

Tacit Knowledge

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1. Core Definition and Characteristics

Tacit knowledge represents a profound category of human understanding often characterized as knowledge that is highly personal, deeply rooted in experience, and extremely challenging--if not impossible--to articulate or formalize. Unlike **explicit knowledge**, which can be codified, written down, transmitted in manuals, or stored in databases, **tacit knowledge** is frequently referred to as "know-how"--the collection of skills, insights, intuition, and contextual understanding possessed by an individual. It is the practical capacity to perform actions effectively and efficiently. This type of knowledge is learned primarily through direct observation, imitation, and personal, hands-on experience, necessitating sustained interpersonal contact for its acquisition and effective transfer, as it relates directly to what we know how to do, rather than simply facts.

The core difficulty in transferring tacit knowledge stems from its inherent nature: it resides largely below the level of conscious awareness. When an expert performs a complex task, such as dancing the tango or diagnosing a subtle engineering fault, they often rely on thousands of implicit rules and contextual cues that they cannot easily verbalize or structure logically for an external recipient. For instance, the ability to successfully drive a car involves sophisticated cognitive and motor processes--judging speed, anticipating traffic flow, and feeling the vehicle's balance--that have been internalized through years of practice. This internalization makes the knowledge fluid and actionable but fundamentally resistant to simple documentation, distinguishing it sharply from declarative knowledge (knowing what).

Philosopher and scientist **Michael Polanyi** famously captured this concept with the phrase, "We can know more than we can tell." Polanyi argued that all knowledge, even seemingly explicit knowledge, is rooted in a tacit base. He proposed a structure where the knower attends *from* a subsidiary awareness of particulars *to* a focal awareness of a comprehensive whole. The subsidiary particulars (the subtle tension of the muscles, the instantaneous assessment of risk, the feel of the material) constitute the tacit infrastructure necessary for the focal activity (the successful execution of a skill). This relationship underscores the personalized and non-transferable nature of the knowledge apart from the knower's direct, lived experience, highlighting its context-specific and embodied reality.

2. Etymology and Historical Development

While the general idea of practical, unwritten knowledge has ancient roots in practices like

apprenticeship, the formal academic conceptualization of **tacit knowledge** is overwhelmingly attributed to Michael Polanyi, particularly through his 1966 work, *The Tacit Dimension*. Polanyi developed this concept while seeking to demonstrate the limitations of pure scientific objectivism, emphasizing the crucial role of personal commitment, skill, intuition, and subjective judgment in both scientific discovery and the mastery of everyday life skills. His work provided the essential philosophical underpinning by defining knowledge not as detached, impersonal facts, but as an active, integrated human endeavor inseparable from the individual's commitment.

The concept gained immense traction in the late 20th century within the fields of business and organizational theory, reaching mainstream recognition through the efforts of Japanese organizational theorists **Ikujiro Nonaka** and Hirotaka Takeuchi. In their seminal 1995 publication, *The Knowledge-Creating Company*, they adapted Polanyi's insights to explain how organizations innovate and create new knowledge through continuous processes. Nonaka and Takeuchi positioned tacit knowledge as the crucial, proprietary raw material for organizational competitive advantage, arguing that successful firms must continuously convert tacit knowledge into explicit forms and reintegrate explicit knowledge back into individual skill sets.

Furthermore, the philosophical distinction between "knowing how" (practical competence) and "knowing that" (propositional competence) provided an earlier, influential framework. Philosopher **Gilbert Ryle**, in *The Concept of Mind* (1949), strongly argued against what he termed the "intellectualist legend," which suggests that performing an action intelligently requires first consciously reciting intellectual rules or propositions. Ryle asserted that intelligent action demonstrates knowledge directly, proving that practical skill--Ryle's "knowing how," which is conceptually aligned with embodied tacit knowledge--is often logically prior to, and independent of, propositional knowledge. This framework established the epistemological necessity of recognizing deeply internalized, practical skills as a legitimate and essential form of human understanding.

3. Key Characteristics and Dimensions

Tacit knowledge possesses several defining attributes that solidify its separation from formal, explicit information. These dimensions are critical for understanding how this knowledge is acquired, stored, and utilized by individuals within a social or organizational context.

