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Data as Monument:
The Dystopia of the Column of Figures
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1. "In Search of a New Monumentality: A Symposium by Gregor Paulsson, Henry-Russell Hitchcock, William Holford, Sigfried Giedion, Walter Gropius, Lucio Costa, Alfred Roth," Architectural Review CIV (September 1948). pp.117

2. Christine C. Collins and George R. Collins, "Monumentality; A Critical Matter in Modern Architecture," The Harvard Architectural Review 4, no. 4 (1985). p. 28

3. "In Search of a New Monumentality: A Symposium by Gregor Paulsson, Henry-Russell Hitchcock, William Holford, Sigfried Giedion, Walter Gropius, Lucio Costa, Alfred Roth". p. 125

The ideologies that gave rise to the state-sponsored architecture of the 1930s – the Palace of the Soviets, Zeppelinfeld, the Palazzo della Civiltà Italiana, and others – were perhaps the last to so earnestly and ambitiously conflate neoclassical style and monumentality. As symbols of authoritarian power, these structures quickly came to embody the menace and malice of the governments that built them. After the Second World War, the fate of monumentality in modern architecture was the subject of urgent debate among architects and urbanists. They questioned whether there was a place for monumentality in modern architecture and, if so, whether this new monumentality could remain true to modernism's functionalist and socially progressive goals. They debated whether it was appropriate for architects in democratic societies to pursue monumentality at all, given its association with authoritarianism.

In response to these ongoing debates, a symposium titled *In Search of a New Monumentality* was organized in the September 1948 issue of the Architectural Review. Gregor Paulsson, Henry-Russell Hitchcock, Sigfried Giedion, Walter Gropius, Lucio Costa and Alfred Roth all offered their contributions to the questions posed, but the most radical idea of modern monumentality came from William Holford, Professor of Town Planning in the University of London and joint author of the plan for the City of London [1]. In what could be seen as a throwaway comment, or, as Christiane C. and George R. Collins have it, a sarcastic aside, Holford proposes that "the new monumentality" has been present in the modern era all along in the form of statistics [2]. He writes:

In some ways the most monumental column of the twentieth century is the column of figures. For centuries we have transferred the recording value of the monumental building to an ever increasing extent into the mechanical forms of reproduction. Posterity will have shorter sight. It need not gaze across the plain to tower and citadel; it can turn up a book or a photograph. It can store a lifetime of knowledge, or a panorama of an entire city in microfilm. Economic man may well regard a monumental work as a statistical digest, or a plan for full employment, thus transferring to the brain what as once appreciation of the senses. In the strict meaning of the term, there will be fewer and fewer monuments. [3]

After this revelation, Holford goes on to conclude that modern monumentality may be achieved in urban planning over the course of time, not through conscious construction. Perhaps, tied to nineteenth-century notions of monumentality embodied in various revival styles, he did not fully realize the implications of a "column of figures" as monument. I would suggest that what Holford labels as the "column of figures" or a "statistical digest" is, to contemporary discourse, "Big Data", the rapidly expanding sets of information produced by human interactions with data-collecting systems that necessitates new tools and methods of understanding it. While architects were busy looking for the monumental in three-dimensional constructions, the modern era had already conceived a unique monumental form: data, or, the columns of figures.

