, and cognitive extension. Oxford University Press.

Clark, A. (2013). Whatever next? Predictive brains, situated agents, and the future of cognitive science. Behavioral and Brain Sciences, 36(3), 181–204. https://doi.org/10.1017/S0140525X12000477

Clark, A. (2016). Surfing uncertainty: Prediction, action, and the embodied mind. Oxford University Press.

Csikszentmihalyi, M. (1990). Flow: The psychology of optimal experience. Harper & Row.

Davidson, R. J., & Lutz, A. (2008). Buddha's brain: Neuroplasticity and meditation. IEEE Signal Processing Magazine, 25(1), 176–174. https://doi.org/10.1109/msp.2008.4431873

Dennett, D. C. (2017). From bacteria to Bach and back: The evolution of minds. Norton.

Draganski, B., Gaser, C., Busch, V., Schuierer, G., Bogdahn, U., & May, A. (2004). Changes in grey matter induced by training. Nature, 427, 311–312. https://doi.org/10.1038/427311a

Ericsson, A. K., Krampe, R. T., & Tesch-Römer, C. (1993). The role of deliberate practice in the acquisition of expert performance. Psychological Review, 100(3), 363–406. https://philpapers.org/rec/FISATO-4?

Esbjörn-Hargens, S. (2020). Our wild kosmos!: An exo studies exploration of the ontological status of non-human intelligences (Resource Paper No. 1). Exo Studies Institute. https://www.exostudies.org/wp-content/uploads/2023/02/Exo_Studies-Our_Wild_Kosmos.pdf

Feuerstein, G. (2001). The yoga tradition: Its history, literature, philosophy, and practice. Hohm Press.

Fischer, K. W. (1980). A theory of cognitive development: The control and construction of hierarchies of skills. Psychological Review, 87(6), 477–531. https://philpapers.org/rec/FISATO-4

Fischer, K. W., & van Geert, P. L. C. (2014). Dynamic development of brain and behavior. In Handbook of developmental systems theory and methodology (pp. 287–315). The Guilford Press. https://doi.org/10.1080/10888691.2017.1398649

Gelman, A., Carlin, J. B., Stern, H. S., Dunson, D. B., Vehtari, A., & Rubin, D. B. (2013). Bayesian data analysis (3rd ed.). Chapman and Hall/CRC. https://doi.org/10.1201/b16018

Gilovich, T., Griffin, D., & Kahneman, D. (2002). Heuristics and biases: The psychology of intuitive judgment. Cambridge University Press.

Goyal, M., et al. (2014). Meditation programs for psychological stress and well-being: A systematic review and meta-analysis. JAMA Internal Medicine, 174(3), 357–368. https://doi.org/10.1001/jamainternmed.2013.13018

Gross, J. J. (2015). Emotion regulation: Current status and future prospects. Psychological Inquiry, 26(1), 1–26. https://doi.org/10.1080/1047840X.2014.940781

Guyatt, G. H., Oxman, A. D., Vist, G. E., Kunz, R., Falck-Ytter, Y., Alonso-Coello, P., & Schünemann, H. J. (2008). GRADE: An emerging consensus on rating quality of evidence and strength of recommendations. BMJ, 336(7650), 924–926. https://doi.org/10.1136/bmj.39489.470347.AD

Gyatso, J. (1998). Apparitions of the self: The secret autobiographies of a Tibetan visionary. Princeton University Press.

Gyatso, V. L. (1997). Bodhicitta: Cultivating the compassionate mind of enlightenment. Snow Lion Publications.

Hedlund, N. H. (2021). Visionary realism and the emergence of a eudaimonistic society: Metatheory in a time of metacrisis (Doctoral dissertation). University College London.

Hedlund, N., & Esbjörn-Hargens, S. (Eds.). (2022). Big picture perspectives on planetary flourishing: Metatheory for the Anthropocene, Volume I. Routledge.

Hyman, R. (2010). Meta-analysis that conceals more than it reveals: Comment on Storm, Tressoldi & Di Risio (2010). Psychological Bulletin,

136(4), 486–490. https://doi.org/10.1037/a0019676

Ioannidis, J. P. A. (2005). Why most published research findings are false. PLOS Medicine, 2(8), e124. https://doi.org/10.1371/journal.pmed.0020124

James, W. (1912). Essays in radical empiricism. Longmans, Green & Co.

Kastrup, B. (2019). The idea of the world: A multi-disciplinary argument for the mental nature of reality. Iff Books.

