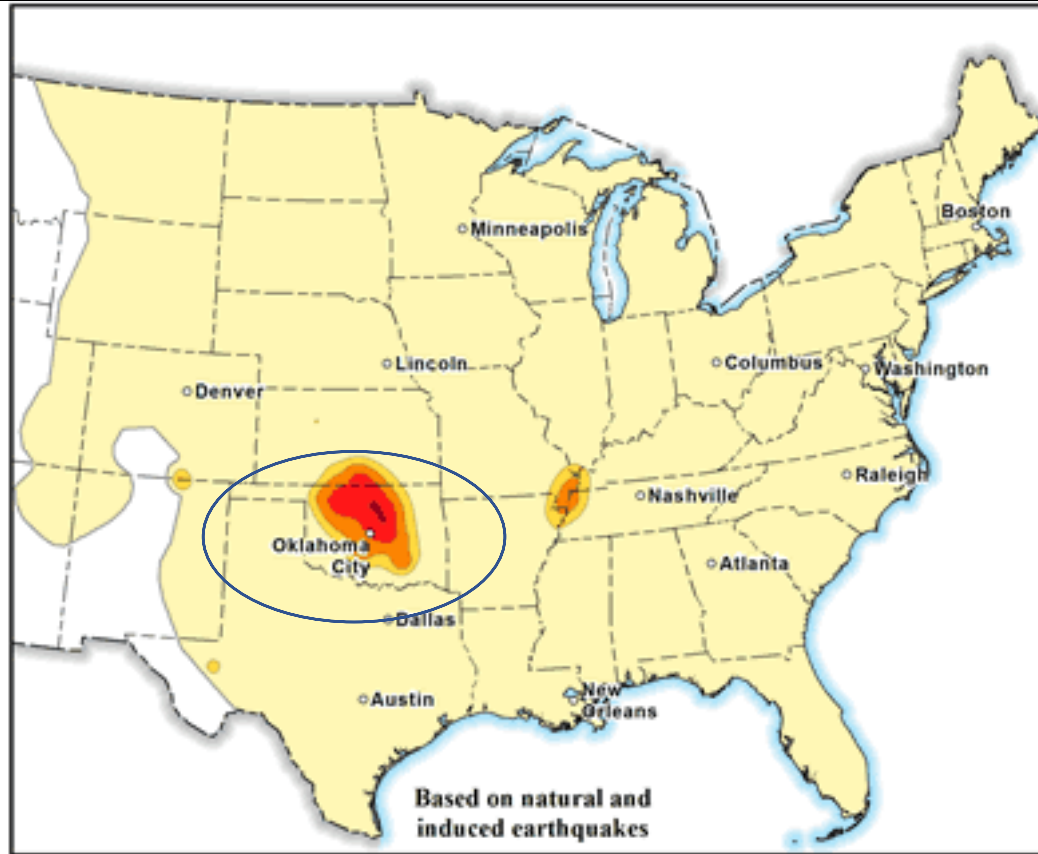
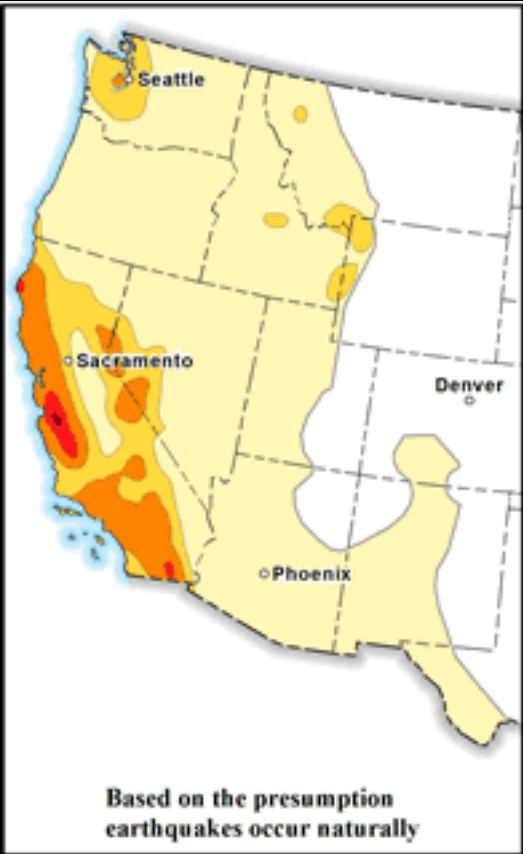


