

THE SHOCK TO COME?

All shook up: a scene in San Francisco after the 1989 Loma Prieta earthquake

In March 2001, the U.S. government said that an earthquake in San Francisco was one of three big disasters likely to hit the country. The other two? A terrorist attack in New York and a hurricane in New Orleans. Now that 9/11 and Hurricane Katrina are history, attention turns to the third part of the prediction.

One hundred years after the 1906 earthquake that destroyed most of San Francisco and killed thousands (see page 25), is “the City by the Bay” ready for something catastrophic? For the most part, no.

San Francisco is a city of 777,000 people, but in the Bay area — including the cities of Oakland and San Jose — there are seven million. It is also home to Silicon Valley, with its high concentration of semiconductor and computer-related industries. The next earthquake to hit the city will clearly do more than just damage the Bay area — it will also harm the U.S. economy.

California is a seismic time bomb. Eight fault lines, including the large San Andreas Fault, run through San Francisco alone. Geologists have been predicting for the past 30 years that the next “big one” could happen soon.

“There is a 62 percent probability that at least one earthquake of magnitude 6.7 or greater will occur in the Bay area within the next

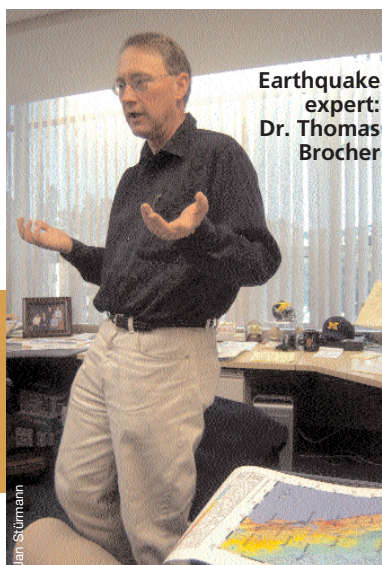
people to be ready for earthquakes. The state receives federal funding for emergency preparedness, though earthquake preparedness has not been made a priority since 9/11. According to *BusinessWeek*, three of every four dollars the U.S. government gives California as part of its \$3.4 billion allotment go to anti-terrorism efforts, which leaves very little for earthquake preparedness.

Some of the money that is left does, however, go to emergency readiness courses, such as the NERT (Neighborhood Emergency Response Team) training offered by the San Francisco Fire Department. The program is designed to help San Franciscans learn how to cope and how to help others when the next earthquake strikes.

During the 20-hour course, which runs for six weeks, NERT participants learn earthquake awareness and preparedness skills. These include how to shut off gas, water

and electrical lines, how to use a fire extinguisher, basic disaster medicine and psychology skills, and what role NERT-certified people play in the city’s disaster plan.

Although NERT helps to increase awareness and make people ready for the next quake, only 12,000 people have finished the program so far. “If a disaster of that caliber — either the 1906 earthquake or the 1989 earthquake — hits again, there’s no way we can handle the projected number of calls that will be made,” says NERT trainer John Rocco of the San Francisco Fire Department. ▶



