

Semantic Memory: Findings from Cognitive Psychology and Neuroscience

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Abstract: This article investigates semantic memory as a core component of human cognition, integrating findings from cognitive psychology and neuroscience with debates in the philosophy of mind, language, and culture. Building on classical models of memory [1–4], it examines how knowledge is encoded, stored, and retrieved, and critically interrogates whether semantic memory functions as a static repository of representations or as a dynamic, reconstructive process of meaning-making. The discussion draws on philosophical perspectives—including Wittgenstein, Putnam, Dennett, Husserl, and Ricoeur—to show that semantic memory extends beyond the individual mind, shaping identity, guiding language use, and structuring shared social realities. Neuropsychological and neuroimaging evidence, including studies of semantic dementia and hippocampal amnesia, is presented to illustrate the distributed, interactive, and socially mediated nature of semantic knowledge. Furthermore, the article addresses epistemological and ethical dimensions, highlighting how semantic memory mediates both personal understanding and culturally transmitted knowledge, and emphasizing its relevance as an interdisciplinary object of study. By bridging cognitive science, philosophy, and social theory, this work positions semantic memory as a dynamic, socially embedded, and culturally grounded system that underlies human thought, behavior, and collective meaning-making. Examines semantic memory as a central component of human cognition, integrating insights from cognitive psychology, neuroscience, and philosophy of mind and language. It explores whether semantic memory functions as a static repository or a dynamic, reconstructive system of meaning-making. Drawing on neuropsychological evidence, including studies of semantic dementia and hippocampal amnesia, and philosophical perspectives from Wittgenstein, Putnam, Dennett, Husserl, and Ricoeur, the article highlights how semantic memory shapes identity, language, and shared social realities. Finally, it addresses epistemological and ethical implications, emphasizing semantic memory as a socially and culturally embedded system that bridges individual cognition with collective knowledge.

Keywords: Cognitive Psychology; Neuroscience; Memory; Philosophical; Human.

1. INTRODUCTION

Memory is one of the central themes in psychology and neuroscience, but also in philosophy. By investigating semantic memory, we address not only the capacity to store concepts but also how humans assign meaning to the world. Questions such as “Is semantic memory merely a mental archive or part of the very constitution of our experience of reality?” guide this reflection, which integrates cognitive science and philosophy of mind.

The study of memory has fascinated philosophers since antiquity. Aristotle regarded memory as an imprint of experience, comparing it to a seal on wax. Later, thinkers like Locke and Hume emphasized memory’s role in identity and knowledge, linking it to personal continuity. In the modern period, memory became central in debates about empiricism and rationalism: does knowledge

stem from stored sensory impressions, or from innate structures of reason? The rise of psychology in the 19th century, with pioneers like Ebbinghaus, provided systematic experiments on memory capacity and forgetting. In the 20th century, the cognitive revolution established models that likened memory to computational processes, though always with the caveat that human cognition is more flexible and interpretive.

In this article, we expand on both the scientific and philosophical aspects of semantic memory. We examine how cognitive models explain the mechanisms of semantic storage and retrieval, and we confront these accounts with philosophical perspectives on language, meaning, and truth. We also consider clinical evidence, cultural dimensions, and ethical issues. The aim is to offer an integrated view of semantic memory as a phenomenon that is at once biological, cognitive, cultural, and philosophical.

Neuropsychological and philosophical research has consistently demonstrated that semantic memory is distributed across multiple brain regions, interacts with episodic memory, and is reconstructed each time it is recalled rather than stored as a fixed record. This view challenges traditional notions of memory as a passive storage system and positions it as an active process, entangled with imagination, inference, and cultural frameworks. The implications are profound: semantic knowledge is both fallible and evolving, shaped by individual cognition as well as social norms, language, and shared cultural experiences.

Applied research in psychology reinforces the practical significance of these insights. Interventions aimed at enhancing emotional awareness and regulation, highlight how structured programs can shape the way individuals encode, retrieve, and utilize semantic knowledge. Cognitive-behavioral approaches further illustrate that semantic memory can be actively reshaped through narrative reconstruction, demonstrated in clinical cases, where patients' maladaptive narratives were transformed to improve functioning and well-being. Semantic memory is not merely a theoretical construct but a central target for psychological intervention and behavior change.

