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Cities as Cognitive Maps: Memory, Mind, and Mental Health in Italo Calvino's *Invisible Cities*

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Abstract: Italo Calvino's *Invisible Cities* uses a literary lens to reflect on the processes of memory as they relate to cognitive and psychological mappings. The argument presented by this paper is that Calvino's use of imagined cities serves as external manifestations of various mental processes associated with memory, including recollection, repetition, fragmentation, and cognitive overload, and that they can be considered an environment, or a space in which people can live with the implications of these memory processes. Rather than displaying illness through clinical realism, *Invisible Cities* provides spatial representations of the states of individuals thus making memory a part of the inhabitable spaces formed by the individual's mental condition, and memory creates a fragile balance between the individual's capacity to remember and forget. The close textual analysis of *Invisible Cities* is supported by the insights from Aleida Assmann, Paul Ricoeur, Cathy Caruth, Arthur Frank, Rita Charon, and the work of numerous scholars of Calvino. This paper places *Invisible Cities* as a major interdisciplinary text that connects literature, memory studies, and the medical humanities.

Keywords: memory, cognitive mapping, mental health, medical humanities, narrative, space

Introduction

Memory, Mental Life, and Literary Space

Both medicine and literature consider memory as a crucial place where identity, suffering, and meaning coalesce. Whereas memory in the medical field is equated with trauma, depression, anxiety and dementia, it is understood as narrative that is culturally curated in literature. The field of medical humanities is bridging the gap between these two perspectives since both involve a breakdown in memory due to illness, while also recognizing that storytelling helps people to get through a fragmented sense of self and the distress that they have experienced in life (Charon 67).

Italo Calvino's *Invisible Cities* is one of the most complex literary explorations of memory in postmodern fiction written to date. It is composed of different descriptions about imaginary cities that are described by Marco Polo to the emperor Kublai Khan. Even though the narrative structure of the story is not linear or psychologically realistic, memory serves as the foundation around which the entire narrative is organized. Calvino says, "the city does not tell its past, but contains it like the lines of a hand" (11). Memory cannot be treated as chronologically documented; it can be considered in terms of the place in which it exists, and inscribed into environments, much as memory is inscribed into the mind and body.

This paper argues that the cities of *Invisible Cities* function as cognitive maps—symbolic representations of mental processes through which memory structures identity and mental health. By externalizing memory into space, Calvino transforms abstract psychological states into visible, inhabitable forms. A careful review of works related to memory studies and medical humanities as well as the novel *Invisible Cities*, shows that there is an ongoing engagement with the subject of mental health: particularly concerning the dangers of excessive memory; fragments created by disrupted recollection; and the healing potential of reconfiguring memories into narrative (Bond et al. 3).

Cognitive Mapping and the Architecture of Memory

Cognitive mapping as developed in psychology by Edward C. Tolman and later extended to cognitive theory describes a way of mapping both tangible (physical) and intangible (conceptual) surroundings through internal representations of the world around us (Tolman 192). Memory within this framework is not a static storehouse but a dynamic mapping process shaped by emotion, selection, and revision. As contemporary neuroscience research demonstrates, the hippocampus contributes to memory by encoding "a wide variety of information about temporal and situational context" and organizing experiences within multidimensional cognitive maps (Eichenbaum et al. 10840). Martin A. Conway explains that autobiographical memory is constructed through "spatial and emotional

frameworks" rather than linear recall (602). This neurological understanding of memory as spatially and contextually organized provides a scientific foundation for reading Calvino's literary architecture.

Calvino's narrative structure mirrors this cognitive process. Rather than being listed based on where they are found on the map, all types of cities in *Invisible Cities* are grouped thematically underneath conceptual headings that correspond directly to cognitive categories: "Cities & Memory," "Cities & Desire," and "Cities & Signs." This impulse to classify indicates the attempt of the mind to categorize experience into meaningful, easily understood patterns. As Marco Polo observes, "arriving at each new city, the traveler finds again a past of his that he did not know he had" (Calvino 29). Memory here is reconstructive rather than archival, aligning with contemporary cognitive models that emphasize the active, creative nature of remembering (Conway 604).

