A qualitative thematic coding of narratives related to honey economies and territorial relations at the agrarian commodity frontier in the Bolivian Chiquitanía

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Introduction

This document is part of the archived data and materials of the Ph.D. dissertation "Economies of honey at the agrarian commodity frontier. How diverse economies emerge from the territorial fractures in the Bolivian Chiquitanía", submitted by Stefan Ortiz-Przychodzka on the 9th of May 2025 at the Leuphana University of Lüneburg, Germany. The thesis was defended on the 21th of July 2025, and rated *magna cum laude*. The oral examination (defense) was held on the 21th of July 2025 and rated *summa cum laude*. The final grade of the doctoral examination was *magna cum laude*. The reviewers' committee included:

- Hon. Prof. Dr. habil. Maraja Riechers, Thünen Institut für Ostseefischerei.
- Prof. Dr. Barbara Muraca, University of Oregon.
- Prof. Dr. David Abson, Leuphana University of Lüneburg.

This document presents a synthesis of the materials and data involved in the elaboration of Chapter 5 of the thesis. While the data set is not available due to the confidentiality of the information it contains, this document describes elements of the data coding process and reflections that led to the final chapter[1].

Key elements for data analysis

- Instrumental relations: include stories of fear, affections, and encounter. Instrumental values are present, but more than that. There is meaningfulness in the instrumentality of these relations of honey economies. Key roles of honey (relational properties), bees (charisma, abilities), and practices/roles (e.g., honey collector, a central character of stories).
- The relations are mainly means to an end, but still deeply meaningful and seemingly hard to replace. This is an expression of strong relationality in instrumental relations (blend with relational values).
- Perhaps relational values (RV) are more linked to honey, co-occurring with instrumental values (IV). But, through honey, relational values also seem to be linked to bees.
- RV (human-human) and with landscapes through honey (e.g., care) and bees' pollination (flowers), and *meleo* (honey collection and harvesting) as a practice made with others (collective, not only individual).
- *Meleo*: a practice involving RV and IV. E.g., the value of working hard, not being "lazy".
- Spatial relations: experiences and stories of encounter told – or referring to different places in the community (or beyond). These can be mapped.

[1] Chapter 5 corresponds to paper 4, submitted to People and Nature: Ortiz-Przychodzka, S, Hanspach, J (under review, April 2025). Honey economies weave meaningful instrumental relations in Bolivia's Chiquitanía.

- Materials: many materials and instruments (e.g., fire, smoke, chainsaws, axes, protective equipment…). Chainsaws are not necessarily synonym of utilitarian values or extractivism.
- Honey economies (human-bees-honey) are a web of relations (assemblage/synchronizations) that connect people to forests and trees in *chacos* (especially in San Juan), and activate the acknowledgment/noticing of how agricultural practices affect non-human lives (especially in Cordillera). What makes honey economies different from other economies like hunting or logging? It seems like more people has some direct experience with honey, or using it (consumption, medicine, sweetener), or collecting/harvesting it (directly or with parents/past stories). Not everyone has gone logging or hunting. Perhaps medicinal plants represent another economy with similar characteristics.
- Meaningful instrumental relations: in the "fighting" between people and bees, there is some notion of meaningfulness.
- Value-assemblages and place-relations. Combinations/overlaps of values show different types of meaningful instrumental relations constituting honey-economies.
- The more we look at the intimacies and details of human-bees relations, the more values blend and are hard to distinguish.

Key emerging topics:

- Water as a central element connecting people-bees-forests-landscapes.
- Key assemblages including: trees, plants, flowers.
- Honey's characteristics/properties: "empalagosa", "agria", "ácida", "gruesa", "dulce", "espesa", "suave", "amarga", "caliente", "fresca", "aseada", "linda", "seca". Few times also mentioned the "reborá". All these have different meanings and reflect different types of relations.
- Bees' behavior, capacities, charisma (mainly in the codes "trajectories", "agencies", "affections"): "mala", "floja", "brava", "trabajadora", "saben", "mansa", "inteligente". Also reference to bees' life trajectories, changes during day/night and according to weather.
- Abundance and quality, especially in forests. But this abundance is sometimes seen in general terms in the territory of the community, sometimes at the scale of a place of encounter, possibility of extinction.
- Movement and change (both of bees and people): dynamism of places.
- Death (of bees and people – and of places sometimes – e.g., "desierto").
- Fear, pain, are common feelings or emotions.
- Beyond humans and bees, other overlapping trajectories.
- Senses: observation, noticing, contemplation, sounds (e.g., buzzing).
- Embodied experiences.
- Idea of bees being beneficial through honey, but at the same time being harmful due to their fighting to protect their honey.