The social dimension of semantic memory is equally critical. The alignment between patient and healthcare professional styles significantly enhances therapeutic outcomes, reflecting the relational and socially embedded nature of knowledge. Semantic memory mediates understanding, communication, and behavioral coordination in shared social spaces, and misalignments or distortions can have practical consequences for therapy, education, and social participation. This observation resonates with philosophical perspectives on situated and fallible memory: as Husserl and Ricoeur highlight, memory is always incomplete, context-dependent, and influenced by social testimony, making collaboration and dialogue essential in shaping shared knowledge.

Technological developments further extend the reach and utility of semantic memory in applied contexts. Digital tools in clinical and educational psychology facilitate knowledge dissemination, enhance training, and support intervention strategies, making it possible to adapt cognitive and

social frameworks to contemporary cultural contexts. Technology not only assists individual learning but also scaffolds collective memory, allowing knowledge to be standardized, transmitted, and reshaped in ways that reflect evolving social norms and scientific understanding.

Taken together, these perspectives illustrate that semantic memory bridges cognition, culture, and practice. It is a dynamic system that evolves with individual experience, social interaction, and technological mediation. Far from being static, semantic memory shapes how we interpret the world, interact with others, and participate meaningfully in society. Understanding its reconstructive and socially embedded nature is crucial for both theoretical and applied psychology, offering insights into cognitive functioning, therapeutic intervention, and the ongoing negotiation of knowledge in collective human life.

Ultimately, semantic memory bridges cognition, culture, and practice. It guides thought and behavior, shapes identity, and sustains meaningful participation in society. Its reconstructive and socially embedded nature reminds us that knowledge is never static, always partial, and continuously co-created. To study it is to explore not just how we remember facts but how we inhabit a shared world of meaning, negotiate social norms, and collectively make sense of reality. By integrating philosophical reflection, neuropsychological evidence, and applied psychological practice, we gain a fuller understanding of semantic memory as a cornerstone of human experience—dynamic, relational, and profoundly human.

2. COGNITIVE MODELS OF MEMORY

The classical theory of Atkinson and Shiffrin [1] proposed three systems: sensory memory, short-term memory, and long-term memory. Within the latter, semantic memory constitutes a subdivision of declarative memory, responsible for storing general knowledge and meanings [2].

2.1 SHORT-TERM VS. LONG-TERM MEMORY

Research by Milner [15] and later neuropsychological findings revealed a dissociation between short-term retention and long-term consolidation, particularly in patients with hippocampal damage. Such patients could hold a phone number for a few seconds but were unable to store new factual knowledge. This finding demonstrated that semantic memory depends on distinct neural systems compared to episodic memory, highlighting the complexity of its biological basis.

2.2 WORKING MEMORY

Baddeley reformulated the notion of short-term memory by introducing the concept of working memory, an active system that integrates and manipulates information [3]. The working memory model describes an executive system that coordinates subsystems such as the phonological loop, visuospatial sketchpad, and episodic buffer. These components act as bridges between raw sensory data and pre-existing semantic networks, showing that semantic memory is not isolated storage but is constantly updated and rehearsed through working processes.

2.3 SEMANTIC NETWORKS AND FEATURE MODELS

Collins and Quillian's semantic network model [4] proposed that information is stored hierarchically. For example, "a robin is a bird" is answered faster than "a robin is an animal" because the link is shorter. This model explains semantic priming effects, where exposure to one concept (e.g., "doctor") speeds the recognition of a related concept (e.g., "nurse"). In contrast, the feature comparison model of Smith, Shoben, and Rips [5] describes semantic concepts as bundles of defining and characteristic features. A penguin shares defining features with birds (wings, feathers) but differs in characteristic features (it cannot fly). This model accounts for graded judgments and semantic typicality.