Paul Ricoeur's claim that "human lives need and merit being narrated" (75) is formally enacted in *Invisible Cities*, where memory becomes narrative cartography. If cognitive mapping explains how memory is structured, Calvino's cities reveal how such structures are emotionally inhabited and experientially lived. The organization of the novel into thematic categories mirrors what neuroscience describes as schematic organization, wherein "the hippocampus creates a systematic network organization that mirrors the spatial and nonspatial associations that can guide choice behavior" (Eichenbaum et al. 10843). Literature and neuroscience thus converge in understanding memory as fundamentally architectural.

Cities of Memory: Nostalgia and Affective Recall

The section titled "Cities & Memory" foregrounds recollection as an affective process. Diomira exemplifies how memory mediates experience: "the traveler who has once known it remembers it thereafter at each moment of his life" (Calvino 7). The city functions less as a physical location than as a mnemonic trigger, evoking emotional memory. This mechanism parallels medical psychology's understanding of cue-dependent memory, where sensory stimuli reactivate stored emotional responses (Tulving 69). In trauma and mood disorders, such triggers often overwhelm the present (Caruth 4). Calvino's cities dramatize this process by saturating space with affect.

Zaira intensifies this dynamic, being defined not by architecture but by remembered gestures and relationships: "the city consists of relationships between the measurements of its space and the events of its past" (Calvino 10). This formulation suggests that space itself becomes meaningless without the affective and narrative content invested in it. Memory transforms neutral geography into lived place. Neepa Sarkar argues that in *Invisible Cities*, "memory becomes part of a socio-political and philosophical deliberation in search of negotiations to contour and buttress the idea of 'home' and self" (Sarkar 3). The city as memory-space thus functions as an identity marker, a means by which the self recognizes and defines itself through accumulated experience.

Repetition further complicates memory's affective power. Calvino writes, "the city is redundant: it repeats itself so that something will stick in the mind" (15). Repetition stabilizes memory but also risks obsession. When repetition exceeds remembrance, memory shifts from affective recall to psychological compulsion. This tension between necessary repetition and pathological fixation runs throughout the novel, suggesting that mental health depends on maintaining a delicate equilibrium.

Repetition, Trauma, and the Pathology of Perfect Recall

Calvino repeatedly warns against the dangers of excessive memory. The city of Zora preserves every detail of its past with absolute precision, refusing change. As a result, the city stagnates: "forced to remain motionless and always the same, Zora has languished, disintegrated, disappeared" (Calvino 34). This paradox—that perfect memory leads to destruction—anticipates medical insights into mental health, where forgetting is recognized as an essential cognitive function.

Aleida Assmann argues that remembering always implies forgetting, and that both are constitutive of identity (Assmann and Conrad 5). Healthy memory requires selective retention and strategic erasure. Zora's refusal to forget becomes pathological, echoing conditions such as post-traumatic stress disorder (PTSD), where intrusive memory overwhelms the present. Cathy Caruth observes that trauma returns through compulsive repetition rather than narrative integration: "the event is not assimilated or experienced fully at the time, but only belatedly, in its repeated possession of the one who experiences it" (4). The traumatized individual becomes trapped in a perpetual present haunted by an unmetabolized past, unable to move forward.

Arthur W. Frank similarly notes that suffering becomes intelligible only when memory is narratively reshaped rather than mechanically repeated (55). In medical narratives of illness, patients who remain fixated on the traumatic moment of diagnosis or injury often experience greater psychological distress than those who integrate the experience into a broader life story. Calvino's poetics thus align with the medical humanities by presenting memory as a force that must remain flexible to sustain mental life. Zora represents the psychological danger of total recall: when nothing is forgotten, nothing can be processed, and psychological paralysis ensues.

The city of Isidora presents a related but distinct problem. Described as a city "where he arrives as a young man" but which "is the form his dreams took," Isidora embodies nostalgia that has solidified into melancholy (Calvino 8). The protagonist's arrival in old age means the city can never fulfill its promise; desire has been preserved so perfectly that it has become unlivable. This temporal mismatch between memory and present reality produces a profound sense of loss. Isidora dramatizes how idealized memories can become prisons, preventing adaptation to changing circumstances and fostering depression.

