

THE CONTRADICTIONS OF INTERNATIONAL COLLABORATION

Managing Irrelevance in Energy Research from the Global South

Fabício Neves

University of Brasília, Department of Sociology, Brazil | [\[email protected\]](#)

RESEARCH CONTEXT

The Central Paradox

International scientific cooperation opens genuine opportunities for advancement and recognition, yet contains structural inclinations toward imbalances.

Key Question

How do researchers in "peripheral" contexts navigate tensions between national and international objectives in energy research collaboration?

RESEARCH SITES

CENPES

Petrobras, Brazil

- 281 publications (Web of Science)
- 71 international collaborations
- 95% in English
- Top partners: USA, UK, France

Y-TEC

YPF, Argentina

- 10 publications since 2014
- 100% international collaboration
- All in English
- Top partners: Norway, USA

Methodology

- **Qualitative approach:** Semi-structured interviews with research leaders
- **Field visits** to CENPES facilities
- **Content analysis** using QSR/N-VIVO
- **Bibliometric analysis** (Web of Science)

THEORETICAL FRAMEWORK

The "Regime of Management of Irrelevance"

(Neves, 2022)

This regime operates through:

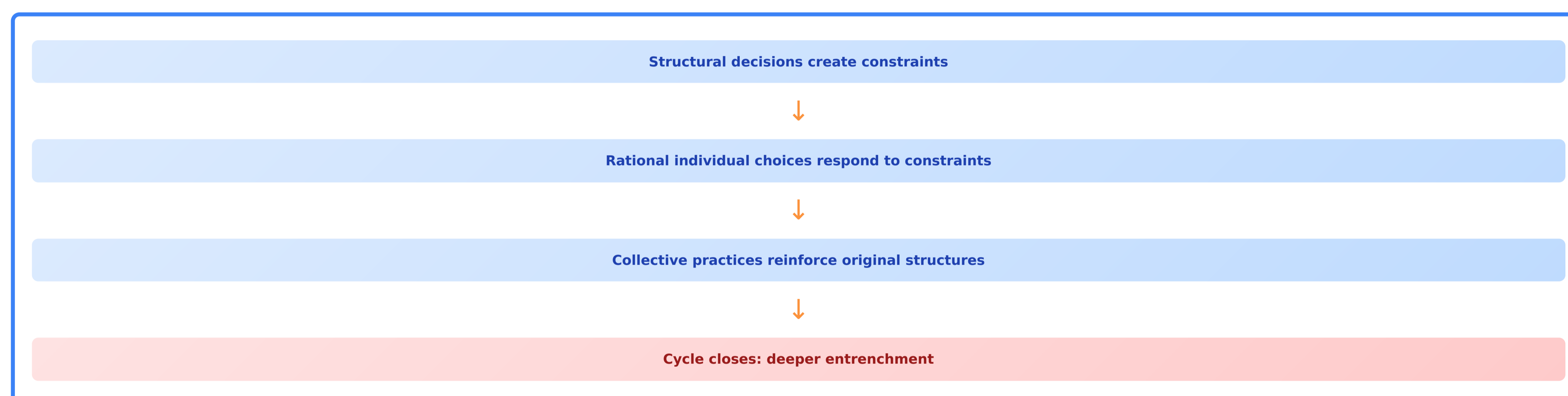
- Internalization of perceptions of inferiority
- Differential access to high-impact journals
- Institutional evaluation practices
- Preferential publication in English-language international journals

Critical Insight

These are not merely subjective perceptions but **real structural constraints** that shape research choices, publication strategies, and conceptions of scientific relevance.

FINDING 1: THE REINFORCEMENT CYCLE

Structure ↔ Agency Feedback Loop



Example: When CONICET/CAPEX prioritize Q1 international publications, researchers rationally seek foreign collaborations, which reinforces the perceived irrelevance of national journals.

FINDING 2: VARIED STRATEGIES

Researchers are not passive victims. They develop:

✓ Technical Object Selection

Choosing research objects that facilitate internationalization (mathematical models, universal processes)

✓ Strategic Analogies

Preserving local relevance while connecting to global interests

✓ Deliberate Prioritization

Consciously choosing national agendas despite lower international circulation

FINDING 3: GENUINE TENSIONS

National vs. International

- Sovereignty concerns in strategic sectors (oil & gas, lithium)
- Technology transfer and intellectual property issues
- **"Who benefits?"** remains an unresolved question

"There are geopolitical interests that discourage local industry growth because what they really want is to receive the inputs, because value is added elsewhere."

— Roberto Salvarezza (Y-TEC, former Minister of Science)

"When you arrive, you always feel behind. But it's more of a mental thing..."

— Alexandre (CENPES)

THE TECHNICAL vs. LOCALIZED DIVIDE

Two Research Trajectories with Different Internationalization Paths:

Technical Objects

- ✓ Apparent universality
- ✓ Mathematical language
- ✓ Easy internationalization
- ✓ High editorial receptivity
- ✓ Context-independent

Localized Objects

- Geographic specificity
- Context-dependent data
- Requires "analogies" for relevance
- Perceived as "local interest"
- Lower international recognition

Consequence: Systematic pressure toward decontextualized research for international recognition

CONCLUSIONS & IMPLICATIONS

Cooperation Functions Contradictorily

① Genuine Opportunities

- Access to cutting-edge knowledge
- Advanced training
- Infrastructure access
- International recognition

② Structural Inclinations

- Toward imbalances
- Knowledge extraction
- Agenda subordination
- Dependency reinforcement

The relative weight varies according to contexts, research objects, and individual/institutional choices.

Policy Implications

- ♦ Recognition that asymmetries are **not inevitable**
- ♦ Need for institutional experimentation with **alternative partnership forms**
- ♦ Importance of **robust national innovation systems** as foundation for equitable cooperation
- ♦ Critical evaluation of metrics that exclusively privilege international publication

Key References

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