2.4 CONNECTIONIST AND DISTRIBUTIONAL MODELS

Later, connectionist models [16] argued that meaning is represented in distributed networks

across artificial neurons. This approach aligns with neurobiological evidence, where no single cell represents "dog" but rather patterns across populations. Modern distributional semantic models (as used in computational linguistics and AI) extend this logic, representing meaning through statistical co-occurrence. These models highlight the plasticity and context-dependence of semantic memory, showing how meaning is dynamically shaped by usage.

2.5 EMPIRICAL EVIDENCE OF ORGANIZATION

Empirical studies, such as Bousfield's [6], demonstrate the spontaneous tendency of the brain to organize information into semantic categories. This clustering effect suggests that memory is not a passive storehouse but an active, structured network of interrelated meanings. Priming, clustering, and category effects consistently support the idea that semantic memory operates through structured networks rather than isolated facts.

3. THE PHILOSOPHICAL PERSPECTIVE

3.1 WITTGENSTEIN AND THE USE OF LANGUAGE

According to Wittgenstein, meaning does not reside in internal definitions but in the use of language in social practices [7]. Thus, semantic memory is not a hidden repository of internal symbols but a capacity to engage in shared linguistic activities. Remembering the meaning of a word is not recalling a private definition but being able to use it correctly in a community. This perspective undermines purely internalist accounts of memory, emphasizing instead its communal and pragmatic dimensions.

Wittgenstein's insight challenges the traditional "mental dictionary" metaphor. If meaning is use, then semantic memory is not just a file cabinet of entries, but participation in the form of life that language makes possible. This opens an important bridge to cognitive science: what we traditionally call "semantic memory" — often understood simply as the storage of factual knowledge — might more accurately be described as the embodied and social capacity to orient oneself in

shared worlds of meaning. Rather than being a static repository of information, semantic memory emerges through interactions with our environment and with others. It reflects how we situate ourselves within culturally and socially constructed contexts, drawing on both bodily experience and communal practices to make sense of concepts, symbols, and relationships. In this view, understanding a concept is not merely recalling a definition, but actively navigating the network of meanings that gives it relevance within a lived, social world. This perspective challenges purely individualistic or brain-centered models of cognition, suggesting that meaning itself is co-constructed, dynamic, and inseparable from the environments and communities in which we participate.

What we call “semantic memory” may be better understood not as a static store of facts, but as the embodied and social ability to navigate shared worlds of meaning. Knowledge is thus shaped through interaction with both our environment and our communities, reflecting how we situate concepts within lived, cultural, and social contexts. Understanding, in this sense, is less about recalling definitions and more about actively engaging with networks of meaning that give ideas relevance and coherence in our shared experience.

This perspective bridges directly to cognitive science, suggesting that “semantic memory” is not merely a passive store of facts but an active, embodied, and social capacity to orient ourselves within shared worlds of meaning. Knowledge emerges through engagement—with our bodies, our environments, and our communities—shaping how concepts acquire relevance and coherence. To understand something, then, is not simply to recall it, but to navigate the dynamic web of meanings that make it significant in a lived, social context.

4. REALITY, REPRESENTATION, AND MEANING CONSTRUCTION

Cognitive psychology traditionally treats memory as a form of mental representation, emphasizing the encoding, storage, and retrieval of information as if it were a faithful internal model of the world [2,3]. This perspective frames semantic memory largely as a repository of objective facts and relationships, highlighting

mechanisms that allow the mind to reflect and manipulate knowledge. However, from a philosophical standpoint, a more fundamental question arises: does semantic memory merely mirror an external reality, or does it actively participate in constructing the meanings that organize our experience? Rather than being a passive reflection, memory may function as a dynamic interpretive system, shaped by cultural, social, and bodily contexts. In this sense, understanding and remembering are inseparable from the processes through which humans create coherent, meaningful worlds, raising profound questions about the nature of knowledge, truth, and cognition itself.