Fragmentation, Discontinuity, and Identity

While repetition threatens mental health through excess, fragmentation threatens it through loss of coherence. Eutropia is composed of multiple interchangeable cities, each abandoned once its inhabitants grow bored. Life is continually restarted: "when all its inhabitants feel the same boredom, the city is abandoned and they move on to the next" (Calvino 64). Memory here is discontinuous, preventing the formation of a stable identity.

Maurice Halbwachs emphasizes that memory depends on continuity and social frameworks: "it is in society that people normally acquire their memories. It is also in society that they recall, recognize, and localize their memories" (38). Eutropia's perpetual displacement offers a spatial metaphor for cognitive and narrative fragmentation. In clinical contexts, such fragmentation is associated with dissociative disorders, where traumatic experiences remain unintegrated into the coherent life narrative (Kirmayer 133). The inhabitants of Eutropia lack what Ricoeur calls "narrative identity"—the sense of selfhood that emerges from the ability to tell one's life as a continuous story (246).

Similarly, *Fedora* contains models of cities that might have been, preserving unrealized possibilities. "In *Fedora*'s central square there stands a metal building with a crystal globe in every room" containing miniature models: "these are the forms the city could have taken if it had not, for one reason or another, become what we see today" (Calvino 32). These unrealized memories resemble what Assmann terms the "archive of memory," where alternative pasts persist alongside lived experience, often producing melancholia and psychological burden (97). The weight of unlived lives, of roads not taken, becomes as heavy as actual experience.

This proliferation of alternative memories points to what contemporary psychology recognizes as counterfactual thinking—the tendency to imagine alternative outcomes to past events. While moderate counterfactual thinking can support learning and adaptation, excessive rumination on what might have been is associated with depression and regret (Roese 133). *Fedora* spatializes this psychological process, transforming mental speculation into architectural form. The city becomes a museum of lost futures, each crystallized model representing a path foreclosed. For Kublai Khan, who contemplates these models, the experience produces not liberation but paralysis, as the multiplication of possibilities undermines decisive action.

Maurilia presents another variation on fragmented identity. The city exists in two forms: the present city and postcards of "Maurilia as it used to be" (Calvino 30). Visitors are told that the old Maurilia was different, but "sometimes the same scene is presented: a hen in the same place as a henhouse, a girl's pose the same" (30). The relationship between past and present becomes uncertain, and identity dissolves into indeterminate resemblance. This ambiguity mirrors the unreliability of

memory itself, the way recollection reconstructs rather than retrieves, often producing false continuities and spurious connections. The postcards of old Maurilia may depict an entirely different city, or they may capture the same city under different conditions; the text refuses to resolve this uncertainty. In psychological terms, this represents the problem of confabulation—the production of fabricated or distorted memories without conscious intention to deceive (Turner et al. 403).

Cognitive Overload and the Burden of Total Knowledge

If fragmented memory destabilizes identity through loss, Calvino also explores the opposite danger: the psychological paralysis produced by an excess of memory. This condition is embodied by Kublai Khan, who seeks total knowledge of his empire. Surrounded by maps and models, he becomes increasingly overwhelmed. Calvino observes that "the Great Khan could decipher the empire's knowledge only by reducing it to images" (121). Yet even this reduction proves insufficient; the sheer volume of information exceeds his capacity for comprehension.

Paul Ricoeur describes such moments as crises of interpretation, when memory exceeds narrative coherence (412). Kublai Khan's distress exemplifies cognitive overload, a phenomenon associated in psychology with anxiety and decision paralysis. Contemporary research on information processing confirms that human cognitive capacity is finite; when presented with excessive data, individuals experience decreased decision quality and increased stress (Sweller 295). The Khan's predicament dramatizes this universal limit. His desire for comprehensive knowledge of his empire—for a complete cognitive map—founders on the impossibility of such totality.

The contrast between Khan's totalizing impulse and Marco Polo's selective storytelling underscores Calvino's central insight: mental health depends not on exhaustive memory but on meaningful configuration. Where Khan seeks encyclopedic completeness, Polo offers narrative coherence. Where Khan accumulates information, Polo creates meaning through selection and arrangement. As Polo explains, "it is not the voice that commands the story: it is the ear" (Calvino 135). Narrative emerges not from comprehensive data but from responsive dialogue, from the interplay between teller and listener.