Anyone writing about monumentality is obliged to provide a suitable working definition of the term. After its Latin inception, the definition of the monument shifted away from its etymological roots as "something that reminds" to a variety of physical forms we nominally recognize as monuments. By the nineteenth century, the columns and pediments of classical antiquity, along with the gravestone or tomb, were conflated with monumentality in such a way that their physical style or form was the monument rather than various types of monument.
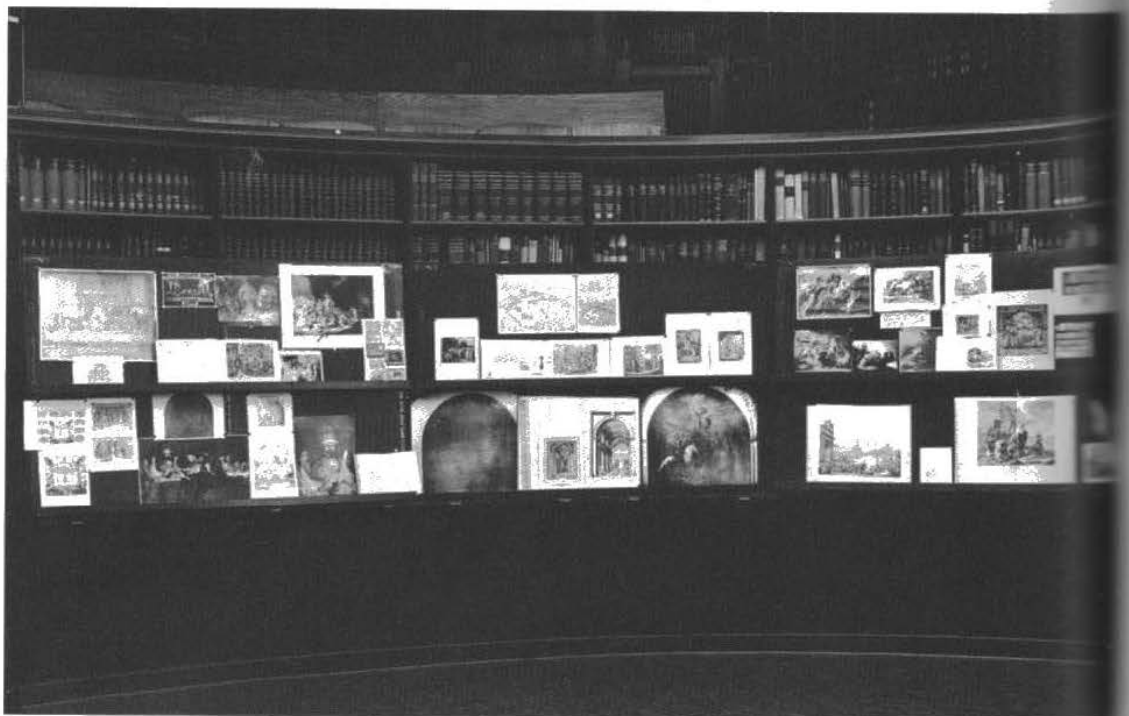
4. See: Claire Bishop, "Antagonism and Relational Aesthetics," October 110 (October 1, 2004): 51–79; Nicolas Bourriaud, Relational aesthetics ([Dijon]: Les Presses du réel, 2002)

5. "Online Etymology Dictionary," accessed April 17, 2014. Making Memory Matter: Strategies of Remembrance in Contemporary Art, 2006. pp. 47

Recent writings, particularly those on contemporary art and monumentality, return to the original definition of the monument as a marker of memory, regardless of stylistic form or relationship with burial. This return to the roots of monumentality finds relevance in participatory artistic practices or Relational Aesthetics. [4] These investigations into the deeper significance of monumentality often note that the Latin root *monere* suggests not only to remind but also to warn. [5]

In 1948, nearly every member of the symposium took for granted that a monument must be present in physical space, all of them paying homage to and referencing classical architectural forms in one way or another. It comes as no surprise that those actively involved in three-dimensional building would want to define the modern monument in familiar terms. Unable to fully commit to his revised definition of monumentality, Holford states, half seriously, half sarcastically: "The monu-ment proper must surely be a three-dimensional object designed to call the attention of men or gods to the attributes of the person or thing commemorated." [6] Gregor Paulsson is also unwilling to define the monument in terms that totally disregard physical space, but he goes so far as to admit that the concept of monumentality has nothing to do with the act of physical construction or building. He says:

> The modern meaning of the word is the result of a change in its significance. In Latin the word monumentality is never connected with aspects of building, but only with land survey, e.g. Cippus Monumentalis, a border post serving at the same time as a memorial. The word therefore has no aesthetic distinction. [7]

6. "In Search of a New Monumentality: A Symposium by Gregor Paulsson, Henry-Russell Hitchcock, William Holford, Sigfried Giedion, Walter Gropius, Lucio Costa, Alfred Roth." pp. 125

7. Ibid, 125

Here Paulsson points to the fact that monumentality has become confused with the aesthetic style and form of classical buildings rather than remaining true to its origins as a site of memory. Paulsson, like Holford, ultimately concludes that modern monumentality can be achieved through consideration of the context or environs of city space rather than a discrete object or building. In doing so, he misses the deeper significance of rooting the monument in land survey. What is a land survey, after all, if not an overlaying of immaterial significance on physical space? The lines on a map become, in light of this, as monumental as the border post.