All Shook Up

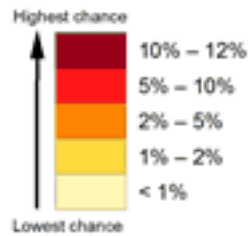
Rhetorics of Induced Seismicity

Jen Schneider, Professor
School of Public Service
Boise State University

Kimberly Gardner, PhD Candidate
Public Policy and Administration
Boise State University



Chance of damage



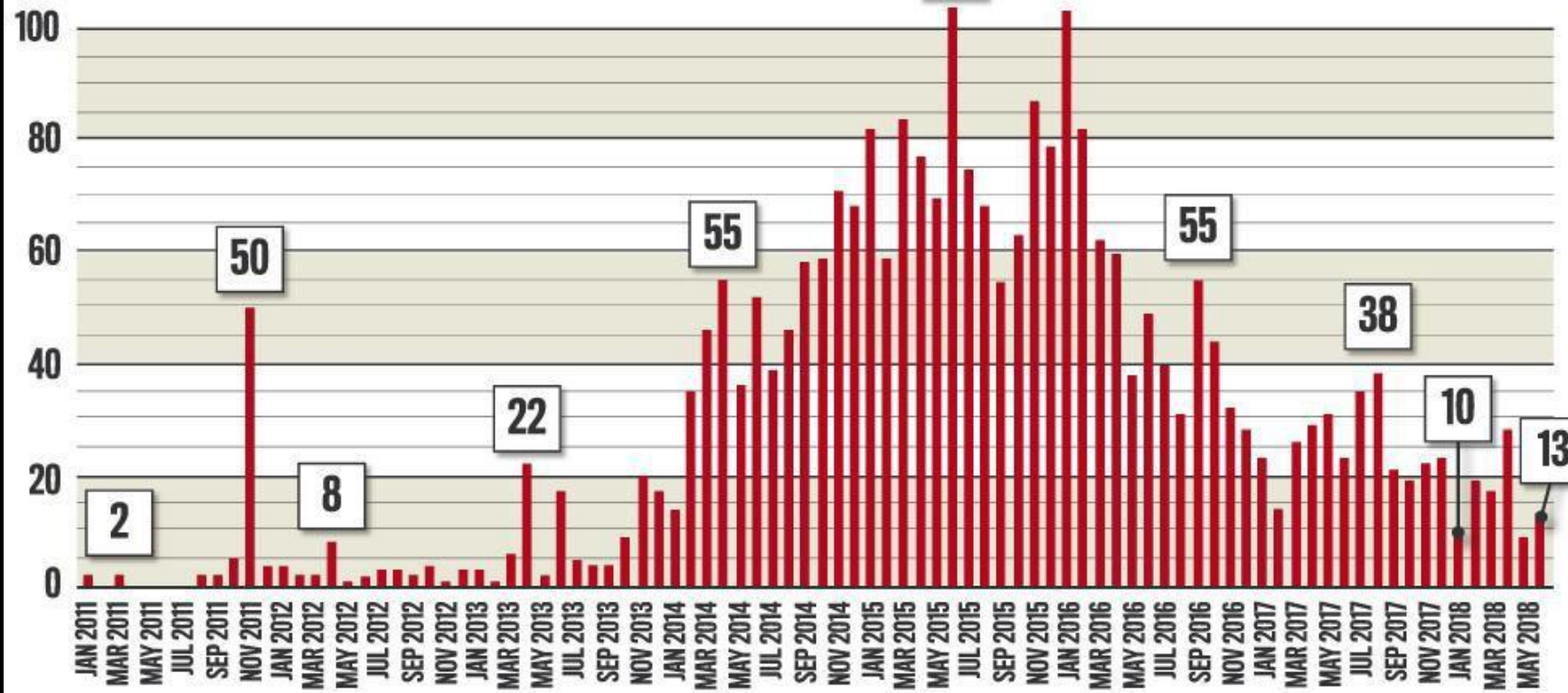
"I nearly went into shock,"
said Ladra, 63. "You just
really don't think you're
going to live through it."

