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Jason Kalin & Jordan Frith

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Wearing the City: Memory P(a)laces, Smartphones, and the Rhetorical Invention of Embodied Space

Jason Kalin and Jordan Frith

This article extends research on the production of embodied space by focusing on the relations between place and memory. Beginning with a consideration of how wearable technologies enable new spatial practices within the constructed order of the city, we develop a conceptual framework to understand these spatial practices by returning to the rhetorical art of memory and the building of memory palaces. The art of memory, exemplified by memory palaces, offers a rhetorical resource for understanding how smartphones as wearable technologies may be incorporated—that is, brought into the body, as integral to the production of embodied spatial memories. We argue for the memory-palace builder as an inventive rhetorical (and mobile) figure who not only walks but also wears the city, composing and embedding hybrid memories into and onto hybrid places and, thus, providing a coherent way of being and acting in contemporary urban space.

Keywords: *memory palace*, *mobility*, *rhetorical memory*, *smartphones*, *spatial practice*

The city is redundant: it repeats itself so that something will stick in the mind. . ..
Memory is redundant: it repeats signs so that the city can begin to exist.
—Italo Calvino, *Invisible Cities*

Turn On Location Services to Allow Maps to Determine Your Location.
—iOS app request

Smartphones have become the most rapidly adopted technology in history (Mlot). In industrialized nations, such as the United States and most of Western Europe, smartphone adoption represents more than fifty percent of the population. And for much of the developing world, the first time that people will access the Internet has been or will be through a mobile interface. Smartphones are now a communication

Jason Kalin is Assistant Professor in the Department of Writing, Rhetoric, & Discourse, DePaul University, 2320 N. Kenmore Ave., Schmitt Academic Center, Room 350, Chicago, IL 60614, USA. E-mail: jkalin@depaul.edu

Jordan Frith is Assistant Professor in Department of Technical Communication, University of North Texas, 1155 Union Circle #305298, Denton, TX 76203-5017, USA. E-mail: jordan.frith@unt.edu

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nexus that enable people to make voice calls, send text messages, access social network sites, check e-mail, update calendars, and so on. For all the hype given to bleeding-edge wearables such as Google Glass, Fitbit, and the Apple Watch, the smartphone has been and will continue to be the most influential and widely adopted technology carried on the body. Indeed, through their pervasive adoption and use, including their always-on, ready-to-hand nature, smartphones have become the invisible infrastructure for the production of embodied space (Farman, "Stories").

Whereas much of the discussion surrounding smartphones has focused on issues of interpersonal sociability, this article examines how smartphones mediate not only an individual's body but also the relationship between place and memory. According to Jason Farman, embodiment and embodied space are enacted through practices of inscription and of being inscribed, referring to how bodies both write and are written by spatial practices ("Stories"; see also Reynolds). In this way, wearable technologies, especially smartphones, foreground the specificity of location and embodiment, the user's body in space and time. We extend such research by considering spatial practices that reveal how people can use smartphones and location-based applications to engage deeply with physical space, particularly the intertwining of place and memory. To do so, we develop a conceptual framework for understanding how smartphones as wearable media may be incorporated—that is, brought into the body, as integral to the production of embodied spatial memories.

We begin by discussing the work of Michel de Certeau and interdisciplinary research in environmental psychology to examine how mobile mapping technologies have been understood to impair engagement with physical space. However, we address this critique by drawing from the rhetorical tradition the art of memory and the memory palace as rich rhetorical concepts that illuminate how wearable technologies complicate the embodied spatial and mnemonic practices of contemporary urban life. Although the art of memory is typically treated with a passing reference in rhetorical studies and barely mentioned at all in media studies, we argue that the art of memory, exemplified by the memory palace, offers a model for understanding how users may compose and incorporate the city. Place and memory share a "deep cultural history" in rhetorical studies (Dickinson, Blair, and Ott 1), and contemporary wearable technologies have introduced new affordances and constraints in this relationship. Delving more deeply into both the rhetorical art of memory and creative uses of applications, like Facebook and Instagram, reveals inventive links, both physical and digital, between memory and place.

