

Written by Diana Mazzella Illustrated by Graham Curry

n 1989, the Chinese military shot down hundreds of people in Tiananmen Square during a student-led protest. New U.S. Investments were halted. Expatriates pulled their employees out of China. But the employees at one particular

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company stayed. Jim Wood became president of that company in 1996 and is now director of the U.S. China Energy Center's Advanced Coal Technologies Consortium headquartered at West Virginia University.

Seven years after Tiananmen, the mayor of Beijing sent Wood an invitation to dinner at his home. Wood can't remember the exact words Mayor Jia Qinglin said. But it boiled down to: "We are now partners."

"It takes a long time in China to build a relationship," Wood said.

"[Seven] years is not a long time."

If seven years is not long, then the nearly 40 years since diplomatic relations between the nations resumed in 1978 is not much longer. Especially not when our economic security is entwined with China, a nation across the world with more than four times as many people and an economy three-fourths the size of the U.S. GDP.

President Barack Obama <u>told *The Atlantic*</u> this year that the relationship between China and the U.S. was our "most critical" international relationship. "We have more to fear from a weakened, threatened China than a successful, rising China," he said.

There have been constant American fears expressed in the

news this year about China from the moment the Chinese stock market took a nosedive after the new year to casting blame on China for U.S. manufacturing job losses during the presidential election cycle.

A 2015 Pew Research Center survey showed that only 38 percent of Americans had a favorable view of China, and 44 percent of Chinese had a favorable view of the U.S.

Chinese think the U.S. is trying to hold them back, according to Pew. And Americans worry about the colossal amount of U.S. debt held by China, cyber security and human rights abuses.

Couple the fear and unfavorable views with a lack of information, and you've got a grim picture of the last few decades.

"It is probably the most important relationship of this century, and it certainly ended up being one of the most important ones of the last century," says West Virginia University Management Professor Usha Haley of the U.S. and China.

"You ignore a country like China at your own peril. But there is a civilizational chasm between the U.S. and China."

Roll and Sway

Two decades ago Usha Haley started studying China as an emerging market when very few people were digging into how Chinese companies do business. Now, she's getting two calls a day from the likes of the U.S. government, private companies, *The Economist* and *The Wall Street Journal* to understand how businesses in China operate.

Haley, who has her PhD from New York University and completed a fellowship at Harvard, was once asked if she thought China was "the enemy for the American way of life."

The WVU management and international business professor called the idea "absurd." China



is not an enemy, she says. It's a competitor. A competitor that holds more U.S. debt than any nation has held from any other nation in the world ever.

"And we haven't done a good job," she said. "We've done a facile job. We've done a job with which we feel comfortable. We've understood them on our own terms. We haven't understood them on their terms, and everyone else does a better job of understanding us than we do."

It's true that the U.S. needs to "staunch the bleeding" of job losses in places like Ohio, Pennsylvania and West Virginia, she says. Those jobs won't be coming back. But we can start to change the quality of the relationship through understanding China.

Bottom line: Keeping our distance from China isn't an option.

"We roll and sway with China's ups and downs," she said. "China has a glut or China has a shortage — since China is part of the supply chain, we roll and sway with it."

Americans as a people go into interactions with China thinking that under a veneer of cultural differences, we have the same basic structures and habits, Haley says. And that idea has not served us well.

"We are fly-by-night operators," Haley said of the U.S.

"We do research on the United States, often on very narrow parts of the United States, and then extrapolate from that to the rest of the world. It worked to a point. It does not work anymore."

There's been an expectation that China collects and values the same data that we do. It doesn't. Or that lower sale prices signal efficiencies or technological development. That's not always the case, as Haley was first to discover in the case of Chinese steel.

For years, from the outside, it looked like China was producing steel for 30 percent less than the U.S. cost to produce steel. Every year.

Onlookers relied on what they knew to parse the problem. It must be a technological advance. Or some kind of efficiency. But there was no evidence.

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USHA HALEY

Then a few years ago, someone in the U.S.-China Economic and Security Review Commission came to Haley asking her to solve it. She told him it would take six months. More than a year later, Haley and her colleague and husband, George, had the data for their 2013 book <u>"Subsidies to Chinese Industry."</u>

Before the book, the U.S. didn't make trade decisions with this knowledge. The Haleys changed that. This work has made it into U.S. and European Union trade regulations that place tariffs on steel believed to be priced below market value.

"Now it's considered a given that China subsidizes," she said. "George and I were the first people who actually found those subsidies, and we found them very, very carefully to the point that the Chinese government actually put into laws that you can't get direct data like that which would hurt the interests of the Chinese government."

Haley's work represents the top economic U.S. advantage over China: funding for research and development. American researchers will tell you that funding is dwindling. And it is less than it was, down from \$160 billion five years ago to \$150 billion this year, more than half of that defense research, according to the American Association for the Advancement of Science. But Haley says it's still more than any nation in the world allocates for research.