Earthquake expert: Dr. Thomas Brocher

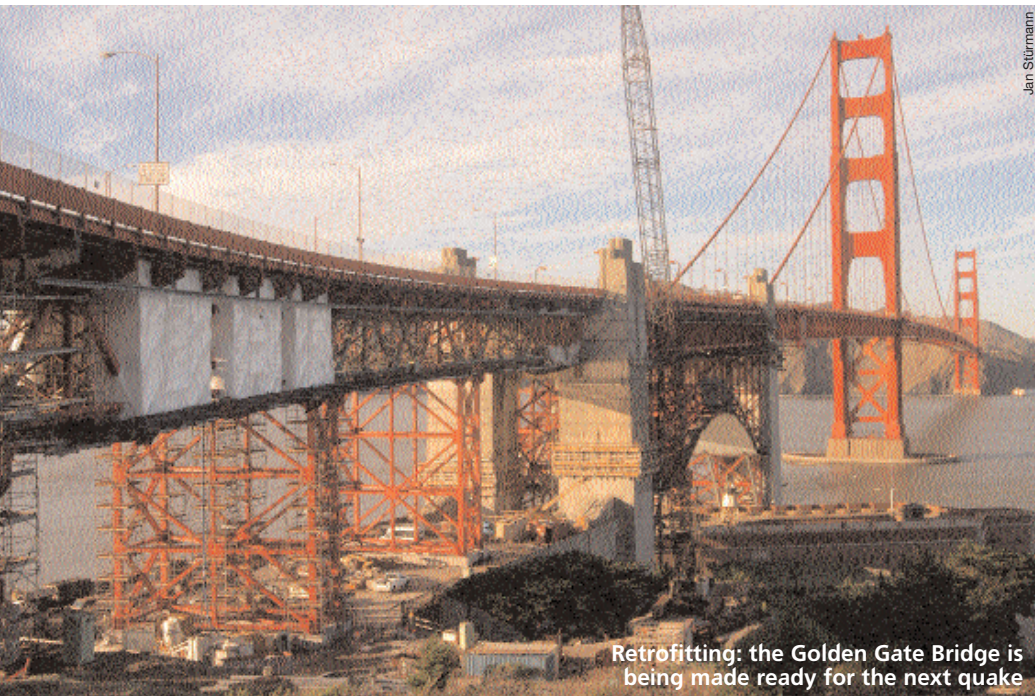
John Schürmann

The next “big one” could happen within 30 years

30 years,” expert Thomas Brocher told *Spotlight*. Brocher is co-coordinator of the Northern California Earthquake Hazards Team at the United States Geological Survey (USGS) in Menlo Park, California. The quake he mentions would be at least as powerful as the 6.7-magnitude event of October 17, 1989, which was centered on the Loma Prieta mountain range near Santa Cruz, California. That earthquake killed 63 people and caused \$10 billion worth of damage. But if another one of magnitude eight — the same power as the one in 1906 — hits San Francisco, as many as 6,000 people could die, Brocher says.

Many in California see the 1989 earthquake as a warning that the “big one” could happen within our lifetime. The state has spent billions retrofitting schools and hospitals and making its bridges and highways safe. California has also made more money available for training

allotment [ə'la:tmənt]	Zuteilung
bay [beɪ]	Bucht
billion ['bɪljən]	Milliarde(n)
cope [kəʊp]	zurechtkommen
earthquake ['ɜ:θkweɪk]	Erdbeben
emergency [ɪ'mɜ:dʒənsi]	Notfall-
fault line ['fɔ:lt laɪn]	Verwerfungslinie
federal funding [ˌfedərəl 'fʌndɪŋ]	staatliche Mittel
fire extinguisher ['faɪə rɪk, stɪŋgwɪʃər]	Feuerlöscher
hazard ['hæzərd]	Gefahr, Risiko
magnitude ['mæɡnɪtu:d]	Stärke
occur [ə'kɜ:]	auftreten
prediction [prɪ'dɪkʃən]	Vorhersage
projected [prə'dʒektɪd]	vorhergesagt; hier: geschätzt
retrofit sth. ['retrə, fɪt]	etw. nachrüsten; hier: etw. erdbebensicher machen
semiconductor ['semɪkən, dʌktər]	Halbleiter-



Jan Stürmann

Retrofitting: the Golden Gate Bridge is being made ready for the next quake

“Most people do resist [thinking about] it and think: ‘It won’t happen to me, and if it does, there’s nothing I can do about it,’” Skyler says. “People are always rationalizing why not to get prepared. I even have a friend who won’t get supplies, because he feels it will bring on an earthquake. Businesses and schools are more likely to get prepared; individuals are less likely. You need somebody to say, ‘We’ve got to get prepared; I know I should do it,’” Skyler adds.

Mary Currie, public affairs officer at the Golden Gate Bridge Highway and Transportation District, looks at the question of preparedness from the perspec-

“That’s why we teach people how to be self-sufficient for at least 72 hours after disaster strikes.” This is the amount of time the San Francisco Office of Emergency Services and Homeland Security has suggested is necessary before the most important services such as electricity, gas, water and telephone are restored.

“Fewer than 10 percent of households in the Bay Area have disaster plans; fewer than 10 percent of homeowners have taken steps to retrofit their homes; and fewer than 50 percent of households have disaster supply kits,” Brocher says. “This is shocking and obviously in need of improvement.”

Bay area resident Nanette von Berg is typical in that she does not have a plan if disaster strikes. “I grew up here, and earthquakes are part of the place, but I don’t think about the next big one. We will just have to deal with it.” Yet “dealing with it” is something von Berg is prepared to do only when that day comes. She does not have an emergency supply kit, nor has she taken steps to retrofit her home. “Why not?” we asked. “Are you kidding? As far as risk assessment is concerned, a person is far more likely to die in a car accident than in an earthquake. Do we therefore stop driving cars?”

Emergency preparedness, earthquake research, and advances in engineering have done a lot to give people the resources necessary to survive an earthquake. But the one enemy that remains is denial. Von Berg is a typical Californian in the way she thinks, says Michael Skyler of Mill Valley, California. Skyler runs an earthquake supplies store in California.

tive of road safety. Thousands of people drive over the Golden Gate Bridge every day, and making sure it is safe is a high priority. Not only is the Golden Gate Bridge one of San Francisco’s main tourist attractions, it is also a structure that is being prepared for the inevitable.

