Multimedia

Google Earth and Google Earth Voyager
https://earth.google.com/web

In its corporate mission statement, Google promises to “organize the world’s information and make it universally accessible and useful.” But what does it mean for information about architecture and history to be useful? There can be little doubt that students of both architecture and history find significant use value in simply having access to a comprehensive database of satellite and aerial photography of most of the earth’s built environment, and in having available a corpus of precisely geolocated photographs and photographically rendered digital models of buildings and sites. Furthermore, the utility of introducing historical imagery such as maps and photographs into the same database, enabling the visual comparison of contemporary and past images and the assessment of changes over time, is obvious. All of this is precisely what the original Google Earth platform aimed to provide. A review in this journal almost a decade ago focused on that platform as cartography, and on the ways in which its aerial photographs operated as a database of pictorial evidence.

Since that time, Google has consolidated its set of geographic tools—Earth, Maps, and Street View, all of which Google acquired in the early 2000s—into one platform: the new Google Earth. The original Earth application promised fully navigable, low-altitude, three-dimensional simulated photographic views of cities and buildings, while Street View added the possibility of remotely viewing full-surround photographic imagery generated from station points on public streets around the world. Operating together, these platforms promised a frictionless freedom of movement and exploration, a kind of universal accessibility unimpeded by travel distances, time differences, and local customs.

Several features distinguish the new Google Earth from its predecessors. Where Maps and Street View were browser based, the original Earth was a desktop application requiring a fairly powerful computer. The new version of Earth has been made entirely browser based and mobile through the delegation of most of its computational needs to Google’s cloud service. The new version also incorporates artificial intelligence into its navigation, which, its creators argue, enables it to provide results more closely tailored to users’ needs.

The single biggest change, however, is that this unified platform is backed by extensive data acquired by Google over the past ten years. One result of these changes is Voyager, which its creators call “Google Earth’s storytelling platform.” Released in 2017 as part of the new Google Earth, Voyager encapsulates the new use value suggested by these changes. Voyager allows authors to use geo-referenced images, texts, and models to compose narratives, which it calls Guided Stories; these exploit the various affordances of the Google Earth interface, such as the eye-level, first-person mode of Street View and the bird’s-eye view mode of Earth. Where spin-off projects such as Google Earth Engine and Google Earth Outreach attack social and environmental problems using Earth’s cartographic intelligence, an entirely new type of mapmaker is now exploiting the platform’s narrative capabilities and vast database of places. For example, Fernando Meirelles, codirector of the 2002 film City of God, recently produced the Guided Story “I Am Amazon.” Indeed, as Earth’s project director recently declared, stories and storytelling are “the ‘linchpin’ of the new Google Earth.” Put another way, Voyager is a platform for writing stories using geospatial data.

Google inaugurated Voyager by commissioning an initial set of Guided Stories from various partners. Each Guided Story weaves together a set of discrete locations, which it presents through a split screen combining Google Earth aerial imagery with still photographs, brief textual descriptions, maps, and the like, along with links to external sites providing related information (Figure 1). A typical example of a Guided Story is “Explorers: Lewis and Clark,” which narrates the connections between twelve historically significant sites along the route of the Lewis and Clark Expedition. Not all Guided Stories are so tightly integrated; however, “UNESCO World Heritage Sites,” for instance, is merely a loosely organized collection of thirty sites, including the Pyramid of Khufu and the Taj Mahal, that have no obvious narrative connection other than that they share the World Heritage Site designation. Voyager’s Guided Stories, then, are not necessarily stories in the sense of having a beginning, middle, and end. Whatever commitment to traditional narrative exists in a story is the author’s responsibility rather than an inherent attribute of the platform.

All stories require telling in some form, and the idiosyncrasies of Voyager’s user interface pose clear risks to traditional narrative practices. When taking the viewer/reader from one location to the next within
a story, Voyager's interface simulates the movement of flying away vertically from the surface of the earth as the planet spins beneath, and then diving back down to the surface to visit the next site in the narrative. This approach to transitions suggests that anything on earth can be brought next to anything else, and that journeys from one side of the planet to the other are possible in an instant; Voyager reinforces this sensation through a kind of digitally simulated drama of spaceflight, one that is distinct from the messy reality of the actual travel required to visit these places. The transition effect can be disorienting, and it verges on the absurd in situations where nearby locations are visited in succession, as is the case with the Guided Story “Restaurant Movie Moments,” which carries viewers into low earth orbit to get them from Katz’s Delicatessen to the Smith & Wollensky steak house, a short New York cab ride away. Of course, the simulated sensation of flight heightens awareness of the individual locations’ relationships to one another on an otherwise incomprehensibly large planet. But how different the experience would be if Voyager, as its name suggests, provided a visual simulation of a land route between locations. A simulated journey at ground or sea level, no matter how abbreviated, would lack the visual drama of the sudden launch into space, but it would raise the possibility of intersecting many other earthbound journeys. This would seem to be a benefit if the purpose of this tool is not simply to provide access to information but also to encourage social connectedness.