Cognitive psychology often treats memory as a system of mental representations, focusing on the storage and retrieval of information [2,3]. Yet from a philosophical perspective, one might ask whether semantic memory simply mirrors reality or actively constructs meaning. Rather than passively reflecting the world, memory can be seen as a dynamic process shaped by social, cultural, and embodied contexts, through which humans create coherent and meaningful experiences.

4.1 REALISM VS. CONSTRUCTIVISM

Realism posits that semantic memory functions as a mirror of the external world, capturing objective truths and allowing the mind to store and retrieve accurate representations of reality. In contrast, constructivist perspectives argue that semantic memory is not merely reflective but actively shapes meaning, creating interpretive frameworks through which we engage with and understand our experiences. Jean Piaget emphasized that knowledge emerges through the active construction of schemas, highlighting the role of individual cognitive processes in organizing and assimilating information. Lev Vygotsky, on the other hand, stressed the fundamentally social nature of cognitive development, showing how cultural, linguistic, and interpersonal contexts provide the scaffolding within which knowledge is co-constructed. Taken together, these perspectives suggest that semantic memory is neither a purely objective repository nor a wholly subjective invention; it is dynamically shaped by the interplay between individual cognition and the broader cultural and social environments in which we

participate. This dual influence underscores the importance of viewing memory as both an internal cognitive process and a socially mediated resource for navigating shared worlds of meaning.

Realism views semantic memory as a mirror of the external world, storing objective truths, while constructivism sees it as an active process that shapes meaning and interprets experience. Piaget emphasized that knowledge develops through the construction of cognitive schemas, whereas Vygotsky highlighted the social and cultural contexts that scaffold learning. Together, these perspectives suggest that semantic memory emerges from the interplay between individual cognition and shared cultural-linguistic frameworks, functioning as both an internal process and a socially mediated resource for understanding the world.

4.2 MEMORY AS DYNAMIC RECONSTRUCTION

Contemporary neuroscience increasingly supports a reconstructive view of memory, suggesting that it is not retrieved as a fixed, faithful record but is actively reassembled each time it is recalled [17]. This process highlights the fluid and dynamic nature of semantic memory, which is deeply entangled with imagination, inference, and the broader cultural frameworks in which individuals participate. Because memory is reconstructive, semantic knowledge is inherently adaptable: categories evolve, words shift in meaning, and shared concepts are continuously reshaped to fit new social, technological, or cultural contexts. For instance, the semantic category of “marriage” has undergone dramatic reconstructions across many societies in recent decades, reflecting changing norms, legal frameworks, and cultural attitudes. Such transformations underscore that semantic memory is not simply a static repository of facts, but a living system that co-develops with human experience, shaped by both cognitive processes and collective cultural negotiation.

Contemporary neuroscience views memory as reconstructive rather than fixed, meaning that each act of recall actively reassembles information [17]. Semantic memory, intertwined with imagination, inference, and cultural frameworks, is therefore fluid and adaptable. Categories change, words shift in meaning, and shared concepts evolve to meet new social and cultural contexts. For example, the

concept of “marriage” has been dramatically reshaped in many societies over recent decades, illustrating how semantic knowledge co-develops with collective experience and cultural negotiation.

4.3 KNOWLEDGE AND ERROR

If semantic memory is fundamentally reconstructive, it raises pressing questions about the reliability of its contents. How can we claim to “know” something if each act of recall is subject to alteration, distortion, or omission? This dilemma invites broader epistemological reflection: can knowledge be considered stable and objective if memory is inherently fallible? Philosophical insights provide valuable guidance here. Husserl’s concept of retention emphasizes that memory is never a mere reproduction of past experiences but is always situated within the flow of consciousness, inherently partial and interpretive. Similarly, Paul Ricoeur highlights the testimonial dimension of memory, showing that our recollections are socially mediated and reliant on narratives that are open to negotiation and reinterpretation. Consequently, semantic memory is shaped not only by individual cognitive processes but also by cultural and social forces, making it vulnerable to distortions, stereotypes, and entrenched biases. False beliefs—ranging from outdated medical myths to prejudiced social assumptions—often persist precisely because they are reinforced through repeated social transmission. Understanding semantic memory in this way underscores that knowledge is less a fixed archive of facts and more a dynamic, co-constructed system, continuously revised and contested within both personal and collective frameworks.