Kelly, E. F., Kelly, E. W., Crabtree, A., Gauld, A., Grosso, M., & Greyson, B. (2007). Irreducible mind: Toward a psychology for the 21st century. Rowman & Littlefield.

Kelly, E. F., & Marshall, P. (Eds.). (2021). Consciousness unbound: Liberating mind from the tyranny of materialism. Rowman & Littlefield Publishers.

Kilgard, M. P., Pandya, P. K., Vazquez, J., Gehi, A., Schreiner, C. E., & Merzenich, M. M. (2001). Sensory input directs spatial and temporal plasticity in primary auditory cortex. Journal of Neurophysiology, 86(1), 326–338. DOI:10.1152/jn.2001.86.1.326

Kohn, L. (2008). Daoism and Chinese culture. In C. I. Beckwith (Ed.), Daoism handbook (pp. 23–40). Brill.

Kohn, L. (2020). The Zhong-Lü system of internal alchemy. Three Pines Press.

Komjathy, L. (2013). The Daoist tradition: An introduction. Bloomsbury Academic.

Kox, M., van Eijk, L. T., Zwaag, J., van den Wildenberg, J., Sweep, F. C. G. J., van der Hoeven, J. G., & Pickkers, P. (2014). Voluntary activation of the sympathetic nervous system and attenuation of the innate immune response in humans. Proceedings of the National Academy of Sciences of the United States of America, 111(20), 7379–7384. https://doi.org/10.1073/pnas.1322174111

Kripal, J. J. (2010). Authors of the impossible: The paranormal and the sacred. University of Chicago Press.

Kuhn, T. S. (1970). The structure of scientific revolutions (2nd ed.). University of Chicago Press.

Kuhn, D. (2012). The structure of scientific reasoning. Educational Psychologist, 47(3), 187–200. https://doi.org/10.1080/00461520.2012.667065

LaBerge, S. (2014). Lucid dreaming: A concise guide to awakening in your dreams and in your life. Sounds True.

Lakatos, I. (1970). Falsification and the methodology of scientific research programmes. In I. Lakatos & A. Musgrave (Eds.), Criticism and the growth of knowledge (pp. 91–195). Cambridge University Press. https://doi.org/10.1017/CBO9781139171434.009

Lutz, A., Slagter, H. A., Dunne, J. D., & Davidson, R. J. (2008). Attention regulation and monitoring in meditation. Trends in Cognitive Sciences, 12(4), 163–169. https://doi.org/10.1016/j.tics.2008.01.005

Mallinson, J. (Trans.). (2018). Haṭhayoga-prakāśa: Illuminating Haṭha Yoga. YogaVidya.

Mallinson, J., & Singleton, M. (Trans.). (2012). Haṭha yoga pradīpika. YogaVidya / Penguin Classics. (Original work published 15th century)

Metzinger, T. (2009). The ego tunnel: The science of the mind and the myth of the self. Basic Books.

Ñāṇamoli, B., & Bodhi, B. (1995). The middle length discourses of the Buddha: A

new translation of the Majjhima Nikāya. Wisdom Publications.

Maguire, E. A., Gadian, D. G., Johnsrude, I. S., Good, C. D., Ashburner, J., Frackowiak, R. S. J., & Frith, C. D. (2000). Navigation-related structural change in the hippocampi of taxi drivers. Proceedings of the National Academy of Sciences, 97(8), 4398–4403. https://doi.org/10.1073/pnas.070039597

Mossbridge, J. A., & Barušs, I. (2017). Transcendent mind: Rethinking the science of consciousness. American Psychological Association.

Murphy, M. (1992). The future of the body: Explorations into the further evolution of human nature. Jeremy P. Tarcher.

Noë, A. (2004). Action in perception. MIT Press.

Nosek, B. A., Ebersole, C. R., DeHaven, A. C., & Mellor, D. T. (2018). The preregistration revolution. Proceedings of the National Academy of Sciences of the United States of America, 115(11), 2600–2606. https://doi.org/10.1073/pnas.1708274114

O'Fallon, T. (2020). States and STAGES: Waking up developmentally. Integral Review, 16(1). https://www.integral-review.org/issues/vol_16_no_1_ofallon_states_and_stages.pdf

Osto, D. E. (2024). Paranormal states: Psychic abilities in Buddhist convert communities. Columbia University Press.

Piaget, J. (1970). Structuralism. Basic Books.

Piaget, J., & Inhelder, B. (1969). The psychology of the child (H. Weaver, Trans.). Basic Books.

Popper, K. (2002). The logic of scientific discovery (2nd ed.). Routledge.

