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Curiosity at Work: A Productive Inefficiency Model

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Abstract

Curiosity is increasingly recognized as consequential for work outcomes including achievement and creativity. Unlike related constructs such as growth mindset and openness, curiosity involves active deviation from familiar paths, inviting workers to slow down, ask additional questions, and entertain multiple possibilities when speed and closure are typically prized. This review positions curiosity as a productive inefficiency, which reflects a force that prolongs decision-making and consumes resources in the short term while enabling vitality, agility, and potential breakthrough solutions over the long term. We review evidence on multidimensional models of curiosity, examine costs and benefits, explore the emerging literature on leader curiosity and curiosity's upward influence, and address assessment advances. We conclude with practical recommendations alongside a future research agenda emphasizing temporal dynamics and interventions. Throughout, we argue that managing curiosity effectively requires treating it as a strategic tool to be budgeted rather than a universal good to be maximized.



WHY CURIOSITY MATTERS AT WORK

Curiosity is far more consequential to the vitality of organizations than its reputation as a merely desirable trait suggests. At its core, curiosity is the intrinsic desire to seek out and engage with novel information and experiences (Markey & Loewenstein 2014, Silvia & Kashdan 2009). In workplace contexts, this motivational state translates into productive behaviors such as asking probing questions, exploring tangential paths, seeking out unfamiliar perspectives, and gathering additional information before decision-making. Curiosity is a psychological strength (Sheldon et al. 2015) because it orients people toward information that reduces uncertainty, sharpens their predictions, and supplies raw material for future achievements. A curious mindset is therefore useful for individuals, teams, and organizations navigating challenges or staying competitive in fast-changing environments. While the behaviors of curious individuals are beneficial, they do carry costs. Taking time to figure things out or ask questions slows down decision-making, consumes energy, and delays output. The evidence reviewed here suggests these costs may be prerequisites, the downpayment as it were, for how curiosity creates value over the longer term.

The documented benefits of curiosity are wide-ranging. Meta-analytic evidence synthesized by von Stumm et al. (2011) across multiple independent samples ($N > 70,000$ students) demonstrated that intellectual curiosity (operationalized as typical intellectual engagement) showed a corrected meta-analytic correlation of 0.33 with academic performance, compared to 0.39 for general intelligence. In their best-fitting path model accounting for 25.7% of variance in academic performance, intelligence emerged as the strongest individual predictor ($\beta = 0.35$), while curiosity and conscientiousness each contributed independently ($\beta = 0.20$), such that their combined effect rivaled that of intelligence. Longitudinal research tracking individuals across 11 years found that sustained interest, curiosity's expression within self-chosen activities, explained 83% of the variance in income, 33% in occupational prestige, and 35% in college completion rates (Rounds & Su 2014). These findings tie curiosity to established predictors of success, which points to its generative potential in organizations and careers.

Although correlations between curiosity and desirable outcomes are well-documented, causal evidence from controlled longitudinal studies remains limited. Addressing this gap, researchers tested whether a smartphone-based intervention designed to promote daily curiosity-relevant behaviors could shift trait-level curiosity over three weeks (Gross & Schooler 2025). App users showed significant increases in perceptual curiosity, creative behavior, and meaning in life relative to a waitlist control. Participants who received an additional mindful curiosity component showed the broadest gains, including reduced boredom proneness and increased mindful awareness. These findings provide evidence that trait curiosity is malleable through targeted practice and can act as a gateway strength for other healthy traits and life outcomes.

Curiosity also helps people in situations where most workplaces train people to protect themselves, such as when a mistake is made. Across multiple studies using tasks with immediate feedback, errors that violate a person's expectations, especially high-confidence errors, reliably elicit surprise followed by curiosity. Feeling curious is positively associated with subsequent exploration, in contrast to other positive emotions such as pride (Vogl et al. 2019, 2020). Curiosity was more strongly tied to the error signals (i.e., when something went wrong) than to success. Thus, under the right conditions, errors, mistakes, and failures do not make people retreat if curiosity is present; rather, these conditions make them investigate. That investigative pattern is a psychological ingredient for success, particularly when problem-solving depends on the capacity to adapt to new information.

Appreciating the value of workplace curiosity requires recognition of its cognitive functions. Curiosity operates as an attention allocation mechanism, helping individuals direct their limited

cognitive resources toward information that matters (Wojtowicz & Loewenstein 2020). When distraction is a widespread liability, directing attention toward investigation is central to organizational performance. The behavioral expression of curiosity, to search for knowledge-building opportunities, serves a purpose. By providing an automatic signal about where to redirect mental resources, curiosity directs attention without the kind of deliberate cost-benefit analysis that normally consumes those same attentional resources. This explains why curious employees often notice ways to expand knowledge and skills that laser-focused colleagues miss (e.g., Zada et al. 2023), and why organizations benefit from having workers whose attention naturally gravitates toward anomalies and possibilities.

Even after acknowledging the benefits of curiosity, literature often ignores the costs. In this review, we organize the growing literature on workplace curiosity around a central framework with curiosity characterized as a productive inefficiency. This framing captures curiosity's apparent short-term detours as costs that serve as seeds for future creativity and adaptation. Our guiding questions for this review are, How does curiosity help and hinder individuals, teams, and organizations in dynamic work environments? And under what conditions can organizations best leverage the benefits of curiosity, while mitigating potential costs?

As a roadmap for readers, we first distinguish curiosity from the constructs it is most often confused with and then introduce a framework with four dimensions of workplace curiosity and the distinct trade-off associated with each. We show how curiosity integrates with established organizational theories and how it builds knowledge in these areas. From there we turn to the empirical literature on workplace outcomes and the conditions that influence when curiosity's inefficiency pays off, followed by the use of curiosity as a tool for influence, teams, leadership, and creativity. We then examine how curiosity is measured before closing with a future research agenda. The through line is that curiosity is of greatest value when its costs are spent deliberately.

DISTINGUISHING CURIOSITY FROM ADJACENT CONSTRUCTS

Science requires precision. We begin by differentiating curiosity from conceptually related constructs commonly applied in organizational psychology. **Table 1** summarizes key distinctions between curiosity and several well-studied characteristics: growth mindsets, learning goal orientation, promotion focus, openness to experience, intellectual humility, need for cognition, tolerance of uncertainty or ambiguity, and psychological safety. Growth mindset reflects the belief that abilities are malleable through effort, a cognitive orientation toward self-improvement (Dweck 2006). Learning goal orientation involves preferences for skill development versus demonstrating competence (VandeWalle 2001). Similarly, a promotion focus, from regulatory focus theory, incites a motivational orientation toward growth, advancement, and accomplishments (Higgins 1998). Openness to experience represents broad receptivity to novelty across aesthetic, imaginative, and intellectual domains (McCrae & Costa 1997). Intellectual humility captures a willingness to consider opposing viewpoints (Porter & Schumann 2018, Porter et al. 2022). Need for cognition describes enjoyment of effortful thinking (Cacioppo & Petty 1982). Tolerance of uncertainty (Sorrentino et al. 1992) and ambiguity (Furnham & Marks 2013, Merrotsy 2013) captures individual differences in the preference for maintaining clarity. Psychological safety is the held belief that one can take interpersonal risks in a group without fear of punishment (Edmondson 1999).