To code and build the cartographies:

1) Identify spatial information by crossing:
    - GPS points (from walking interviews and soundscapes)
    - Soundscapes
    - Participatory cartographies and stories of encounter (interviews specific places)
2) Map all available spatial information:
    - Stories of encounter (inside the community's territory): *remembered* and current; and key aspects of those stories (e.g., affections, trajectories/practices, type of encounter).
    - Soundscapes

- Participatory mapping
    - of the territory (general land cover and perceived abundance of bees)
    - specific (key spatial referents, e.g., water sources, roads, forests/patches)

3) Identify key stories of encounters to highlight in the map (ideally linked to meaningful relations presented in the results or in the synthesis table)
4) Identify key aspects to interpret and analyze from the maps.

Ideas for categorizing (drawing on (Deplazes-Zemp & Chapman, 2021)):

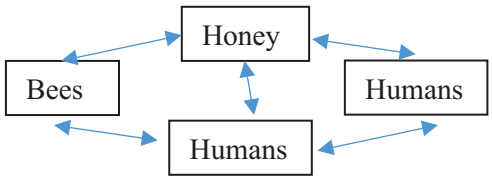
- How <u>values</u> reveal place-relations:
    - Intrinsic values: A → B
    - Instrumental values (replaceable): A ← B (merely instrumental = replaceable)
    - Instrumental values (non-replaceable): A ←← B (meaningful, relational element).
    - Instrumental values (indirect): A ← B(c) through C (e.g. honey).
    - Relational values (direct): A ← → B (with intrinsic and instrumental elements).
    - Relational values (indirect): A ← → B(c) through C (triangular relation).

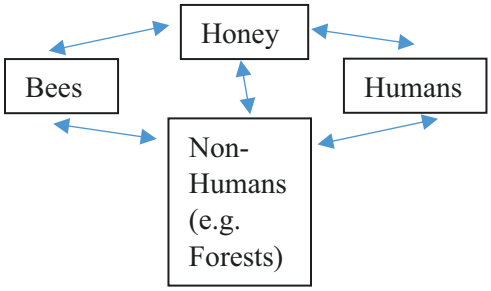
- <u>Place-relations</u> (drawing on (Ortiz-Przychodzka et al., 2023)) :
    - Places (bees/honey) → Economies (people's practices and values)
    - Economies (people) → Places (bees/honey)
    - Places (bees/honey) ←→ Places (non-humans)
    - Places (bees/honey) ←→ Places (non-humans) through C (Economies)

  + types of relations can include beneficial or non-beneficial, harming.
  + set in territorial spaces where instrumental relations (economies) take place: forests, croplands (*chacos*), and villages.

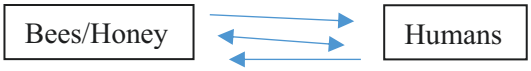
Theorizing meaningful relations of diverse economies through value assemblages

I – Bees have a value in themselves that is independent from humans' interests or valuing of their relation (e.g. "floja", "trabajadora"). However, because of the relation of humans to honey (through honey), they the relation to bees has an (indirect) instrumental value. But the relation to bees is in principle not central to the valuation.

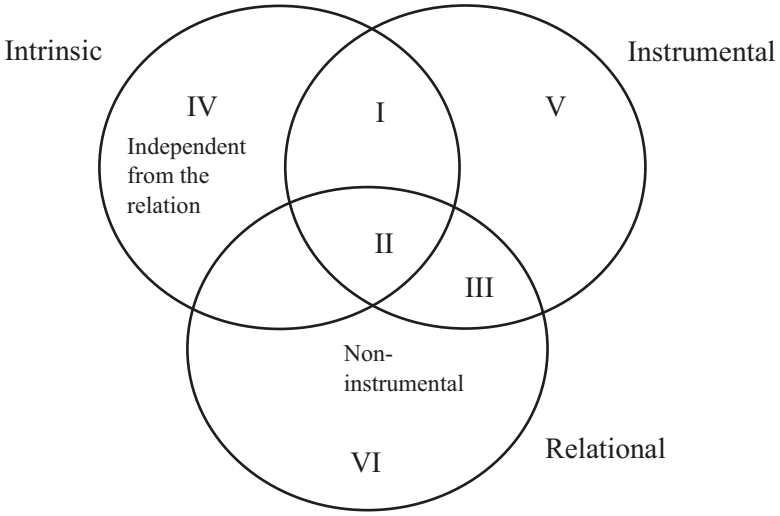




II – All values blend/overlap: RV have intrinsic and instrumental elements.



III – Irreplaceable instrumental relations.



I, II and III, are the spaces of diverse economies, representing meaningful instrumental relations that are shaped by values and agencies (place-relations).

References

Deplazes-Zemp, A., & Chapman, M. (2021). The ABCs of Relational Values: Environmental Values That Include Aspects of Both Intrinsic and Instrumental Valuing. *Environmental Values*, *30*(6), 669–693. https://doi.org/10.3197/096327120X15973379803726

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