

Cognitive Structure Analysis

Finding the ~~underlying~~ structure of meaning in everyday life/discourse

Culture is...

- Customs, beliefs, institutions, artifacts...
- What one would have to know in order to behave appropriately in any role recognized in a given society.

Investigating Cultural Knowledge

- Cultural knowledge is organized and systematic
- What form do systems of cultural knowledge have?
- Can the study of culture be modeled on the study of language (an important cultural system)?

Studying sounds of language

- What are the distinctive features that distinguish the phonemes of a language one from the other?
- **Phonetic** and **phonemic** distinctions

Phonetic vowel paradigm

	Front	Central	Back
High	i I	ɨ	u U
Mid	e ε	ə	o ɔ
Low	æ	ʌ	a

Narrowing the focus of cognitive anthropology

- How is meaning made in everyday life?
- *Much (perhaps most) of cultural knowledge is encoded in and transmitted via language.*
- How is meaning made in everyday language?
- *Most of language is about things.*
- How is meaning organized in groups of nouns?
- What are the **emic** distinctions that matter in cultural systems?
- Accounting for observed complexity in terms of simpler underlying structure.

English Personal Pronouns

Person/Number	Singular	Plural
First	I	we
Second	you	you
Third	he/she/it	they

Person\Number	Singular	Plural
First	I	we
Second	you	you
Third	he/she/it	they

Trobriand Personal Pronouns

Person\Number	Singular	Dual		Plural	
		incl	excl	incl	excl
First	yegu	yakida	yakama	yakidase	yakamesa
Second	yokwa	yokwami			
Third	ma<pc>na	ma<pc>sina			

Person\Number	Singular	Dual		Plural	
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Term	Example
• Lexeme	• <i>Kin term (Mother)</i>
• Domain	• <i>Kinship</i>
• Denotata	• <i>Kin type (e.g., MoBr)</i>
• Attributes	• <i>Female, nurturing</i>
• Semantic feature	• <i>Female</i>
• Dimension	• <i>Sex</i>

- Lexeme
- Domain
- Denotata
- Attributes
- Semantic feature
- Dimension
- *Kin term (Mother)*
- *Kinship*
- *Kin type (e.g., MoBr)*
- *Female, nurturing*
- *Female*
- *Sex*

Chiricahua Apache Warriors



Chiricahua Apache Kinterms

Key for Chiricahua kin terms

A cinálé	E citàà	F cidèèdèè'	K cìkìs
B cìt'cìné	H cìmáá'	I cìʔóʔé	L cìlá'
C cìtsóyé	M cìʔè'		
D cìtécó	N cìyát'cé'		

“c” is pronounced like the “sh” in “shell”
˘ represents a low tone
˙ represents a high tone
ʔ is a voiced velar fricative

Figure 2.1 Chiricahua kinship terms

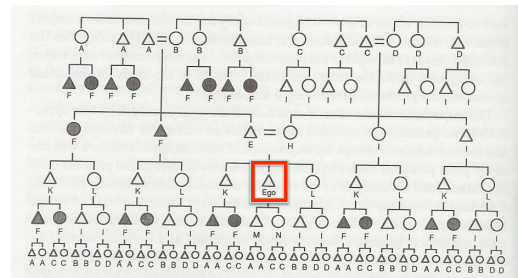
Key for Chiricahua kin terms

A cinalé	E citáa	F cideèdèè	K cìkis
B cit'ciné	H cinnáa'	I cìwéwé	L cìlà'
C citsóyé	M cìwé'		
D citco	N ciyát'cé'		

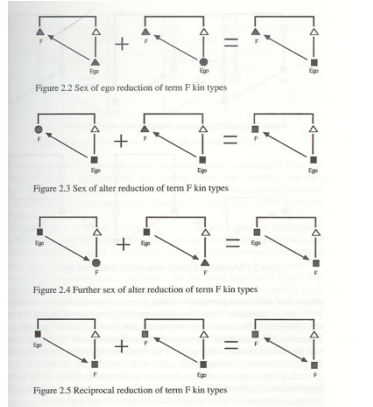
"c" is pronounced like the "sh" in "shell"
' represents a low tone
` represents a high tone
w is a voiced velar fricative

Figure 2.1 Chiricahua kinship terms

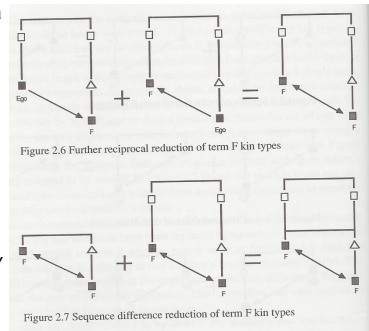
Cideedeey'



Reducing the kin-types to relational features



Cideedee denotes a consanguineal relative of my parent's generation who is on my father's side of the family, or for the reciprocal relationship a consanguineal relative who is the child of a man of my generation.