Similar to Robert J. Topinka's conception of "the walker as rhetorician," we suggest that the memory-palace builder is a rhetorical (and mobile) figure who not only walks but also wears the city, composing and embedding hybrid memories into and onto hybrid places. The art of memory shows how we might spatialize the embodied knowledge of the city while also pushing beyond the pre-given spatial representations or "optical knowledge" (de Certeau 93) of popular mobile applications like

Google Maps. We show that by incorporating wearable technologies into their bodies, people build and move through, both digitally and physically, hybrid palaces of memory and wear the city as a rhetorical practice of everyday life, thus providing a coherent way of being and acting in contemporary urban space. In this way, a rhetoric of wearable technologies examines not only the how and why of what we wear but also the consequences of wearing the technologies we do. As we show below, a rhetoric of wearables also provides a conceptual lens through which to analyze the extent to which these technologies become embodied practices, habits, affects, and memories constituting our continued encounter with reality.

Losing One's Place: Spatial Practices and the Constructed Order

In *The Practice of Everyday Life*, Michel de Certeau discusses how, when we view the city from above, we come into the perspective of a "scopic drive" that fixes the city as an artifact, thus conflating scopic with the gnostic, an "optical knowledge" (92). De Certeau's criticism of an "optical knowledge" foregrounds "the very relationship between spatial practices and the constructed order" of the city (107). And this relationship between spatial practices and the constructed order has been undergoing intense transformation in the contemporary city. The emergence, adoption, and proliferation of wearable technologies, including smartphones and location-based apps, have blended physical and digital spaces into hybrid spaces of interaction and experience (Frith 19–23). Such hybrid spaces introduce not only new possibilities for the constructed order of the city but also new spatial practices in which to actualize some of these possibilities. Walking in the city, we might say, has never been so mediated, causing some commentators and scholars to wonder if we are spending more time looking at our screen than our streets (Farman, "Stories" 112; Gergen 227–31). Through mapping applications like Google Maps, users sort through and arrive at their destinations, but have these technologies occluded the spatializing of the city itself? Asked differently, why must people remember a particular route through the city if Google Maps does so for them?

Early research on mobile technologies often focused on this kind of "optical knowledge" that totalizes the city, elevating engagement with a spatial representation over engagement with physical space. Studies of Global Positioning System (GPS) units in cars, for example, showed that drivers who relied on GPS displays were less able to recall landmarks than drivers who used traditional maps (Bakdash, Linkenauger, and Proffitt 2117). This line of research was extended to mobile phone mapping in an influential environmental psychology study that explored how mobile mapping affected a person's ability to form a cognitive map, which refers to "a mental representation, or set of representations, of the spatial layout of the environment" (Montello and Freundschuh 8). To study how mobile phones impacted cognitive maps, Toru Ishikawa et al. placed participants in three groups (74–82). The first group received a directed tour of a route and then were asked to walk the route themselves. The second group used paper maps to plan their route. The third

group received turn-by-turn directions on a mobile device. The researchers then had each group walk the route and had the groups recall details of their mobility, including the distance traveled, cardinal directions, and physical features of the space they moved through. The mobile map group—the participants who followed turn-by-turn directions—performed markedly worse on spatial recall, suggesting that the spatial representations, or "optical knowledge" of mobile media, impaired the formation of cognitive maps.

The Ishikawa et al. study was repeated in similar form by other researchers who found similar results (Münzer et al.). For example, Katharine S. Willis et al. compared different groups and found that mobile map users were least able to estimate distance traveled or the cardinal directions of landmarks they walked past. The authors concluded: "A mobile map with automated position information (i.e. self-localization) essentially enables and possibly even encourages someone using it to switch off and to become the passive receiver of information, and as such does not support learning in a constructive manner" (108). Similar observations argued that mobile phone users turn into "phone zombies" who do not pay attention to their surroundings (Farman, "Stories" 112; Williams). Other studies have found that mobile phones in general distract users from actively engaging in their surrounding space, which was, with no exaggeration, one of the primary fears of early- to mid-2000s media studies research on the mobile phone (de Souza e Silva and Frith 78–81). Furthermore, such studies accord well with Plato's critique of writing: The more we write down, the less we have to remember, and the more we forget. Writing, Plato averred, provided access to knowledge—one could see it on the page, an "optical knowledge," as it were—without requiring the writer or reader to embody that knowledge. With Google Maps accessed through wearable, ready-to-hand smartphones, users can feel as if they know the city without remembering the physical space.