--"Oklahoma worries over swarm of
earthquakes and connection to oil
industry," *The Washington Post*, 2015



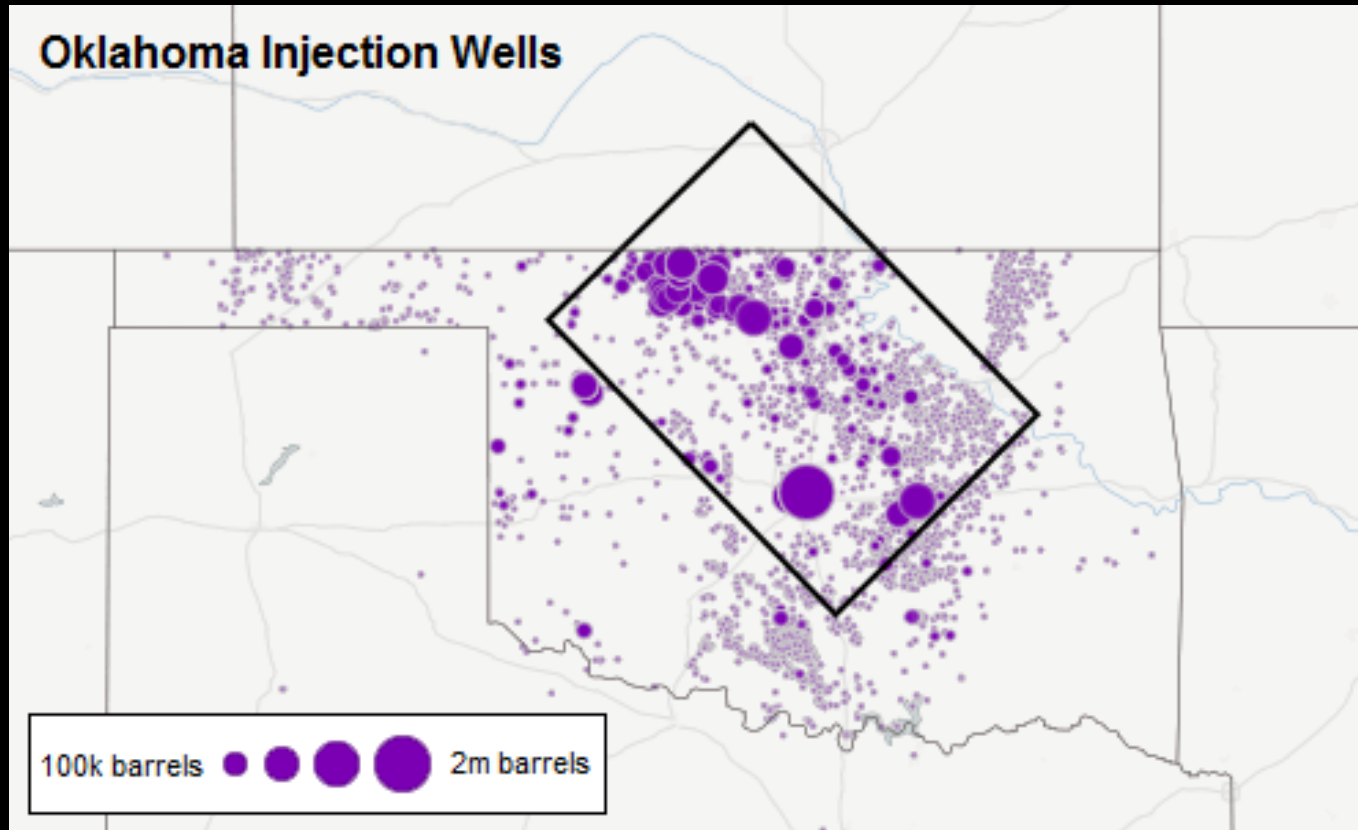
Prague, Oklahoma

Oklahoma earthquakes magnitude 3.0+



