



As Beijing spends heavily on railways and roads, villagers risk their lives every day on the nation's many crumbling bridges

A deadly, daily crossing

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Cailiang law firm. "The common people are happy if the government repairs and builds bridges," Zhu said. "But it does not have obvious economic returns for the government."

Many of these bridges were built during the time of mass construction in the 1970s, said Wang Jianyong, deputy financial section chief of Hebei Water Resources Department, adding "the bridges weren't intended for trucks and heavy machinery to cross".

Said Zhu: "It's ironic that in the '70s when China was poor we could build so many bridges, and now that the economy has taken off, the government doesn't have any money to fix them."

Even though the phenomenon of unsafe bridges is widespread, there has been no collective effort from a central government level to fix the problem, which has dragged on for more than two decades. There has not even been a concerted effort to document the number of unsafe bridges and their locations.

As a result, no one knows how many there are in the country. The Ministry of Transport, which tracks road bridges, recorded more than 6,000 unsafe bridges nationwide in 2007, a number that has not been updated since.

But that figure is suspect. The number of unsafe bridges in Hebei province was at least 9,946 last year, according to figures given to *South China Morning Post* separately by people in the province's communications and water resources departments.

But the true number in Hebei might be double or even triple of that because the majority of village bridges are not included, said Wang, the water department official.

The nearly 10,000 bridges only include so-called sluice-gate bridges

(bridges with dams), road bridges and a small proportion of village bridges that are for commuting purposes. The majority of village bridges, like the one in Qiantun, are not included.

Wang said the water department was allotted 410 million yuan to build or fix 1,489 sluice-gate bridges in Hebei from 2005 to last year, an average of 372 bridges a year. At this rate it will take another 10 years just to fix all the listed unsafe sluice-gate bridges in the province.

Township officials, who are in charge of fixing most of the village

Unsafe passage
Two sources say the number of unsafe bridges in Hebei province last year was at least

9,946



Cracks in the bridge in Hebei province where Wang Bingliang died last April. Photos: Lulu Chen

bridges, are even more financially stressed. They rely heavily on the water department for subsidies. But with money tight, the department makes it a rule of thumb to rarely approve any project that costs more than 600,000 yuan, Wang said.

Every bridge has a different price tag to fix or repair. Some officials say it costs more than 5 million yuan to build a new bridge. The Hebei water department allotted 171 million yuan for building or repairing 424 bridges last year. That figure implies an average of 403,301 yuan to fix or build a bridge. Even if this low figure is accurate, Hebei would need at least 4.01 billion for all its recorded unsafe bridges.

Right now due to lack of funds, "the township officials have to lobby at the provincial level and whoever does the better job gets the money", Wang said. "There are simple too many of them."

With few incentives and many hurdles in applying for money, local governments often wait until they receive repeated complaints from victims' family members or numerous accidents occur.

The township officials of Wenmiao, who are in charge of the bridge that Li and his wife fell off, said that money was so hard to apply for that they had to lobby at the provincial level for years until someone paid attention.

"No one would give us money, not the water department, not the transport department," said Sun, an official who requested to be quoted only by his last name.

Sun said that the township had only about 200,000 yuan in tax revenue left after handing revenue over to the province, only a fraction of the cost of building a new bridge. "There's no way we could afford to build a new bridge by ourselves," he said.

By government regulations, the bridge that Li fell off should be

blocked or knocked down. Sun said that the government blocked one side of the bridge with waist-high mud and bricks to prevent people from passing. But villagers just ignored the barrier and kept using the bridge.

Sun said the township government obtained about 3 million yuan this January and is planning to build a new bridge late this year after the rainy season.

Meanwhile, another tragedy could occur. At least 20 people, mostly on motorbikes, passed the unsafe bridge within half an hour at around 5pm on a weekday.

"We blocked it and said it was dangerous, but the villagers keep using it. What can we do?" said Sun. Perhaps because of this, for bridge victims it's a long battle for justice, even after a death.

One morning in April, one Hebei villager, Wang Bingliang, 58, rode his three-wheeled cart across another unsafe bridge, about 100 meters long and five meters wide. There was a large hole in the bridge covered by a cement slab. As he rode over the uneven slab, the bike tipped and he was thrown over the side of the bridge, which had no rails. He fell five meters to the dry riverbed below. Wang was rushed to the hospital where he later died.

"The government had not set up a warning sign, and there were no barriers on either side," said Zhang Tiegang, 49, a villager who witnessed the tragedy.

