

IGRI Panels at WOW7

The grammar of rules-in-use

A protocol for collecting, coding, and analyzing rules from qualitative data with the institutional grammar

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IGRI Working Groups

The importance of studying rules-in-use

- **Rules-in-use** (*de facto*):

Actual practices, customs, and behaviors in human interactions and their interactions with the environment.

- Rules-in-use can be **written and unwritten**
- Rules-in-use can often **differ from the rules-in-form**
- Qualitative methods (transcripts of interviews, focus groups, etc.)

**Crucial to understand
how rules are actually
put into practice**

Differences between the grammar of formal and informal institutions

- Few attempts to codify rules-in-use with the IG



The Policy Studies Journal, Vol. 44, No. S1, 2016

**People Don't Talk in Institutional Statements:
A Methodological Case Study of the Institutional
Analysis and Development Framework**

Cristy Watkins and Lynne M. Westphal



International Review of Public Policy

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Special Issue

Evolution and diversity of institutions: Using institutional grammar to analyze governance changes in traditional crop-livestock systems

Irene Pérez-Ibarra, Alicia Tenza-Peral, Diego Soler-Navarro, Diego Arahuetes-de la Iglesia and Carmen Garate-Marín

Differences between the grammar of formal and informal institutions

Challenges

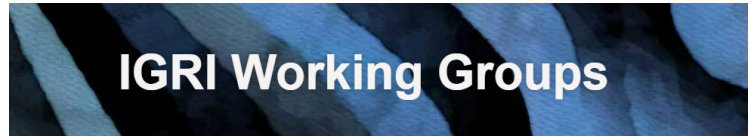
- Identify institutional statements from transcripts
- Distinguish between individual and collective behaviors
- Imply grammatical elements
- Multiple and disjointed responses
- Language translations
- Protocols to code transcripts with the IG are not available

Strength

- Formal and informal rules
- Rewards and sanctions
- Reasons behind rules
- Change over time

A protocol to study rules-in-use with the IG

- Gap



- A guide for future comparisons of cases
- Contents:
 - I. Data collection
 - II. Apply the Institutional Grammar 2.0
 - III. Interviewee inconsistency at the individual and group level
 - IV. Intercoder reliability from interviews

Data collection

1. Design your own interview guide
2. Use third party transcripts

Data collection

Design your own interview guide

1. Maximize the number of institutional statement

- **Goal of our research:** design principles, rule typology, or one or more components of the IG

Design principles (Ostrom 1990, Cox et al. 2010)	Types of rules (Ostrom and Crawford 2005)
CLEARLY DEFINED BOUNDARIES FOR USERS: Who can be a farmer in this area? What are their requirements?	POSITION: What are the roles of the members of this community? BOUNDARY: What characteristics can/cannot or must/must not a person have in order to have each of these roles?
57 institutional statements from 32 excerpts (178%)	70 institutional statements from 59 excerpts (119%)

Data collection

Design your own interview guide

1. Maximize the number of institutional statement:

- **Goal of our research:** design principles, design principles, or one or more components of the IG
- Clearly distinguish between **individual and collective behaviors**:
 - By asking about the reason behind a behavior or doing more than one interview:
 - a) **Individual behaviors** (based on internal motivations)
 - b) **Collective behaviors**:
 - Internal motivations (e.g., personal emotions, economic incentives, etc.)
 - External motivations (e.g., social emotions, status, to fit in a community, etc.)
 - Formal rules (collective)