SOURCE: Oklahoma Geological Survey

STEVEN RECKINGER/Tulsa World



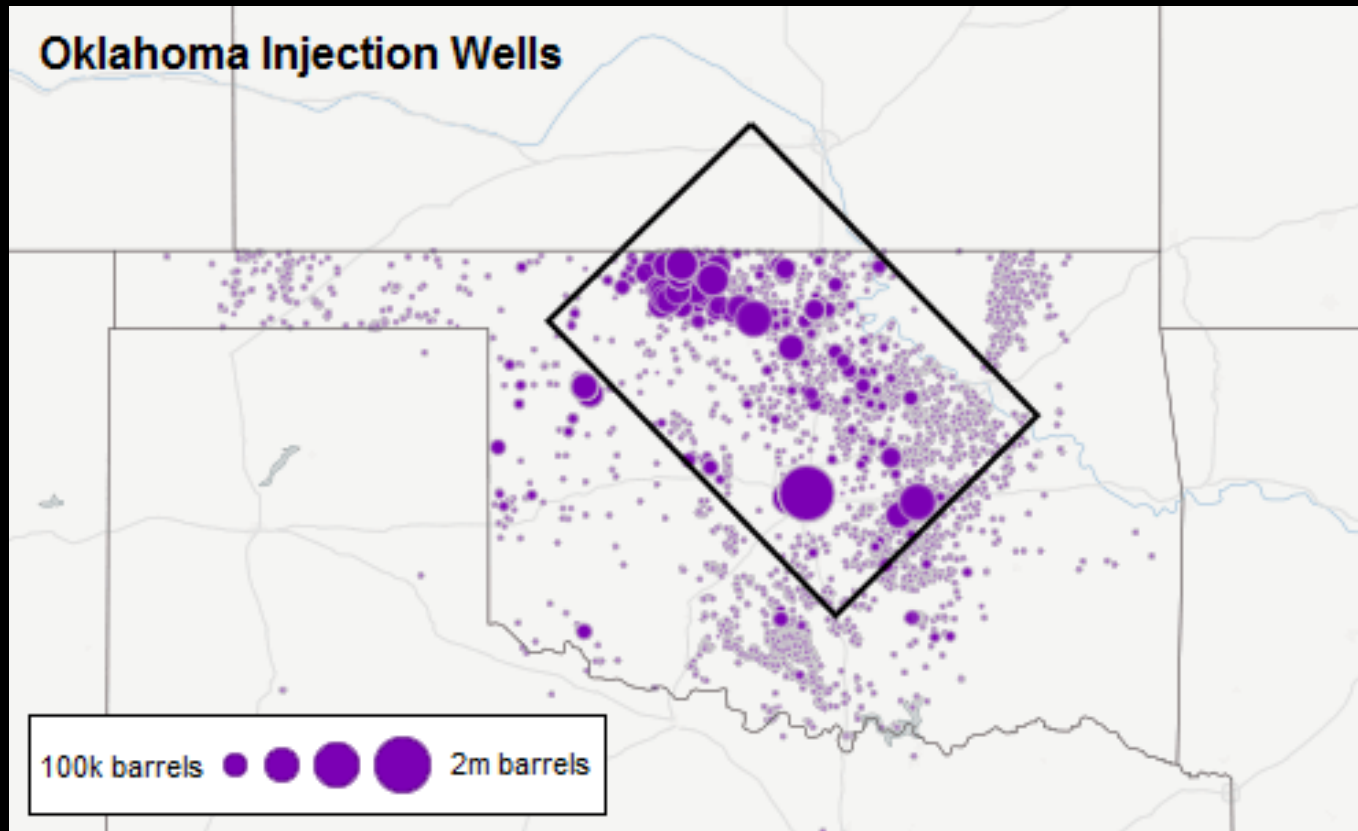
Source: [Oklahoma Corporation Commission](#), 2014 injection volumes