This insight resonates with narrative medicine's emphasis on selective attention and interpretive frameworks. Rita Charon argues that clinical competence requires not merely gathering information but organizing it into meaningful patterns: "Narrative competence enables the physician to practice medicine with empathy, reflection, professionalism, and trustworthiness" (9). The physician, like Marco Polo, must select salient details from the overwhelming flux of clinical data and configure them into coherent stories. Cognitive overload threatens both empire-builders and clinicians; narrative offers a means of managing complexity without succumbing to paralysis.

Narrative as Therapeutic Reconfiguration

Against overload and fragmentation, *Invisible Cities* proposes narrative as a reparative practice. Marco Polo's storytelling functions as a form of cognitive and emotional regulation. Each city he describes is implicitly a version of Venice: "Every time I describe a city I am saying something about Venice" (Calvino 86). Memory here is not retrieval but transformation. Polo does not simply recall Venice; he reimagines it through endless variations, each description adding new dimensions of meaning.

Rita Charon argues that narrative competence enables recognition and interpretation of suffering: "The effective practice of medicine requires narrative competence, that is, the ability to acknowledge, absorb, interpret, and act on the stories and plights of others" (67). Polo's narratives exemplify this process, translating memory into symbolic space. His descriptions do not merely represent cities; they actively construct meaning from experience. Through narrative reconfiguration, painful or overwhelming memories can be metabolized and integrated into the self.

This therapeutic dimension of narrative appears most clearly in the structure of Polo's dialogues with Khan. Initially, Khan experiences profound despair: "From now on, I'll describe the cities to you, in your journeys you will see if they exist" (Calvino 45). Unable to verify Polo's accounts, Khan begins to doubt the reality of his empire, experiencing a crisis of meaning. Yet gradually, through their ongoing conversation, Khan learns to engage imaginatively rather than empirically with Polo's descriptions. The question shifts from "Do these cities exist?" to "What do these cities mean?" This transformation represents a movement from traumatic fixation (Khan's obsession with verifiable facts about his disintegrating empire) to narrative integration (Khan's acceptance of imaginative meaning-making).

Arthur Frank describes this process as "narrative wreckage" and "narrative reconstruction": illness disrupts the coherent life story, leaving fragments that must be reassembled into new patterns (54-55). Polo's method of describing cities demonstrates such reconstruction. Faced with the impossibility of comprehensive description—every city contains infinite details, infinite perspectives—Polo selects emblematic moments and images that capture essential qualities. This selective process mirrors how individuals reconstruct identity after traumatic disruption, choosing which memories to emphasize and which to release.

The interplay between Khan and Polo also models the therapeutic relationship. Khan's role as listener proves essential; without an audience, Polo's narratives would lack meaning. Charon emphasizes that narrative medicine requires "narrative competence" from both patient and physician, involving "attention, representation, and affiliation" (8). Similarly, Khan learns to attend to Polo's stories, to represent them mentally, and to affiliate himself imaginatively with the cities described. This

process transforms Khan's relationship to his empire from one of anxious control to one of imaginative participation.

Preventive Memory and Mental Resilience

Beyond trauma, *Invisible Cities* explores memory's preventive and sustaining functions. Literature, as Lucy Bond, Susannah Radstone, and Jessica Rapson argue, does not merely represent memory but actively shapes how memory is imagined and experienced (Bond et al. 3). Calvino's cities function as imaginative rehearsals of mental states, enabling reflection without collapse. By encountering through fiction the dangers of excessive memory (Zora), the loss of fragmented memory (Eutropia), and the paralysis of cognitive overload (Khan), readers develop awareness of these psychological risks.

Owain Jones and Joanne Garde-Hansen describe places as "mnemonic anchors" through which identity is negotiated (Jones and Garde-Hansen 18). Calvino's imagined cities serve precisely this function, offering cognitive maps that allow individuals to navigate loss, empire, and mortality without succumbing to despair. The cities provide frameworks for understanding complex emotional experiences that might otherwise remain inchoate and overwhelming. By giving spatial form to psychological states, Calvino makes the invisible visible, the unmanageable manageable.

