

Chaco astronomies

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Great Chaco region

Is located in central South America.

Partially covers the south of Bolivia, Paraguay, and northwest Argentina.

Inhabited by various aboriginal groups and a complex non-aboriginal population

We work in the Argentinean Chaco

Argentinean Chaco before the arrival of the Europeans



•They form part of complex networks of pacific and violent interchange

•Most of the aboriginal groups were hunters and gatherers. Others were horticulture societies.

•The three most prominent linguistic groups were and still are the Guaycurú, Mataco-Mataguayo, and Guaraní.

Complex interchange of astronomical representations and practices

Colonial times

- Relative independence
- Many types of exchanges with the Creole and European population (from trade to military conflicts)
- Jesuit's missions
- Europeans → redefinition of social groups' forms, boundaries and names



Complex interchange
of astronomical
representations and
practices



Distribution of “Indian nations” in the Argentinean Chaco (XVIII century) as they are defined by colonial authorities.

The time of Nation:



- National-state occupation of the Chaco region

- Sedentarization process

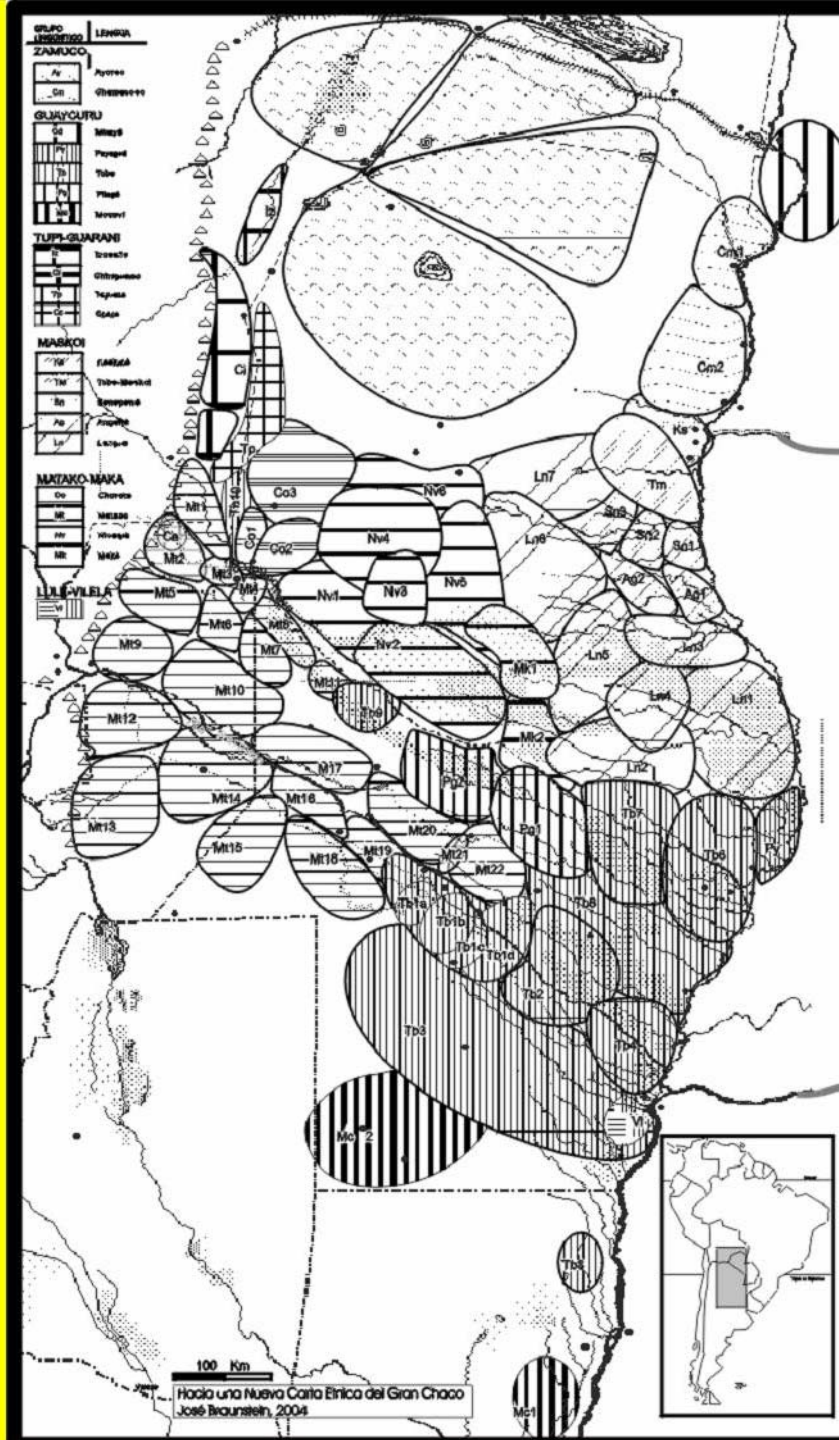
- Forced transformation of aboriginal people into rural laborers