While together these constructs form a nomological network that describes how individuals orient themselves epistemically, what distinguishes curiosity is its active expression, which manifests behaviorally through seeking and exploring the unknown. We briefly distinguish curiosity



Table 1 The uniqueness of curiosity

Construct	Definition	Key distinction from curiosity
Curiosity	Intrinsic motivation to seek novel information and experiences	Not applicable
Growth mindset	Belief that abilities can be developed through effort and practice	Cognitive belief about personality malleability; does not require active information-seeking behavior
Learning goal orientation	Preference for developing competence by acquiring new skills and mastering new situations	Goal-directed toward mastery; curiosity is exploratory often without predetermined learning objectives
Promotion focus	Motivational orientation toward growth, advancement, gains, and accomplishments	Focus on advancement and progress; curiosity is focused on learning and understanding (which may lead to advancement)
Openness to experience	Broad trait reflecting appreciation for novelty, variety, aesthetics, and liberal values	Passive receptivity to experience; curiosity involves active pursuit of the unknown
Intellectual humility	Willingness to consider opposing viewpoints and recognize the limits of one's knowledge	Responsiveness to presented information; curiosity proactively generates questions and exploration
Need for cognition	Tendency to engage in and enjoy effortful cognitive activity	Enjoyment of thinking deeply; curiosity emphasizes novelty-seeking and gap-closing motivation irrespective of cognitive complexity
Tolerance of uncertainty or ambiguity	A sense of comfort sitting with not knowing something, and often viewing these moments as appealing	Uncertainty tolerance involves being comfortable with, and even preferring, conditions of sustained uncertainty; curiosity reflects a preferred desire to engage in activities that offer potential understanding or resolution about what is interesting
Psychological safety	An organizational or team climate that fosters the shared belief that makes exploration and making mistakes safe	Psychological safety removes some social costs and reduces the fear that pushes against curiosity; curiosity provides the initial pull to explore

from each of its sibling constructs. Growth mindset is a belief about ability malleability; it does not require action. Learning goal orientation directs effort toward predetermined mastery objectives; curiosity explores without a known, fixed endpoint. Promotion focus catalyzes a desire to advance (“I want to progress”); curiosity suspends the need for progress per se, with a focus on learning (“I want to understand”). Openness reflects a receptivity and appreciation of novelty; curiosity involves active pursuit. Intellectual humility responds to information presented; curiosity generates contexts in which new information surfaces. Need for cognition emphasizes enjoyment of deep thought; curiosity emphasizes novelty-seeking and gap-closing motivation that may or may not involve analytical processing. While at least one study suggests minimal discrimination between specific measures of curiosity and need for cognition (Mussel 2010), an individual can experience curiosity over superficial internal thoughts or external stimuli (e.g., whether someone resembles a childhood friend) and anything can be the target of intrigue. This stands in contrast with the limited preference for deep thinking and intense contemplation that defines need for cognition. An orientation to be intolerant of uncertainty and ambiguity reflects a preference for certain situations and excess negative emotions such as fear when in uncertain situations that promote avoidant behavior (e.g., Sorrentino et al. 2009). Perhaps the most common overlapping construct in organizational settings is psychological safety, which is a team or organizational climate that makes

a person feel secure enough to take calculated risks. The presence of psychological safety might reduce barriers to exploration at both individual and collective levels.

In organizational samples, workplace curiosity predicts job satisfaction, work engagement, skill development, job crafting, healthy work relationships, and innovation (Lievens et al. 2022), outperforming trait mindfulness in predictive validity of these outcomes (Kashdan et al. 2020). Other experimental work contrasting related constructs finds that even after accounting for openness to experience, curiosity is what prevents people from being defensive and aggressive toward people who are aggravating (Kashdan et al. 2013); notably, openness to experience had a null relationship with aggressive responses to being provoked. As for comparisons with intolerance of uncertainty, curious people show positive attitudes when in a state of incomplete knowledge, and this includes optimistic expectations that desirable outcomes will arise from information-seeking (e.g., Whitecross & Smithson 2023).

Initial evidence suggests that although growth mindset and curiosity are related (Hutchins & Jirout 2025), only curiosity is positively associated with seeking to accomplish mastery goals. These findings align with existing theory that suggests a growth mindset belief might serve as a precursor to curiosity, which in turn drives proactive, exploratory behaviors (Mendoza & Yan 2025). In some cases, curiosity is the independent variable that predicts related constructs. For example, leader curiosity fosters an environment of psychological safety (which in turn predicts employee voice) (Thompson & Klotz 2022). Notably, in a separate study, leader curiosity was a stronger predictor of employee creativity than psychological safety (Mutonyi et al. 2025).

These findings suggest that curiosity provides scaffolding for workplace success, particularly progress toward mastery goals. More research is needed that directly compares competing constructs to determine their unique value in predicting desirable outcomes. Such basic research can determine which constructs are the strongest, reliable, generalizable predictors, or whether items for related constructs load on a latent curiosity variable, as a way of limiting concept proliferation. A particularly promising direction is whether curiosity can function as a gateway virtue that drives the development of related characteristics such as intellectual humility and creativity. Longitudinal designs are especially well-suited for this question, as they can determine which constructs precede the development of others; a similar approach was recently applied to determine the developmental trajectories and causal associations between purpose and happiness (McKnight et al. 2025). Insights from these research efforts would enable scientists and practitioners to determine ideal targets when considering interventions for organizations.

CONSIDERING CURIOSITY DIMENSIONS, COSTS, AND BENEFITS

Rather than a monolithic trait, curiosity comprises distinct dimensions with unique consequences. The multidimensional workplace curiosity model (Kashdan et al. 2020) identifies four major dimensions: joyous exploration, the pleasure in seeking new information; deprivation sensitivity, the discomfort with knowledge gaps driving persistent search; stress tolerance, the willingness to manage the distress of uncertainty; and openness to people's ideas, an overt interest in diverse perspectives. This structure has demonstrated cross-cultural validity across nine countries (Kashdan et al. 2025b), supporting its applicability to global organizational contexts. Each of these dimensions has benefits and trade-offs, detailed below.

Trade-Offs of Joyous Exploration: Breadth Versus Inefficiency

Joyous exploration facilitates breadth. It leads to diverse information exposure and varied social networks that fuel novel combinations and creative outputs. Research on R&D professionals shows that joyous exploration fosters creative engagement, particularly for engineering and

technology development (Chang & Shih 2019). However, the cost is productive inefficiency. Joyous explorers may pursue tangents without guaranteed returns. This cost can be perceived as a lack of focus by colleagues or teammates. When organizational deadlines loom, the very trait that drives innovation can undermine performance by diverting cognitive and temporal resources away from execution to unnecessary exploration.

Consider the organizational strategy of 20% time, famously used by Google to allow engineers to spend one day a week on side projects. This structural mandate directly incentivized joyous exploration by providing the temporal slack necessary for broad information gathering. While highly inefficient in the short term, diverting thousands of labor hours away from core product maintenance, it facilitated the spontaneous associations that led to Gmail and Google AdSense (Steiber & Alänge 2013). However, as Google matured and market deadlines became more rigid, the productive inefficiency of this policy was eventually scaled back. This illustrates that the utility of joyous exploration is highly contingent on temporal slack. In high-pressure environments, the exploratory drive of joyous exploration often clashes with the immediate demands of the production cycle.

Trade-Offs of Deprivation Sensitivity: Depth Versus Premature Closure

Deprivation sensitivity produces investigative depth. Within the dual pathway model of creativity (Nijstad et al. 2010), joyous exploration maps onto flexibility (diverse idea generation), while deprivation sensitivity maps onto persistence (sustained effort on difficult problems). However, the cost of deprivation sensitivity is attentional fragmentation and premature closure. Because deprivation sensitivity is driven by an aversive need to know, it can lead to satisfaction of search errors, which is a phenomenon where the discovery of one solution causes an individual to stop searching, even if other, better solutions remain (Biggs & Mitroff 2014, Fleck et al. 2010). This is essentially a form of satisficing (Simon 1956) driven by the desire to alleviate the psychological tension of the gap rather than an exhaustive search for truth.

Consider an individual high in deprivation sensitivity searching for information on a particular health symptom. During their search they may come across a clickbait title “Doctors are shocked by this one weird trick.” The unresolved information gap caused by the headline would be particularly seductive to such an individual. Those high in deprivation sensitivity are more likely not only to click and read this content but also to accept and be satisfied with the information they receive from it. In sensationalized or uncertain environments, the deprivation-driven need to know can undermine a more thorough and critical process of discovery.

Research suggests that individuals high in deprivation sensitivity are more likely to believe and share fake news (Zedelius et al. 2022). The drive for resolution at the expense of critical thinking explains why deprivation sensitivity predicts higher receptivity to inaccurate information. The itch for an answer overrides the discernment required for due diligence.

Trade-Offs of Stress Tolerance and Openness: Resilience Versus Time

Stress tolerance enables engagement with novel challenges that others avoid, allowing individuals to remain curious when situations become uncomfortable. Openness to people’s ideas enables relationship formation and trust-building through genuine interest in colleagues’ perspectives. The cost of these dimensions is extended interaction time. Socially curious individuals, who possess high openness to other people’s ideas and the stress tolerance to handle the friction of divergent views, engage in longer conversations, and prolong conflict resolution through the collecting of multiple perspectives before making decisions (Bolino et al. 2024).

