INTEGRATING
METEOROLOGY
&
ANTHROPOLOGY

Overview and Examples
Julie Brugger & Jen Spinney

WAS*IS 2010 Summer Workshop
Monday, August 9
What is Anthropology?

The study of what it means to be human

Archaeology

Physical -and- Biological Anthropology

Linguistic Anthropology
A READER
Second Edition
Edited by Alessandro Duranti

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What is Anthropology? cont’d

Socio-cultural Anthropology
Anthropological Perspective

Study Changes Over Time
-Culture-

- Learned
- Shared
- Adaptive
- Symbolic
Methods
-Participant Observation-

Dice Games Canada Day

Community Feast
Pangnirtung, Nunavut
SOME CRITIQUES OF ANTHROPOLOGY

- Colonialism
- Objectivity versus subjectivity
- Power differences

What anthropologists have done about it

- Reflexivity
- Ethics
- Writing
Public Land and the American Democratic Imaginary:

A Case Study of Conflict over the Management of
Why GSENM?

- Created by Presidential Proclamation on September 18, 1996.
- 1.9 million acres: the largest national monument outside Alaska.
- First national monument to be managed by the Bureau of Land Management.
- Ongoing conflict over its management.
Research Goals

1) Gain a better understanding of the conflict over the management of GSENM.
2) Use the conflict as a way to investigate what democracy means to ordinary Americans.

Methodology: how I accomplished these goals

1) Use historical material to:
   a) provide a temporal context for the contemporary conflict;
   b) identify “background conditions” that affect local events in ways people may not be aware of or articulate.

2) “Follow the conflict” over time to analyze the role that ideas about democracy play.

3) In depth research with key participants to gain greater insight into what democracy means to them and how it informs their participation in the conflict.

4) Analyze fieldnotes from these activities and textual analysis of documents.
Physical and Social Landscape
Democratic paradoxes

Local residents – democracy and community

“The fact that I know in this small town that I do have a voice in government, that I can be personally involved in it, and that I personally can make a difference in the community.”

“I’ve noticed a lot more of the people who come here because they just love the area, but one of the first things they want to do is to start making changes.”

Ranchers – democracy and freedom

“It means that I can go where I want, do what I want, become what I want.”

“The BLM just shuts you down.”
Conclusions

What *does* democracy mean to ordinary Americans?

- It means different things to different people in different places and at different times, is always being imagined and enacted under a particular set of circumstances, and is always contested and always changing.

- Its meaning is closely entwined with the Western landscape.

- A paradox: people are practicing and altering democracy as they negotiate the democratic paradoxes they encounter in their daily lives.

- For a political system to be democratic, citizens must continually struggle against state structures that try to limit and control democracy.

- Public land is good for democracy because it motivates people to engage in these struggles.
Project Description

- Goal: to explore the ways in which people in these communities are and have experienced change in the glaciers and the surrounding environs and the concerns they may have about these changes

- Methods: interviews, focus groups, archival work

- Research Sites: North Cascades, Washington State, USA; South Tirol, Italian Alps; Cordillera Blanca, Ancash, Peru

North Cascades residents use this mural of Mt. Baker to represent and create community identity.

This building in the South Tirol - Payerhütte - was built around 1890 to accommodate visitors to the glacier front.

Indigenous villagers in the Cordillera Blanca regularly climb to the glacier front to obtain ice from which they prepare raspadilla (shaved ice).
<table>
<thead>
<tr>
<th>Research Sites</th>
<th>North Cascades Washington, USA</th>
<th>South Tirol Italian Alps</th>
<th>Cordillera Blanca Peruvian Andes</th>
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</thead>
<tbody>
<tr>
<td><strong>Location</strong></td>
<td>![North Cascades Map]</td>
<td>![South Tirol Map]</td>
<td>![Cordillera Blanca Map]</td>
</tr>
<tr>
<td><strong>Age of range</strong></td>
<td>5-7 million years</td>
<td>180 million years</td>
<td>100 million years</td>
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<tr>
<td><strong>Elevation of community</strong></td>
<td>84-267 m</td>
<td>1033-3905 m</td>
<td>3330 m</td>
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<tr>
<td><strong>Ave. annual precip.</strong></td>
<td>200 cm</td>
<td>90 cm</td>
<td>50 cm</td>
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<tr>
<td><strong>Distance to nearest glacier</strong></td>
<td>12 km</td>
<td>8 km</td>
<td>5 km</td>
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<tr>
<td><strong>Source of drinking water</strong></td>
<td>groundwater</td>
<td>groundwater</td>
<td>glacial meltwater</td>
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<tr>
<td><strong>Former livelihoods</strong></td>
<td>mining, forestry, hydropower</td>
<td>irrigated agriculture, animal husbandry</td>
<td>agropastoralism</td>
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<tr>
<td><strong>Current livelihoods</strong></td>
<td>government, tourism, commute to work</td>
<td>small scale tourism, irrigated agriculture, commute to work</td>
<td>agropastoralism</td>
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## Concerns about water

<table>
<thead>
<tr>
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<th>North Cascades</th>
<th>South Tirol</th>
<th>Cordillera Blanca</th>
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<tbody>
<tr>
<td>Drinking water</td>
<td>low</td>
<td>low</td>
<td>high</td>
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<tr>
<td>Agriculture/livestock</td>
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<td>high</td>
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</tr>
<tr>
<td>Landscape aesthetics</td>
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<td>high</td>
<td>low</td>
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<tr>
<td>Hazards</td>
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<td>medium</td>
<td>low</td>
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<tr>
<td>Fish and wildlife</td>
<td>medium</td>
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<tr>
<td>Tourism</td>
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<tr>
<td>Hydropower</td>
<td>low</td>
<td>medium</td>
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<td>Changes in precipitation and/or temperature</td>
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<td>medium</td>
<td>high</td>
</tr>
<tr>
<td>Changing water governance</td>
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<td>medium</td>
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