Nevertheless, we must contextualize and resist the urge to automatically view mapping applications negatively for two reasons. First, using turn-by-turn directions often induces the welcomed pleasure found in simply following a pre-given spatial order or representation. For instance, Amy D. Propen notes that many drivers who use GPS no longer worry about becoming lost, which allows them to enjoy more freely the drive itself (154). And as de Certeau argues, many types of consumption are productive and accord the individual a kind of agency. Second, and related to the first, these studies focus on the ways space ostensibly should inscribe and prescribe the practitioner's body. That is, these studies seem to conflate a route through space with rote memorization, and in this way, they display a constricted sense of rhetorical memory and mnemonic practice.

In contrast to the aforementioned studies, rhetorical memory is not simply the reconstruction of a route through space. If it were, memory would be unnecessary or redundant, as Calvino suggests (19, included in the epigraph), a mere effect or by-product of the city, and a simple graphic trail would suffice to re-present the material reality of space. Instead, we should ask the more rhetorically grounded

question: Rather than having to memorize their routes, how else were users making memories? How were the places evoking memories from other times? How were memories evoking similar places? With these questions, we arrive at a rhetorical practice of memory whereby memory is essential to the invention and experience of space. Memory, thus, is not simply tacked on after the fact but rather helps call forth the existence of space, of the city itself. Practices of memory, often accompanied by walking, produce the *here* and *there* of the city itself, thus making the places of the city viscous so that the city begins to the stick to the individual.

De Certeau argues that walking, as an everyday practice, uncovers and returns a "certain strangeness" because the walker "actualizes" some of the possibilities of the spatial order of the city (98). Topinka, extending de Certeau into rhetorical studies, notes how the walker as a rhetorical figure resists the fixity of suburban planning. Indeed, the walker spatializes the city; that is, the city, rather than being a container holding walkers, is produced by walking. Walkers bring space to life by composing with the "world's debris" (de Certeau 107), writing stories and memories onto and into places. Similarly, memory may propel the walker forward, both returning to familiar places and discovering new ones. As such, people may begin to exert their agency within or against the "optical knowledge" or pre-given spatial representations afforded by wearable technologies. To help illuminate this process, we return to the art of memory as an embodied spatial practice that encourages users to interrogate differently the constructed order of the city.

Finding One's Place: Memory P(a)laces and the Rhetorical Invention of Embodied Space

Although today primarily regarded as an intellectual curiosity or a showman's display of mental dexterity,[1] in the ancient and classical rhetorical tradition, the art of memory was an essential skill because it assured and amplified the rhetor's ability to speak on and for any occasion. Yates identifies the three classical works of rhetoric describing the art of memory as, in chronological order, the anonymously written *Rhetorica ad Herennium*, Cicero's *On the Orator*, and Quintilian's *Institutes of Oratory*. Each treatise grounds the art of memory in the story of Simonides. After performing his lyric poem in honor of the nobleman Scopas, Simonides was requested to meet two young men outside the banquet hall. Once outside, the roof of the hall collapsed on the dinner guests, rendering their bodies unrecognizable. Simonides, remembering the places and order in which the guests had been seated, was able to identify their bodies and return them to their families. The story of Simonides presents the two main principles of the art of memory: visually striking images and spatially ordered places (Yates). The art of memory thus is a two-step program.

[1]Consider the popular book by Joshua Foer titled *Moonwalking with Einstein: The Art and Science of Remembering Everything*, which discusses the author's time training for the USA Memory Championship.

First, the orator builds an architectural space with a series of specific places, or *loci*, which form the constructed order of his memory. For example, Quintilian recommends a structure that is both spacious and varied, such as a house including the living room, bedrooms, and parlors along with statues and other ornaments (11.2.17–22). Second, the images by which the speech, or any other information, is to be remembered—images typically related to a speech's primary parts or points—are imprinted on the places that have been memorized in the architectural space. The *Rhetorica ad Herennium* recommends that images be striking and singular so that they more forcefully impress themselves on the memory places. As an example of a striking image, the anonymous author suggests an image of a ram's testicles to represent, punningly, the witnesses (*testes*) in a lawsuit (3.20.33). Images thus correspond to places in memory. The image associated with the first part of the speech should be superimposed on the first place, the second image on the second place, and so on: "The method ensures that the points are remembered in the right order, since the order is fixed by the sequences of places in the building" (Yates 3). When delivering a speech, the orator, as Quintilian describes, walks—akin to de Certeau's urban walker—through the architectural space, stopping at each place to bring to mind the corresponding image and memory. In this way, the art of memory belongs to rhetoric as a *techne* or practice allowing the rhetor to deliver a speech with unfailing accuracy. In short, the art of memory enabled the rhetor to give a virtuosic public performance. As a practice giving form to knowledge, the art of memory was considered—and still ought to be considered—a virtue, and virtuosity and virtue are linked by *virtu*, power (Lanham 189). For the rhetor, the art of memory offered a powerful way of being and acting in the world.