If semantic memory is reconstructive, its reliability comes into question: can knowledge be stable if memory is inherently fallible? Philosophers offer insight: Husserl’s notion of retention emphasizes that memory is always situated and interpretive, while Ricoeur highlights its dependence on social testimony. Semantic memory is thus shaped by both individual cognition and cultural forces, making it susceptible to distortions, stereotypes, and biases. False beliefs—such as outdated medical myths or social prejudices—often persist because they are reinforced through repeated social transmission, showing that knowledge is a dynamic, co-constructed process rather than a fixed archive of facts.

5. CLINICAL CASES AND NEUROPSYCHOLOGICAL EVIDENCE

Cases of brain damage provide compelling evidence for the organization of semantic memory. Hodges and Patterson [21] showed that patients with semantic dementia, involving anterior temporal lobe deterioration, lose knowledge of categories—such as what a “camel” is—while retaining episodic memories. This dissociation supports the idea that semantic memory is a distinct system. Oliver Sacks’ clinical accounts, particularly in *The Man Who Mistook His Wife for a Hat* (1985), vividly illustrate how selective neurological damage can unravel specific facets of knowledge and identity, revealing the intricate architecture of human cognition.

Complementary evidence comes from patients with hippocampal damage, who often cannot form new episodic memories but retain previously learned semantic knowledge [15]. Neuroimaging studies confirm that semantic processing engages a distributed network, including temporal and frontal regions, highlighting its reliance on multiple interacting systems rather than a single brain locus. Together, lesion and imaging data indicate that semantic memory is both specialized and networked, integrating conceptual knowledge across different neural circuits.

Semantic memory loss also has profound social consequences. Patients with semantic Cases of brain damage provide compelling evidence for the structure of semantic memory. Hodges and Patterson [21] found that patients with semantic dementia lose knowledge of categories—such as what a “camel” is—while retaining episodic memories, supporting the idea that semantic memory is a distinct system. Oliver Sacks’ clinical accounts, particularly in *The Man Who Mistook His Wife for a Hat* (1985), illustrate how selective neurological damage can unravel specific facets of knowledge and identity.

Patients with hippocampal damage, by contrast, often cannot form new episodic memories but retain previously learned semantic knowledge [15]. Neuroimaging confirms that semantic processing engages a distributed network of temporal and frontal regions, indicating that it relies on interacting systems rather than a single brain locus.

Semantic memory loss has profound social consequences. Patients with semantic dementia struggle with language, categorization, and social norms, showing that semantic memory underpins meaningful participation in life. As Sacks’ narratives demonstrate, the erosion of semantic knowledge can disrupt both cognition and identity, highlighting memory’s deep entanglement with personal experience and cultural frameworks.

6. THE SOCIAL AND CULTURAL DIMENSION OF MEMORY

Semantic memory is not solely an individual cognitive achievement; it is deeply social and culturally embedded. Halbwachs [12] introduced the concept of collective memory, highlighting that societies maintain and transmit shared frameworks of meaning across generations. Through rituals, language, stories, and institutions, groups preserve knowledge that shapes how individuals interpret experiences, categorize concepts, and navigate the world. This collective dimension underscores that semantic memory is intertwined with social norms and culturally endorsed knowledge rather than being purely private or idiosyncratic. Tomasello [13] further demonstrates that human cognition is fundamentally shaped by cultural transmission and cooperative practices, setting humans apart from other primates. Through joint attention, imitation, and collaborative problem-solving, humans acquire not only skills but also culturally embedded concepts, categories, and values, which become integral components of individual semantic memory. Together, these perspectives suggest that semantic memory is a co-constructed, socially mediated system: individual cognition and collective culture are in continuous dialogue, constantly shaping and reshaping what we know and how we understand the world.

