Shaken and Rectified: The 1855 Ansei Edo Earthquake

Basics:
Ansei Edo EQ (10.2.1855 = 11 Nov); M ≈ 6.9 - 7.1; Type = shallow crustal; greatest danger = collapsing buildings; damage uneven

Actual Destruction:
☞ about 8,000 civilian casualties
☞ samurai casualties unknown (8K+ ?)
☞ about 14,000 structures
☞ varied greatly owing to soil base & pop. density

Imagined Destruction:
☞ exaggerated accounts in popular press
☞ rumors
☞ shortage of burial containers; bodies in street
☞ cosmic forces seemed to aim at the bakufu

Produced:
☞ namazu-e (catfish picture prints)
☞ press coverage throughout Japan
documentaries and fictional accounts
☞ sense of impending change
  ► other EQs
  ► Perry
  ► yo-naoshi (world rectification)
☞ enhanced sense of Japanese identity
☞ weakened the bakufu & hastened its demise 12 years later.
Soil base and ground motions in an earthquake

- Wave amplitude increases
- Path of waves shifts vertically
- Waves become trapped by the basement rock
- Bottom line: ground movement greatly amplified; much more destruction
The result in the context of 1855 Edo: places like Fukagawa, Yoshiwara, and “Daimyō Lane” that had once been swamplands suffered nearly complete destruction. Other locations suffered much less damage.
Although Fukagawa was an exception, in general, commoner neighborhoods fared well. Some daimyō mansions also did well. But the large concentration of destroyed fudai mansions, bakufu offices, and offshore artillery installations contrasted dramatically with the low level of destruction in the neighborhoods just across the moat. How would the people of Edo have “read” these results?
Causes of Earthquakes?
Today we know that earthquakes are all the fault of faults. Nobody knew this in 1855.
Based on the notion that magnetic forces weaken just before an EQ
“Yo-naoshi,” “yo-naori,” and “manzairaku” were talismanic chants during earthquakes and tsunamis. Only in the 1855 Ansei Edo Earthquake did yo-naoshi become a descriptive term used to characterize the event.
Aftershocks, many severe, continued almost daily for about a month. Therefore, many of Edo's residents stayed outside for at least the first few days & nights.
The only major bakufu building in Daimyō Lane left standing was the bureau that dealt with the administration of Edo, including the office that dealt with disaster relief. This seemingly random occurrence would not have seemed accidental to observers: the cosmic forces were not out to destroy ordinary people.

Bakufu Relief: Food & medical aid; Temporary housing (5 locations); Survey of casualties & property damage; Coordination of relief with neighborhood heads; Pressed wealthy individuals and businesses to provide relief & coordinated it (there was no duplication of relief); Basis of food relief was not the extent of EQ damage, but rather one’s income/socio-economic level—poverty relief conducted in the name of EQ relief. Why? “Disaster utopia;” Attempted, without success, to keep wage and price increases down. The lack of success generally aided ordinary townspeople; Overall effect: reinforced sense of EQ as “world rectification”
Extensive Non-Government Relief

In the days after the EQ, ordinary people contributed goods and service in large quantities. A partial list includes miso, tea, soba, pickled radishes, pickled plums, sweet potatoes, dried fish, straw mats, towels, paper, pickled vegetables, and other practical items. One hair dresser offered free services. Donations were not limited to the residents of Edo. A rural physician donated 200 packages of medicine for treating cuts, bruises, and puncture wounds, and the peasants of one rural village donated six barrels of pickles.

Popular pressure and bakufu pressure also elicited substantial contributions from businesses that stood to profit from the earthquake and from Edo’s wealthy merchants.
This print expresses anger at the Kashima deity. A mob attacks the deity and others push over the foundation stone. To the right, a crowd welcomes to Edo a new deity, Amaterasu. Amaterasu is the solar deity, the supposed ancestor of Japan’s imperial family. The print makes a serious political statement that is potentially anti-bakufu.
Within 2 days of the earthquake, the first commercial prints began to appear. For about the first week especially, there was a strong demand for accurate information. One popular format was a map showing the location of fires. Later, amazing tales and other human interest stories began to appear as well as official information and lists of charitable donors along with the type and amount of their donations.

Press reports, though often exaggerated at first, still served as a psychological aid by letting people know the overall situation. Sometimes the information was of practical use as well.

The press undoubtedly encouraged governments (including the warlords), temples, businesses, and individuals to make charitable donations.
Earthquake Folklore

☞ The notion that some sort of creature—most commonly a serpent-like dragon—resides under the Japanese Islands and causes earthquakes when it moves had been common in folklore since the 14th century.

☞ By the 19th-century, this creature was often a giant catfish (namazu).

☞ Supposedly the deity of the Kashima Shrine (near Edo) kept the giant fish immobile by pinning its head down with a giant rock (the “foundation stone,” kaname-ishi).

☞ These images were in the realm of metaphor for most residents of Edo.
For two months after the earthquake, publishers cranked out hundreds of anonymous “catfish picture prints” (namazu-e).

They are a rich record of popular reaction to the earthquake.

Why only 2 months? Because the bakufu eventually forced publishers to stop producing them.

Why would the bakufu care? Because, first of all, any focus on the earthquake at all tended to cast the bakufu in a negative light. Second, and more important, these prints evolved into commentaries on society and politics.

The prints issued in the first days after the earthquake were talismanic in nature. They claimed to offer protection against further damage (recall the many aftershocks).
“Daikoku no tsuchi” (big country/name of deity; mallet/ground)
Web of Associations:

☞ Perry’s recent visit (as we have seen)

☞ Recent earthquakes in other parts of Japan from 1830 -the previous year

☞ Overall interpretation: major change is taking place; the cosmic forces are trying to rectify a corrupt or imbalanced world. Logical culmination of this idea: new government

☞ Also: reinforced the a vision of “Japan” that extended beyond Edo (Cf. appearance of Amaterasu in several of the prints--we’ve seen one example.)

Names of recent earthquakes
“O-kage” Years: 1855 & 1867

In 1866 urban riots broke out and frenzied, orgiastic dancing spontaneously took place in many areas of Japan. The songs the dancers chanted included the refrain “Ee ja nai ka?!” At least one of them explicitly mentioned the Ansei Edo Earthquake and stated that now, 12 years later, it is time for the bakufu’s final collapse. It did collapse that year. The 1855 EQ remained part of folk memory and re-emerged.
Concluding Points

Did the 1855 Ansei Edo Earthquake cause the bakufu to collapse? No

Did the earthquake contribute to the collapse of the bakufu? Yes

In what ways? Financially, loss of bakufu prestige, made the possibility of a new government easier to imagine, enhanced prestige of Amaterasu (thus the emperor), nurtured an early version of Japanese nationalism.

What about the big earthquake of 1703? It had no such effect.

Broader Point: natural hazards/disasters interact with human societies in various, often unpredictable ways. Much depends on the state of society. If its institutions are weak, natural disasters can act as a strong catalyst for change.