The art of memory works with any *content*, from remembering parts of a speech to items on a grocery list to random sets of numbers to more meaningful events in one's life—a powerful *program* of gathering knowledge in memory. And as a mnemonic practice grounded in visual imagery and spatial ordering, it provides a conceptual framework for thinking through similar practices developing around wearable technologies. For example, the smartphone application Foursquare—before moving check-ins to the separate Swarm application in 2014—allowed users to check in to locations, and the application saved the check-ins in an archive (Frith and Kalin 49–52). The archive, which is now featured through the Swarm application, works as a Web page on which people can sort through the memories of their physical mobility, filtering results to see where they traveled on certain days, with whom they checked-in, or how many of each category of location they had visited (e.g., airports or pubs). Importantly, the archive also allowed people to visualize their check-ins on a digital map, placing memories recorded through their check-ins in relation to one another on a visualized spatial representation. Thus, check-ins are a kind of *loci* impressing upon a particular place a particular memory, and when assembled and connected in the archive, they begin to form an architectural and structured way of thinking about one's past. The digital archive turns into a hybrid memory palace.

Such mnemonic activity is similar to the orator constructing *loci* to which she may return during her speech: "I go *here* for the exordium, and *there* is the peroration." For instance, the user is able to turn an abstract spatial order, such as a list of lunch options within a half mile, into a concrete place by checking in and leaving a review: "Here, I had the best ham sandwich in the city." The Foursquare user acts within both the constructed order of the city and that of Foursquare's location awareness to actively build not only a digital archive of her locations but also a hybrid memory palace, combining the digital and physical in which she may develop her embodied sense of both her past and her place within the city. Places begin to cling to her as meaningful embodied spatial memories. Indeed, the check-in as mnemonic practice spatializes urban life, removing urban space from the realm of the conceptual—of ro(u)te memorization—and emplacing it within personal experience.

The check-in as mnemonic practice emphasizes embodied emplacement. Propen describes embodiment as an affective relation between body and world—that is, how the body is situated in and interacts with its environment (5). Jason Farman similarly discusses "embodied implacement" as the sense of direction and integrity one feels in a place; it is the ability to answer questions, such as "What am I doing here?" and "What is my history with this place?" (*Mobile* 42). De Certeau refers to a related experience of embodied emplacement when he portrays places as "inward-turning histories . . . symbolizations encysted in the pain or pleasure of the body. 'I feel good here': the well-being under-expressed in the language it appears in like a fleeting glimmer is a spatial practice" (109). The check-in as an embodied spatial mnemonic thus crystallizes an affective response to place, a feeling of direction and integrity along with a sense of well-being. Jodi Dean claims that affect is a "binding technique," whereby "every little tweet or comment [or check-in] . . . accrues a tiny affective nugget" (21). The person using wearable technologies and location-based applications to check in creates a personal "affective network" that binds together embodiment and mobility with place and memory. The hybrid memory palace, as we conceive it, enacts this binding together, allowing its builder to construct experiences of everyday life that matter not only for the reconstruction of her past but also, in subtle ways, her engagement with the future. As such, the hybrid memory palace instills in its builder a sense of agency.

The builder's agency thus emerges from and is distributed across technologies and bodies as well as discursive, material, mnemonic, and spatial practices. Put differently, agency is the contact between internal representation and external surroundings as mediated by technologies, bodies, and practices. In relation to memory, agency is more than the ability to store and retrieve memories; rather, agency is an openness to the suasive, affective force of memory itself by which the external environment may become incorporated into internal subjectivity (Pruchnic and Lacey). That is, an external stimulus, such as a place, may produce a non-cognitive, affective mnemonic response, and vice versa. Indeed, the memory palace mediates external environment and internal subjectivity through embodied emplacement and ongoing movements through space. Recall that for de Certeau memory is a kind of spatial

practice—the memorable here and there, often incited by walking, within the constructed order of the city. Embodied spatial memory is an agential and inventive practice that says, "I feel good here," without remembering or knowing—at first, or at all—exactly why one has such a feeling. Consequently, the hybrid memory palace mediates the familiarity and strangeness of the city: "I've been *here* before" and "*This* place feels different." The hybrid memory palace is the mediation between internal subjectivity and external environment—in this case, how places become incorporated into the body as affective mnemonic responses. As such, the figure of the memory-palace builder finds herself already in the middle of the world, but not without resources—or rather, something other than resources.