For the purposes of this essay, I define monumentality closer to its etymological roots and not as a three-dimensionality object manifest in physical space. The monument is a reminder, a warning and a trace. It is inherently intellectual rather than physical and so it exists in order to serve as artificial memory rather than material substance.

7. See, among others: Nicholas G Carr, The Shallows: What the Internet Is Doing to Our Brains (New York: W.W. Norton, 2010); Patricia Cohen, "Internet Use Affects Memory, Study Finds," The New York Times, July 14, 2011, sec. Health; Daniel M. Wegner and Adrian F. Ward, "How Google Is Changing Your Brain," Scientific American 309, no. 6 (December 2013): 58–61; Clive Thompson, Smarter Than You Think: How Technology Is Changing Our Minds for the Better (New York: Penguin Press HC, The, 2013); Ryan Wittingslow PhD student in Film and Philosophy at University of Sydney, "Outsourcing Memory: The Internet Has Changed How We Remember," The Conversation, accessed April 17, 2014; Mark Bauerlein, The Dumbest Generation: How the Digital Age Stupefies Young Americans and Jeopardizes Our Future (Or, Don't Trust Anyone Under 30) (New York, NY: Tarcher, 2009)

8. "In Search of a New Monumentality: A Symposium by Gregor Paulsson, Henry-Russell Hitchcock, William Holford, Sigfried Giedion, Walter Gropius, Lucio Costa, Alfred Roth." pp. 125

9. Ibid., 128.

The role of data as artificial memory is decidedly more apparent to twenty-first-century observers than it was at the time of the Architectural Review symposium. Standing on the threshold of the computer age, Holford and his associates were well aware of the expanding importance of statistics in all aspects of modern life but they did not have the benefit of experiencing the internet and the access to collective knowledge and data it facilitated. The capacity for our databases to store information clearly outstrips human memory capacity. There have been countless articles in recent years debating the effects of the internet on individual memory, often arguing that dependence on Google has hampered our ability to remember facts, figures or pieces of information we might otherwise have retained. [7] If the monument is "something that reminds," access to Big Data via search algorithms like Google's surely fits the description on a grand scale. The monument is, as it has perhaps always been, a collective mnemonic device rather than an individual one.
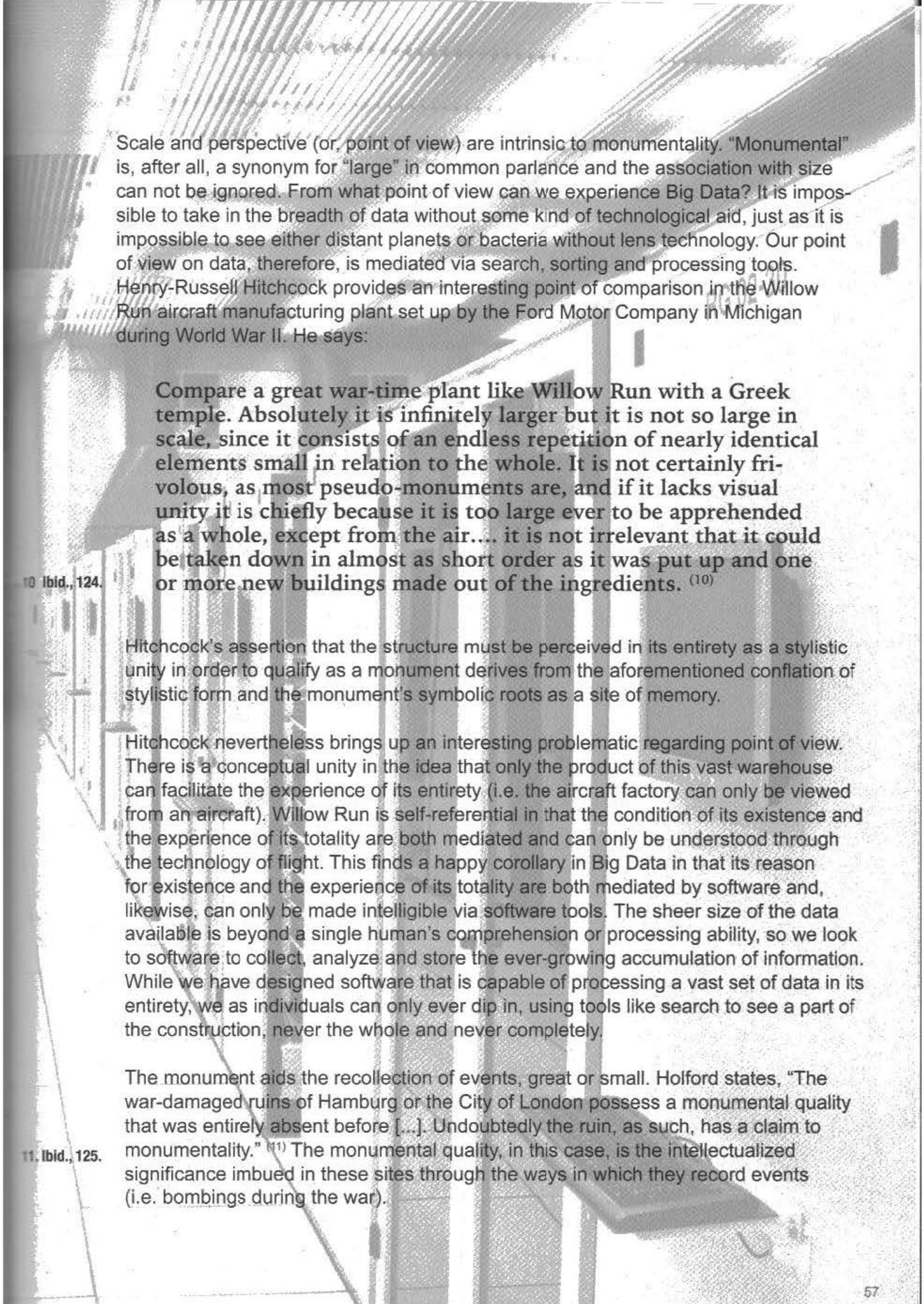
The monumentality of data, as an immaterial or intellectual concept, raises the question of representation versus abstraction. Holford states: "This kind of monumentality will have to appeal to the senses through the intellect, rather than the opposite. Church windows will no longer be Bibles in glass, they will be formal patterns bearing some allusion to an abstract idea." [8]