Consider the onboarding process for a new cross-functional team lead. A lead high in openness to people's ideas and stress tolerance may prioritize deep, qualitative listening tours to understand the diverse perspectives and hidden tensions within the group. While this builds high levels of trust and social capital, it can result in a slow start compared to a lead who prioritizes efficiency and rapid decision-making. The socially curious leader may prolong the initial phases of a project by inviting dissenting opinions and exploring uncomfortable truths that others prefer to avoid (Kashdan & Roberts 2004). This relational investment is often viewed by time-pressured stakeholders as a drag on momentum, even though it reduces the long-term risk of team fragmentation or groupthink (Packer et al. 2014).

The Affective Synergy of Dimensions

While researchers often isolate these facets to understand their unique contributions (Whitcross & Smithson 2023, Zedelius et al. 2022), real-world success requires their synergy. Deprivation sensitivity provides the motivational push but triggers a concurrent frustration pathway that can cause individuals to rush past slower, thoughtful engagement (Schweitzer et al. 2023). Without joyous exploration or stress tolerance acting as an affective shield, the itch of a knowledge gap might devolve into debilitating anxiety or reckless urgency. In this synergistic model, joyous exploration transforms the tension into a pleasurable challenge, while stress tolerance provides the resilience to sit with the discomfort of not yet knowing.

HOW CURIOSITY OPERATES IN ORGANIZATIONAL SCIENCE

Curiosity integrates readily with major organizational theories and bridges individual psychology and strategic learning. Within the job demands–resources (JD-R) framework (Bakker & Demerouti 2017), curiosity functions as a personal resource (Xanthopoulou et al. 2007). It buffers against workplace stressors, particularly the anxiety of the unknown, and fuels engagement (Kashdan et al. 2020). Empirical evidence suggests that this trait-level curiosity translates into workplace creativity specifically through this heightened engagement, confirming JD-R predictions regarding resource–engagement–outcome chains (Mussel 2013, Xu & Tsai 2025).

This psychological engagement mirrors the exploration–exploitation trade-off central to organizational learning (March 1991). While organizations must exploit existing competencies for efficiency and predictability, they rely on exploration for long-term viability, which is a process that is inherently inefficient. High-curiosity individuals and teams embody the exploration side of this trade-off (Tarba et al. 2020). Their willingness to deviate from established routines in favor of inefficient information-seeking provides the raw material for innovation, though as reviewed later, the payoff of this positioning depends heavily on the environmental pressure for novelty versus execution.

Curiosity arises from several overlapping psychological mechanisms whose interplay determines when curiosity persists and when it is extinguished. The first is the information gap (e.g., Litman 2005, Loewenstein 1994). Curiosity is triggered when a person notices a discrepancy between what they know and what they want to know. This response tends to follow an inverted U-shaped curve where individuals are most curious about information they have moderate familiarity with (e.g., Kidd & Hayden 2015), as opposed to novice or expert knowledge. The second is the drive for sense-making, when a curious person seeks to organize information into a coherent story that supports prediction and action (Chater & Loewenstein 2016, Weick 1995). The third is rational attention allocation, when curiosity functions as a strategy for sampling an experience when the expected learning value is high relative to cost (Dubey & Griffiths 2020, Wojtowicz & Loewenstein 2020). And the fourth is coping potential. The cognitive appraisal perspective on

curiosity (Silvia 2005, 2008) suggests that curiosity arises when individuals view situations as simultaneously novel (high novelty potential) and manageable (adequate coping potential). This dual requirement explains why curiosity does not lead to exploration under extremely volatile conditions that overwhelm coping capacity; such situations instead can trigger excess anxiety, worry, fear, or confusion. Thus, fostering workplace curiosity requires opportunities for both novelty and challenge, while ensuring that the workplace environment supports the psychological resources necessary to engage with it. We return to intervention implications in subsequent sections.

CURIOSITY INFLUENCES THE DEVELOPMENT OF INTELLIGENCE

Psychometric research often treats curiosity and general intelligence as separate predictors of organizational success. A productive inefficiency framework suggests an integrated relationship with roots in theories of adult intellectual development. Cattell's (1987) investment theory held that crystallized intelligence, a person's accumulated storage of knowledge and skill over a lifetime, forms as fluid intelligence is invested in learning over time. The process, personality, interests, and knowledge theory (Ackerman 1996) extended this idea by specifying that personality traits and passionate interests govern when, where, and how much people invest their cognitive resources, and that this sustained investment is what builds domain knowledge throughout adulthood. A meta-analysis of this literature found that investment traits, including intellectual engagement and epistemic curiosity, predict adult intellect, with the strongest associations appearing for crystallized rather than fluid intelligence (von Stumm & Ackerman 2013). In this tradition, it would be a misunderstanding to construe curiosity as a rival to intelligence. Curiosity is one of the dispositions that converts cognitive capacity into knowledge.

We position curiosity as a primary behavioral expression of psychological investments over the human lifespan. Curiosity supplies the wide-ranging environmental sampling described in Campbell's (1960) model of blind variation and selective retention. By exploring when the immediate payoff of information is not yet apparent, curious individuals encounter a larger and more varied set of mental elements, which raises the probability of forming the chance configurations that later combine to solve novel problems (Simonton 1988). Curiosity directs fluid resources toward challenging material and sustains the incidental learning through which expertise accumulates. This clarifies a finding that is easy to misread. In the meta-analytic evidence introduced earlier, intellectual curiosity and conscientiousness each predicted academic performance, and their combined contribution rivaled that of intelligence, which is why curiosity has been called the third pillar of academic performance alongside ability and effort (von Stumm et al. 2011). Academic performance is a downstream outcome in that work. Curiosity is essential because it populates the knowledge base that intelligence later retrieves and applies, and because it keeps doing so long after formal schooling ends.

Investment theory explains accumulation across years. It says less about why curiosity is triggered in one uncertain moment and disengages in another. In computational accounts (Poli et al. 2024), curiosity tracks the degree to which new evidence updates one's model of the world (information gain) and the rate at which prediction errors fall over time (learning progress). Uncertainty alone is an unsatisfactory indicator because attention sometimes locks onto situations where no learning can occur. Curiosity instead intensifies while learning is happening and drops when the environment offers no reduction in uncertainty. Behavioral evidence supports this view. Participants exploring probabilistic environments stayed engaged while they were learning a situation and disengaged once it was mastered or proved unlearnable (Ten et al. 2021). In mice, midbrain dopamine release depends on the rate of learning rather than the level of predictability, which

suggests that the neural machinery of curiosity is tuned to progress rather than to uncertainty itself (Coddington et al. 2023). For the psychology of work, this points to curiosity as a self-regulatory mechanism that concentrates effort where learning is viewed as achievable.

Rather than a simple on-off switch, curiosity tracks the gradient of a person's own improvement. It is sensitive to the rate at which unknowns become known and initial deficits turn into competence. This has concrete implications for job design. Tasks that provide no progress feedback disconnect the learning signal that sustains curiosity, leaving effort expended without forward momentum (Amabile & Kramer 2011). Tasks that provide even modest signs of progress can sustain curiosity over long timelines. This helps explain why some objectively complex jobs (opaque bureaucracies, projects with invisible impact) drain curiosity while simpler jobs with clear feedback (direct customer contact, hands-on prototyping) often preserve it.

Organizations often accidentally erect unwarranted barriers that prevent regular, deep curious exploration. They hire people with curious minds but then build feedback systems that teach those minds to shut down (Argyris 1957). They reward fast answers, penalize unnecessary questions, and offer either minimal feedback or nothing of use to subsequent improvement. Curiosity remains an underused strength in individuals, teams, and organizations. These trends can be reversed, starting with insight into why and how curiosity is worth its psychological and social expense.

EMPIRICAL EVIDENCE ON WORKPLACE OUTCOMES

The clearest evidence that curiosity changes work outcomes might come from research showing the specific cognitive and emotional mechanisms that account for workplace performance. Three categories of evidence are particularly informative: direct effects of curiosity on creative output, mediated pathways that reveal what people feel and do when curious, and identification of the information-processing styles that distinguish curious from less curious workers.