Haley started looking for answers where there just weren't any in the Western world when it came to Chinese business. It led her to research Chinese management practices, talking to CEOs throughout Asia for the book <u>"New Asian Emperors."</u> Then in the 2000s she coauthored <u>"The Chinese Tao of Business"</u> about Chinese business networks among expatriates.

And there's more to come.

Haley is seeking funding from the National Science Foundation to look into a growing energy source: shale natural gas. And she discovered that China is the No. 1 outside investor in U.S. shale gas. "We're talking 30 percent of U.S. shale gas is now owned by the Chinese," Haley said, "and why is nobody looking at it?"

A Marriage of True Minds

Energy is one area where China and the U.S. agree more or less in a relationship fraught with conflict over human rights and geographic boundaries. At the heart of this agreement is the recognition that rolling back carbon emissions is essential.

In the last couple years, Presidents Barack Obama and Xi Jinping renewed an earlier agreement that established U.S.-China Energy Centers. These groups bring researchers and private companies together in both countries to solve energy problems in five areas: vehicles, buildings, energy and water, heavy-duty vehicles and coal technology.



Jim Wood, former deputy assistant secretary at the U.S. Department of Energy, manages the coal group on the U.S. side from his office at WVU.

Wood calls himself "intolerant of time." He has four years to see results from U.S. and Chinese energy

researchers as he attracts private matching funds and checks on researchers from Wyoming to West Virginia.

The researchers he meets are exploring questions that we'd like answered right about now, particularly how to make carbon capture economical and how to restructure electrical grids to also handle renewable energy. Currently researchers are exploring the possibility of injecting carbon in an aquifer in China while extracting water. On the power output side, researchers are modeling electrical grids that could handle variable energy sources such as solar and wind along with the steady input from coal.

"When the five years is over, I want to have some victories," Wood said. "And I would say part of the reason that I feel strongly about that is the four years I was down at DOE, and I was spending \$400 million a year in research and \$2.5 billion in projects, and I didn't see a lot of outcomes.

"I saw just a continuation of similar research that had been done the year before and not a lot of connecting of research elements into systems, into components, that would finally say, yeah, we've got something that's actually economic."

Mitigating pollution from coal-fired power plants and staving off climate change is a central quest for both countries, but particularly China, the largest producer and consumer of coal. In 2015, <u>climateresearchers at Berkeley</u> <u>Earth</u> estimated in 2015 that poor air quality in China leads to 1.6 million deaths a year. Particulate matter from coal power plants and car exhaust paint the bleak photos coming out of major population centers there while the demand for energy to power homes and industry is only increasing.

In the recent Paris climate agreement, China committed to begin reducing carbon dioxide output in 2030. But right now because of energy demand, Wood says, China is building new fossil fuel power plants at a rate of about 20 percent of U.S. existing power plants every year, though the new plants require emissions controls and limits and could allow for older plants in residential areas to be decommissioned. Even where the countries agree, it's still complicated. China admitted at the end of last year that its carbon emissions from coal were 17 percent higher than originally estimated. Haley says that because these figures are from the government, the actual number is likely much higher.

Wood says a difference in data finds an equilibrium when researchers are the ones doing the talking. And as he awaits research results, he's already seen relationship results.

Researchers aren't politicians. They're focused on the data, Wood says. When it diverges as it is bound to between the U.S. and China, the researchers ask questions and find that the answer was always the same.

A point of divergence when companies come together from each country is how to treat intellectual property. Protecting intellectual property rights is a bedrock of U.S. business. It hasn't been in China. When a private company in the coal consortium had a dispute with a Chinese company, the U.S.-China Energy Center's technology management plan resolved it, Wood said.

"We're trying to make the center a strong center where ... you try to converge the technology because you want to converge the politics," Wood said.

Take Me Home

Beneath the national rhetoric shaping China as an economic enemy are the people on the ground who see a giant economic opportunity that has the power to change everything in places where the economic losses have hit the hardest — places like West Virginia.

In 1989, Victor Chow joined the Finance faculty in the College of Business and Economics. In 1994, he helped Professor William Riley form the Center for Chinese Business, which has quietly become a major force for connecting WVU with China.



Born in Taiwan, Chow,

who holds a PhD in finance from the University of Alabama, has had a close-up view of China's rapid economic and social change while he's brought 500 government officials and business executives to WVU for training programs that last up to a year, recruited Chinese students to WVU and American students to China, and fostered international trade.

He's seen how quickly Chinese, particularly alumni who spend time at the University, become ambassadors for the Mountaineer nation and West Virginia.

They are the biggest global players from WVU that you've never heard of.

Xu Lejiang, chairman of Bao Steel Group, China's largest steel company. Guangzhou Mayor Ren Xuefeng. Shanghai Vice Mayor Jiang Ping. Tianjin Vice Mayor Cui Jingdu. Zhou Chi, former chairman of Shanghai Airlines and chairman of Shanghai Tongsheng Investment Group Co., the largest investment firm in Shanghai. And Chen Guoqiang, vice governor of Shaanxi province, a major coal and energy center in China with a population of 37 million people. And these are just some of the Chinese graduates from the College of Business and Economics.