Wearable technologies appear to the memory-palace builder not as resources to be mined or even prosthetics to donned, but rather as "rhetorical artifact[s] . . . that elicit interaction and bodily engagement in everyday settings and mundane activities" (Propen 123). And through this bodily engagement, wearable technologies, we suggest, do more than shape embodiment: They become bodily conditions. Debra Hawhee describes how *hexis*—the Greek term for bodily condition—"is indistinguishable from habits and practices" so that "thought isn't just 'embodied'— it is bodily" (58). She quotes Parmenides: "the constitution of his limbs is that very thing which thinks" (58). We think with our bodies. When Google Maps asks for permission to use the user's location, the user's body is the blue dot that moves as the user moves through space.[2] Eric Laurier, Barry Brown, and Moira McGregor, in their research of mediated pedestrian mobility, emphasize how users of a map application walk the city by aligning their movements with those of the blue dot on the smartphone screen, thus demonstrating "how walking is one part of the gestalt of action which sustains the intelligibility (and unintelligibility) of what the [walkers] are doing in ongoing real time" (15). Such coordinated movement between physical body and digital representation shows how embodiment and agency mutually arise between materiality and digitality, between external environment and internal subjectivity. Similarly, the check-in is made possible through the "bodily intelligence" enacted through Foursquare. This coordinated action suggests how space does not simply preexist the user's movement; the user, through embodied emplacement and bodily intelligence, produces city space. Building a hybrid memory palace becomes a manner of thinking and mode of inventing a space-time from and in which to act and dwell within the constructed order of the city.

The hybrid memory palace and its builder's bodily condition is exemplified by the popular photosharing application Instagram. Although the application is

[2]Smartphones as wearable technologies encourage this extension of embodiment. Nevertheless, the user could be separated physically from her smartphone, in which case the smartphone would be tracked not the user. Thus, much depends on the user's psychological and behavioral patterns in contributing to this extension. For example, Vera J. Sauer et al. study the various psychological and behavioral patterns related to "phantom phone sensations." Similarly, Cynthia A. Hoffner, Sangmi Lee, and Se Jung Park show how the psychological model of self-expansion applies to smartphone users: use of smartphones often encourages users to expand their sense of self to include their devices, and this expansion potentially leads to greater psychological health and well-being.

most famous for enabling users to apply filters to their images, the application itself—along with the photographic practices that have arisen with it—highlights the importance of movement, memory, and place. For example, users can choose to upload images with location metadata (GPS data from the smartphone), and this locational information allows the images to be mapped, which both spatializes and visualizes the users' photographic and locational history. Raz Schwartz and Germaine R. Halegoua describe how the photo map enables people to "'drill down' using this interactive map and study the various places a user has taken photographs, down to street level specificity. In this way, local and individual patterns of mobility can be visualized and archived as well" (1651). Instagram's photo map combines the long history of photography and memory with the new potentials of mobile technologies constantly worn and carried on the body. The photographs are given special relevance because they are attached to physical locations, and organizing them by date can spatially display one's mobility through physical space. The photo map—the images and places—becomes a hybrid memory palace that users construct while on the move.

Classical rhetors developed memory palaces that allowed them to both build a world through which to move and understand their place in and movement through that world, thus cultivating a particular bodily condition and intelligence. In a similar way, Instagram users have adopted the application not only to express themselves to others but also to find their place in the world. In a study of Instagram users, Larissa Hjorth and Sarah Pink describe Instagram images as "image-in-motion visualities" or "emplaced visualities" that attend to "the relationship between people, images, and environment, that is, to their situatedness in ecologies of place" (42). Instagram's "emplaced visuality" brings together online and offline locations and weaves together places as "stories-so-far" (Massey 130). Hjorth and Pink expand upon this notion by arguing that "we inhabit and at the same time are creating a world in movement, an ongoingness that we contribute to through our own mobility and that of which mobile media play an increasingly inevitable part" (45). The mundane becomes memorable within the ongoing production of embodied space. As users upload and tag images, they create a hybrid memory palace, one that combines physical and digital places and memories. For example, a student in one of the author's courses created this kind of memory palace as a class project. Using her Instagram images and their embedded location information, she was able to walk through her past, moving from place to place as she remembered who she was with and what she was doing. From one pizza place in New York City to a coffee shop in San Francisco to the beach in Chicago, she returned to the places that were meaningful to her. Yet, considered within a memory palace, the images become as much about moving through or forward as they were about remembering the past. That is, images, places, and memories became enmeshed with one another so that one image pointed to the next, or one memory led to another, or one place evoked a similar place in a different city. Much like a rhetor moving through a memory