- New Christian missions

- Central and East European immigration

Complex interchange of astronomical representations and practices

Distribution of socio-political aboriginal units in the Argentinean Chaco at the time of the forced sedentarization process



Present Chaco situation:

- **Aboriginal people population: around 133,000**
- **European immigration community: around 1.000.000**
- **Total population: around 3.500.000**

- **Marginalization of aboriginal population**
- **Formal education system with very little attention to aboriginal knowledge**
- **Presence of Evangelical denominations**
- **Astronomical representations from the Mass-media**
- **Legal and burocratic Western practices**

All these issues are the context of present day astronomical representations and practices in the Argentinean Chaco





Biblical studies

Cult practices that express aboriginal forms of Christianity



Use of new technologies to approach their own past



Intercultural education initiatives



Political mobilizations in national context

Some methodological keys to ethnoastronomical studies:

- **Societies are not units isolated and clearly defined.** They are, in general, part of complex networks.
- **Group identity is the result of a contrast with others.** It is not simply defined by a list of group's characteristics but by the opposition to other groups' characteristics.
- **Societies are dynamic and systems in instable equilibrium**
- **Representations and practices about the sky are relevant to political power.** They are related to the proposed nature and meaning of the world and for this reason with the legitimation of social order.

•Non-hierarchical societies have a broad spectrum of explicit astronomical systems (based on a similar common sense). Only the presence of specific and centralized social institutions makes possible the existence of an unique astronomical discourse.

•We can identify some general “logics”. These “logics of practice” are the ground of explicit cosmological systems

•Importance of regional studies

•Importance of historical perspective

In the case of aboriginal Chaco astronomies:...

Socio-Cosmos and power: basic logics

- **Cosmos molded by** multiple human and non-human societies
- **Asymmetrical Power Relations** as a key preoccupation
- Relevance of **cosmo-politics**
- The **cosmos phenomena** are not “naturals” or signs of an impersonal cosmic order. They **are gestures that reveal the intentions of social agents**. Importance of the ability to interpret these gestures.
- The **social agents have many physical appearances**. More power implies more body regimes. The **body have permeable boundaries**.
- **Key relevance of the “encounters”** with non-human powerful agents.

Some Key
encounter
spaces:

SKY


DREAMS

SICKNESS

PATHS

FOREST



- 
- **Star brightness** is seen as a manifestation of **power**.
 - **Power** it is related with a **fertilising capacity**
 - The “powerful” beings that shape the Chaco aboriginal cosmos has brightness physical manifestations: “golden horns”, bright” dwellings, lightning or rainbows.
 - The **sky** is a space seen as **extremely powerful**.
 - Cultural relevance of **helical rising and setting** of asterisms linked with increase and decrease of power.
 - **Key role of Pleiades**.

The “riches of the sky”

The Milky Way because their remarkable concentration of brightness

Milky Way as a path and the greater way of communication in the cosmos of Chaco aboriginal groups