The concept of resilience in contemporary psychology emphasizes the ability to maintain mental flexibility under stress, to adapt cognitive frameworks in response to changing circumstances (Southwick et al. 2-3). Calvino's narrative structure embodies such resilience. Unlike Khan's rigid pursuit of comprehensive knowledge, Polo's narratives remain fluid, adapting to Khan's questions and the evolving dialogue between them. No single city provides definitive answers; instead, the proliferation of cities creates a network of meanings that readers can navigate according to their own needs and circumstances.

Moreover, the text's refusal of closure supports ongoing engagement. The novel ends ambiguously, with Polo describing a city that might be hell or might be heaven, depending on one's perspective: "The inferno of the living is not something that will be; if there is one, it is what is already here" (Calvino 165). This refusal to resolve meaning definitively keeps interpretation open, allowing readers to return to the text at different life stages and discover new significances. Memory, like meaning, remains dynamic rather than fixed.

The Ethics of Forgetting and the Politics of Memory

While much of *Invisible Cities* explores the necessity of memory, the text also raises ethical questions about forgetting. Clarice is described as a city that has been destroyed and rebuilt repeatedly: "Clarice has had many lives... in each life people build a city which in turn requires a further change"

(Calvino 106). Each rebuilding erases previous structures, yet traces remain embedded in the new architecture. This palimpsestic quality suggests that forgetting is never absolute; the past persists as trace even when consciously erased.

Aleida Assmann distinguishes between "functional memory" (what a culture actively preserves and transmits) and "storage memory" (what remains archived but inactive) (125). Clarice demonstrates the tension between these modes: societies must selectively remember to maintain coherent identity, yet what is forgotten does not disappear but rather enters storage, available for potential future retrieval. This dynamic proves especially significant in contexts of historical trauma, where communities must negotiate between commemorating suffering and enabling recovery.

The ethical stakes of this negotiation appear in Phyllis, where "successive phases of the city's growth" create layers that "alternate, change their axis, branch out and encircle one another" (Calvino 95). No single layer can claim definitive authority; each represents a particular historical moment with its own legitimacy. This architectural multiplicity models what Ricoeur calls "just memory," which requires recognizing plural perspectives rather than imposing singular narratives (88). Mental health, both individual and collective, depends on this capacity to hold multiple memories in productive tension rather than forcing resolution into univocal accounts.

Conclusion

By transforming memory into spatial form, *Invisible Cities* offers a powerful model for understanding the relationship between mind, memory, and mental health. Calvino's cities function as cognitive maps that chart nostalgia, trauma, fragmentation, overload, and the necessity of forgetting. Rather than depicting illness through clinical realism, the text externalizes psychological processes, allowing readers to inhabit mental states that medicine often describes abstractly.

Calvino demonstrates that memory must remain dynamic to sustain mental life. When memory becomes rigid or totalizing—as in Zora or in Kublai Khan's cognitive exhaustion—psychological well-being falters. When memory fragments into disconnected episodes—as in Eutropia or Maurilia—identity dissolves. Yet when memory is imaginatively reconfigured through narrative, as in Marco Polo's storytelling, it becomes a source of resilience and meaning. The text thus validates central insights from both memory studies and medical humanities: that memory is constitutive of identity; that traumatic memory requires narrative integration; that cognitive overload threatens mental health; and that selective forgetting enables adaptation.

In bridging literary imagination with the concerns of medical humanities, *Invisible Cities* affirms literature's vital role in understanding mental health as a lived, narrative, and profoundly human experience. The novel demonstrates that literature does not merely reflect psychological

theories but actively contributes to them, offering phenomenological insights that complement clinical and neuroscientific approaches. By reading Calvino's cities as cognitive maps, we recognize memory not as a passive repository but as an active, creative process through which individuals and communities construct meaning, maintain identity, and navigate the complex terrain between remembering and forgetting. *Invisible Cities* remains essential reading for anyone seeking to understand how narrative shapes mental life and how spatial imagination can illuminate the invisible architectures of mind.

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