Data represents the life on our planet in a similarly abstract way. Representation in this immaterial sense presents itself in abstraction. The old art historical dichotomy between abstract and representational becomes moot in this context. The abstract is representation. We are not tied to physicality or materiality in the same way. This begins with written language, a code designed to transmit abstract thought, moving from pictographic representations to alphabetic ones. Before computers, comprehensive data was collected less efficiently in books.

Big Data is exponentially approaching total representation (that is, coming as close as possible to the representation of everything without, perhaps, ever actually reaching that totality). Alfred Roth, in his text from the 1948 symposium, questions the representational power of physical construction, saying, "our buildings are no longer symbols of tyrannical or transcendental power. They are born of the lives as we live them and of our creative abilities. Representational duties no longer enchain them." [9]

Representational duties in the realm of the monument, however, are impossible to avoid. Big Data is both a symbol and a reserve of power. Whether that power is transcendent or tyrannical is merely a matter of perspective.

Scale and perspective (or, point of view) are intrinsic to monumentality. "Monumental" is, after all, a synonym for "large" in common parlance and the association with size can not be ignored. From what point of view can we experience Big Data? It is impossible to take in the breadth of data without some kind of technological aid, just as it is impossible to see either distant planets or bacteria without lens technology. Our point of view on data, therefore, is mediated via search, sorting and processing tools. Henry-Russell Hitchcock provides an interesting point of comparison in the Willow Run aircraft manufacturing plant set up by the Ford Motor Company in Michigan during World War II. He says:

> Compare a great war-time plant like Willow Run with a Greek temple. Absolutely it is infinitely larger but it is not so large in scale, since it consists of an endless repetition of nearly identical elements small in relation to the whole. It is not certainly frivolous, as most pseudo-monuments are, and if it lacks visual unity it is chiefly because it is too large ever to be apprehended as a whole, except from the air.... it is not irrelevant that it could be taken down in almost as short order as it was put up and one or more new buildings made out of the ingredients. [10]

10 Ibid., 124.

Hitchcock's assertion that the structure must be perceived in its entirety as a stylistic unity in order to qualify as a monument derives from the aforementioned conflation of stylistic form and the monument's symbolic roots as a site of memory.