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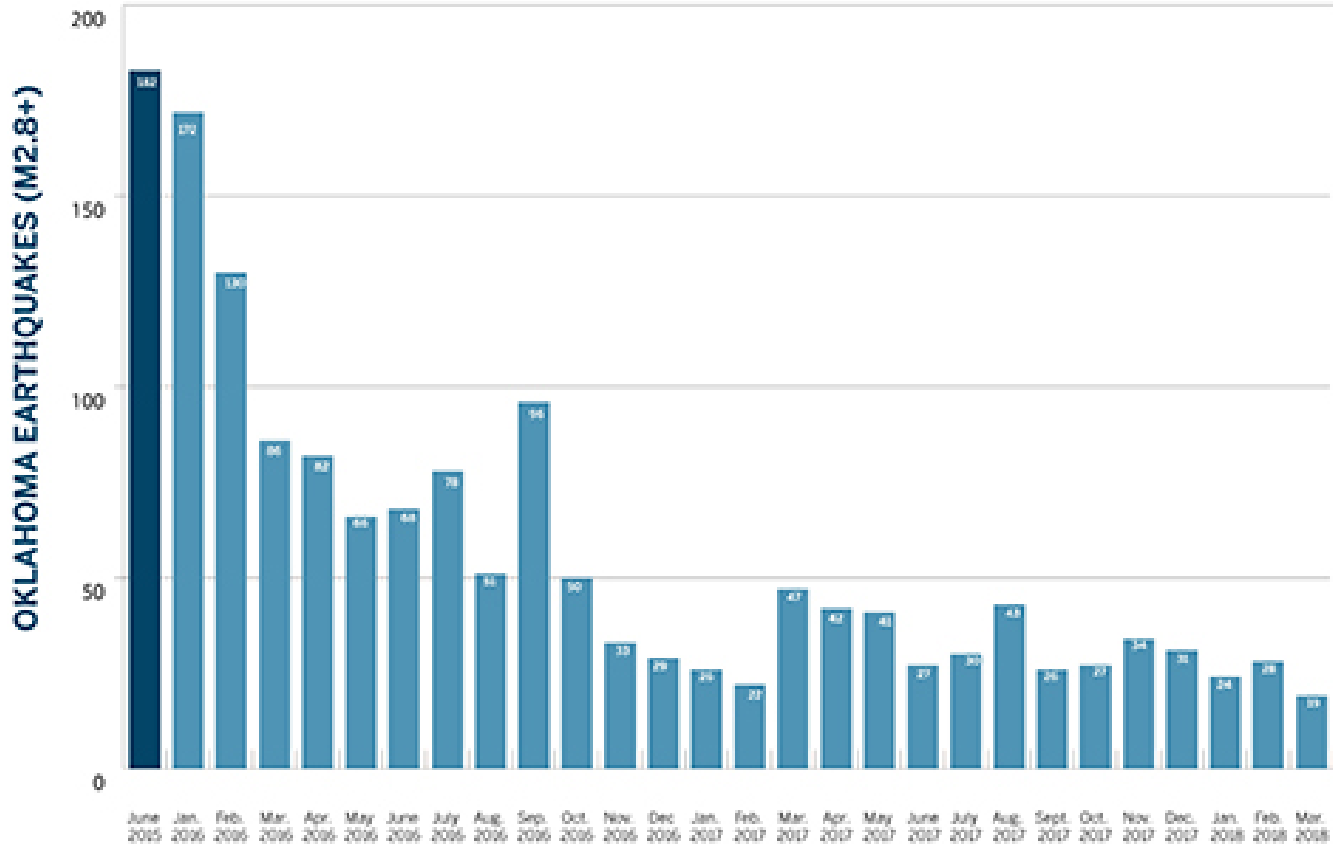
"There's a hysteria that needs to be brought back to reality that these [quakes] are light and will not cause any harm," Brown said, according to local news reports.