The most straightforward test examines whether workplace curiosity predicts creative outcomes when other factors are controlled. A study of workers across 188 job titles found that work-related curiosity positively predicted worker innovation, with divergent thinking partially mediating this relationship (Celik et al. 2016). Norwegian hospitality employees showed creative performance gains when their leaders modeled curious behaviors (Mutonyi et al. 2025), which suggests that curiosity's benefits extend beyond individual traits to social contagion.

More revealing are studies that trace the mechanisms through which curiosity generates creative output. Research with United Arab Emirates public sector employees demonstrated that both interest-type and deprivation-type curiosity predicted innovative work behavior through work engagement (Al Bloushi et al. 2024). In a sample of Pakistani knowledge workers, work curiosity predicted employee creativity through the cognitive process of connecting disparate concepts and ideas. Mindfulness moderated this relationship such that curiosity's influence on creativity was amplified among the most curious and mindful employees (Zada et al. 2023). These findings fit the prediction that curiosity drives creativity through acts of sustained attention and conceptual integration rather than through raw motivation.

The most distinctive evidence comes from what information curious individuals pursue, and how they pursue it. Intrinsic to definitions of curiosity is the value of noninstrumental information, defined as information that has no tangible or immediate relevance or value (Gottlieb & Oudeyer 2018). Put another way, for curious individuals, information is valued for its own sake (Loewenstein 1994). As a result, information relevance (i.e., to a given task or context) plays a diminished role in the types of information that are pursued, or the motivation behind their pursuit. This characteristic information foraging style has been particularly well-documented in children. For example, curious children are more likely to try alternative options rather than exploit the most



effective one. While this strategy is cost inefficient in the short term, it is predictive of learning and flexibility over time (Blanco & Sloutsky 2024).

A parallel pattern of results has been demonstrated in adults, in which attention to task-irrelevant information has been found to be predictive of an increased likelihood of incidental learning. That is, information that was not the target for the task is better remembered in a follow-up surprise memory test. Converging lines of research show that conditions that foster curiosity lead to increases in incidental learning (Gross et al. 2019, Meliss et al. 2024, Murphy et al. 2021). In a professional setting, a similar strategy was documented in a study of modern dancer groups, whereby the group would use elastic coordination, subdividing to explore divergent ideas rather than simply focusing on rehearsing the existing choreography (Harrison & Rouse 2014). Similarly, researchers found that highly curious professional T-shirt designers asked open-ended questions that allowed them to elicit and explore more ideas from their feedback providers (Harrison & Dossinger 2017). These studies support the basic premise that curiosity broadens the information available for deeper processing, at the expense of focused attention. This incidental information does feed the wider accumulated knowledge base observed in curious individuals (which over longer timescales allows them to draw from a richer information repository) (Zedelius et al. 2022).

The benefits of broad information sampling extend beyond memory and learning to provide inputs for creative activity. Research on irrelevance processing consistently shows that creative individuals attend to seemingly extraneous information that less creative individuals filter out (Agnoli et al. 2015). Studies show that curious individuals engage in idea linking, a sort of cognitive hopscotch where they used one idea as a springboard to another to be more creative (Hagtvedt et al. 2019). For curious individuals, what looks like distraction in the moment later enables the creative connections that would be unlikely to be discovered through step-by-step thinking.

In some environments, curiosity is a lever that multiplies skill. In others it magnifies conflict and distraction. The most useful empirical work is the kind that makes those boundary conditions explicit. One set of striking findings comes from research showing that curiosity can compete with better judgment. People will sometimes pursue information even when they predict it will feel bad and provide no instrumental benefit. In a series of experiments, participants chose to expose themselves to aversive stimuli, including electric shocks, simply to resolve uncertainty (Hsee & Ruan 2016). In work settings, this helps explain behaviors that look irrational, like obsessively checking metrics late at night, reading anonymous feedback that cannot be acted on, or entering gossip-related conversations that seem to possess little to no strategic value. Curiosity is not always a rational servant of performance. Yet, the same mechanism can be harnessed toward desirable outcomes. If the mind is wired to pay a premium for resolving uncertainty, leaders can design information environments that guide attention toward knowledge, skill, and wisdom building.

CURIOSITY TRADE-OFFS ADDRESS WHEN INEFFICIENCY BECOMES PRODUCTIVE

In our productive inefficiency framework, curiosity elicits trade-offs rather than a universal positive. By definition, curiosity involves deviation from efficient paths: asking additional questions when existing answers already seem sufficient, exploring tangents when direct routes exist, gathering more information when quick decisions are possible. Each curious act prolongs tasks and spends finite energy, time, and, in some cases, finances. The central question is when these short-term costs yield acceptable long-term returns (detailed in **Figure 1**).

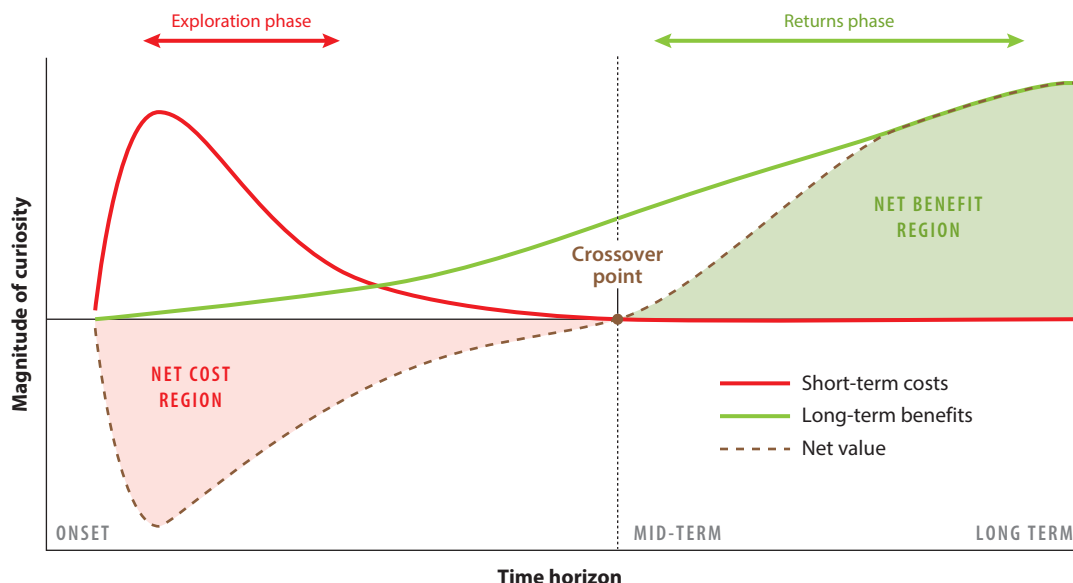


Figure 1

The productive inefficiency curve: a conceptual illustration of curiosity's temporal cost-benefit dynamics. Curiosity's costs are front-loaded; benefits are delayed but cumulative. Short-term costs (*red*) are front-loaded, peaking early as exploration slows decisions and consumes resources, and then declining rapidly. Long-term benefits (*green*) emerge gradually as creativity, adaptation, and knowledge accumulation compound over time. The crossover point marks where cumulative benefits exceed cumulative costs and depends on task complexity, organizational context, and the specific curiosity dimension engaged.

Time Urgency as a Moderator

Time urgency influences curiosity's value. In deadline-driven environments where speed determines success, curiosity's delays become liabilities. When goals are clear, methods established, and outcomes predictable, efficiency wins. However, in exploratory phases, ambiguous problem spaces, or high-uncertainty environments, curiosity's apparent costs convert to investments. Early problem scoping benefits from extended questioning, particularly when the questions posed prior to brainstorming help ensure the problem is accurately defined and understood (Chen 2026). Investing time in asking the right questions early on can prevent wasted time spent pursuing solutions to problems that may not exist or that when reframed reveal simpler, accessible solutions. Ambiguous strategic decisions benefit from considering alternatives that focused analysis might miss. Novel challenges benefit from the diverse knowledge repertoire that curious individuals accumulate.