Semantic memory is not only an individual cognitive faculty but also a social and culturally embedded system. Halbwachs [12] introduced the concept of collective memory, showing how societies preserve and transmit shared frameworks of meaning through language, stories, and institutions. Tomasello [13] emphasizes that human cognition is shaped by cultural transmission and cooperation, enabling individuals to acquire

not only skills but also socially shared concepts and values. Together, these insights highlight that semantic memory is co-constructed: individual understanding is continuously shaped by, and contributes to, collective cultural knowledge.

6.1 CULTURAL SCRIPTS AND SEMANTIC MEMORY

Every culture provides “scripts” or schemas that guide social behavior—rituals, greetings, moral codes, and everyday conventions—which are embedded within semantic memory. These cultural schemas enable individuals to navigate complex social contexts, from formal events like funerals and weddings to routine interactions in marketplaces or workplaces. Knowing how to behave appropriately in these situations relies not on conscious reasoning each time, but on internalized, culturally transmitted knowledge that forms part of our semantic repertoire. Such schemas are learned and reinforced through multiple channels: language communicates explicit rules and narratives; education formalizes norms and expectations; and imitation allows individuals, especially children, to absorb subtle behavioral patterns from others. Beyond guiding behavior, these cultural scripts provide continuity and coherence within a society, linking past traditions to present practices and helping individuals align personal actions with collective expectations. In this way, semantic memory functions as a bridge between cognition and culture, embedding socially shared knowledge into everyday thought and action.

Every culture provides “scripts” or schemas for social behavior—rituals, greetings, moral codes—that are embedded in semantic memory. These schemas guide everyday interactions, from attending funerals to navigating marketplaces, relying on internalized knowledge rather than conscious deliberation. They are transmitted through language, education, and imitation, allowing individuals to absorb both explicit rules and subtle social cues. Beyond shaping behavior, these cultural scripts ensure continuity, linking past traditions to present practices and aligning personal actions with collective expectations. In this way, semantic memory serves as a bridge between cognition and culture, embedding socially shared knowledge into thought and action.

Recent research highlights the multifaceted role of psychology in understanding, shaping, and supporting human behavior across clinical, educational, and social contexts. [15] demonstrate how structured interventions can enhance emotional awareness and regulation, emphasizing the importance of targeted programs in fostering psychological skills. [16] situates these practices within a historical perspective, showing how psychology has evolved as a science dedicated to explaining and influencing human behavior. [17] illustrate the transformative potential of cognitive-behavioral approaches in clinical settings, revealing how reshaping patients’ narratives can alleviate conditions like paruresis. The integration of technology further expands these possibilities, as [18] argues that digital tools are increasingly essential for training clinicians and delivering effective interventions in health and clinical psychology. Finally, the quality of patient-professional interactions plays a critical role in therapeutic outcomes: [19] emphasizes that alignment between the styles and expectations of patients and healthcare professionals enhances treatment efficacy and patient satisfaction. Together, these studies underscore the dynamic interplay between psychological theory, clinical practice, technological innovation, and the social dimensions of care.

The studies highlight psychology’s role in shaping human behavior across clinical, educational, and social domains. Pereira et al. (2014) [15] show that interventions can enhance emotional awareness, while Soares (2023) [16] contextualizes these practices within the historical development of psychology. Oliveira and Soares (2014) [17] demonstrate how cognitive-behavioral approaches can transform patients’ narratives in clinical settings. Technology further supports these aims, with Soares (2024) [18] emphasizing its importance in training clinicians and delivering interventions. Finally, Soares (2025) [19] highlights that compatibility between patient and professional styles improves therapeutic outcomes. Collectively, these findings illustrate the integration of theory, practice, and social interaction in contemporary psychology.