--"Oklahoma worries over swarm of earthquakes and connection to oil industry," *The Washington Post*, 2015



Source: [Oklahoma Corporation Commission](#), 2014 injection volumes

**OKLAHOMA M-2.8 AND GREATER EARTHQUAKES:
JUNE 2015 TO MARCH 2018**



Sources: United States Geological Survey

UNDER PRESSURE

COAL INDUSTRY RHETORIC AND NEOLIBERALISM



JEN SCHNEIDER, STEVE SCHWARZE,
PETER K. BSUMEK & JENNIFER PEEPLES

TEACHING STUDIES IN MEDIA AND ENVIRONMENTAL COMMUNICATION
SERIES EDITOR: A. HANSEN S. DIXON



- Suppression of evidence
- Strategic delay
- Industrial apocalyptic
- Minimization of trauma
- Normalization of the irregular
- Emphasis on consumer culpability

Signs of industry under pressure

Example: Industrial apocalyptic

Industry executives said a verdict against an energy company would be devastating....

Shutting down disposal wells and the industry they serve, he added, "will make 'The Grapes of Wrath' look like a cheery movie.

--Kim Hatfield, Chairman, Oklahoma Independent Petroleum Administration

The New York Times, 2015

“postnormal” science (Funtowicz and Ravetz, 1993)

1. Science does not compel action (Pielke, Jr.)
2. Expertise is politicized
3. Value propositions are supported by scientific certainty
4. Conversely, scientific uncertainty is used strategically

The postnormal in Oklahoma

Example: Strategic uncertainty

"I'd like nothing better than to tell you we have it all figured out. Unfortunately, that's not the case.... [It could be oil and gas, but] "we just can't conclude that," Keller said.

"There lots of reasons to believe that this is a perfectly natural earthquake," Keller said. "You can go either way on that."

--Randy Keller, Director of Oklahoma Geological Survey, 2013, *Tulsa World*



Environmental melodrama (Schwarze, 2006)

- Emphasizes political aspects, not just personal ones
- David and Goliath dynamics
- Misdeeds are characterized as moral wrongs



Environmental melodrama in Oklahoma

"The question is: Is it all about profits, or do the people have any rights at all?"

--Robert Freeman, 69, Retired Air Force, Advocate of moratorium on new disposal wells