An official in the township of Wang Wuzhuang said efforts were made to block the bridge, but villagers removed the impediments and kept using it. "We said it was unsafe and blocked it," official Guo Mengliang said.

Wang Bingliang's niece, Wang Yuzhen, 44, disputed this. "The local government didn't set up cement blocks until a year after my uncle died after I complained repeatedly."

Wang's family is defiant and angry. Wang Yuzhen wrote letters to provincial level governments and filed lawsuits complaining that the local government did nothing to fix the problem, even though the bridge was identified as unsafe as early as 2008.

The court ruled that Wang Bingliang passed the bridge knowing it was unsafe, so he should take 70 per cent of the blame.

The township government of Wang Wuzhuang was ordered to pay the family 122,695 yuan, about one-third of what the family spent for medical and funeral expenses.

The attorney Zhu, who was not involved in the case, said that even for the court to accept the case and rule that the government accept 30 per cent of the blame was a rare success. "Perhaps it was because an NPC representative found out about the case and filed complaints to the local government."

Zuo Chunhe, the NPC representative, said it was the government's fundamental responsibility to make sure no one used the bridges, and it failed, so "it should take full responsibility".

Zuo said that the local governments may want to dismiss the incident and may think that everything will pass with time, but "these matters cannot be dragged on and dismissed". "The more you do it, the more oil you are adding on fire," Zuo said.

Zhu said that if Wang's case showed that the government can get away with inaction, matters will worsen and the local government might continue to ignore the problem. "In times like this we need the law to provide justice to people and remind government of its duty."

Today, the unsafe bridge still stands on the Qingliang River. Cornfields occupy the puddle-scattered riverbed. Villagers cross the river by either walking on a dirt path on the

We need the law to provide justice to people and remind government of its duty

Zhu Xiaoding, a lawyer researching unsafe bridges



Li Shiping and her husband, Li Maotong, were injured when they crashed off a dangerous bridge.



riverbed or continue to use the bridge with one side blocked.

The bridge was identified as fifth-level hazardous, which means the government can either knock it down or block it, regulations say.

"It costs more to dismantle a bridge than to block one," said Wang Jianyong, the water department official. He said this might be one of the reasons the government has not taken the bridge apart.

Four people climbed over the cement block to cross the bridge, one

with a bicycle, within 20 minutes at about 3pm on a weekday. And even though all of them knew that people had fallen off this bridge, they said it was their best means of getting out of the village.

A new bridge stands about 40 minute's walk from the old one. It's an arduous hike, requiring one to tread through knee-high grass and bug-infested muddy hills.

"I know it's not even safe to walk on the riverbed because the bridge might collapse on us someday, but the new one is too far away and inconvenient," said Zhang, the witness.

Wang's family appealed his case and it reopened in court on July 30. But other victims might not be as legally sophisticated and persistent. Li, who fell off the bridge with his wife, has not reported his accident or complained to officials.

Even though Li is the village head of Houtun, he has no knowledge of what legal rights he is entitled to. Li said he thinks he should be responsible for the accident because the township officials in charge had said the bridge was unsafe and he was fully aware of the danger.

"Another person fell off the bridge last year and he hasn't received any compensation," Li said. "What's the use of fighting?"

Back on the bridge it is rush hour again.

A shirtless chubby man with a heavy mustache almost finishes his journey across the bridge. His bike slips on the waist high mud hill that the government piled up as a feeble attempt to prevent people from passing. The front of his bike almost falls over where rails are missing.

Other passengers gasp as they watch.

"I'm OK," said the man who almost just fell off, his sister-in-law trailing behind him. "I think the government wants us to continue to use it. Otherwise why don't they blow up the bridge?"

Policing takes page out of science fiction to predict crime

McClatchy-Tribune in Los Angeles

The future of crime fighting begins with a story about strawberry Pop Tarts, bad weather and Wal-Mart.

With a hurricane bearing down on the Florida coast several years ago, the retail giant sent trucks into the storm to stock shelves with the pink pastries. The decision to do so had not been made on a whim, but by a computer that crunched reams of sales data and found an unusual but undeniable fact: When Mother Nature gets angry, people want to eat a lot more strawberry Pop Tarts.

Officials in the Los Angeles Police Department are using the anecdote to explain a similar but far more complicated idea they and researchers say could revolutionise law enforcement. "As police departments have gotten better at pushing down crime, we are looking now for the thing that will take us to the next level," LAPD chief Charlie Beck said. "I firmly believe predictive policing is it."

