

## ASSIGNMENT #1 Due Today

**FOCUS:**  
**Cultural Ecology** and "human adaption to extreme conditions."  
**Late penalty assessed: - 5 pts from 100 which equals one letter grade on a +/- scale**

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## Assignment 1: Human Adaption What did you find?

|   |   |
|---|---|
| <p><b>Unique physical areas:</b></p> <ol style="list-style-type: none"> <li>1. <b>High altitude plateau or mountain basin</b> (extreme altitude)</li> <li>2. <b>Hot summer desert area</b> (extreme heat/dryness)</li> <li>3. <b>Middle latitude plains or steppes</b> (seasonal/flat)</li> <li>4. <b>River delta or coastal barrier islands</b> (world of water)</li> <li>5. <b>Steep-sloped area</b> (limited flat land)</li> <li>6. <b>Sub-polar region</b> (extreme cold)</li> <li>7. <b>Tropical rainforest</b> (extreme heat/humidity)</li> </ol> | <p><b>ASSESSMENT/ spatial analysis:</b></p> <ul style="list-style-type: none"> <li>✓ location on earth</li> <li>✓ traditional/historic ethnic geog. of the area</li> <li>✓ cultural identification</li> <li>✓ traditional housing, dress, food</li> <li>✓ accessibility to the outside world and movement within the area</li> <li>✓ governing status</li> <li>✓ economic base/livelihood</li> <li>✓ aspects of acculturation and assimilation over time</li> </ul> |
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# GEOG 247

## Cultural Geography

### Course Introduction V

#### Physical Aspects of Culture

Prof. Anthony Grande  
Hunter College-CUNY

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## Influences on Human Culture: Physical Geography and Cultural Development

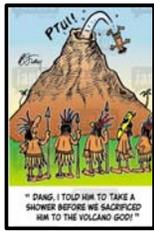
|  |   |
|--|---|
| <ul style="list-style-type: none"> <li>✓ Environmental Determinism</li> <li>✓ Possibilism</li> <li>❖ Many aspects of the natural environment <b>influence</b> the development of cultural traits.</li> </ul> | <p><b>Astronomical Influences</b></p> <ul style="list-style-type: none"> <li>• Celestial dome, Earth-Sun relationships and associated events</li> </ul> <p><b>Atmospheric Influences</b></p> <ul style="list-style-type: none"> <li>• Weather, climate and associated processes/events</li> </ul> <p><b>Geologic Influences</b></p> <ul style="list-style-type: none"> <li>• Landforms, soils, minerals and associated processes/events</li> </ul> <p><b>Water Resources</b></p> <ul style="list-style-type: none"> <li>• Surface/underground supplies and associated processes/events</li> </ul> |
|--|---|

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## Observing and Reacting to Natural Events



"The gods are angry tonight."



"DANG, I TOLD HIM TO TAKE A SHOWER BEFORE WE SACRIFICED HIM TO THE VOLCANO GOD!"

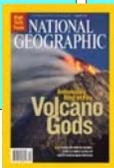


"YOU WERE SUPPOSED TO SACRIFICE A PRINCE... NOT A WISE MAN!"

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## People and Natural Events

|   |  |
|---|--|
| <ul style="list-style-type: none"> <li>• Volcanic eruptions</li> <li>• Lightning</li> <li>• Thunder</li> <li>• Droughts</li> <li>• Earthquakes</li> <li>• Tsunamis</li> <li>• Whirlpools</li> <li>• Sinkholes</li> <li>• Disease</li> </ul> | <ul style="list-style-type: none"> <li>• Assume a force more powerful than us ('the gods') must be angry.</li> <li>• Feel the need to appease 'the gods' for human frailties and wrong-doings.</li> <li>• Do things (as make sacrifices) to please 'the gods' either after the fact or on-going to prevent new occurrences.</li> </ul> |
|---|--|




## People and Natural Events

Yet human response in a “modern” setting is still very much culturally-based especially when considering aspects of **risk assessment, preparedness, response and prevention** to natural hazards and associated events.

There is both governmental and individual person attitudes and responses to these events.

- **Decision making of societies at risk is embedded in culture: ignore; accept; prepare; prevent.**
- **Vulnerability can be replaced with resilience and the feeling that people can control nature: technology.**

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## Influence of Culture on Human Recognition and Response

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## Assessing Responses to Disasters

[http://www.redcross.org.au/files/World\\_Disasters\\_Report\\_2014.pdf](http://www.redcross.org.au/files/World_Disasters_Report_2014.pdf) : This is a 276 page report. Be careful before hitting the print button!