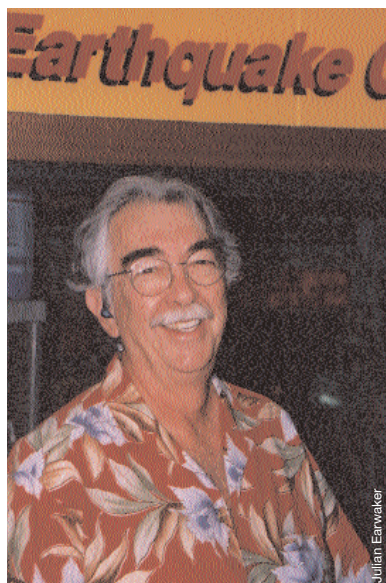
“After the 1989 earthquake, we undertook a seismic vulnerability study of the bridge,” Currie told *Spotlight*. “Engineers concluded that it was vulnerable to damage from earthquakes with a magnitude of 7 or greater. The north and south viaducts were considered the most vulnerable to collapse under a strong earthquake,” she added.

The north and south viaducts of the bridge have now been retrofitted and can withstand an earthquake as strong as magnitude 8.3. The rest of the bridge is also being retrofitted. These measures are expected to be complete by 2010. Every day, between 120 and 150 people are out working on the bridge. When the retrofitting is complete, more than \$392 million will have been spent.

Money for this project has come from tolls, as well as from state, regional and federal grants.

In his NERT courses, John Rocco constantly tells people “they can do it.” Earlier this year, he told the crowd: “We can prepare for disaster, and we should not wait anxiously for the next earthquake to happen. Let’s make sure we are ready for that day.”

John Golda, a park ranger at Point Reyes National Seashore, a half-hour north of the city, agrees. “The ‘89 earthquake was the biggest I’d



Julian Earwaker

Preparing people: Californian John Golda

San Francisco’s buildings are ready; its people are not



Listen to more about earthquakes on our CD/cassette

100 YEARS AGO...

The 1906 earthquake took place along the San Andreas Fault at 5:12 a.m. on April 18, 1906. The Richter scale had not been invented at that time, but scientists believe the earthquake was as strong as magnitude 7.9. Its epicenter was 80 kilometers north of San Francisco. Shocks were felt from Oregon to Los Angeles and even in central Nevada. The earthquake is estimated to have killed between 3,000 and 6,000 people, leaving another 300,000 homeless. The earthquake and its aftershocks caused \$400 million in damage, particularly through fires resulting from broken gas pipes. Eighty percent of the city had to be rebuilt.

Keystone



In ruins: 80 percent of San Francisco had to be rebuilt after the 1906 earthquake

Recommended reading:

In *A Crack in the Edge of the World*, geologist Simon Winchester looks back at the 1906 earthquake. Over 480 pages, he explains how the event led to greater attempts to understand the movements of the earth. ISBN 0-670-91493-2, €15.70.

www.SprachenShop.de

Spot on
Titel neu
1/3 4c

ever felt, and it was very humbling," he says. "The fact of the matter is that an earthquake can come along, and everything you've worked for is gone. Every generation has a moment in time that they can define and say 'I was there.' At the turn of the [20th] century in California, it was the 1906 earthquake."

"Doing something as simple as preparing for earthquakes and understanding them makes them a little less," Golda adds. "For a lot of people, they seem random and very chaotic, and you never know when they're going to happen. But the more you understand, the more you should prepare."

Are you kidding? [ˌɑːr ju 'kɪdɪŋ]	Machen Sie Witze?
assessment [ə'sesmənt]	Einschätzung
bring on sth. [brɪŋ 'ɑːn]	etw. hervorrufen
denial [dɪ'naɪəl]	Leugnen
grant [grænt]	Zuschuss
humbling ['hʌmbəlɪŋ]	demütigend; hier: Respekt (vor der Natur) einflößend
inevitable: the ~ [ɪn'evətəbəl]	das Unvermeidliche
kit [kɪt]	Ausrüstung
random ['rændəm]	willkürlich; hier: unvorhersehbar
rationalize ['ræʃənəlaɪz]	begründen; hier: sich Gründe einfallen lassen
restore sth. [rɪ'stɔːr]	etw. wiederherstellen
self-sufficient [ˌselfsə'fɪʃənt]	selbstversorgend, autark
shock [ʃɑːk]	hier: Erdstoß
survive [sɜː'vaɪv]	überleben
toll [tuːl]	Maut
vulnerability [ˌvʌlnərə'bɪləti]	Verletzlichkeit; hier: Anfälligkeit
withstand sth. [wɪð'stænd]	etw. aushalten, etw. überstehen