Efficiency might kill curiosity, but curiosity can enable efficiency, particularly at project inception or during periods when organizations have space for exploration. The exploration-exploitation framework from organizational learning (March 1991) provides theoretical grounding where organizations require both exploring new possibilities and exploiting current capabilities, and the optimal balance shifts with environmental conditions. Stable environments favor exploitation; dynamic environments favor exploration. Curiosity is the individual-level expression of exploration, and acting on this motivation carries parallel trade-offs.

When deadlines loom, curiosity can feel like indulgence, even when it would prevent later errors. In time-urgent contexts, people often default to relying on what is already known, repeating what has worked, and prioritizing speed and closure. The irony is that this is often when curiosity is most valuable because urgent situations usually contain incomplete information.

When there is a sense of urgency to complete a task, long-wandering explorations may be sub-optimal. But microcuriosity can still function. A single diagnostic question can prevent a cascade of bad assumptions. A brief “what are we missing” inquiry can surface hidden constraints. Organizations can institutionalize microcuriosity moments through premortems, quick after-action reviews, and red team challenges, all of which are structured, low-cost ways to surface what a group already knows but has not voiced.

Viewing Curiosity as a Problem in Practice

A puzzling disconnect characterizes organizational attitudes toward curiosity. Leaders espouse its value in principle yet frequently react adversely when employees display it in practice. This friction often stems from a coding error where a colleague’s intent to understand is misread as an intent to evaluate or challenge. While curiosity is often framed as a pillar of psychological safety (Edmondson 1999), questioning can inadvertently expose ignorance, reveal latent mistakes, and undermine professional confidence.

This miscommunication is most acute in cultures of expertise or high power distance environments. In these settings, asking questions can violate a competence protocol where the unspoken rule is that high-status individuals should already possess relevant solutions. Consequently, curiosity is often perceived as insubordination (Kashdan 2022, Thompson et al. 2023). Research indicates that the severity of this backlash is moderated by an employee’s political skill. Those who navigate organizational dynamics skillfully can express curiosity without triggering defensive reactions from leadership.

Tragic historical evidence of this dynamic is found in aviation. The series of Korean Air accidents in the late twentieth century was largely attributed to a culture of radical compliance and mitigated speech (Helmreich 1994). In high power distance index cultures, junior officers suppressed clarifying questions or failed to challenge a captain’s erroneous decisions to protect the social hierarchy. Curiosity was sacrificed to preserve status, leading to catastrophic system failures.

The subsequent intervention, crew resource management, focused on mandates for assertive questioning and the adoption of a common language (English) to decouple inquiry from insubordination. By normalizing curiosity as a life-saving redundancy, the airline effectively flattened the hierarchy during flight phases, allowing for the productive inefficiency of questioning that prevents errors.

CURIOSITY AS A TOOL FOR INFLUENCING AND PERSUADING

In environments dominated by a promotion orientation, where eagerness and aspirational goals drive speed (Higgins 1998, 2002), the curious employee is often labeled as difficult or slow. However, these curious individuals are a prevention-oriented counterweight. By exploring multiple possibilities and sitting with the discomfort of not yet knowing, they reduce the risk of catastrophic mistakes that a pure promotion-focused culture might overlook. The backlash they face, including defensiveness, sarcasm, or subtle retaliation, is often a group-level mechanism used to restore certainty and momentum at the expense of accuracy.

The disruption curiosity causes to group cohesion is often a function of team maturity. In fragile teams, curiosity may be perceived as disloyalty, and in overconfident ones, as negativity. To mitigate this, the delivery of curiosity must be strategically shaped.

Curiosity framed as shared problem-solving reduces perceived threat. Questions that acknowledge collective effort, clarify intent, and invite joint exploration are functionally distinct from those that resemble cross-examination. Leaders can reduce backlash by modeling curiosity about their own assumptions, which signals that questions are tools for collective navigation rather than evaluation.

Curiosity can be deliberately triggered and strategically deployed as a behavioral lever. One of the largest randomized field experiments on curiosity (116,772 observations) demonstrated that curiosity lures, or incentives that pique interest but deliver closure only upon choosing a desirable option, can redirect behavior from “want” options (tempting but unproductive) toward “should” options (normatively desirable) (Polman et al. 2022). Whether increasing stair usage by 9.8% via trivia placards or boosting produce purchases in grocery stores by 10%, the mechanism remains consistent: creating a closable information gap that demands resolution.

The power of curiosity extends beyond simple preference shifts to overcoming deeply ingrained psychological barriers. In decision science, curiosity has been shown to override regret aversion (Van Dijk & Zeelenberg 2007). In experimental settings, providing even a single descriptive hint about an unknown package increased participants’ willingness to forgo a certain monetary reward from 33% to 70%. The information gap demanded closure even when the rational choice favored certainty.

Curiosity can also counteract the defensive tendency to avoid threatening information. Recent work by Horn et al. (2024) reveals that priming curiosity can bypass the psychological auto-shield people use to ignore useful but uncomfortable health data. By framing information not as a threat to the self but as a puzzle to be solved, curiosity diminishes the anchors that keep individuals tied to the familiar and the safe.

Perhaps the most sophisticated strategic use of curiosity is found in interpersonal influence. When Harrison & Dossinger (2017) observed designers seeking peer feedback, the most curious ones deployed structurally different questions. They threw open the frame by asking, “What do you think of this?” or “What would you do with this prototype?” These broad invitations let peers engage from multiple angles, generating richer, less predictable responses. Less curious designers narrowed the aperture to near-uselessness with statements such as “Should I make this blue?” or “Does this feature make this idea better?” While in the same interaction with the same ostensible goal, wildly different yields emerged with open-ended, generative conversational conditions where other people wanted to give them more.

Individuals tend to underestimate the interpersonal value of asking questions. When individuals ask more questions, particularly open-ended follow-up questions, they are reliably viewed more favorably by conversational partners. Yet, the same research found that individuals consistently fail to anticipate this effect (Huang et al. 2017). A common concern is that curiosity-driven inquiry may slip easily into intrusiveness or nosiness. The consistency of the results across participants and contexts suggests this concern is largely unfounded.

Conversational receptiveness, the use of language to demonstrate genuine engagement with opposing views, turns out to predict trust, willingness to collaborate, and even persuasiveness (Minson & Chen 2022, Yeomans et al. 2020). In contentious policy discussions among government executives, those rated highest on receptiveness (by their partners and by a machine-learning algorithm, though not by their own self-assessments) were the people others wanted on their team, trusted to make complex decisions, and chose to represent their organization (Yeomans et al. 2020). Strangely, the most receptive people did not know they were being receptive. It operated beneath conscious strategy.

When using the language of receptiveness during a disagreement, a partner notices that someone is tracking the argument, reflecting it back, and asking for elaboration. With these acts, it is far harder to write off a person as hostile or irrational. Receptiveness breeds reciprocity. In a 2024 study across multiple experiments, receptiveness transmitted between disagreeing parties created a virtuous cycle that bridges ideological conflict and improves evaluations not just of the individual being receptive but of their entire political group (J.A. Minson, M. Yeomans, H.K. Collins, C.A. Dorison & F. Gino F. article).

In three studies, including two preregistered randomized controlled experiments, researchers found that people consistently underestimate how open-minded and intellectually humble their own political party members are (Kashdan et al. 2025a). Liberals and conservatives both carry the same assumption that their side is more closed off than it is. This is a misperception about the ingroup, not the outgroup, and it matters because perceptions of ingroup open-mindedness were positively correlated with every dimension of political curiosity measured. People who believed their fellow partisans valued diverse views and were willing to update their beliefs reported more joyous exploration, more social curiosity, and stronger motivation to learn rather than persuade in political conversations.

To correct misperceptions about their allies, participants completed a wise intervention that is best framed as a brief, theory-guided strategy that improves the psychological experience that people adopt for themselves, other people, or the situation they are in (Walton 2014). In our study, participants learned that their political ingroup was more open-minded than they had assumed, read personal stories from peers that reinforced this, and then wrote their own letter to a future participant offering advice on navigating political disagreements. The self-persuasion component mattered. Making people feel like helpers rather than subjects is one of the more reliable findings in behavior change research (Eskreis-Winkler et al. 2018). The results across both experiments were that the intervention increased social curiosity, boosted motivation to learn in political conversations, produced a direct effect on openness to diverse viewpoints in the replication study, and survived stringent comparison conditions designed to rule out the possibility that merely discussing politics was driving the change, and they operated identically for Democrats and Republicans.