Cideedee'

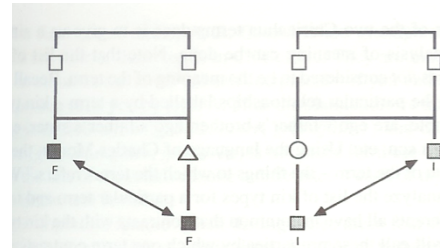
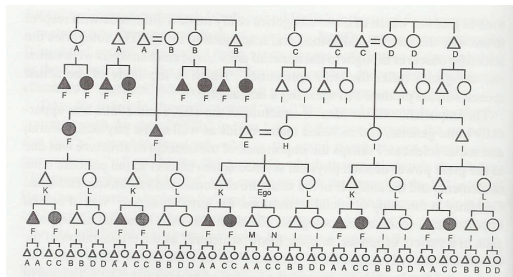
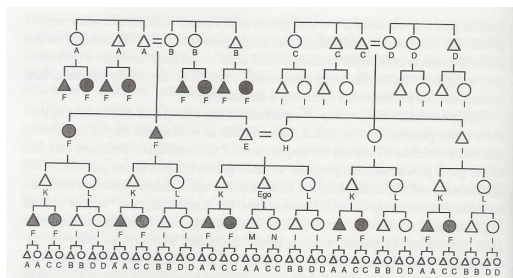


Figure 2.8 Reduced expressions for Chiricahua terms F and I

Cideedee'

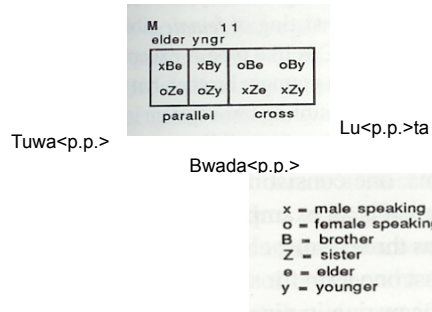


English Sibling Terms

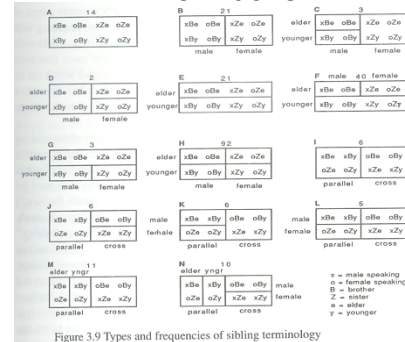
B		21		y
xBe	oBe	xZe	oZe	
xBy	oBy	xZy	oZy	
male		female		
Brother		Sister		

x = male speaking
 o = female speaking
 B = brother
 Z = sister
 e = elder
 y = younger

Trobriand Sibling Terms



Humans Prefer Conjunctive Definitions



Simple Paradigms

	male	female
adult	man	woman
immature	boy	girl
newborn	baby	

Figure 3.1 Paradigmatic structure of English terms for *humans*

	male	female	neuter
adult	stallion	mare	gelding
immature	colt	filly	
newborn	foal		

Figure 3.2 Paradigmatic structure for English terms for *horses*

A simple taxonomy

something to eat				
sandwich		pie		ice-cream bar
hamburger	ham sandwich	apple pie	cherry pie	Eskimo pie

Figure 3.6 Taxonomy for *something to eat* (adapted from Frake 1962)

English Kinship Paradigm

	direct		collateral	
	male	female	male	female
G2	+	grandfather	grandmother	
	-	grandson	granddaughter	
G1	+	father	mother	uncle aunt
	-	son	daughter	nephew niece
G0		brother	sister	cousin

Figure 2.9 Feature analysis of English kin terms

Classical Feature model method

- Collecting the terms that matter in a domain
- Denotational meaning
 - what it takes to distinguish each denoted thing from other denoted things (in a contrast set)
- Connotational meaning – ignore this
 - whatever else is implied
- Distinctive features
 - necessary and sufficient conditions for category membership
- Componential (feature) analysis
 - finding the components of meaning that matter in a domain

English Kinship Paradigm

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Figure 2.9 Feature analysis of English kin terms

Investigating the organization of meaning

- features of meaning
 - pairs of items that share distinctive features will be judged to be more similar than pairs of items that do not share features
- similarity judgments
 - pairs of items that are judged to be similar share distinctive features (even if we do not know what those features are).

