

Knowing Which Way the Wind Blows

Weather Observation, Belief and Practice in Native Oklahoma (first impressions)

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My research...

I am conducting field interviews in southwestern Oklahoma to understand how Native farmers **observe and conceptualize weather and climate**, particularly in local, traditional ways, and how this knowledge is informing **new efforts to farm, ranch and garden sustainably** within a broader framework of **food sovereignty**. I also ask farmers whether they have noticed **climate change** and if so if they've modified what they do in response to it.

What others have to say about traditional knowledge...

Ingold and Kurttila (*Perceiving the Environment in Finnish Lapland*, 2000) defined traditional knowledge as knowing "**generated in the practices of locality**," knowledge that is historical yet **dynamic** in content and unique in its **locatedness**

Berkes (*Sacred Ecologies: Traditional Ecological Knowledge and Resource Management*, 1999) wrote that interest in "**non-scientific**" knowledge should not be "merely academic" – its lessons have **practical significance** for the rest of the world in addressing issues related to the environment

Pierotti and Wildcat (*Traditional Ecological Knowledge*, 2000) believe traditional knowledge can yield "**unexpected**" and "**non-intuitive insights**" about nature

Climate change...

Climate change and the associated shifting patterns of weather and plant and animal life already are having **highly local and enormous impacts** and **adaptive burdens** on Native peoples – **Chie Sakakibara: Cetaceousness and Global Warming Among the Inupiat of Arctic Alaska** and **Heather Lazrus: Weathering the Waves: Climate Change, Politics, and Vulnerability in Tuvalu** provide two recent field examples of change and its impacts and resulting adaptations

On climate change...

"...doesn't think much about it [climate debate] but thinks it's happening"
 "...past 10 years have not been the same...not balancing out...more unpredictable...more downs than ups"
 "...water tables have been affected and creeks are drying up" "...rivers fall so low that you can walk through them...can't find earthworms for fishing"
 "...things [should] go by the calendar...have to go on intuition more now because you cannot rely on nature due to all the changes taking place"
 "...what we put in the atmosphere is not healthy for the environment and nature in general"
Interesting point made: "...everything works together. Nature as we know it is being lost. It is taken for granted by society. People don't value the land anymore; they trash and waste it. There's a loss of respect for what God has given us."

On observational indicators in nature...

"...thickness of the chest fur of deer...size and thickness of squirrel and bird nests...thickness of pecan shells and greenness of plums...gathering habits of beavers...horse behavior when storms approach...star visibility...moon rings...sun rise color...ants movement"
 "...geese flying south in the morning foretell that cold is getting ready to come"
 "...cattle go into the woods and lay down before bad weather hits"
Interesting point made: "...knowing the moods of things is important...weather can get mixed up and turned around"

What farmers are telling me...

On farming...

The (increased) **variation** and (decreased) **reliability** of observational signs over time – "**everything is confused**" – is making it harder to base farming decisions on them
 Yet, they **adapt their farming practices**, including use of **no-till methods** for wheat that conserve water and soil and reduce the need for chemicals, and **maintenance of seed varieties** (especially in vegetable gardening) – "**trying to make a difference with no-till** – it produces a clearer runoff"
Interesting point made: they believe **changes have been good**, for example, by allowing for later planting in the fall of over-winter crops like wheat because of the perception that freezes are occurring later

On what the farmers know...

They feel what they know could contribute to the **discourse and practice regarding climate change adaptation**
 What they know is **common-sense everyday knowledge** about things they "**just know**" from being **rooted to the land** in deeply sustainable and spiritual ways, and that **we should pay attention to them**
Interesting point made: "...it is important to take a stance to preserve our knowledge for the children – they need to know **'this is what used to happen'**..."

Local and Traditional knowledge are important to consider

Native America Calling – The National Electronic Talking Circle
 Thursday, December 18, 2008 – "**The Moon, the Stars and Sun**"

"Native communities have always looked to the skies above when determining the best time for ceremony, planting and harvesting. The close connection to the vastness of the skies is still present in many indigenous communities. From remembering the names given to constellations by our Native ancestors to studying astronomy, Natives are still reading the skies to plot their course and find their futures. What is the significance of the moon, sun and stars in your tribal culture?"

Exploring all ways of knowing – not just recent advances in weather and climate science but also on-the-ground observations of, experiences in, and adaptations to nature **may prove useful for better conceptualizing, recognizing and understanding** shifting environmental conditions

Observational signs in nature and everyday experiences with nature are contextualized within **worldviews** that promote particular (more sustainable?) ways of being in the world

"Traditional knowledge is worth knowing as a comparison to what is going on now – **changes that could happen**"... "we could save future generations by paying more attention to nature"

Kiowa Storm Spirit. M. Scott Momaday, The Way to Rainy Mountain (1969)
 "The Kiowa language is hard to understand, but, you know, the storm spirit understands it. This is how it was: Long ago the Kiowas decided to make a horse; they decided to make it out of clay, and so they began to shape the clay with their hands. Well, the horse began to be. But it was a terrible, terrible thing. It began to writhe, slowly at first, then faster and faster until there was a great commotion everywhere. The wind grew up and carried everything away; great trees were uprooted, and even the buffalo were thrown up into the sky. The Kiowas were afraid of that awful thing, and they went running about, talking to it. And at last it was calm. Even now, when they see the storm clouds gathering, the Kiowas know what it is: that a strange wild animal roams on the sky. It has the head of a horse and the tail of a great fish. Lightning comes from its mouth, and the tail, whipping and thrashing on the air, makes the high, hot wind of the tornado. But they speak to it, saying 'Pass over me.' They are not afraid of *Me-ke-je*, for it understands their language."