What ties these lines of research together is the social transmission problem. Curiosity spreads between people (Dubey et al. 2021), but so does its absence. When social environments signal that exploration is unwelcome and that closed-mindedness is the norm, individual curiosity dissipates. People systematically underestimate their conversation partner's desire to learn from them, and this misperception creates a self-fulfilling prophecy of defensive, unproductive conflict (Collins et al. 2022). The barriers to curiosity in disagreement are perceptual. People are more ready to engage than we give them credit for. The intervention is to remove the false beliefs that are suppressing curiosity that was there to begin with.

CURIOSITY IN TEAMS AND LEADERSHIP CONTEXTS

Research on curiosity in organizations has primarily examined individual-level effects, but emerging work illuminates team and leadership dynamics. Across four studies with leader-follower dyads, leaders who displayed curiosity behaviors such as asking questions, acknowledging what they do not know, and seeking new information enhanced followers' psychological safety and subsequent use of voice (Thompson & Klotz 2022). Benefits were notably stronger for followers of male leaders, consistent with social role theory. Men who display communal behaviors like curiosity violate gender-based expectations, which increases positive attributions. Data from 23 Chinese organizations extended these findings to team climates and member behaviors in ways that mirror individual-level outcomes, showing that leaders higher in joyous exploration produced teams with greater promotion-focused motivation. That is, teams maintained aspirational, approach-oriented goals focused on growth rather than loss aversion (Ma 2023). This benefit was specific to the joyous exploration dimension, whereas leader deprivation sensitivity did not produce benefits, suggesting dimension-specific pathways from leader curiosity to team outcomes.

At executive levels, CEO curiosity fosters innovation-oriented climates that permeate organizations (Liu et al. 2023). Using survey data from 563 Chinese firms, researchers found that CEO

curiosity positively influenced firm innovation via the extent to which CEOs seek information and ideas beyond the boundaries of their organization. Organizational inertia weakened both the direct effect of CEO curiosity on boundary-spanning searches and its indirect effect on firm innovation, suggesting that even curious CEOs face structural constraints that can dampen innovation outcomes. This young research program leaves substantial room to study the downstream effects of leadership curiosity and the moderators and mediators.

As important as downstream effects may be, we are aware of the upstream effects as well. Research has predominantly examined downward flows or how leader curiosity affects followers. Yet subordinate curiosity also shapes leader behavior through upward influence processes. When employees ask probing questions, leaders face a choice to engage openly, potentially revealing uncertainty, or to react defensively (Minson & Chen 2022). If a subordinate lacks the necessary political skill, their curiosity can be perceived by leaders as insubordination or a challenge to their authority (Thompson et al. 2023). These conditions may lead managers to deflect or react negatively, potentially suppressing the voice of minority members and removing opportunities for divergent ideas (Bolino et al. 2024). However, when managed effectively through pliable guidance, subordinate curiosity can facilitate feedback loops that improve creative work (Harrison & Dossinger 2017).

The upward flow question deserves systematic attention. Subordinate curiosity may enhance leader effectiveness by surfacing information leaders lack and identifying problems leaders miss. Alternatively, it may threaten leader identity when questions challenge competence or authority. Boundary conditions likely include leader secure versus defensive attachment style, organizational power distance norms, and relationship quality between leader and follower. We flag this as a priority for future research.

CURIOSITY-CREATIVITY RELATIONSHIP AS AN ILLUSTRATION OF BOUNDARY CONDITIONS

Conventional wisdom holds that curiosity fuels creativity, and meta-analytic evidence supports a positive relationship (Schutte & Malouff 2020). However, this global association obscures important nuances. Creativity emerges from particular configurations of curiosity types, team compositions, organizational supports, and temporal conditions.

Creativity requires alternating phases of divergence (generating possibilities) and convergence (selecting and refining solutions). Curiosity dimensions differentially serve these phases: Joyous exploration supports divergence through broad information gathering and spontaneous associations. These requirements are supported by findings showing that, at the trait level, joyous exploration predicts creative output most reliably (Koutstaal et al. 2022). However, at the state level, deprivation sensitivity may provide the necessary focus and persistent problem-solving until closure of knowledge gaps or solutions to the problem. In one of the few experimental demonstrations of the curiosity-creativity connection to date, the induction of deprivation curiosity led to more creative thinking on a subsequent, related task (Hagtvedt et al. 2019). Teams optimally composed for creativity may balance members high in different curiosity dimensions, ensuring both divergent generation and convergent resolution.

Curious people appear to value the process of discovery, which goes beyond attaining desirable outcomes. Research using an evolving line drawing task, where participants watched ambiguous images gradually resolve into recognizable objects, revealed that higher curiosity predicted choosing to continue watching even when immediate resolution was available, that is, even when participants could skip directly to seeing the final answer (Hsiung et al. 2023). Across two studies with more than 2,000 participants, this pattern held regardless of whether stopping meant

forgoing resolution entirely or jumping immediately to the answer. This finding challenges theoretical accounts of curiosity as a drive to eliminate uncertainty as quickly as possible (e.g., Loewenstein 1994). Instead, curiosity appears to raise the value of watching information unfold, not only of reaching the answer. For creative work, this suggests curious employees may be more willing to tolerate the extended, uncertain middle phases of creative projects where outcomes remain unclear but the process of discovery itself provides engagement. Organizations seeking sustained creative effort might attend not only to whether employees are curious about outcomes but also to whether workplace structures permit the exploratory process that curiosity seems to value.

Boundary conditions matter, as jealousy can poison curiosity's creative benefits when team members compete rather than collaborate. Siloing prevents knowledge transfer that curiosity generates. Time horizons that rarely permit incubation cut short the delayed returns that justify curiosity's immediate costs. Mapping the full set of enabling conditions is ongoing work, but available evidence (Edmondson & Lei 2014, Hülsheger et al. 2009) suggests that curiosity's positive impact on creativity emerges most often when risk-taking and cross-silo knowledge flow are not just tolerated but welcomed.

The emerging research on how task characteristics moderate curiosity-creativity links deserves further attention. Initial evidence suggests that task variety and task specialization moderate how work curiosity translates to innovation performance in high-tech industries (e.g., Chang & Shih 2019). Engineers facing varied, nonroutine tasks benefit more from curiosity than those performing specialized, routine work. This pattern aligns with broader arguments that curiosity's value depends on environmental demands for adaptation versus execution.

Recent evidence calls for revising the traditional view of curiosity as purely intrinsic motivation. Research across multiple experiments demonstrates that perceived usefulness directly stimulates curiosity and subsequent information-seeking (Dubey et al. 2022). When participants read about scientific topics framed as medically relevant (high personal usefulness), they reported significantly greater curiosity and searched for more follow-up information compared to identical content framed as academically interesting but practically irrelevant. The effect was not reducible to general interest or surprise. Simply presenting fascinating facts without usefulness framing failed to boost curiosity. In organizational settings, this can be seen in studies of newcomers that showed that curiosity helped predict newcomers' ability to gather useful information that aided them in their onboarding (Harrison et al. 2011). Training programs, onboarding, strategic initiatives, and innovation challenges may trigger more exploratory engagement when their practical stakes are made explicit rather than assumed. A project described as potentially transforming customer experience will likely generate more curious investigation than one described as technically elegant.

Usefulness effects extend beyond personal benefit to social and collective value. Participants demonstrated heightened curiosity about information described as beneficial to society broadly (Dubey et al. 2022). For workplace contexts, these findings suggest that framing organizational challenges in terms of broader impact (how solving this problem benefits customers, communities, or future employees) may amplify the curious engagement that fuels creative solutions. Purpose-driven organizations may hold an advantage in eliciting workforce curiosity because the usefulness of their work to others is already salient.

ASSESSING WORKPLACE CURIOSITY

Self-Report Approaches

Early workplace curiosity research suffered from measurement limitations including unidimensional scales capturing global curiosity or scales developed in nonwork contexts applied to

organizational settings. Recent advances address these limitations such as the multidimensional workplace curiosity scale (Kashdan et al. 2020), mentioned earlier. The scale's dimensions, joyous exploration, deprivation sensitivity, stress tolerance, and openness to people's ideas, show discriminant validity from each other and from related constructs such as trait mindfulness, while predicting meaningful workplace outcomes including job satisfaction, work engagement, job crafting, healthy work relationships, and innovation (also see Mussel 2013).