Data collection

Design your own interview guide

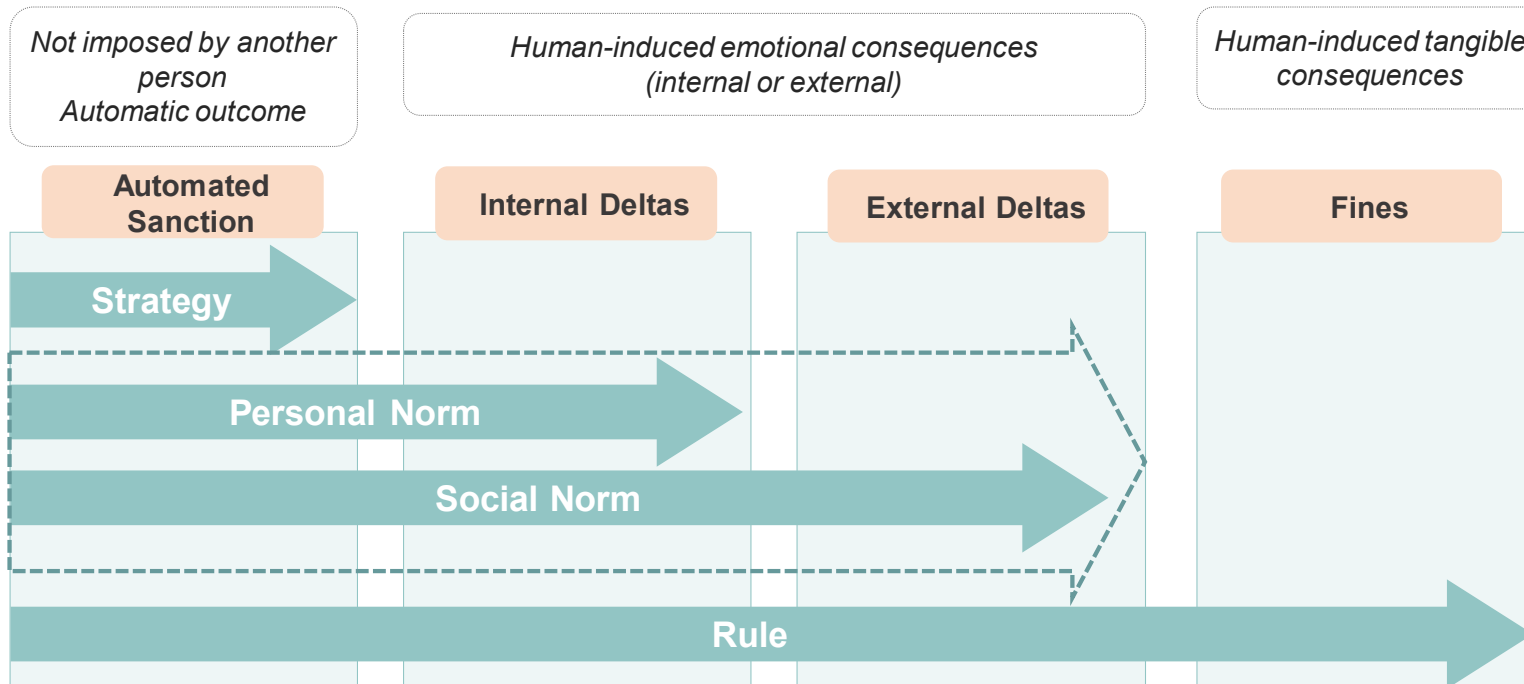
1. Maximize the number of institutional statement
2. Maximize the diversity of institutional statements collected
 - By using more than one transcript

Rules	Interview 1	Interview 2
Aggregation	0	2
Boundary	8	15
Choice	35	27
Information	0	7
Payoff	12	8
Position	1	8
Scope	1	1

Data collection

Design your own interview guide

1. Maximize the number of institutional statement
2. Maximize the diversity of institutional statements collected
3. Study the continuum between rules, norms, and strategies



Data collection

Design your own interview guide

1. Maximize the number of institutional statement
2. Maximize the diversity of institutional statements collected
3. Study the continuum between rules, norms, and strategies
4. Maximize the number of grammatical components collected
 - Ask for the grammatical components
 - Attribute: *Who specifically?*
 - Context: *Under what conditions and restrictions (where? how? when?)*
 - Deontic: *Should(not), may(not), will(not), must(not), shall(not)*
 - Or else: *What are the consequences of (in)compliance with these rules?*
 - Support your questions with cards or images
 - Train interviewers with the IG