Predictive policing is taken to the extreme in the 2002 movie *Minority Report* starring Tom Cruise, in which police of the future, with the aid of special psychics, are able to predict crimes and arrest and jail the perpetrators before they commit them.

In today's world, predictive policing is rooted in the notion that it is possible, through sophisticated computer analysis of information about previous crimes, to predict where and when crimes will occur. At universities and tech companies in the US and abroad, scientists are working to develop computer programs

The naysayers want you to believe that humans are too complex ... this sort of maths can't be done

Jeff Brantingham, an anthropologist at the University of California, LA

that could enable police to anticipate and prevent many types of crime.

Some of the most ambitious work is being done at the University of California, Los Angeles, where researchers are studying how criminals behave. One, who recently left UCLA to teach at Santa Clara University south of San Francisco, is working to forecast the time and place of crimes using the same mathematical formulas

that seismologists use to predict distribution of quake's aftershocks.

Another builds computer simulations of criminals roving through city neighbourhoods to better understand why they tend to cluster in certain areas and how they disperse when police go looking for them.

"The naysayers want you to believe that humans are too complex and too random - that this sort of maths can't be done," said Jeff Brantingham, a UCLA anthropologist who is helping to supervise the university's predictive policing project.

"But humans are not nearly as random as we think," Brantingham said. "In a sense, crime is just a physical process, and if you can explain how offenders move and how they mix with their victims, you can understand an incredible amount."

The LAPD has positioned itself aggressively at the centre of the predictive policing universe, forging ties with the UCLA team and drawing up plans for a large-scale experiment to test whether predictive policing tools work. The department is considered a frontrunner to prevail over other big-city agencies in the autumn for a US\$3 million Justice Department grant to conduct the multiyear tests.

LAPD officials have begun to

imagine what a department built around predictive tools would look like. Automated, detailed crime forecasts tailored to each of the department's 21 area stations would be streamed several times a day to commanders, who would use them to make decisions about where to deploy officers. For patrol officers, mapping software on in-car computers and hand-held devices would show continuous updates on the probability of various crimes in the vicinity, along with the addresses and background information about ex-convicts living in the area. Information gathered by officers from suspects, witnesses and victims would be fed in real time into a nerve centre where predictive computer programs churn through crime databases.

The LAPD and other agencies have become adept enough at channeling the flow of information from officers in the field that crimes committed in the evening are included on the next day's crime maps.

No matter how quickly crimes are plotted, however, these mapping programs leave police stuck in reaction mode. They show where crimes have occurred in the past, but police still must make educated guesses about where future crimes will occur.

George Mohler and Martin Short believe they can change that. In a yet-to-be-published research paper he wrote while at UCLA, Mohler makes the case that the time and place of past crimes can be used to determine where and when future crimes are most likely to occur. To do this, he argues, police need to start thinking of crimes the way seismologists think of earthquakes and aftershocks.

Mohler's theory stems from a peculiar aspect of crime. Much as an earthquake sets off aftershocks, some types of crimes have a contagious

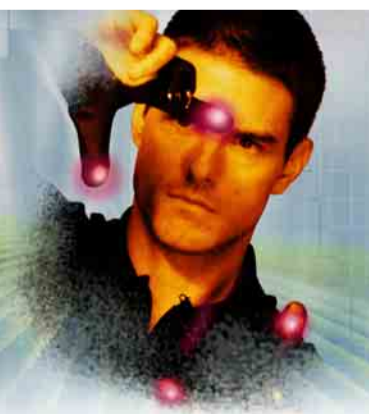


Tom Cruise as detective John Anderton in the 2002 film *Minority Report*.

quality to them. When a burglar robs a home, for example, the same house and others in its immediate surroundings are at much greater risk of being burglary victims in the days that follow. The phenomenon is called an exact or near-repeat effect.

The same dynamic can explain the way rival gangs retaliate against one another.

And, although it is harder to pin down in more complex crimes that are motivated by passion or other emotions, experts believe it holds there as well.



Tom Cruise as detective John Anderton in the 2002 film *Minority Report*.

Using LAPD data, he tested his computer model on several thousand burglaries in a large section of the San Fernando Valley throughout 2004 and 2005. The results, Mohler said, were far more effective than anything on the market today.

The program divided the valley area into patrol zones that were each roughly the size of several neighbourhood blocks and then calculated which zones had the highest probability of experiencing burglaries the next day.

In one test, in which Mohler assumed there were enough police to patrol 10 per cent of the area, the model accurately identified the zones the officers should have patrolled to thwart about a quarter of all the burglaries that occurred that day.