Assessment approaches must also account for individual differences in how curiosity operates. Recent research reveals that curiosity's relationship to information-seeking varies systematically across the lifespan (Swirsky & Spaniol 2024). In studies involving 514 adults, curiosity predicted information-seeking behavior more strongly for older workers than younger workers, suggesting that curiosity may gain motivational potency with age. Equally important, the factors that stimulate curiosity differ across age groups. Younger adults showed curiosity triggered primarily by personal relevance and low-popularity cues (using social signals to identify what not to pursue). Older adults demonstrated greater curiosity in response to high-popularity cues and information framed as socially or collectively valuable. These patterns have direct implications for how organizations might differentially frame learning opportunities, innovation challenges, or knowledge-sharing initiatives for multigenerational workforces. Highlighting collective benefit and social validation may more effectively spark curiosity in experienced employees, while emphasizing personal relevance and unexplored territory may better engage early-career workers.

For practitioners, these measurement advances enable the assessment of individual curiosity profiles for development planning, composing teams with complementary curiosity dimensions, evaluating intervention effectiveness, and diagnosing organizational curiosity climates. We caution against using curiosity measures for high-stakes selection decisions given limited evidence on adverse impact and potential for motivated distortion on self-report measures. Development and climate assessment represent more defensible applications given current evidence.

A consideration for global organizations is whether curiosity translates across diverse cultural frameworks. Recent large-scale research has addressed this by establishing measurement invariance for the workplace curiosity model across nine countries: the United States, Germany, Australia, Chile, China, Israel, Japan, Portugal, and Turkey (Blanco-Donoso et al. 2025, Kashdan et al. 2025b, McKnight et al. 2025).

In practical terms, this means not only that the four-factor structure of curiosity is consistent across Western, Eastern, individualist, and collectivist societies but also that the individual items are interpreted with the same meaning and weight regardless of cultural context. For global HR practitioners, this suggests that the curiosity profiles of an R&D team in Tokyo can be meaningfully compared to those of a marketing team in Berlin or New York, facilitating standardized development across global talent pipelines.

For practitioners, these measurement advances enable the assessment of curiosity profiles for development planning and the composition of teams with complementary dimensions (e.g., balancing joyous exploration with deprivation sensitivity). However, we advocate for defensive applications. Given the potential for motivated distortion on self-report measures and limited evidence regarding adverse impact in high-stakes hiring, these tools are best used for climate assessment and individual development rather than selection.

Behavioral and Non-Self-Report Approaches

Self-report scales capture how people characterize their own curiosity, which is useful but vulnerable to limited insight and motivated distortion. Behavioral and observational methods can complement these scales by capturing curiosity through what people visibly do.



Laboratories use trivia anticipation tasks where participants rate their curiosity about an answer and then reveal whether they will spend a scarce resource to access it. Curiosity ratings follow an inverted-U shape as more curious participants spend more limited tokens or wait longer to see answers, allowing willingness to pay to serve as a behavioral index (Kang et al. 2009, Marvin & Shohamy 2016). The cost people will absorb to feel curious can be substantial. In some studies participants accept the risk of mild electric shock for the chance to resolve a trivial uncertainty (Lau et al. 2020). Perceptual versions of the same logic use blurred images that gradually sharpen, where the effort spent seeking the clear version tracks the triggering and satisfaction of curiosity (Jepma et al. 2012).

Decades ago, researchers observed classroom curiosity through students' spontaneous question-asking and verbal participation (e.g., Gopnik 2020, Peters 1978). The workplace analog is largely untapped. Questions raised in meetings, the breadth of colleagues a person consults, voluntary enrollment in unfamiliar projects, and search behavior in internal knowledge systems are all observable traces of curiosity that organizations already record.

Intensive longitudinal methods offer a third route. Experience sampling prompts workers several times a day to report momentary curiosity alongside their current task, social context, and goal progress (Csikszentmihalyi & LeFevre 1989). These designs capture within-person fluctuation that trait scales cannot capture, and they permit tests of temporal precedence, such as whether a curious morning predicts more exploratory work that afternoon, or how long the creative payoff of an exploratory episode takes to appear. Momentary designs are necessary for understanding how curiosity operates across a working day.

Passive and observational sensing can reduce reliance on active reports. Digital traces collected in most organizations including calendar diversity, communication networks, and patterns of tool and document use can serve as unobtrusive behavioral indicators (Onnela & Rauch 2016). Ambient methods such as the Electronically Activated Recorder sample brief snippets of daily sound and allow trained coders to count behaviors that plausibly express curiosity, including question-asking, topic exploration, and engagement with unfamiliar people (Mehl et al. 2001).

We see these methods as a frontier to assess curiosity in the wild. The laboratory paradigms are well-validated but rarely deployed in organizations, the developmental and observational methods require translation to adult work settings, and the passive sensing indicators (including information on smartphones such as mobility in varied settings) await validation against existing curiosity approaches. Pairing self-report profiles with even one behavioral or observational index would strengthen inference considerably and would help separate workers who describe themselves as curious from those who reliably act on it.

BUDGETING CURIOSITY: PRACTICAL RECOMMENDATIONS

Like financial investments, curiosity investments carry risk and yield returns under some conditions and losses under others. Effective management requires knowing when to invest in exploration. The recommendations in **Table 2** translate this framework into guidance at four organizational levels.

At the individual level, developing curiosity self-awareness through assessment enables strategic deployment. Knowing one's profile across dimensions supports leveraging strengths and compensating for gaps. Budgeting curiosity means allocating exploration during early project phases when divergent thinking generates options and then constraining exploration during execution phases when focus enables completion.

At the team level, composing teams with complementary curiosity profiles balances divergent generation (joyous explorers) with convergent problem-solving (deprivation-sensitive members).

Table 2 Practical recommendations for managing curiosity

Level	Recommendation	Implementation strategy
Individual	Develop curiosity self-awareness through assessment of personal curiosity dimensions	Use validated measures with feedback in onboarding and development programs
	Budget curiosity time strategically	Allocate dedicated exploration time during early project phases; constrain during execution
Team	Compose teams with complementary curiosity profiles	Balance joyous explorers (divergent thinking) with deprivation-sensitive members (convergent problem-solving)
	Establish opportunities for curiosity expression	Train leaders to model question-asking behavior; normalize uncertainty tolerance
Leader	Display curiosity behaviors visibly	Ask genuine questions in meetings; acknowledge what you do not know; seek subordinate input
	Manage adverse reactions to subordinate curiosity	Recognize that employee questions can feel threatening; train leaders to reframe questions as engagement indicators
Organization	Create structural supports for exploration	Implement innovation time policies; establish curiosity sabbaticals; create cross-functional rotation programs
	Align performance systems with curiosity values	Include exploration metrics; reward learning from failed experiments

Establishing opportunities for curiosity requires leader modeling such that attempts to visibly seek input signal that curiosity is to be rewarded. At the leader level, visible displays of curiosity behaviors cascade through teams via social learning. Managing adverse reactions to subordinate curiosity requires recognizing that employee questions can feel threatening and training leaders to reframe questions as indicators of task investment rather than challenges to authority. At the organizational level, structural supports for exploration include dedicated innovation time (e.g., internal hackathons like Atlassian's ShipIt Days or Adobe's practice of giving employees a toolkit called a kickbox and a small budget to explore new ideas without having to ask for permission), curiosity sabbaticals for cross-domain exposure, and rotation programs that build diverse knowledge repertoires. Aligning performance systems with curiosity means including exploration metrics alongside efficiency metrics and rewarding learning from failed experiments rather than punishing failure.

FUTURE OF CURIOSITY AT WORK

The field has progressed from struggling to distinguish curiosity from other concepts to viewing it as an almost universally positive asset. Our review provides balance by treating curiosity as a form of productive inefficiency that is situationally useful and contingent on dimensions, levels, contexts, and timing. To help push this balanced perspective forward, in **Table 3** we outline high-priority future research directions.