Hitchcock nevertheless brings up an interesting problematic regarding point of view. There is a conceptual unity in the idea that only the product of this vast warehouse can facilitate the experience of its entirety (i.e. the aircraft factory can only be viewed from an aircraft). Willow Run is self-referential in that the condition of its existence and the experience of its totality are both mediated and can only be understood through the technology of flight. This finds a happy corollary in Big Data in that its reason for existence and the experience of its totality are both mediated by software and, likewise, can only be made intelligible via software tools. The sheer size of the data available is beyond a single human's comprehension or processing ability, so we look to software to collect, analyze and store the ever-growing accumulation of information. While we have designed software that is capable of processing a vast set of data in its entirety, we as individuals can only ever dip in, using tools like search to see a part of the construction, never the whole and never completely.

The monument aids the recollection of events, great or small. Holford states, "The war-damaged ruins of Hamburg or the City of London possess a monumental quality that was entirely absent before [...]. Undoubtedly the ruin, as such, has a claim to monumentality." [11] The monumental quality, in this case, is the intellectualized significance imbued in these sites through the ways in which they record events (i.e. bombings during the war).

11. Ibid., 125.

The monumental quality, in this case, is the intellectualized significance imbued in these sites through the ways in which they record events (i.e. bombings during the war). Each keystroke, mouse hover and click recorded and stored as data collects and recollects events in the same way as ruins do, except on a much more comprehensive scale. A piece of data represents an instance connected to and organized according to multiple variables including space and time. According to its technical definition in relativistic physics, an event is defined as a discrete point in the continuum of space-time. Data, therefore, can be seen as a collection of events represented in abstract form.

In a political sense, events are the pivots around which bodies are organized and government occurs. The term Big Data can hardly be raised without addressing the implications of Edward Snowden's leaks to the Guardian published on June 6, 2013, detailing the scale of the NSA's data surveillance operations. Rather than spur any kind of widespread outrage or protest, however, the revelations were greeted mostly with resignation. We have, in many ways, been expecting this all along. At least since Yevgeny Zamyatin's We and George Orwell's 1984, perhaps even from Jeremy Bentham's theories of the panopticon and F.W. Taylor's quantified system of labor productivity, we have foretold many variations of utopia and dystopia that our modern love of statistics (or, now, data) may create. Returning to the monument's etymological roots in monere, defined not only as a reminder but also a warning, it is easy to conjure up primal monuments of warning: heads on stakes or crucified bodies along the road. The body or head of the executed was used as a warning to enemies, traitors, trespassers, witches, and various other societal outsiders to stay inside the boundaries of conduct set by the community. Most of the conversation around Snowden's leaks fluctuates between two poles: he is either a traitor or a whistleblower. To all those who might act in ways that deviate from or oppose the reigning political powers, the specter of NSA data stands as a warning that they should not underestimate the reach of the United States government.

Data demands to be treated in binary, as a polarity. Just as Snowden's revelation of the monumental cache of government data makes him either a traitor or a whistleblower (leaving little room for something in between), data is either immaterial and fragile, disintegrating into nothingness with a blackout or the flooding of a server farm, or it is permanent and omnipresent, calling to mind the internet's new conventional wisdom that what you create digitally (photos, emails, texts) must be assumed to be public. Data simultaneously lives forever beyond our control and is gone for good, never able to slip through our fingers except metaphorically.

The residue that we leave behind, that serves as a reminder and a warning, is a better set of bleached bones, a larger tombstone, or a pyramid encompassing the entire planet. It has no fixed scale or relationship to a human body. It reconstructs all things and all people in the most trivial and minutest of detail. Our databases comprehensively represent the collective information of our planet and its occupants and, as such, are the work of the collective rather than any individual. This does not mean, however, that the collective holds the power embodied in this monumental data. Holford's insight in 1948, that the greatest monument of the modern age is the column of figures, has now become clear, but the abstract ideas that emerge from its formal patterns continually mutate and change. The whole world represented in books, microfilm, photographs, and finally databases testifies to events great and increasingly small. As always, the meaning of the monument contains both tyranny and transcendence.