Non-Articulable Nature: This is the most crucial feature, signifying that the knowledge is inherently resistant to full verbalization or written documentation. For instance, attempting to precisely describe the muscle memory required to speak Japanese fluently or the exact intuitive judgment needed for a complex negotiation often results in incomplete or misleading instructions. The knowledge resides in the execution, not the description.

Skill-Based and Action-Oriented: Tacit knowledge is fundamentally embodied in practice and behavior. It is demonstrated through performance rather than through declaration of facts. It

concerns operational routines, expert judgment, and deep cognitive patterns used to navigate complex and often unstructured real-world environments.

Context-Specific and Personalized: This knowledge is highly dependent on the particular context, culture, and specific environment in which it was learned. Furthermore, it is inextricably linked to the individual knower's perspective, values, beliefs, and unique history of experiences, making it difficult to extract and standardize across multiple people or locations.

Automatic and Subconscious: Once competence is achieved, tacit knowledge operates largely below the threshold of conscious thought. Experts execute complex sequences automatically, relying on intuition and immediate recognition, which frees up limited cognitive resources for higher-level problem-solving, planning, or adaptation to novel circumstances.

Analogical and Associative: Tacit reasoning rarely follows strict, linear, deductive logic based on codified rules. Instead, it involves rapid pattern recognition, analogical inference, and the ability to draw insightful comparisons between the current situation and a vast internal repository of past, often similar, experiences.

4. The SECI Model and Knowledge Conversion

In organizational theory, the conceptualization of **knowledge conversion** developed by Nonaka and Takeuchi provides a dynamic, influential model for understanding how tacit knowledge interacts with explicit knowledge to drive continuous organizational innovation. This model, known as the SECI model (Socialization, Externalization, Combination, Internalization), describes a continuous, spiraling process of knowledge creation necessary for maintaining organizational vitality and competitiveness.

The cycle begins with **Socialization**, the process of sharing tacit knowledge directly between individuals. This is purely tacit-to-tacit transfer and occurs through shared experience, observation, imitation, and collaborative practice--for example, during an intensive apprenticeship or job shadowing where a novice learns through joint, hands-on work with a master craftsman. This stage effectively transfers "know-how" and embodied skill without the necessity of formal translation into structured language.

The next phase is **Externalization**, often considered the most crucial for organizational learning and innovation. This involves converting highly personal tacit knowledge into explicit forms, such as concepts, documented methodologies, hypotheses, analogies, or detailed models. This transformation demands creative articulation, deep reflection, and often utilizes metaphors or narratives to bridge the gap between embodied skill and communicable concepts. Once externalized and formalized, the knowledge can be systematically managed, shared broadly, and critically examined across the organization.

The third phase, **Combination**, involves integrating various pieces of explicit knowledge--

documents, databases, market reports, and standardized procedures--to create new, synthesized explicit knowledge. This is the process of synthesis, editing, and systematization, frequently resulting in new organizational protocols, comprehensive knowledge architectures, or updated product specifications that draw on dispersed documented information.

Finally, **Internalization** completes the spiral. This is the crucial process of converting explicit knowledge back into tacit knowledge by applying, practicing, and embodying the codified procedures or concepts. For instance, reading a new safety manual (explicit) and then practicing the procedures until they become automatic, reactive, and integrated skills (tacit). This continuous, cyclical process ensures that knowledge creation is an ongoing, dynamic loop that feeds both individual competence and organizational memory.

5. Mechanisms of Acquisition and Transfer

Given that **tacit knowledge** resists traditional, text-based classroom instruction or simple documentation, its acquisition relies heavily on immersive, interactive, and highly relational methods. The transfer process is inherently slower, requires significant time commitment, and is fundamentally linked to shared organizational context and mutual trust between the mentor and the learner.

One primary mechanism for transfer is intense **apprenticeship and mentorship**. This typically involves extended periods of sustained observation and supervised practice, allowing the learner to gradually internalize the necessary skills, develop sound judgment, and absorb the crucial, non-verbal intuition (often referred to as "tricks of the trade") from the experienced practitioner. The mentor demonstrates, corrects, and provides context-sensitive feedback in real time, leveraging subtle, non-verbal communication and situational coaching that cannot be captured effectively in a standardized curriculum or procedure guide. Effective transfer necessitates a high degree of interpersonal connection and physical co-presence.