The 2014 report focuses on “culture and risk.”  
The 2016 report focuses on “saving lives for a better future.”

[http://www.ifrc.org/Global/Documents/Secretariat/201610/WDR%202016-FINAL\\_web.pdf](http://www.ifrc.org/Global/Documents/Secretariat/201610/WDR%202016-FINAL_web.pdf)

International Federation of Red Cross and Red Crescent Societies (past reports back to 1993):  
<http://www.ifrc.org/en/publications-and-reports/world-disasters-report/world-disasters-report/>

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## Human Response to Hazardous Natural Processes

Targeted research field between two existing fields

Disaster and Disaster Mitigation  
Civil Engineering, Architecture, Disaster Science, City Planning, Earthquake Engineering, Computer Science

Disaster Mitigation of Cultural Heritage and Historic Cities

Conservation of Cultural Heritage  
Preservation of Cultural Properties  
Art History, History, Conservation & Restoration, Historical Geography, Social Policy Science

**Should we, and if so, how do we preserve cultural heritage?**

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## Astronomical Observations

- ❖ **Astronomy is the oldest of the physical sciences.** Came from people’s curiosity about day and night, the sun, the moon, and the stars. **The ancients saw over 1000 stars at night which moved in permanent groups (constellations) and rotated around a fixed point in the sky (today’s north celestial pole.)**
- ❖ **Ancient astronomers conducted surveys of the positions and motions of stars and planets.** They recorded their data and the data was used to build structures that were aligned with specific astronomical events.

The first known star catalog, containing 800 stars, was created in China in about 350 B.C. by Shih Shen.

**OBSERVATION and RECORDING of natural phenomena is a CULTURAL EXERCISE.**

Chinese star chart from 940 AD

Modern simplified sky chart

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## Aztec Calendar

- ❖ The Aztecs developed a detailed stone solar calendar to let them know when to plant and harvest crops, as well as pray to the gods.
- ❖ All Aztec rituals and sacrifices were governed by this calendar.
- ❖ The 365-day calendar, divided into 18 months of 20 days. Each month is divided into four five-day weeks. (The five leftover days were considered unlucky days!)

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## Hindu System of Astrology

The 27 "Nakshatras" in the Hindu astrologic system (outer ring) are constellations each of which represents 13.3° of the zodiac disc. The inner circle represents the 12 solar months.

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## Astronomical Lore

**MODERN EXPLANATION:**  
The Earth revolves around the Sun.  
**Revolution + Inclination + Parallelism = SEASONS**

All cultures have attempted to explain astronomical events, as the movement of the sun and the moon, solar and lunar eclipses, grouping of stars, alignments and annual events.

Myths and legends came about to explain phenomena that were observed but could not be rationalized at the time.

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## The Solar and Lunar Eclipse

In the Hindu lore the demon Rahu creates eclipses of the sun and moon by periodically swallowing them. They reappear because Rahu has no body!

Most ancient cultures viewed a solar eclipse as some mythical creature devouring the daytime Sun.

The Babylonians believed that a large eclipse was caused by a jaguar attacking the moon, to drive it away they made noise, including beating their dogs to make them howl and bark.

<https://www.almanac.com/content/solar-eclipse-folklore-myths-and-superstitions>

<http://news.nationalgeographic.com/news/2014/04/140413-total-lunar-eclipse-myths-space-culture-science/>

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## ORION Constellation

Orion, The Hunter

Roman warrior

Sacred alignment of Sphinx and pyramids

The Archer (Arabia)

Orion, according to Greek mythology, was the mightiest hunter of all time.

SOUTHEAST EVENING SKY

ORION AS ELVIS

ORION AS THE HOUND DOG

LEPUS AS THE RABBIT

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## Atmospheric Influences Weather and Climate

❖ **WEATHER:** The state of the atmosphere at any one point in time.

- ✓ Weather influences people's daily lives.
- ✓ People can influence local weather by altering the natural landscape, esp. with regard to temperature and moisture.

❖ **CLIMATE:** The average of all weather events at a particular location over a long period of time (50+ yrs).

- ✓ Climate influences people's response to regional conditions; responses become part of their identity.
- ✓ Climates develop and change naturally but can be altered by the works of people.