What happens when WVU alumni rise through the ranks

of business and government in China? They involve us in their businesses. That's the idea the University and the State of West Virginia is counting on in a strategy to bring more Chinese to the state for their college educations.

As of last year, WVU has a full-time admissions recruiter for China. The University also has partnerships with about 20 Chinese universities and leads a ceramic program in Jingdezhen, China.



One Chinese student who stayed is now leading the effort to attract Chinese participation in West Virginia commerce.

Qingyun Sun received bachelor's and master's engineering degrees from the China University of Mining and Technology in Beijing (which now has an exchange program with

WVU), and arrived at WVU to pursue a PhD in 1996. After he completed his degree, he stayed. While he's a researcher and the associate director at the U.S.- China Energy Center,he's also the West Virginia governor's assistant for China affairs in the state development office.

He says a crucial strategy right now is recruiting students to West Virginia. He expects their parents will follow for a visit. They'll invest. They'll become U.S. export partners.

Sun knows the pull of West Virginia. And even when alumni don't stay, he says, they will remember the Mountaineers.

The state is already a trading partner with China. More than half of the state's hardwood exports go to China and most of the mining equipment produced in the state goes to China, Sun says. As the domestic market for mining equipment shrinks, local companies are staying alive through trade with China, Sun says, like Petitto Mine Equipment, a Morgantown company of about 50 people that landed a big contract with a Chinese coal company several years ago.

He says the state, while continuing these development efforts, has made economic growth through education a top priority in growing a relationship with China.

"There is a lot of misunderstanding between the U.S. and China. I've been here 30 years, and I think if people don't go there and people don't communicate they will never understand each other."

VICTOR CHOW

In 2014, the College of Business and Economics through Chow's efforts opened the Confucius Institute for Business West Virginia, a China-funded program that grows connections between K-12 educators in West Virginia and China.

This summer, because of the Confucius Institute, Chow took a group of West Virginia superintendents and principals to China where they visited schools and important cities like Beijing, Tianjin and Xian. He expects this to make broader educational change than starting at the teaching level. He'd like to see Chinese language experts work with teachers in the classroom to grow interest in China in West Virginia schools.

"There is a lot of misunderstanding between the U.S. and China," Chow said. "I've been here 30 years, and I think if people don't go there and people don't communicate, they will never understand each other."

When you look at how close the U.S. and China are in other ways, it's easy to see that there's a lot of educational ground to cover. While more K-12 U.S. students than ever before are learning Mandarin (60,000), far more students are learning Latin (205,000), according to *Education Week*.

And yes, many Chinese know English, but relying on someone else to know your language may not be the best tactic.

"When you go to China or make a phone call and say "ni hao ma" [how are you?], people will feel so differently even though you only know three words," Chow said. "I think it's necessary for our next generation."

The U.S. as a whole has recognized the importance of college students learning in China. In 2009, President Obama announced an initiative to send 100,000 students to study in China. While the number rapidly grew in the new millennium, in 2013-14 the U.S. sent about 14,000 students to study in China, according to the Institute of International Education. China sent more than <u>270,000</u> students to study in the U.S. that year.

Chow wants American children to experience what his own son does as he talks online with a friend in Shanghai about football. Indeed, it's the youth who have the highestrated perception of each other as Pew found that the majority of young people in each country had a favorable opinion of the other nation. It's the people who need to communicate, not just leaders, Chow says. And language is the method. This isn't just a hunch. Sharing a different kind of language has worked before. There's this one, strange, unexpected, beautiful thing that bonds West Virginia and China together, wrapped up in our mutual love of our own homes. And it's been there since the U.S. and China first started looking toward each other again.

In 1979, Chinese leader Deng Xiaoping visited the U.S. and attended an exhibition at the John F. Kennedy Center for the Performing Arts that included performers of American culture: the Harlem Globetrotters, the Joffrey Ballet, Shirley MacLaine and John Denver.

While Americans were involved with our own financial problems with many leaving rural homes, the Chinese were doing the same with mass migration waves toward the cities. During the decades since that performance, Denver's "Country Roads, Take Me Home," which is not as popular as it used to be in the U.S., became one of the most popular songs from the West in China, and it still is today.

This old song that we bellow at football games depicts quiet mountains we don't walk through anymore. The country roads we don't see anymore. Thousands of expatriate West Virginians know this pain. And so do millions of Chinese. You can't replace home. And the song embodying a small green state of 1.8 million people can be a nostalgic symbol for both.

Sun says people across China can sing "Country Roads," from adults to small children. They probably don't know the names Massachusetts or Tennessee. But when you mention West Virginia in conversation, there's a common response, he says.

"Oh, I know," they'll say. "Almost heaven."

All Chinese names in this story place the surname first, except for Qingyun Sun. Assistant Professor of Public Administration Paolo Farah assisted in providing background research for this story.

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WVU Magazine Diana Mazzella, Editor <u>304-293-6998</u> | <u>wvumag@mail.wvu.edu</u> P.O. Box 6688 | Morgantown, WV, 26506-6688

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