Pregadio, F. (Ed.). (2019). Taoist internal alchemy: An anthology of Neidan texts. Golden Elixir Press.

Radin, D. (2006). Entangled minds: Extrasensory experiences in a quantum reality. Paraview Pocket Books.

Radin, D. (2013). Supernormal: Science, yoga, and the evidence for extraordinary psychic abilities. Random House.

Radin, D. (2018). Real magic: Ancient wisdom, modern science, and a guide to the secret power of the universe. Harmony.

Satchidananda, S. (2012). The yoga sutras of Patanjali (Paperback ed.). Integral Yoga Publications.

Sebeok, T. A. (1980). Animal communication: Techniques of study and results of research. Indiana University Press.

Sheldrake, R., Stedall, T., & Tressoldi, P. (2025). Telecommunication telepathy: A meta-analysis. Journal of Anomalous Experience and Cognition, 5(1), 47–69. https://doi.org/10.31156/jaex.25934

Shermer, M. (2011). The believing brain: From ghosts and gods to politics and conspiracies—How we construct beliefs and reinforce them as truths. Times Books.

Stumbrys, T., Erlacher, D., Schädlich, M., & Schredl, M. (2012). Induction of lucid dreams: A systematic review of evidence. Consciousness and Cognition, 21(3), 1456–1475. https://doi.org/10.1016/j.concog.2012.07.003

Tang, Y.-Y., Hölzel, B. K., & Posner, M. I. (2015). The neuroscience of mindfulness meditation. Nature Reviews Neuroscience, 16(4),

213–225. https://doi.org/10.1038/nrn3916

Trungpa, C. (2007). Cutting through spiritual materialism (Revised ed.). Shambhala. (Original work published 1976)

Vago, D. R., & Silbersweig, D. A. (2012). Self-awareness, self-regulation, and self-transcendence (S-ART): A framework for understanding the neurobiological mechanisms of mindfulness. Frontiers in Human Neuroscience, 6, Article 296. https://doi.org/10.3389/fnhum.2012.00296

Varela, F. J., Thompson, E., & Rosch, E. (1991). The embodied mind: Cognitive science and human experience. MIT Press.

Vernon, D. (2021). Dark cognition: Evidence for psi and its implications for consciousness. Routledge.

von Uexküll, J. (1957). A stroll through the worlds of animals and men: A picture book of invisible worlds (C. H. Schiller, Trans.). Instinctive Behavior.

Vygotsky, L. S. (1978). Mind in society: The development of higher psychological processes (M. Cole, V. John-Steiner, S. Scribner & E. Souberman, Eds.). Harvard University Press.

Walach, H. (2020). Naturalizing religion, spiritualizing science: The role of consciousness research. Journal of Consciousness Studies, 27(7–8), 165–194.

Wallace, B. A. (2007). Contemplative science: Where Buddhism and neuroscience converge. Columbia University Press.

White, D. G. (1996). The alchemical body: Siddha traditions in medieval India. University of Chicago Press.

Wilber, K. (2000). Integral psychology: Consciousness, spirit, psychology, therapy. Shambhala Publications.

Wiseman, R. (2010). “Heads I win, tails you lose”: How parapsychologists nullify null results. Skeptical Inquirer, 34(1), 36–39.

Wong, E. (Trans.). (2004). Seven Taoist masters: A folk novel of China. Shambhala Publications.

Wright, F. (2022). Universifying: A theory, model & practice to birth our emerging world through the meta-crisis [Master's thesis, Antioch University]. Universifying. https://universifying.com/wp-content/uploads/2023/03/Universifying-Masters-Thesis-by-Fionn-Wright.pdf

Wright, F. (2023, March 16). Universifier: An AI-supported full-spectrum developmental ecosystem to evolve regenerative metamodern structures (Teal Paper). Universifying. https://universifying.com/wp-content/uploads/2023/04/Universifier-Teal-Paper_Fionn-Wright.pdf

About the Author

Fionn Wright was born in 1990 and grew up around the world, spending a quarter of his life in Europe, a quarter in Africa, a quarter in North America and a quarter in Asia. He has become a meta-cultural global citizen who feels a sense of responsibility to support a healthy unification of diverse consciousness on Planet Earth.