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## CLIMATE

❖ Factors of both Earth-Sun and Earth Environment influence climate development .

- latitude
- solar energy
- moisture
- wind direction
- topography
- ocean conditions

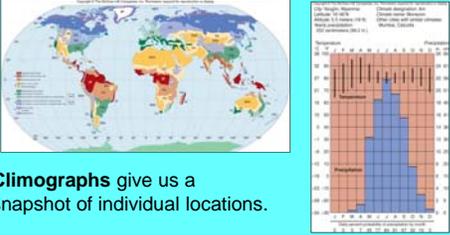
❖ **Climates influence life and culture on earth.**

- soil development, vegetation, biomes
- physical adaptations of animals
- culture traits of people (clothing, architecture, cuisine)
- development of technology (to deal with climate)

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## Incorporating Climate into Cultural Studies

- Climate maps show the geographic distribution of averaged data.



- Climographs give us a snapshot of individual locations.

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## WORLD CLIMATE MAP



Each colored climate region has a unique combination of temperature, precipitation and hours of sunlight.

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## Climate Classification System

**ANCIENT GREEK**



**MODERN**

- Four temperature-based groups:
  - A group: tropical (winterless)
  - C group: subtropical (mild winter)
  - D group: continental (severe winter)
  - E group: polar (summerless; extremely cold)
- One moisture deficiency-based group:
  - B group: arid and semi-arid (evapotranspiration exceeds precipitation)
- One elevation-related group: H group: highlands (vertical zonation of climate along steep slopes)

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## Comparison of World Climates, Soils and Vegetation



CLIMATES



SOILS

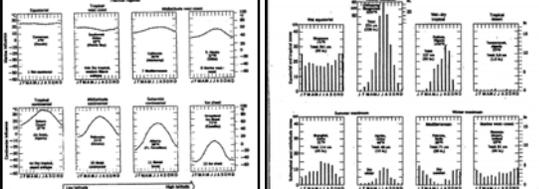
VERY SIMILAR TO EACH OTHER but not exact!



VEGETATION

## CLIMOGRAPHS

Each CLIMATE REGION has distinct patterns of TEMPERATURE and PRECIPITATION



When temperature and precipitation patterns are combined we get a "snapshot" of a location's climate.

<http://www.isu.edu/dept/geography/mhill/webdes/bottom.html>

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## Affect of Climate Change on Indigenous Groups

"The traditional way of life of indigenous peoples has contributed little to climate change, yet they are the most adversely affected by it."

Indigenous Peoples, Lands and Resources

**Gina Cosentino**  
Social Development Specialist Consultant, Africa region, World Bank

Climate change threatens Native Peoples' access to traditional foods and adequate water. Alaskan Native communities are increasingly exposed to health and livelihood hazards related to rising temperatures and declining sea ice. Climate change impacts are forcing relocation of some Native communities.

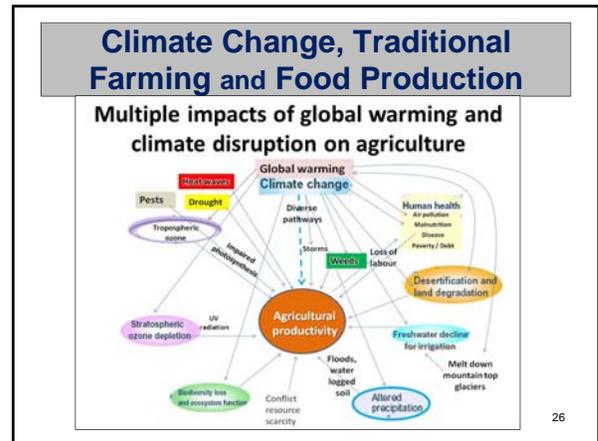
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## Climate Change and Culture

❖ Because of their close relationship to the physical environment, **indigenous groups will be the first to experience noticeable change in their habitat.**

- Temperature affects plant species and their growth rates.
- Plant species create wild life habitat.
- Change in precipitation patterns alters water supply.
- Biomes change.
- Traditions/livelihood of people change.

UN Permanent Forum on Indigenous Issues  
[http://www.un.org/en/events/indigenousday/pdf/Backgrounder\\_ClimateChange\\_FINAL.pdf](http://www.un.org/en/events/indigenousday/pdf/Backgrounder_ClimateChange_FINAL.pdf)



# NEXT

## GEOLOGIC INFLUENCES

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