Another critical method involves the sustained functioning of **communities of practice (CoPs)**. These are groups of people who share a common concern, a set of problems, or a passion for a specific domain, and deepen their knowledge and expertise in that area by interacting with each other on a regular basis. Within a CoP, shared language, common practices, and collective troubleshooting naturally facilitate the implicit sharing of professional norms, quality standards, and highly efficient problem-solving strategies. The shared cultural background and constant interaction provide the essential, trust-based backdrop for implicit learning and continuous calibration of skills and judgment.

Furthermore, the use of **simulation, prototyping, and experiential learning** plays a crucial role in accelerating tacit knowledge acquisition. Training scenarios that successfully mimic real-world complexity, such as high-fidelity flight simulators, immersive virtual reality environments, or

controlled medical manikin training, allow learners to safely develop automatic, intuitive, and reactive responses without the catastrophic risk associated with genuine failure. By subjecting the learner to increasingly difficult, nuanced, and unpredictable situations, the abstract rules of explicit knowledge are transformed into embodied, rapidly actionable tacit skills.

6. Significance in Organizational Success and Innovation

The strategic management and effective leveraging of **tacit knowledge** are recognized as central drivers of sustainable competitive advantage in the modern global economy. While explicit knowledge is often easily accessible and rapidly copied (e.g., patents that expire, blueprints, basic software code), tacit knowledge is unique, inherently difficult to imitate, and often forms the basis of proprietary core competencies for highly successful organizations. A competitor can copy a factory layout, but not the collective, implicit efficiency developed by experienced workers over decades.

Organizational innovation frequently springs directly from the combination and creative translation of previously siloed tacit knowledge. For example, a successful pharmaceutical firm might rely on chemists who implicitly understand the binding properties of certain compounds (tacit scientific insight) combined with marketing specialists who tacitly grasp emerging patient needs and physician prescribing habits. The complex organizational process of bringing these groups together to formalize a new drug concept (Externalization) creates proprietary, new explicit knowledge that the organization can exploit, leading to market leadership. Without effective structures for sharing and translating this implicit expertise, organizations face a significant risk of losing invaluable internal knowledge when key personnel retire or transition roles, resulting in a serious organizational knowledge retention crisis.

Effective organizational knowledge management, therefore, is ultimately less about managing documents and databases and more about designing structures--such as cross-functional project teams, extensive job rotation programs, and collaborative physical and virtual spaces--that actively encourage and facilitate the intense, repeated interpersonal contact and trust necessary for the reliable transfer and synthesis of tacit knowledge. Organizations that successfully cultivate environments of shared practice, psychological safety, and mutual learning are optimally positioned to harvest their collective intellectual capital, leading directly to measurable improvements in process quality, higher efficiency, and sustained disruptive product development cycles.

7. Debates and Criticisms

Despite its near-ubiquitous acceptance in organizational and management literature, the concept of **tacit knowledge** is subject to ongoing academic debate, primarily focusing on the philosophical rigidity of its definition and the methodological implications for measurement.

One major line of criticism revolves around the absolute extent of its non-articulability. Critics, often drawing from modern cognitive science and epistemology, argue that much of what is labeled "tacit knowledge" is merely highly complex explicit knowledge that has become automated, habitual, or deeply proceduralized. They suggest that given sufficient time, appropriate resources, and advanced cognitive analysis techniques (such as those used in knowledge engineering), this knowledge could theoretically be articulated and codified. The difficulty, according to this view, lies not in impossibility, but rather in the practical cost-effectiveness or the current lack of a sufficiently rich standardized language necessary to describe the underlying intricate neural and motor processes. If this perspective is accurate, it challenges Polanyi's hard distinction between tacit and explicit knowledge, viewing them instead as dynamic points on a single, continuous spectrum of codifiability.

Furthermore, the practical challenge of measuring, valuing, and retaining tacit knowledge presents significant methodological obstacles for management professionals. Since it cannot be easily formalized or codified, managers struggle to objectively quantify its stock, assess its quality, or measure its flow within an organization, leading to difficulties in justification for resource allocation for knowledge retention initiatives. The reliance on subjective evaluation, anecdotal evidence, and direct observation raises questions about the objectivity and reliability of assessments regarding an individual's actual level of tacit competence. This has prompted some researchers to propose more refined intermediate categories, such as "implicit knowledge," which refers to underlying, structured knowledge that influences behavior but remains outside conscious awareness, thereby distinguishing it from purely skill-based, embodied tacit knowledge.

Further Reading

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