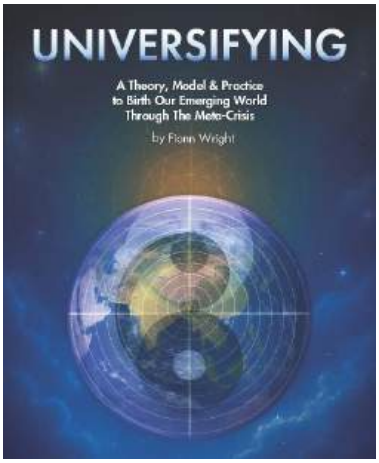
Fionn became known on the streets of Shanghai as an expert in personal development, conscious parenting, and innovative education through his livestreaming in fluent Chinese to over a million viewers, with TV appearances reaching over 100 million views. He's also an award winning documentary producer, serial entrepreneur and keynote speaker, named by City Weekend Magazine as one of the "11 Most Influential Movers & Shakers in Shanghai" – a city of 24 million.

Passionate about education and development, he leveraged his media presence to sponsor his family to live off the grid in a camper for a year to worldschool his own children in the mountains of British Columbia, and presented at hundreds of schools across the world such as the American International School of Mozambique, the Yew Cheng International School and Loreto College and universities such as the London School of Economics, Zhejiang University and University College Dublin, as well as corporations such as Siemens, Roche and Nike. As an integrative coach with an Individualized Masters in Self Design and a PhD candidate in Integral Noetic Science with a specialization in Meta-Theory, he has trained in a variety of modalities including STAGES Coaching, Generating Transformative Change, Leadership Circle Profile, Hakomi Mindfulness-based Somatic Psychotherapy, NLP Master Practitioner, ActionCOACH Business Coaching, Neuroscience for Coaching, Process Facilitation and many more.

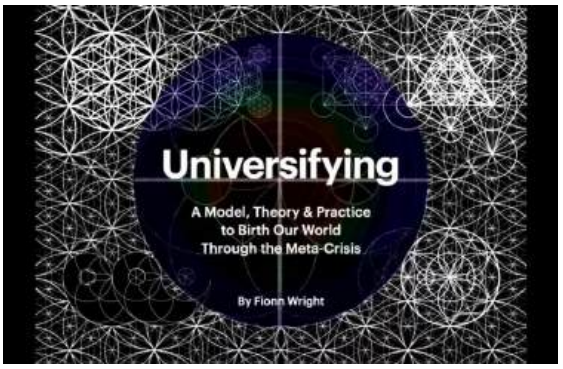
He coaches, advises and consults for leaders in Entrepreneur Organization, Young Presidents Organization and Family Business Network, and leads international teams of world-class practitioners to develop personalized programs for these leaders and their families based on their developmental levels, shadow and a wide range of integrative assessments. He is currently exploring the expansion of our collective leading edge, developing global leadership programs integrating real-time developmental AI, biofeedback, psychedelics, shadow-work, epigenetics and meta-funding models.

As the creator of Universifying — an integrative Meta-Model, Theory and Practice to birth our world through the meta-crisis — Fionn is holding space for an ethically-oriented emergence of a wiser young meta-collective to manifest a global technologically-supported evolutionary meta-ecosystem for us to wake up our awareness, grow up our perspectives, light up our wholeness and show up to regenerate our planet.

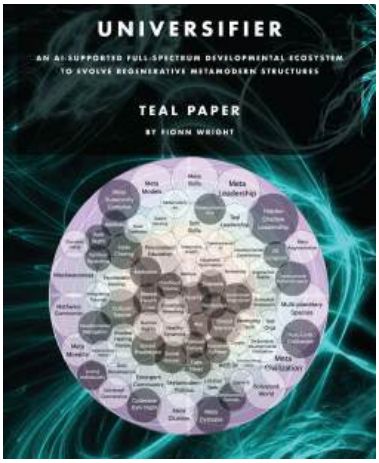
Other Works by Fionn



Universifying: A Meta-Theory, Model and Practice



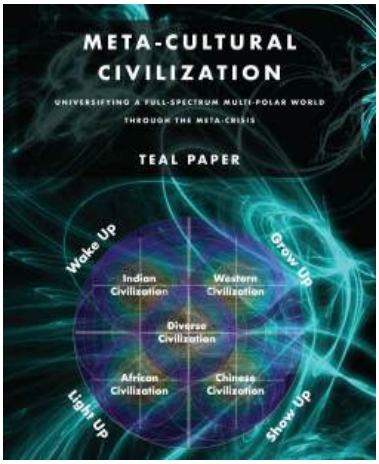
Fionn's Universifying Keynote at What's The Future Integral Conference



Universifier: An AI-Supported Full-Spectrum Developmental Ecosystem

The Soul Of AI: A Conversation with Fionn Wright

The Other Other's Podcast: China Is A Thing – With Fionn Wright



Meta-Cultural Civilization