palace along different paths for different occasions, the student was able to both inhabit and create multiple paths through her photo map.

The art of memory thus allows the orator to adapt to changing rhetorical situations by moving to any place in the architectural structure to retrieve the appropriate information, to create for the moment a particular path within memory. For instance, the orator could improvise a speech by walking through his memory palaces in different ways. Similarly, Foursquare's and Facebook's check-in maps, Google Maps' Timeline, and Instagram's photo map offer users another way in which to enact meaning within a spatial order, and the users encounter memory along an "interactional trajectory." Andrew Hoskins advances the concept of interactional trajectory to highlight how memory in the current new media ecology "involves a continuation . . . of remembrances, that are differentially intersected, applied, and reduced through their embedding in new contexts, testimony, evidence, objects, and media" (277). As a hybrid memory palace, the photo map provides both access to memory and memory itself whereby the user may follow certain memories along particular interactional trajectories: "Here's where I had that amazing lunch, and then I met my friend there for a coffee." This kind of hybrid memory palace is the production of embodied space—a way of incorporating mobile technologies, images, and memories within everyday life. Consequently, spatial or emplaced memories do not occur as effects of urban space or experience, but rather are constitutive of urban space and experience as such.

Moreover, the art of memory and memory palace offer a way of thinking about the relationship between spatial practices and the constructed order of space. As we acknowledged, many location-based applications rely upon spatial abstraction, a bird's-eye view that renders urban space as kind of a "concept city." In short, Google Maps always first offers the most rational and efficient route, and users who follow this route may occlude their movement through that space (Frith 53–56). They may not see the city as anything other than anonymous space. To counteract this possibility, we propose the art of memory and the memory palace as tactical interventions into the production of embodied space. Topinka, for example, shows how de Certeau's walker is a rhetorical figure, one who "opens a space for rhetorical invention in the everyday life of consumers" (82). Similarly, the art of memory shows how we might spatialize and organize the embodied knowledge of the city while also pushing beyond the pre-given "optical knowledge" of mobile applications like Google Maps. Put differently, constructing a memory palace is a rhetorical invention, hitched to movement and mobility, whereby a user of wearable technologies not only "affirms, suspects, tries out, transgresses, respects" (de Certeau 99) the constructed order or fixity of the city but also cultivates a bodily condition and intelligence—*hexis*—along with practices and habits that allows her to build a new dwelling place—a hybrid city—in response.

Conclusion

The previous sections examined different uses of smartphones as wearable technologies, focusing on the ways people mediate embodied movement and memory. Our movement through the city, in many cases, cannot be separated from our engagement with our smartphone screen. Given this mediation, the first section of this article used de Certeau's discussion of spatial practices and the constructed order of the city and environmental psychology research to examine potential impacts of location-based services like Google Maps on mnemonic activity. Although such services rely upon an "optical knowledge" or an abstract spatial representation to guide their users, we suggested that rhetorical scholars should attend to the lived experiences of wearable technology users to better understand the productive entanglement of embodied places and memories.