Eliciting similarity judgments

- Free association
- Pile sorting
- Triads
- Latent semantic indexing
- Organizing opportunities for co-occurrence
 - Co-occurrence -> similarity -> shared features

Which is most different?

Father Mother Son

Which is most different?

Father Mother Daughter

Which is most different?

Father Son Daughter

Which is most different?

Mother Son Daughter

Which is most different?

- Father Mother Son
- Father Mother Daughter
- Father Son Daughter
- Mother Son Daughter

Table 3.3. All possible triads for the set father, mother, son, daughter

1.	Father	(0)*	Mother	(4)	Son	(6)
2.	Father	(3)	Mother	(0)	Daughter	(7)
3.	Father	(5)	Son	(0)	Daughter	(5)
4.	Mother	(3)	Mother	(7)	Daughter	(0)

*Figures in parentheses indicate the number of times a term was selected as most different in meaning from the other two terms by ten respondents.

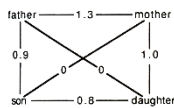


Figure 3.11 Pairings of selected kin terms.
Frequencies represent mean number of times terms were classed together

English Kinship Paradigm

	direct		collateral	
	male	female	male	female
G2	grandfather	grandmother		
	grandson	granddaughter		
G1	father	mother	uncle	aunt
	son	daughter	nephew	niece
G0	brother	sister	cousin	

Figure 2.9 Feature analysis of English kin terms

A 3-D solution to the American kinship paradigm

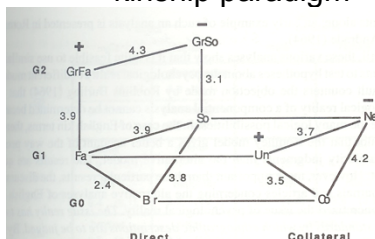


Figure 3.14 Diagrammatic representation of Romney feature analysis of English male kin terms
Connecting lines indicate terms paired together with high frequency. Numbers present mean frequency of pairings

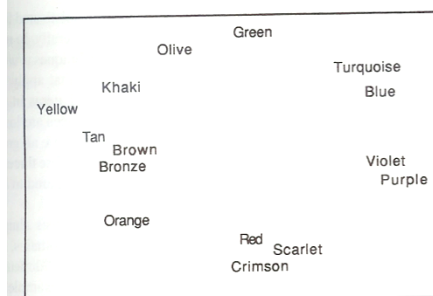
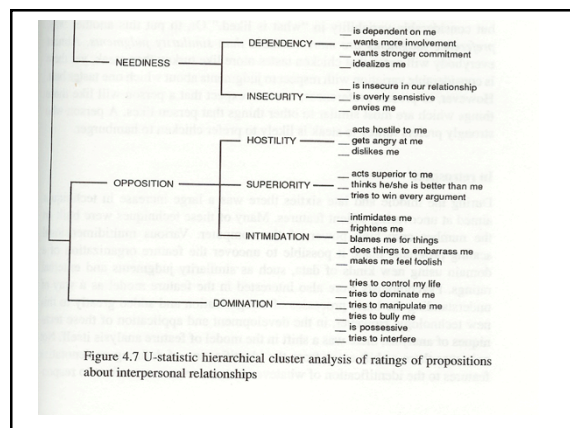
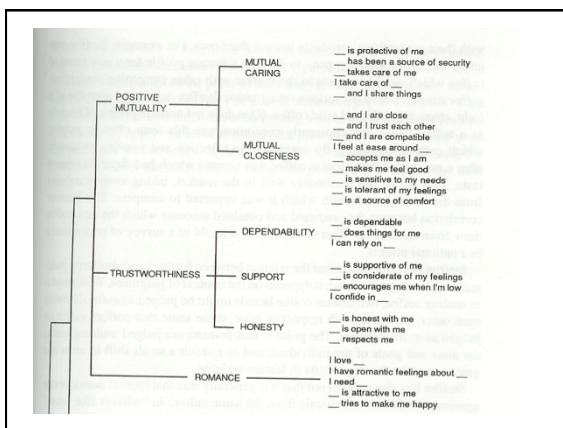
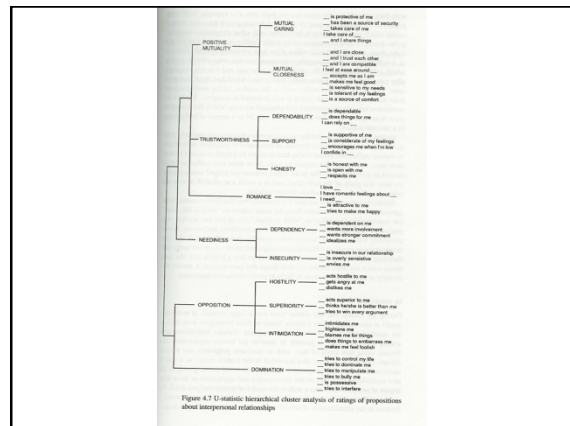
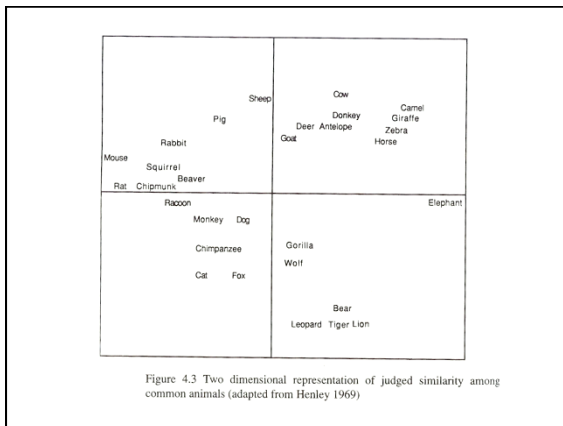