Temporal dynamics deserve consideration. Experience sampling methods that capture curiosity episodes in natural work contexts could illuminate how curiosity states unfold, what triggers them, how long creative benefits require to emerge, and what exploration-execution cycle durations optimize outcomes. These dynamics are important because a key element of curiosity as

Table 3 Future research priorities

Research priority	Key question(s)	Recommended methods
Temporal dynamics of curiosity-creativity links	How long do ideas need to incubate? What exploration-execution cycle durations optimize outcomes?	Experience sampling methods; longitudinal designs tracking project phases
Sustaining curiosity	How can organizations or individuals sustain curiosity beyond a moment, a task, or a project, making it into a more enduring resource?	Panel designs; longitudinal ethnographic or qualitative research
Cross-cultural variations in curiosity expression and reward	How do power distance, uncertainty avoidance, and collectivism moderate curiosity benefits? Do curiosity dimensions function equivalently across cultures?	Multi-country samples with measurement invariance testing or comparing linguistic features of expressed curiosity; within-culture experimental designs; qualitative research
Intervention development and testing	Can curiosity be trained? What are the active ingredients of successful curiosity interventions? How durable are intervention effects?	Randomized controlled trials; component analysis designs; long-term follow-up assessments
Curiosity in crisis and high-stakes contexts	Under what conditions should curiosity be constrained? How do organizations calibrate exploration-exploitation during stressful times?	Event-contingent designs; multi-method or qualitative archival analysis of organizational responses; experimental studies
Construct clarification and measurement refinement	How does curiosity predict outcomes after accounting for alternative hypotheses (e.g., positive emotions, mindfulness, presence)? What individual differences work in synergy with curiosity?	Multi-trait multi-method approaches; latent factor analysis with competing measures; network analysis; construct specificity tests

productive inefficiency perspective we have advanced here is the notion that curiosity takes time away from being on task. Hence, greater attention to temporal dynamics can help us better resolve the short-term downside of curiosity being a distraction against the eventual upside of that distraction turning into a payoff like innovation. In a related yet distinct need for future research, we still lack a strong understanding of how curiosity transforms from something momentary into something more enduring and sustainable. For example, how does a tangential project become a career-defining research stream for a scientist, or how does an experimental painting become the defining style of an artist? Again, each of these projects might initially be seen as inefficient, a distraction from an existing path toward success, and yet they might be the springboard to new insights that define the careers of the individuals involved. Future work should explore how curiosity can evolve from a momentary motivation to a sustained professional focus.

Our perspective of curiosity as productive inefficiency offers a new foundation for approaching cross-cultural research, especially with a focus on expressions of curiosity in organizations. For example, in Japanese, curiosity is written as 好奇心, which can be translated to mean “a heart fond of strange things” and while this typically has a positive connotation, it might also connote nosiness. German encodes a similar tension. *Neugierig* combines *neu*—or new—and *gierig*—or greedy—labeling curiosity as a “greediness for novelty.” This framing describes both positive instances of curiosity and negative instances of prying. In Russian, curiosity is любопытство, which also reflects intrusive nosiness or prying. In cultures where there is higher respect for hierarchy, curiosity expressed toward authority can signal disrespect. In cultures with stronger privacy norms,

curiosity about others' affairs can be seen as intrusive. Because many organizations operate cross-culturally and yet may espouse curiosity as a desired leadership skill or an organizational value, understanding how experiences and expressions of curiosity differ across country cultures but within the same organizational culture would be extremely valuable and might further elucidate hidden inefficiencies built into curiosity, especially working across borders.

Upward curiosity influence remains a major gap. Most leadership research examines how leaders affect followers. Understanding how follower curiosity shapes leader behavior would balance this literature and inform followers' strategic self-presentation. Again, the productive inefficiency perspective is valuable here because when are followers afraid to articulate upward curiosity because it might be seen as a cause for punishment? When do leaders interpret upward curiosity as productive? Research based on interventions might be especially valuable in this regard, and, relatedly, we suggest that interventions themselves represent another area for future research on curiosity. The appraisal framework (Silvia 2005, 2008) suggests interventions targeting novelty potential (highlighting what is interesting) and coping potential (building confidence to lean toward approach instead of avoidance in uncertain situations) may increase curiosity states. There is evidence that such states aggregate into trait change over time (e.g., Gross & Schooler 2025, Silvia 2008). Testing these in leader-follower dynamics, especially moving beyond dyads to look at leader-group dynamics, offers many exciting possibilities.

Finally, construct clarification may benefit the broader emotion-motivation-personality literature. Curiosity overlaps conceptually with growth mindset, learning goal orientation, need for cognition, need for closure, promotion focus, uncertainty orientation, and tolerance for ambiguity and uncertainty. Many measures of these constructs were developed decades ago with different scale construction standards. Factor analytic work examining how these measures cluster and whether simpler underlying dimensions explain observed correlations could streamline future research by pruning redundant constructs. In addition, scales designed to capture the inefficiencies or perceived downsides of curiosity might also provide value.

CONCLUDING THOUGHTS

We live in a world optimized for efficiency. Attention markets reward immediate engagement, productivity systems measure output rather than the diversity of inputs, and organizational cultures discourage the sustained, uncertain exploration that curiosity requires. This emphasis on short-term functioning is self-defeating in dynamic environments that require adaptation. Curiosity peaks not when we know nothing nor when we fully grasp something, but in the middle ground of partial understanding.

Organizations, educational systems, and individuals face a choice: Embrace curiosity's essential inefficiency or optimize it away. This choice determines whether we build environments that support genuine creativity or ones that mimic its surface without the enabling conditions. Curiosity is the scenic route. Its detours and side trips provide wonder, intellectual stimulation, and social connection regardless of output. At their best, these detours provide inputs for insights impossible through more direct approaches.

The research reviewed here points toward a reconciliation. Curiosity is neither a cost-free virtue nor a luxury organizations cannot afford. It is a psychological strength that, when deployed with situational awareness, generates returns through creativity, adaptation, and resilience. What matters is the situational wisdom to know when exploration's costs justify its benefits and when efficiency should win. Leaders and organizations that develop this wisdom, tolerating curiosity's inefficiencies where they matter while constraining them where they do not, increase the probability of desirable performance in the present and future.



The mind that tolerates uncertainty, maintains diverse interests, and spends time with varied people may appear scattered or undisciplined. But this mind builds cognitive and social inputs that are precursors to creative outputs and innovative solutions. In a world requiring original solutions to novel problems, curiosity's inefficient wandering may, in the long run, be the most efficient strategy of all.

SUMMARY POINTS

1. Curiosity is multidimensional with distinct dimensions that generate different benefits and costs.
2. Curiosity is a productive inefficiency, and its immediate costs (extended deliberations, slowed decisions, resource expenditure) are the mechanisms through which downstream benefits (creativity, adaptation, self-expansion) arise.
3. Time urgency moderates curiosity's value. Exploration benefits ambiguous, early-stage, or uncertain contexts; efficiency benefits crisis, deadline-driven, or routine execution contexts.
4. Leader curiosity cascades through teams, enhancing psychological safety and voice, though effects may be stronger for male leaders displaying communal behavior.
5. Subordinate curiosity can trigger adverse leader reactions when questions are perceived as threats to authority rather than challenging opportunities.
6. Curiosity can override regret aversion and other conservative decision tendencies when information gaps are salient.
7. Perceived usefulness, both personal and social, stimulates curiosity, and this challenges purely intrinsic motivational accounts of this construct.
8. Validated measurement tools exist that assess curiosity profiles across multiple countries and cultures.
9. Effective curiosity management requires strategic budgeting of finite resources such as time, energy, and attention toward novel opportunities.

FUTURE ISSUES

1. What are the optimal temporal alterations between curious exploration and exploitation in creative work?
2. How do cultural values (power distance, uncertainty avoidance, collectivism) influence curiosity's benefits and expression norms?
3. Can curiosity be effectively trained, and what are the active intervention ingredients?
4. How does subordinate curiosity influence leader behavior and team dynamics through upward processes?
5. How should organizations calibrate curiosity expression during tasks and periods that vary in urgency, stability, and difficulty?
6. How do age and career stage influence the factors that trigger curiosity and translate it into information-seeking and high-level performance?

7. What is the conceptual and empirical relationship between curiosity and adjacent constructs such as positive emotions, mindfulness, and growth mindset?

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