This abstraction of movement points to the first of the platform’s limitations: its emphasis on spatial location over path. In many respects, Voyager builds on the conventions of armchair travel literature. Rather than visiting sites directly themselves, some people choose to read travel journals written by others, or view others’ photographs, or watch movies featuring faraway places. Voyager exists alongside these conventional secondhand information sources. Secondhand information, of course, places us in a relationship to the world that is distinct from that of direct experience: it asks us to consider how people place sites that are geographically distant from each other into a narrative structure—and both Voyager and the traditional artifacts of travel do this. And like those traditional modes of secondhand information, Voyager enables a kind of productive distraction. While it is possible to follow a Voyager narrative rigorously, as though taking a guided tour, it is also possible to step away from the narrative, or off the tour, at any point, just as it is possible to browse a written travel narrative in the order of one’s choosing—as did late nineteenth-century visitors to Rome when they used Nathaniel Hawthorne’s The Marble Faun (the illustrated “multimedia” Tauchnitz edition in particular) as a guidebook to be subjected to each tourist’s personalized recombinatory logic. The possibility of distraction suggests an innovative means of presenting history through a particular kind of interface: each site becomes connected to a wider context admitting of its own exploration through a network of forking paths.

Voyager also raises more serious problems that are all too familiar: How does the interface enable or constrain the construction of history? What is included, and who decides? One answer is obvious through Voyager’s “partnership” model, those with vested interests in what people see on the platform are granted the ability to select topics, content, and connections, and to define narrative frames and sequences that necessarily include some perspectives while excluding or marginalizing others. But how does an individual or an organization become a “partner”? Critical to the construction of
history is the question of how platforms for dissemination allow individuals and entities to contribute material and to assess those contributions. Voyager’s apparent commitment to mechanisms of entrepreneurship, as distinct from the openness associated with scholarly platforms, may be short-lived; its creators promise a more open platform in the near future, but for now they offer little in the way of scholarly tools (down to the frustrating omission of dates). The stories featured so far have apparently been chosen on the basis of what the editors have found interesting, or possibly particular stories have been selected because they permitted the collection of data or the positioning of advertising content—although Google claims that the company has no plans to monetize the platform.5

Voyager can foreground a distinction between Lincoln Cathedral and a bicycle shed by choosing to frame a Guided Story about one and not the other. In this way, Guided Stories that do not address social or environmental topics merely serve as stamps of approval, conveying that particular sites are interesting or even canonical (e.g., “Wonders of the Ancient and Modern World”), and their authors cast their nets wide over an audience with an appetite for familiar landmarks. To arrive at a canon when starting from such a vast and wide-ranging data set seems a missed opportunity indeed. To be fair, Voyager’s authors make no claims to providing a scholarly resource, and this may be reading too much into a set of stories that are in effect a pilot. Yet, given the degree to which Google products permeate our personal and professional lives—not to mention the fact that for incoming undergraduate art history and architecture students, Google has been not merely a source of useful tools throughout their lives but also a kind of parallel educational institution—we would be advised to take them seriously.

For Voyager to expand the ways in which it enables the construction of history, it needs to support the increased visibility of micronarratives that make explicit the divergent, parallel, and intersecting tracks of other people who use the platform. Such sharing of paths is commonplace in other online platforms, but Voyager is uniquely placed to spatialize such paths of reading. Since the platform enables the possibility of digitally geotagging the places we visit and leaving behind traces of our digital presence, questions of historical significance arise: Who has been here before? What—if anything—did they find significant, and relative to what framework? Where were they coming from? Where were they going? Should we follow them? For history, which is necessarily interested in the ways people behave and interact with each other and with their surroundings, the potential of Voyager exists not only in the selection of sites or artifacts, or in the mere possibility of distraction, but also precisely in the way it operates to make visible the behavior of other people. This includes the people using the platform as well as the inhabitants of the spaces making up the database.

The work of the artist Jon Rafman suggests as much. For several years Rafman has been traveling the roads of Google Earth and harvesting unsettling images of accidents, crimes, celebrations, and various unsanctioned human activities found along the way.6 Voyager might well provide a platform for making possible architecture’s “transition from the unknown to the known,” as the folklorist Henry Glassie puts it, a kind of world-becoming of the particular.7 If it is understood as a tool for making this possible, Voyager has the potential to enable a rewriting of the stories we share about the histories of architecture. Whether or not that happens is in the hands of Voyager’s authors, not its engineers.

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