2015

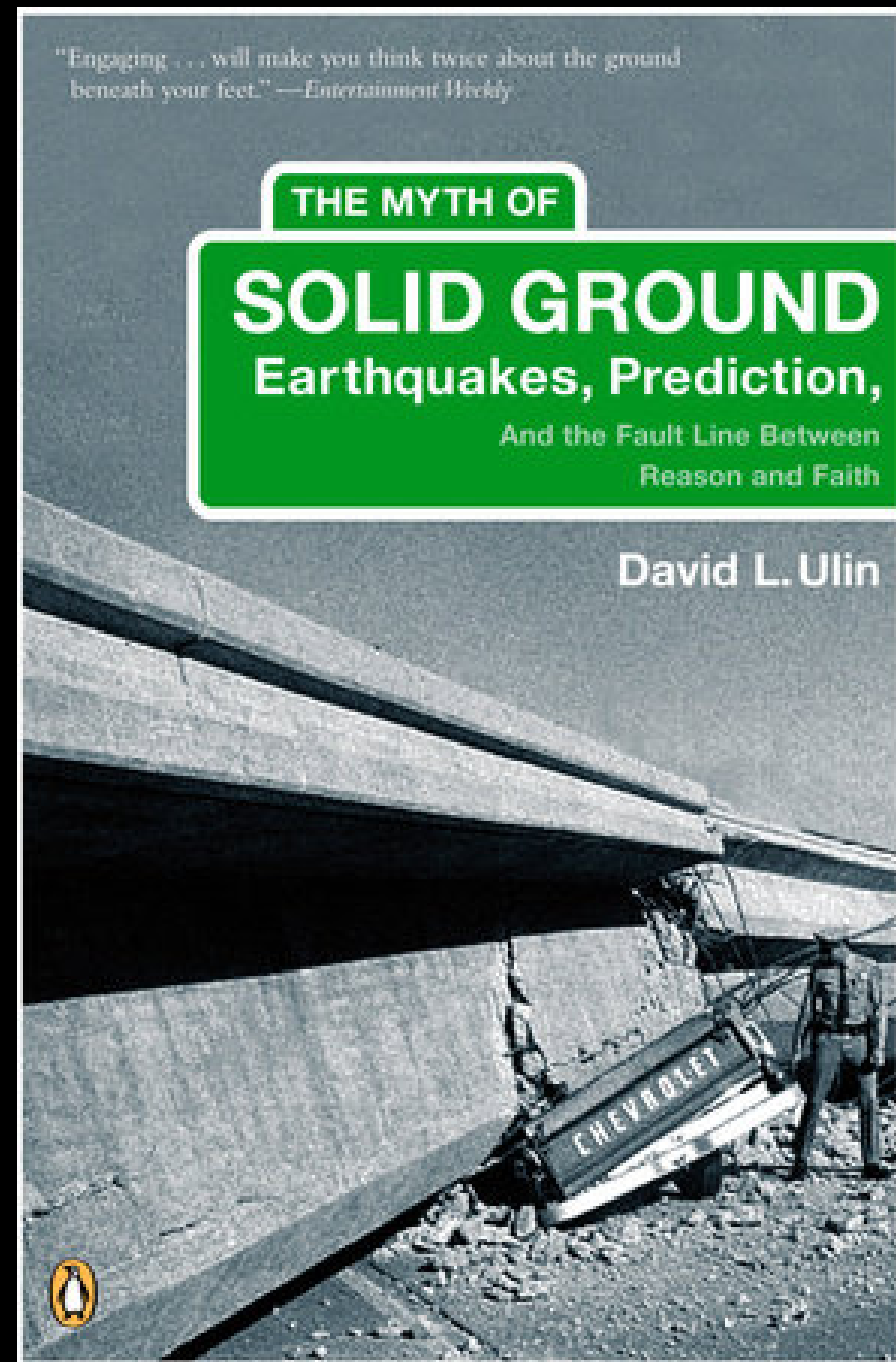
Environmental melodrama in Oklahoma

"Now that the energy sector greedily and wantonly, without consideration of the well-being of Oklahomans or the environment in which they are expected to live, has literally made Swiss cheese of what was once our sacred home to drill a massive unstable cavern beneath our own feet, the days of tax credits protecting the gas and oil industry moguls at the expense of hard working Oklahomans is over."

--State Representative Richard Morrisette

2016

Induced Seismicity and Geopoetics?



“Earthquakes, after all, do strange things to our psyches, by shattering what may be our most widely held illusion, the inviolability of solid ground.”

For survivors, “the word [earthquake] is full of terror. They are supersensitive to the slightest rattles and jars, and move uneasily whenever a heavy truck passes along the highway.”

--David L. Ulin, *The Myth of Solid Ground*

A politics of geopoetics

1. Acknowledgment of world-changing qualities of seismic events



"When the metal cross hit the floor, I was glad I wasn't sitting in the recliner. Because I wouldn't be here," LeValley said as he clutched his half-full coffee cup...

--2016

A politics of geopoetics

1. Acknowledgment of world-changing qualities of seismic events
2. Importance of trauma-informed response



"There have been people who have seen the damage and immediately start to cry," he said. "They couldn't believe what they saw," Mr. Collins said.

--2011

A politics of geopoetics

1. Acknowledgment of world-changing qualities of seismic events
2. Importance of trauma-informed response
3. Recognizing the rhetorical functions of uncertainty



"I'm scared there's going to be a bigger one," Ms. Sexton said.

