

GREGORY CLANCEY

EARTHQUAKE NATION

An illustration of a Japanese city in ruins. A large, jagged red plume of fire or smoke rises from the center of the destroyed buildings. The architecture is traditional Japanese, with wooden structures and tiled roofs. A sign with Japanese characters is visible in the lower right, and another vertical sign is on the left. The overall scene depicts the aftermath of a major disaster.

THE CULTURAL POLITICS OF JAPANESE SEISMICITY, 1868-1930

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*To my son, Kenta,
who grew up with this book*

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Introduction

The story of the Great Nōbi Earthquake has a long history of narration in Japanese, particularly by architects and their historians.¹ It has not, as far as I know, ever been told in English.² Allowing for variations, the rudiments of the story go something like this: beginning in the 1870s, shortly after the Meiji Restoration, foreign teachers were brought to Japan to train the first generation of architects and engineers. The foreign (mostly British) architects taught Japanese to build in brick and stone, and the engineers demonstrated how to string telegraph wires, lay railroads, and span rivers with iron truss bridges. It was a classic example of “technology transfer,” except that the object transferred was not so much machinery or material, but embodied knowledge. Masonry also laid up “culture” in the form of buildings indistinguishable from those lining the streets of London or Manchester. Bricks and pieces of stone became the smallest and most basic material units in the general technocultural adornment of a young, nervous, and radical regime.

Wooden-country Japan, it was decided, would be rebuilt in masonry and iron. The existing Japanese landscape—the temples, houses, and arched timber bridges—became the object of elaborate denigration (sometimes coded, sometimes bald) by foreign teachers and their Japanese pupils alike. The reigning metaphor was strength. Everything in and about Japan seemed, in comparison to Europe and the United States, fragile. This fragility made Japan seem feminine to foreign eyes, but sometimes made it beautiful.

Then, on October 28, 1891, one of the most powerful earthquakes in modern Japanese history, centered on the Nōbi Plain just north of Nagoya, rocked the main island of Honshu from Tokyo to Osaka. Large iron bridges and the walls of brick factories and post offices came crashing down, while Japanese temples, pagodas, and architectural monuments such as Nagoya Castle seemingly escaped unharmed. In the aftermath of the great earthquake, Japanese architects and engineers were forced to question foreign knowledge, and the foreign teachers began even to question themselves. Tokyo University lecturer Josiah Conder, an English architect, advised his students to reexamine the methods and practices of Japanese carpenters (*daiku*). The generation who lived through the Nōbi earthquake now took on the task of adapting foreign knowledge to Japanese nature and marrying the knowledge of the present to the knowledge discovered by their countrymen long ago. This task would preoccupy many of the best professional minds well into the twentieth century.

When I first heard this story of the Nōbi earthquake (or, rather, began piecing it together from many mouths and texts), it seemed the mirror-image twin to classical histories of Japanese technology and industrialization. Many stories of Japanese technical change begin much like the one I've told above (with the arrival of foreign teachers) but continue the way they begin, with Japan henceforth a pupil nation and the West a teacher culture. The most sensitive historians complicate this text by cultivating continuity between the Edo and Meiji periods (showing Japan to have been unusually "well prepared" to learn), emphasizing the speed with which foreign teachers were replaced by their Japanese pupils, or highlighting indigenous adaptation and innovation. Others point out the brutal human and natural costs of all that rapid learning. But rarely in the existing historiography of modern Japanese change does foreign knowledge itself so badly stumble (let alone come crashing down) as in the Japanese narrative of the Great Nōbi Earthquake.³

Why has the story of Nōbi failed to attract foreign narrators? It is—is it not?—a good story, and portions of it have been well documented in Japan for some time. One practical answer (we will encounter others less practical) is that it has mainly been told in a theater that few Western scholars of Japanese technopolitical change regularly enter: Japanese architectural history. In Europe and the United States, the Modern movement in architecture notwithstanding, the history of science and technology is considered far from architectural history and an ocean away from the history of art.⁴ In Japan, however, where the word for technology (*gijutsu*) sounds more like the word for art (*bijutsu*) than the word for science (*kagaku*), where nearly all architects are first trained as engineers, and where chief carpenters are li-

censed architects, it is not so odd to find earthquake-resistant engineering in books that are also about Buddhist temples and Le Corbusier. It is Japanese architectural history, rather than the history of Japanese science and technology, which includes in its domain the most elaborate and complex *gijutsu* of the period before foreigners arrived.⁵

Even when Japanese architectural historians talk about art and architecture in their pure forms, however, that is with nature or technology as context rather than content, European and American scholars have only infrequently listened. It is not just a language barrier. Since the nineteenth century, architects and artists in Europe and the United States have cultivated direct experience of the history of Japanese art and architecture (and that of many other non-Western peoples) through photographs and site visits. They have had less interest in retaining local guides, convinced that art and architecture are embodied in objects they can see, touch, and enter, rather than stories about those objects.⁶ In any case, earthquakes are just as far from art in Europe and the United States as art is from technoscience.