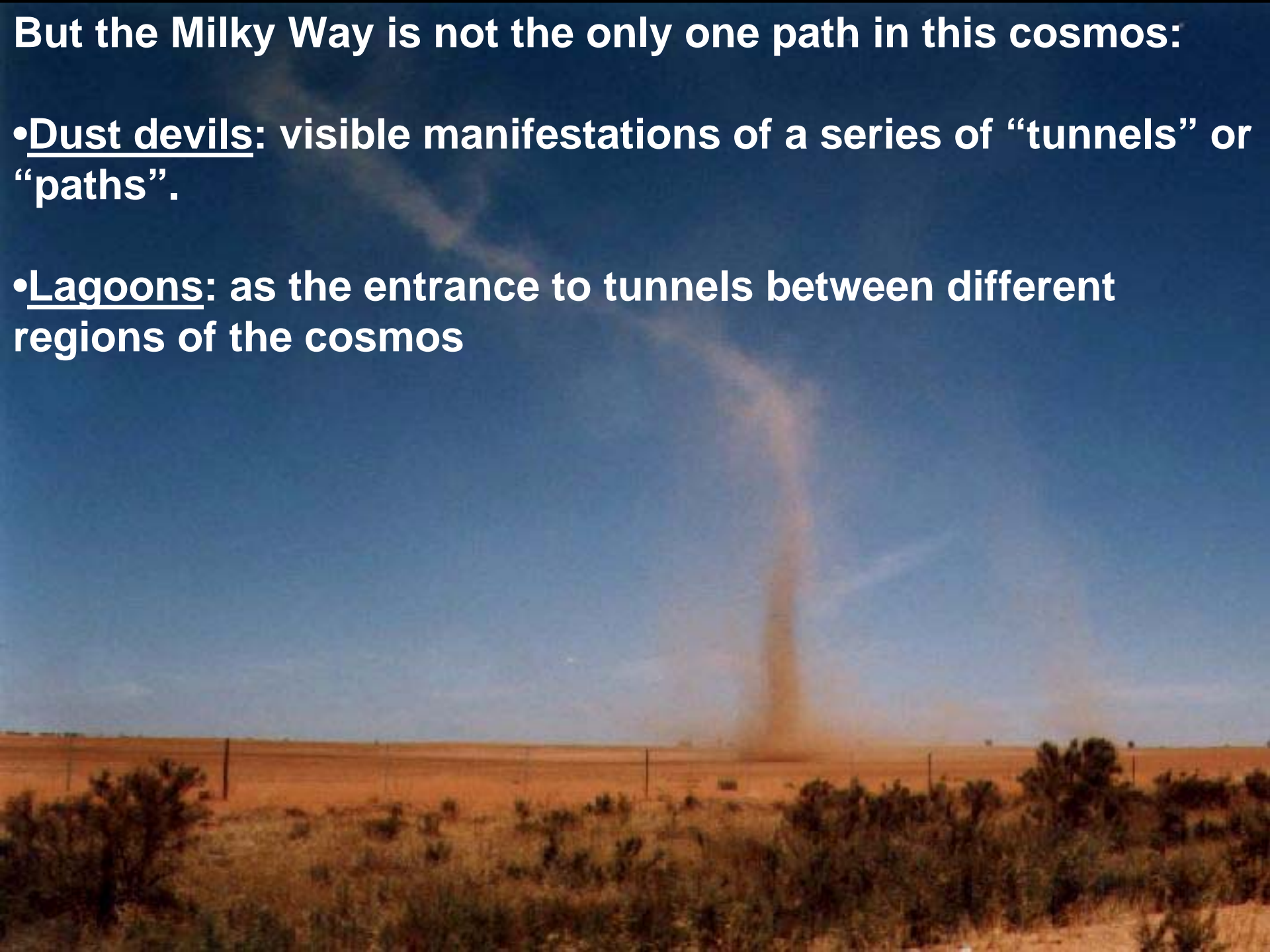


The Milky Way
black Rhea

But the Milky Way is not the only one path in this cosmos:

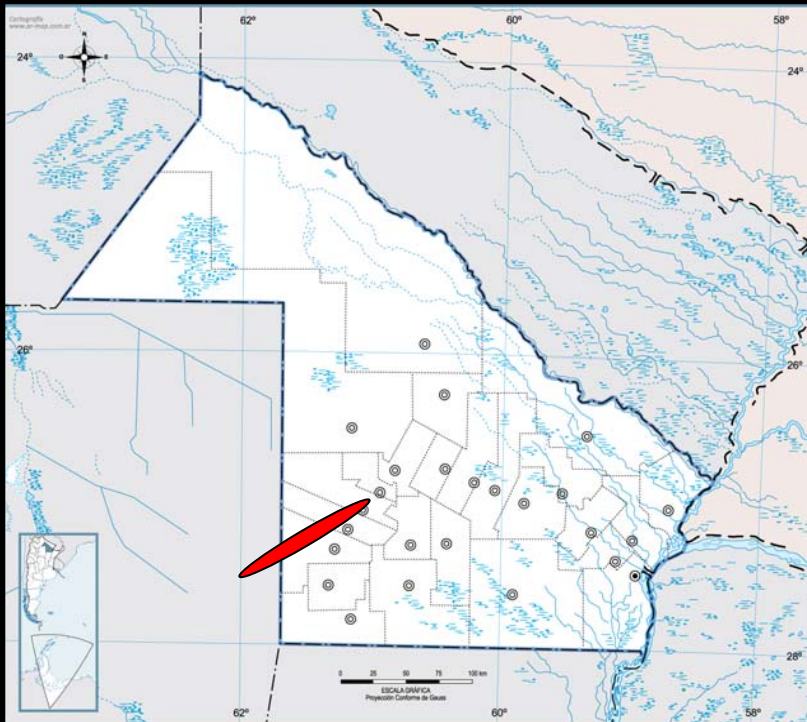
• **Dust devils**: visible manifestations of a series of “tunnels” or “paths”.

• **Lagoons**: as the entrance to tunnels between different regions of the cosmos



“Campo del Cielo” Iron meteorites

- Relevant for aboriginal and non-aboriginal population
- Relevant for scientists, artists and politicians
- Political relevance for almost five centuries



For these reasons, today:

*** The Creole excavations in search for meteorites are seen by the moqoit people as metaphors of white domination**



*** Meteorites as symbols in the struggle for land-rights**

***Ritual performances and right claims**

Importance for the local Creole population:

- Meteorites as signs of divine election of this land
- Catholic cult to an apparition of the Virgin at a lagoon associated with the meteorites
- Since colonial times, these strange metallic objects are thought as possible sources of richness: silver mines, iron mines
- Many local researchers explore the Creole history of these objects



Conflicts because different interpretations of this objects, that acts as material presences of the sky on the Earth



Final remarks

- **Relevance of making links between the ethnoastronomy research and the problems of social sciences.**
- **We need to question our common-sense ideas about societies, identity, isolation of aboriginal groups and power relations and their link with knowledge.**
- **Relevance of ethnoastronomical regional studies with historical depth.**
- **We need to study the “logics of practice” as the ground of explicit astronomical systems.**
- **We need to study western astronomy as a cultural product with the same perspective than non western ones.**
- **Relevance of cultural astronomy to collaborate in conflicts that involve different cultural ideas about the sky**