--2013

A politics of geopoetics

1. Acknowledgment of world-changing qualities of seismic events
2. Importance of trauma-informed response
3. Recognizing the rhetorical functions of uncertainty
4. Centering of figurative expressions of experience

State Rep. Lewis Moore, R-Arcadia, said he was awakened by an earthquake about 2 a.m. Tuesday morning "that sounded like a plane crashed in our back yard."

--2013



A politics of geopoetics

1. Acknowledgment of world-changing qualities of seismic events
2. Importance of trauma-informed response
3. Recognizing the rhetorical functions of uncertainty
4. Centering of figurative expressions of experience
5. Opening to seismic political activity

Thank you

Signs of industry under pressure

Suppression of evidence

“Well, the president of the university expressed to me that I had complete academic freedom but that as part of being an employee of the state survey, I also have a need to listen to, you know, the people within the oil and gas industry,” Holland said. “And so Harold Hamm expressed to me that I had to be careful of the way in which I say things, that hydraulic fracturing is critical to the state’s economy in Oklahoma, and that me publicly stating that earthquakes can be caused by hydraulic fracturing was — you know, could be misleading, and that he was nervous about the war on fossil fuels at the time.”

--2017

https://www.tulsaworld.com/earthquakes/deposition-former-state-seismologist-felt-pressured-not-to-link-oklahoma/article_19c0dfb1-fc12-5a9f-8aa7-eea06d829d8e.html

Signs of industry under pressure

Strategic delay

First elected in 2010, Governor Fallin appointed the earthquake advisory council last September. “Oklahoma has always had seismic activity, but the reality is we are seeing more,” she said then. “It’s important that we study this issue and have sound science that can inform decisions.”

She allowed only last week that wells accidentally drilled into rock containing faults could “potentially” set off shocks. Scientists say that is only one factor at play in the quakes.

--2015

<https://www.nytimes.com/2015/04/04/us/as-quakes-rattle-oklahoma-fingers-point-to-oil-and-gas-industry.html>

Signs of industry under pressure

Erasure, discrediting, or diminishment of victim voices

But Kim Hatfield, the regulatory chairman of the Oklahoma Independent Petroleum Association and president of Crawley Petroleum, warned: "A reaction of panic is not useful."

--2015

<https://www.nytimes.com/2015/04/04/us/as-quakes-rattle-oklahoma-fingers-point-to-oil-and-gas-industry.html>

The postnormal in Oklahoma

“If it was a simple solution, it would already be done,” Terry said. “It's extremely complex. There's not a shut-off button. You can't flip a switch and make it go away. From the science that I've been reading, if you shut all this down at one time, it might cause more problems than we already have.

I know that's what the public thinks is a solution, but they haven't been privileged to all the science that the industry is working on.”

--Mike Terry, President of Oklahoma Independent Petroleum Association, 2016

<https://newsok.com/article/5472642/residents-express-frustrations-during-edmond-earthquake-forum>

Environmental melodrama in Oklahoma

Robert Jackman, a petroleum geologist, regularly contacts members of the U.S.G.S., the O.G.S., and the Oklahoma media to update them on the accumulating peer-reviewed work that links disposal wells to seismicity. The oft-heard refrain that more studies are needed is a sore point for Jackman.

“We know a cold is spread with sneezing and coughing, so we cover our nose and mouth, we wash our hands, we take precautions,” he said. “We don’t need to know exactly what the strain of virus is or all the technicalities of how the throat becomes inflamed in order to know to use a handkerchief.” --(Galchen 2015)

Amna Quraishi, 32, said she felt it at her home near 71st Street and Garnett Road. "I was upstairs getting my twins ready for preschool when all three of us fell in the hallway," she said. "The whole upstairs part of the home was moving. "It was that strong. I thought someone had fallen on the home."

--2010

https://www.tulsaworld.com/archives/magnitude-earthquake-shakes-oklahoma/article_0225f893-1b5a-5a89-9c38-4e13013ed5b6.html



<https://kfor.com/2016/09/03/damage-reports-coming-in-after-large-earthquake-strikes-oklahoma/>