On the other hand, architectural historians in every country have certain things in common. One is an uneasy relationship with narratives of progress, which began well before the term *postmodernity* was coined among them to describe a shift in design theory. In Japan, where all architectural historians are first trained as engineers, and then as architects, and finally as historians, the unease has arguably been less strong than in the West. Yet it still exists. On faculties of engineering at Japanese universities, Japanese architectural historians find themselves the only humanists, and perhaps the only group that does not wholeheartedly embrace the vision of unilinear progress notoriously common among engineers of all nationalities. “Progress” has often been viewed with suspicion in the cosmopolitan world of art (it is arguably one of the ideas that that world first constructed itself against) and this is also the inheritance of Japan’s architects and, even more, their historians, many of whom study and admire ancient buildings. The story of Nōbi has progressive elements—the move away from received foreign authority is also one toward self-sustaining Japanese discovery—but its central trope, the need to discover a local style synthesizing past and present, is more typical of art historical narratives than technoscientific ones.⁷

Nonetheless, a Japanese architectural historian I know refers to the Nōbi earthquake using a term from cosmology: the Big Bang.⁸ This perfectly captures the sense of the Nōbi earthquake as a moment of violent creation, infinitely expansive. Before the Big Bang, Japanese merely absorb foreign knowledge. Nature itself then intervenes—a peculiarly Japanese sort of destructive nature—and sets the na-

tion on a knowledge-producing quest at once “Western” yet all its own (or as a later generation would have it, “modern”). The political and gender relations between foreign knowledge and Japanese nature reverse overnight. Japan is no longer fragile. Its beauty, once considered refined, is now sublime, powerful. The Western factories and bridges now embody vulnerability rather than strength. They require an act of rescue.

It cannot be coincidence, however, that this story of the Nōbi earthquake evokes a moment—circa 1890—that historians have identified as a watershed in Japanese nationalism. Foreign knowledge is humbled on the Nōbi Plain at the very time it was being questioned at a whole range of other sites, and in a range of ways.⁹ Any sense of mystery in this convergence between nature and nation disappears once we accept the science-studies lesson that nature is inevitably spoken for—even manifestations of nature as loud and unmistakable as earthquakes.¹⁰ Indeed, while certain strands in the story were crafted in the disaster’s immediate aftermath, others predated it—receiving sudden amplification in the theater provided by the ruins of Nagoya—and still others have been influenced by subsequent events. The idea that Japanese cultural nationalism is bound up with stories about nature is hardly new or surprising.¹¹ But that nationalism can also be bound up with natural catastrophe may be a more novel contention.

Although earthquakes are normally treated as a footnote to modern Japanese history, late Meiji and Taishō were periods of unusually strong and frequent seismic activity, climaxing with the destruction of Tokyo itself in 1923. Seismicity was in this sense a constant, catastrophic undercurrent to the Japanese nation-building project, one that not only dogged it, but in some sense produced it. We are used to the idea that accidents and disasters expose previously unimagined vulnerabilities, and this has certainly been true in modern Japan. Less self-evident is the way political actors (including scientists, architects, and other state-credentialed professionals) craft advantage from these same phenomena. How the unexpected natural disaster and the normative machinery of governance intertwine, creating not only states of emergency but emergency-oriented states, is a topic we have only begun to explore despite a plethora of intriguing evidence.¹² Japan—where catastrophe not only has been regular and consequential over so long a period of time but also has left such a rich documentary record—is an excellent place to pursue such inquiries.¹³

What I am after in the pages that follow, however, is not the political or social history of earthquakes per se, but their emergence as objects of Meiji-period knowledge-making. The mastery of new and foreign knowledge was, after all, a major component in the charisma of the Imperial state. The phenomena of seis-

micity would prove unexpectedly problematic, however, both to the Japanese project of “Western learning” (*yōgaku*) and Western efforts—often initiated by expatriates—at characterizing Japan as landscape and culture. Tracing the construction of knowledge is normally a matter of choosing a discipline, describing its discourse and practices, and locating it within discrete institutions. I will be more interested in the way an emerging problem—in this case seismicity—restructured disciplines, institutions, and individual careers around itself, and sometimes set them in conflict. I am not suggesting that earthquakes have agency in the sense of making choices about how groups and individuals choose to confront them. In fact, experts, institutions, and specialized equipment proved necessary, as we will see, in order that seismicity even be isolated and named. Earthquakes did have a certain agency, however, in refusing to become stable “knowledge objects.” This force of Japanese nature was important and intractable enough to reorder academic discourses and practices imported from locations such as Britain and Germany, where the earth does not move with such destructive consequences. Thus did the science and architecture of earthquakes become internationally recognized Japanese specialties by the beginning of the twentieth century, although efforts to sustain that achievement would prove more than mercurial.

My account opens with the arrival of foreign (mostly British) professors at Tokyo’s College of Technology (Kōbudaigakkō) in the middle 1870s. It first follows a particular college course, architecture, which in Japan was also a new word, practice, substance, and type of calling. Anglo-Japanese architecture is historicized in a matrix that includes *daiku* (traditional Japanese architect-carpenters), engineering (the unifying principle of the College of Technology), and art (something that was not engineering, but maybe architecture, and maybe even *daiku*-work). My own uncertainty about some of these words and their meanings is not an attempt to be coy, but to preserve and report uncertainty or contingent usage among my initial subjects—British men for whom Japan, by a certain metaphorical logic, was sometimes “the Britain of the East.” I construct solid materials—stone, brick, wood, and eventually concrete—into my narrative at the same time, inscribed in all sorts of ways by their foreign and Japanese handlers. What I am aiming for in these early sections is the design of “Japan” and “the Japanese” by Anglo-Japanese architecture, and the simultaneous erection by that same nascent discipline of “the West” in Japan itself. As I demonstrate in the second chapter, earthquakes were a central concern and opportunity in the construction of this Far-Easterly Britain.

The account of the Nōbi earthquake with which I began was crafted in its original form not by architects, but members of a second discipline even closer to the