Data collection

Use third party transcripts



THE HISTORIC NEW ORLEANS COLLECTION

ORAL HISTORY PROGRAM

<https://www.hnoc.org/research/oral-history>

Data collection

Use third party transcripts

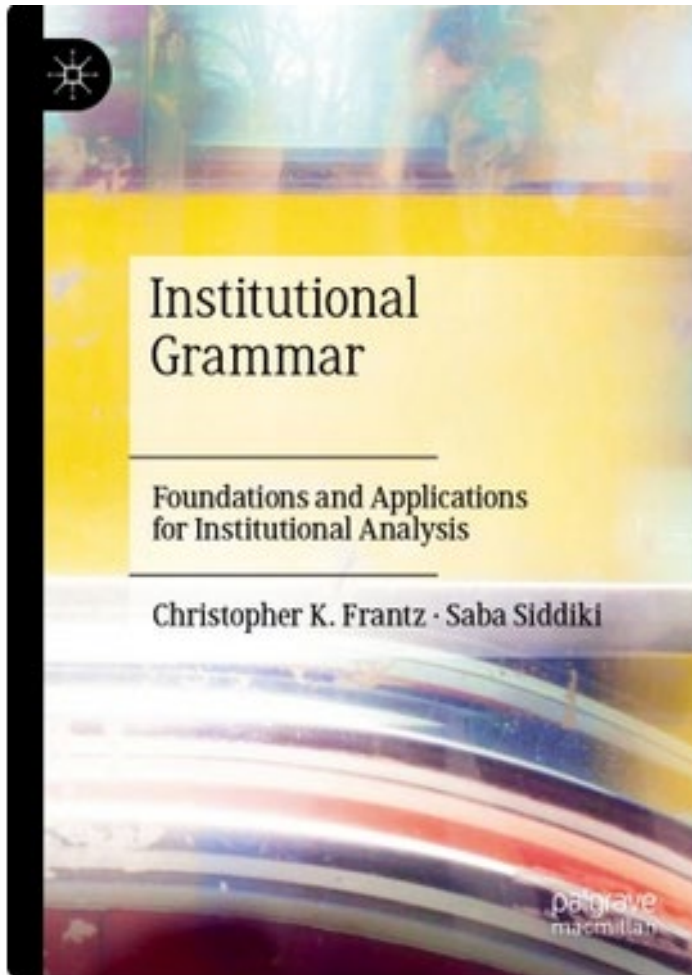
- **Strength:**

- Variety of sources: speech, official statements, hearings, testimony, court documents, etc.
- Reduce resources needed
- No IRB if publically available - facilitates cooperation for group coding and intercoder reliability testing

- **Weakness:**

- Dependence with the original research design and questions
- Gaps of information (institutional statements and components)
- The motivations behind institutional statements are unknown

Apply the Institutional Grammar 2.0

The image is a screenshot of the Institutional Grammar Research Initiative website. The top navigation bar is dark blue with white text for 'Home', 'About', 'Personnel', 'Research', 'Resources', 'Events & Training', and 'Contact'. A search icon is on the right. The main header area has a dark blue background with the text 'Institutional Grammar Coding Guides' in large white font. A breadcrumb trail reads 'Home > Resources > Institutional Grammar Coding Guides'. The main content area is light gray and contains the following text:

IG Coding Guides

[Institutional Grammar 2.0 Codebook](#)

(External link)

- This codebook covers fundamental concepts of the Institutional Grammar 2.0 (IG 2.0) and provides coding guidelines for the IG 2.0.

[Institutional Grammar 2.0 Quick Reference Guide](#)

- This quick reference provides an overview of key features of IG 2.0 as detailed in the IG 2.0 Codebook.

<https://institutionalgrammar.org/resources/institutional-grammar-codebook/>

Apply the Institutional Grammar 2.0

1. Identify institutional statements:

An IS must include at least: Attribute/Constituted Entity + Aim/Function + Context
(Activation Condition and Execution Constraint)

- Identify Attribute OR Constituted Entity
- Identify Aim OR Function
- Find the Context

Food traditions during the holiday season

On Christmas Eve, we have ajiaco, tamales, sancocho, or generally any typical Colombian dish. There always has to be desserts, and the typical dessert is natilla.

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- Identify **Attributes OR Constituted Entities**
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- Find the **Context**

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Apply the Institutional Grammar 2.0

1. Identify institutional statements
2. Infer grammatical components if necessary
 - Infer the Deontic if necessary
 - Replace pronouns with the appropriate Attribute or Constituted Entity and place them in brackets.
 - Infer the context if necessary

Deontic	Formal	Definition	Informal
Must	Must, Shall	The statement is mandatory	Need to, Have/has/had to, Required to, Supposed to, Obligated/obliged...
Will	Will	The statement indicates desire, intent, presumption or expectation	Would, Will
Can	May	The statement is permissive	Can, Could, May, Might
Should	Should	The statement is a recommendation	Supposed to

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 - Infer the **Context** if necessary

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Cac(On Christmas Eve), we A([Colombian families]) have ajiaco, tamales, sancocho, or generally any typical Colombian dish. There Cex(always) has to D[must] be desserts, and the E(typical dessert) is natilla.