Contemporary research in psychology emphasizes the intricate interplay between theory, practice, and social context in shaping human

behavior. [15] highlight how structured interventions can enhance emotional awareness and regulation, laying the groundwork for effective psychological support. [16] situates these practices within the broader historical development of psychology, showing how the discipline has evolved to understand and influence human behavior. [17] illustrate the transformative potential of cognitive-behavioral approaches, demonstrating how reframing patients' narratives can alleviate clinical conditions such as paruresis. Technological advancements further expand these possibilities, with [18] underscoring the role of digital tools in training clinicians and delivering interventions efficiently. Finally, [19] emphasizes that alignment between patient and professional styles enhances therapeutic efficacy and satisfaction. Together, these studies reveal a vision of psychology as a dynamic, applied science, deeply embedded in social, cultural, and technological contexts.

CONCLUSION

In conclusion, semantic memory is not merely an individual repository of facts but a dynamic, reconstructive system shaped by brain networks, cognitive processes, and social interaction. Neuropsychological and neuroimaging evidence, alongside philosophical perspectives, demonstrate its distributed, situated, and socially co-constructed character. Contemporary research further highlights the practical implications of these insights: interventions can enhance emotional awareness and regulation [15], cognitive-behavioral approaches can transform patients' narratives [17], and alignment between patient and professional styles improves therapeutic outcomes [19, 20]. The integration of technology in clinical training and interventions [18] underscores how cultural and social contexts mediate knowledge acquisition and application. Together, these findings situate semantic memory at the intersection of cognition, culture, and practice, revealing it as a socially embedded, evolving system that shapes not only thought and behavior but also education, therapy, and collective human experience.

Semantic memory cannot be understood as a purely individual, static repository of facts. It is a dynamic, reconstructive system shaped by brain

architecture, cognitive processes, and social interaction. Neuropsychological evidence—from semantic dementia to hippocampal amnesia—reveals the separable yet interconnected nature of semantic and episodic memory, while neuroimaging highlights the distributed networks underlying conceptual knowledge. Philosophical and epistemological perspectives remind us that memory is always situated, interpretive, and susceptible to distortion, influenced by both individual cognition and cultural frameworks. At the same time, collective memory and cultural schemas demonstrate that semantic knowledge is socially co-constructed, transmitted through language, education, imitation, and ritual, and foundational for meaningful participation in society. Together, these insights reveal semantic memory as a bridge between mind, brain, and culture: it structures our understanding of the world, shapes our social behavior, and connects personal experience with the shared knowledge of our communities. Far from being a mere repository of facts, semantic memory is a living, evolving system, constantly reconstructed, socially reinforced, and culturally embedded.

Neuropsychological and neuroimaging evidence reveal its distributed and interactive nature, while philosophical and cultural perspectives highlight its situated, interpretive, and socially co-constructed character. Cultural schemas, collective memory, and shared practices demonstrate how semantic knowledge guides behavior and connects personal experience with communal understanding. In this way, semantic memory bridges mind, brain, and culture—constantly evolving, socially reinforced, and foundational for navigating both the individual and collective dimensions of human life.

The discussion highlights the importance of interdisciplinarity, connecting insights from philosophy, cognitive science, and emerging technologies. Looking ahead, concepts such as semantic AI, extended cognition, and neuroethics emerge as promising avenues to deepen our understanding of mind, intelligence, and ethics. This perspective not only underscores the theoretical relevance of these fields but also emphasizes their direct impact on contemporary society, guiding debates on responsibility, autonomy, and human-machine interaction.

Embracing interdisciplinarity is key to understanding the intersections of philosophy, cognitive science, and technology (Soares, Shifferdecker-Hoch, Silva, 2026). Emerging areas like semantic AI, extended cognition, and neuroethics point to a future where mind, intelligence, and ethics are deeply intertwined, with profound implications for contemporary society.

Semantic memory is not merely an individual repository of facts but a dynamic, reconstructive system shaped by cognitive, social, and cultural factors. Neuropsychological and philosophical

insights reveal its distributed and socially mediated nature, while applied research demonstrates its practical relevance: interventions can enhance emotional awareness, cognitive-behavioral approaches can transform patients' narratives, patient-professional style compatibility improves therapeutic outcomes, and technology integration expands intervention possibilities. These findings position semantic memory as a bridge between individual cognition and collective knowledge, guiding thought, behavior, and meaningful participation in social and cultural life.

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