To do so, we returned to the classical art of memory and the memory palace as a way to conceptualize the spatial mnemonic practices arising with wearable technologies like smartphones and accompanying location-based applications. The art of memory and the memory palace foreground the inseparability of place and memory, and importantly, stress the importance of mobility and movement. Whereas the classical art of memory relies upon a more figurative sense of movement wherein the rhetor imagines herself walking through her memory palace, applications like Foursquare, Facebook, and Instagram help to make this movement literal: Users find their way into places and memories while on the move through city space. And importantly, the mobile applications help turn these spatial and mnemonic activities into a digital archive, but one that acts more like a hybrid memory palace, combining digital and physical memories, digital and physical places. This hybrid memory palace combines both memory and access to memory. Collin Gifford Brooke notes that the externalization of memory makes access to information just as, if not more, important than knowledge itself. We suggest the memory palace secures the future against the limits and limitations of access. No longer are these memories just distributed in locations in the mind or externalized in media technologies; they are now attached to locations and worn by the body in physical space. Much like the rhetor walking in her memory palace, through the creative act of filtering based on search terms or "drilling down" to certain parts of the map, users are able to build and reconstruct places and memories in whatever order they wish. As such, the memory palace is a useful metaphor for understanding the new ways in which people archive, remember, and incorporate spatial memories with wearable technologies.

However, before concluding our discussion of the rhetoric of wearable technology, we must return to two questions that shaped an earlier section of the article, except we do so in a different way. First, regarding the question of the active/passive user, we do not intend to glorify smartphones as wearable technologies. We have argued throughout that people can use smartphones and location-based applications as active practices of memory and place-making, and our examples have made

that case. Nevertheless, the hybrid memory palace created by users is only one, comparably small, archive of people's location information. Beneath the level of the interface, these applications and operating systems that enable new practices of place-based memory also passively record user location information. That location information is then stored in an archive not available to the user and can later be used to construct the person as a target for advertising, often without any direct knowledge from the person using the application. This archival practice recalls Jeff Pruchnic and Kim Lacey's account of the "future of forgetting," and future rhetorical research should examine the more passive, back-end archiving and memory through consumer databases.

Second, we have focused on the individual smartphone users without much attention to how smartphones as a communication nexus connect users to one another socially. Much research in mobilities (de Souza e Silva and Frith; Farman, *Mobile*; Frith; Schwartz and Halegoua) has shown how users perform identity, location, and place in, through, and for their social networks. Schwartz and Halegoua articulate the concept of the "spatial self" to argue that this performance is not a byproduct of mobile social media use, but rather the "intentional socio-cultural practices of self-presentation that result in dynamic, curated, sometimes idealized performances of who a user is, based on where they go" (1647). Similarly, neither the builder nor the hybrid memory palace itself should be considered individual performances of memory; rather, the building of a hybrid memory palace occurs in relation to the builder's spatial and mnemonic performance of self—both an individual action and a social performance for others. And this conception recalls the classical memory palace as an idealized architectural structure that assures the orator's virtuosic public performance. The hybrid memory palace suggests how this virtuosic performance may happen in ongoing real-time, thus combining memory and the performance of memory into a simultaneous social interaction. As such, future research could study how builders of hybrid memory palaces incorporate others into their hybrid cities.

Despite concerns about privacy and the passive collection of location information along with attention to the mobile social performance of self, the fact remains that an individual's walking in the city has changed significantly since the moment described by de Certeau. Physical mobility is now frequently mediated through wearable technologies, tracing from the Walkman up to the contemporary smartphone (de Souza e Silva and Frith 1–23). The smartphone has become such a crucial way in which people locate themselves in the strangeness of the city that its locative aspects often cannot be divorced from the act of walking or thinking. People often find themselves in the strangeness of the urban milieu—locate their bodies in the physical world—through their mobile applications, whether those applications provide people with lists of nearby places, routes, or maps on which to embed the fleeting moments of their lives. Indeed, when wearable technologies become incorporated into the body, they help develop new bodily conditions that move and respond to the world while also inviting different movements and responses from

the world. We offer the rhetorical and mobile figure of the memory-palace builder as one bodily condition of contemporary urban space.

If we dismiss the art of memory as simply a mental gimmick or intellectual feat, we miss, according to Patrick H. Hutton, "the historical connection it has always maintained with the human capacity to explain human experience in terms of a vision that unifies knowledge in coherent ways" (392). And as we have shown throughout this article, the art of memory offers a way of mediating internal subjectivity and external environment. As we move through the world, we incorporate experiences as memories: "Neuron by neuron, we snap together mental structures, constantly evolving palaces of memory that we carry with us until we die" (Johnson xiv). If, as de Certeau writes, "stories about places are makeshift things" (107), then the memory palaces of wearable technologies offer people new ways to invent and to gather the city's debris into a meaningful space of places and memories. The art of memory and memory palace thus offer a manner in which a rhetoric of wearable technology captures how the body withstands the ongoing encounter with everyday life.

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