Apply the Institutional Grammar 2.0

1. Identify institutional statements
2. Infer grammatical components if necessary
3. Rephrase institutional statements
 - Find as many constitutive and regulative statements as possible.

Cac(On Christmas Eve), we A([Colombian families]) have ajiaco, tamales, sancocho, or generally any typical Colombian dish. There Cex[always] has to [must] be desserts, and the E(typical dessert) is natillas.

REGULATIVE STATEMENT	Cac(On Christmas Eve), A,p([Colombian]) A ([families]) D([must]) I(eat) Odir(typical Colombian dishes [AND] typical Colombian dessert)
CONSTITUTIVE STATEMENT	E(Typical Colombian dishes) F(are) P(ajiaco, tamales, [OR] sancocho) E(Typical Colombian dessert) F(is) P(natillas)

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HYBRID STATEMENT	Cex(On Christmas Eve), A(we) D(must) I(eat) Bdir;E(typical Colombian dishes) which F(are) P(ajiaco [OR] tamales [OR] sancocho) [AND] Bdir;E(typical desserts) P(such as natillas)

Apply the Institutional Grammar 2.0

1. Identify institutional statements
2. Infer grammatical components if necessary
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 - Find as many constitutive and regulative statements as possible.

Generally, several families gather, and each family is responsible for bringing something. If someone doesn't bring something, they're received well.

REGULATIVE STATEMENT

A(family) D(shall) I(bring) Bdir(food) Cex(at Christmas dinner)

CONSTITUTIVE STATEMENT

The E(responsibility of the family) M(shall) F(bring food) Cex(at Christmas dinner)

POLYMORPHIC STATEMENT

The E(responsibility) of the A(family) D/M(shall) F(be) P(I(bring) Bdir(food)) Cex(at Christmas dinner)

Apply the Institutional Grammar 2.0

1. **Identify institutional statements**
2. **Infer grammatical components if necessary**
3. **Rephrase institutional statements**
4. **Discard non-institutional statements**
 - Discard opinions or code them as “opinion statement”
 - Distinguish between individual and collective behaviors
 - Code other parts of the transcript that are important to the research question but are not institutional statements as “statement of fact”

Apply the Institutional Grammar 2.0

1. Identify institutional statements
2. Infer grammatical components if necessary
3. Rephrase institutional statements
4. Discard non-institutional statements
5. Find and merge duplicate statements
 - Combine similar statements into a unique statement by adding the grammatical elements mentioned in all similar statements

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At Christmas, we enjoy traditional Colombian desserts such as hojuelas, arroz con leche, buñuelos, and natillas.

E(Typical Colombian dishes) F(are) P(ajiaco, tamales, [OR] sancocho)

E(Typical Colombian desserts) F(are) P(natillas, hojuelas, arroz con leche, [OR] buñuelos)

Interviewee inconsistency at the individual and group level



Interviewee inconsistency at the individual and group level

- Add grammatical components from **complementary responses** among and within interviews

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- Add a weight to **response inconsistencies** among and within interviews

Property	Responses	Consistency among respondents	Response inconsistency	Response weight (R)
Natillas	2 out of 2	1	0	0.5
Hojuelas, arroz con leche, buñuelos	1 out of 2	0.5	0	1

Intercoder reliability from interviews

Calculation of Kappa (κ)

Cohen's Kappa between TWO raters

$$\kappa = \frac{p_o - p_e}{1 - p_e} = 1 - \frac{1 - p_o}{1 - p_e},$$

where:

P_o = the relative observed **agreement** among raters.

P_e = the hypothetical probability of **chance agreement**

Intercoder reliability from interviews

- Calibration
 - IS detected
 - IS classified as regulative vs constitutive
- % of agreement
 - Attributes/Constituted Entities
 - Deontics
 - Aim/Function
 - Cac, Cex
- % of agreement
 - IG Core level
- Reliability (Krippendorff's alpha, Cohen's kappa)
 - IG Core level

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Thank you!



Institutional Grammar
Research Initiative

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