

## Memory in the Digital Photo Archive

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From its inception, this project was motivated by my fascination with the intersection of technology and memory. I wanted to explore the possibility that modern technology has changed how humans interact with and invoke memory. In its final form, the project has narrowed its gaze to the digital photo archive's relationship with memory—that is, the archive's role as a newly minted metaphor for memory. Apps like Google Photos and Apple Photos are the most prominent examples of the rapidly expanding digital photo archive. I performed a qualitative analysis on these two archives to identify how they invoke memory. I then placed two separate frameworks onto my findings to uncover the digital archive metaphor's impact on how humans conceive of memory. The first framework, central to the entire study, is the philosopher Paul Ricœur's polarity of *Mnēmē* and *Anamnēsis*—evocation and search. While memory as an evocation is spontaneous and defined by an affection, memory as a search is more methodical and defined as a capacity. The second framework is Jeff Hawkins's cognitive model for memory. This model outlines several principles that human memory adheres to. I considered how digital photo archive's representation of memory fit into and stretched these frameworks.

In my qualitative analysis, I identified three areas that the digital photo archive invokes memory: the search function, photo compilations, and the sharing function. The search function is the most overt representation of memory as a search. The digital photo archive has automatized the search process such that the user's role is reduced to feeding the archive a descriptor of the photo they seek; the apps do the rest of the work. However, embedded within the search function is a semantic network, which creates opportunities for evocation. This network presents photo compilations that have similarities to the photo that the user is viewing, prompting the user to explore a new memory they did not intend to find. The semantic web lends an exploratory character to the search function.

A memory in the digital photo archive is implicitly defined as a compilation of photos. This is the digital photo archive's effort to replicate the sequential nature of memories, a property that Hawkins outlines in his model. Some compilations, such as the photo timeline, present photos in flat sequences, in which one photo may be completely unrelated to the photo after it. While these sequences are poor representations of human memories, their randomness heightens the possibility of evocation in the user, who may encounter an unexpected photo in their scroll through the compilation that then sparks an affection. Other compilations—those driven by AI categorization—such as the slideshow, present sequences that are more meaningful. Even so, these sequences are still limited in their reconstruction of human memory and mostly act as objects that evoke a sudden memory in the user's head.

Sharing, the final area explored in this study, expands the boundaries of what memory as search entails. Sharing a memory digitally is distinct from sharing a memory in speech because unlike in speech, a static form of the memory is preserved digitally—both the user and recipient view the same photo. Therefore, if a person was to ask another person to share a photo with them, they are, in effect, searching for a memory beyond their own digital stash. Online searching extends to other people's memories as well as our own.

My project has identified the ways that the digital photo archive, examined via Google Photos and Apple Photos, expands the boundaries of recall and the opportunity for evocation. Though the archive is just an aid to human memory, restricted by the principles Hawkins outlines in his model, as a metaphor for memory it has profoundly changed how we search for memories and in what circumstances we encounter them. I expect that my findings could lead to a published article that contributes to our understanding of modern technology's role in redefining the boundaries of human cognition.

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