Figure 4.2 Two dimensional KYST representation of color terms (Adapted from Fillenbaum and Rapoport 1971)

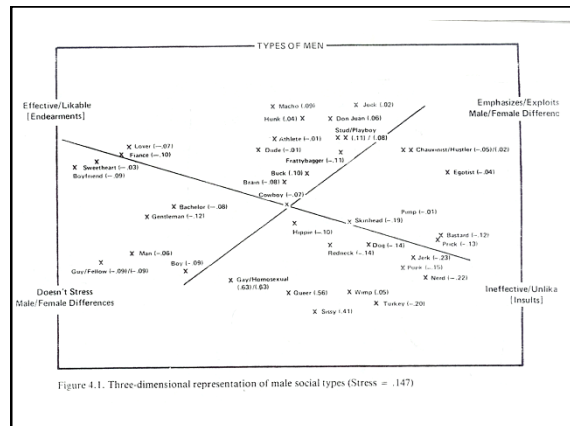
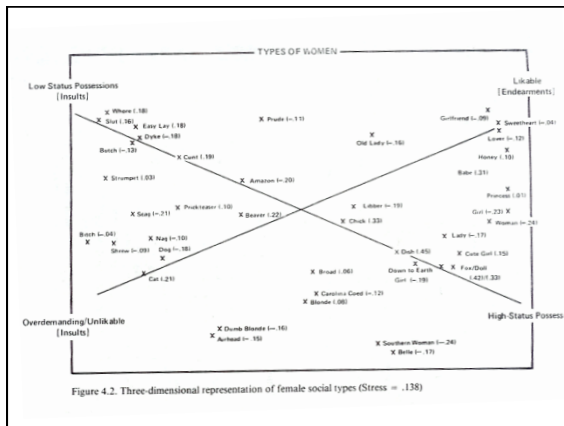


Holland and Skinner Methods

- Interviews (42) to elicit gender types and descriptions of the types
- Sort cards bearing the type names into piles, and describe the similarities in the piles.
 - Piles -> similarity metric -> MDS
 - Identify themes or dimensions
- Participant observation and more interviews
 - talking diary
 - describe a relationship

Holland and Skinner Questions

- What do our informants assume about ordinary relationships between males and females?
- What are the taken for granted worlds in which these male and female types interact?



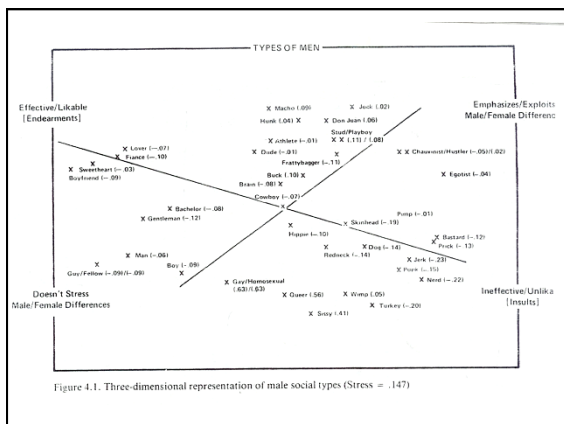
Question

What did Holland and Skinner get out of their analysis of interview data that they could not get out of cognitive structure analysis?

Why is the paper titled "Prestige and Intimacy"?

The women's model

- Man shows affection and attention to the woman's needs
- Man is sensitive to woman's response
- And man is attractive
- Woman returns affection and permits intimacy to develop
- "Treat me right, and we'll see."



The men's model (as seen by the women)

- My woman is hot!
- Let's move this intimacy thing along.
- Give me some space.
- "Hey bro, check out how good I look with her."