Color terms and color categories in Gyeli

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Outline

Colors within the dissertation structure

Option 1

1. Introduction
2. Phonology
3. Nouns
4. Verbs
5. Other word classes
   - color terms
6. TAM
7. Clause types
8. Texts
9. Lexicon

Option 2

1. Introduction
2. Phonology
3. Nouns and noun phrases
   - The noun
   - Elements of the NP
     - color terms
4. Verbs and verb phrases
   - The verb
   - The verb phrase (TAM)
5. Clause types
6. Texts
7. Lexicon

The color term subchapter

Gyeli color terms

1. Structure of color terms
   - traditional color terms (POS on their own?)
   - color term innovations (nouns)
2. Semantics of color categories
3. Color variability among speakers
4. ? Borrowed colors

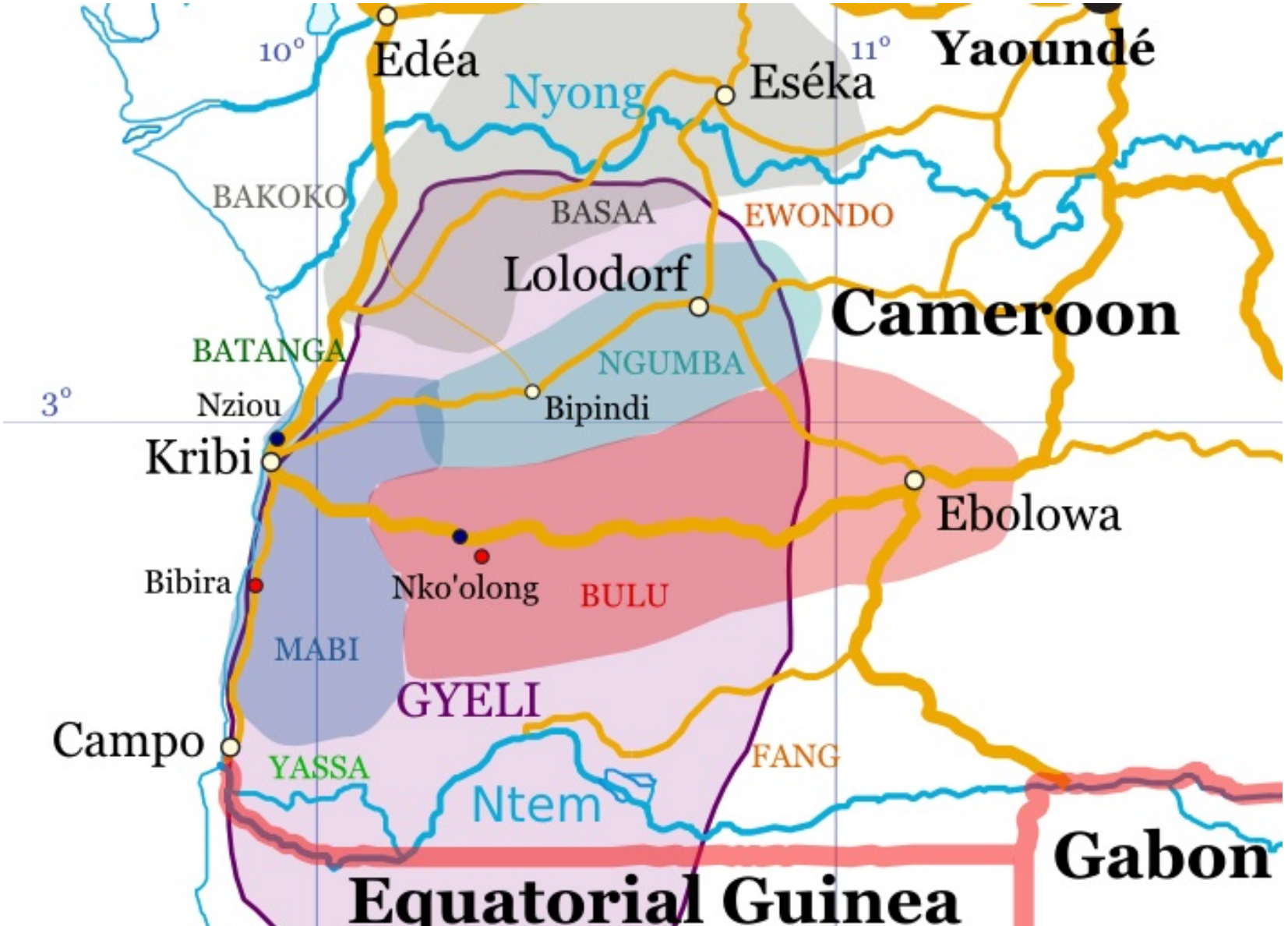

CAMEROON
Province boundary
Province capital
Road
Railroad
NIGER
CHAD
N'DJAMENA
NIGERIA
NORD
NORD-OUEST
OUEST
SUD-OUEST
LITTORAL
CENTER-SUD
EST
FERNANDO PO
EQUATORIAL GUINEA
GABON
CONGO


worldatlas
North Atlantic Ocean
EUROPE
Mediterranean Sea
MIDDLE EAST
TROPIC OF CANCER
Red Sea
Arabian Sea
AFRICA
Cameroon
EQUATOR
South Atlantic Ocean
PRIME MERIDIAN
Lake Victoria
Indian Ocean
TROPIC OF CAPRICORN
1000 mi
1000 km
©GraphicMaps.com

Gyeli language

- Bantu A80
- 'Pygmy' hunter-gatherers (PHGs)
- 4000-5000 speakers dispersed over an area of 4800 sq mi (12.500 km^2)
- speakers change their traditional way of life (more sedentary, more farming, less hunting)
- speakers shift to neighboring languages of farmers
- different dialects corresponding with different contact languages
- intense contact with neighboring languages

Farmer languages in the area



Colonial languages

- mainly French, but also English influence
- language of the elite
- farmers learn French at school, PHGs mostly do not go to school

Eliciting color data

- collect basic color terms
- interview speakers individually (at least 12)
- check for color blindness
- MPI color booklet for partition of color terms in color space
- ask for best examples of basic color terms
- consider most frequent answers

Color in language contact

Investigating language contact through borrowing of colors

Advantages of investigating borrowing of colors

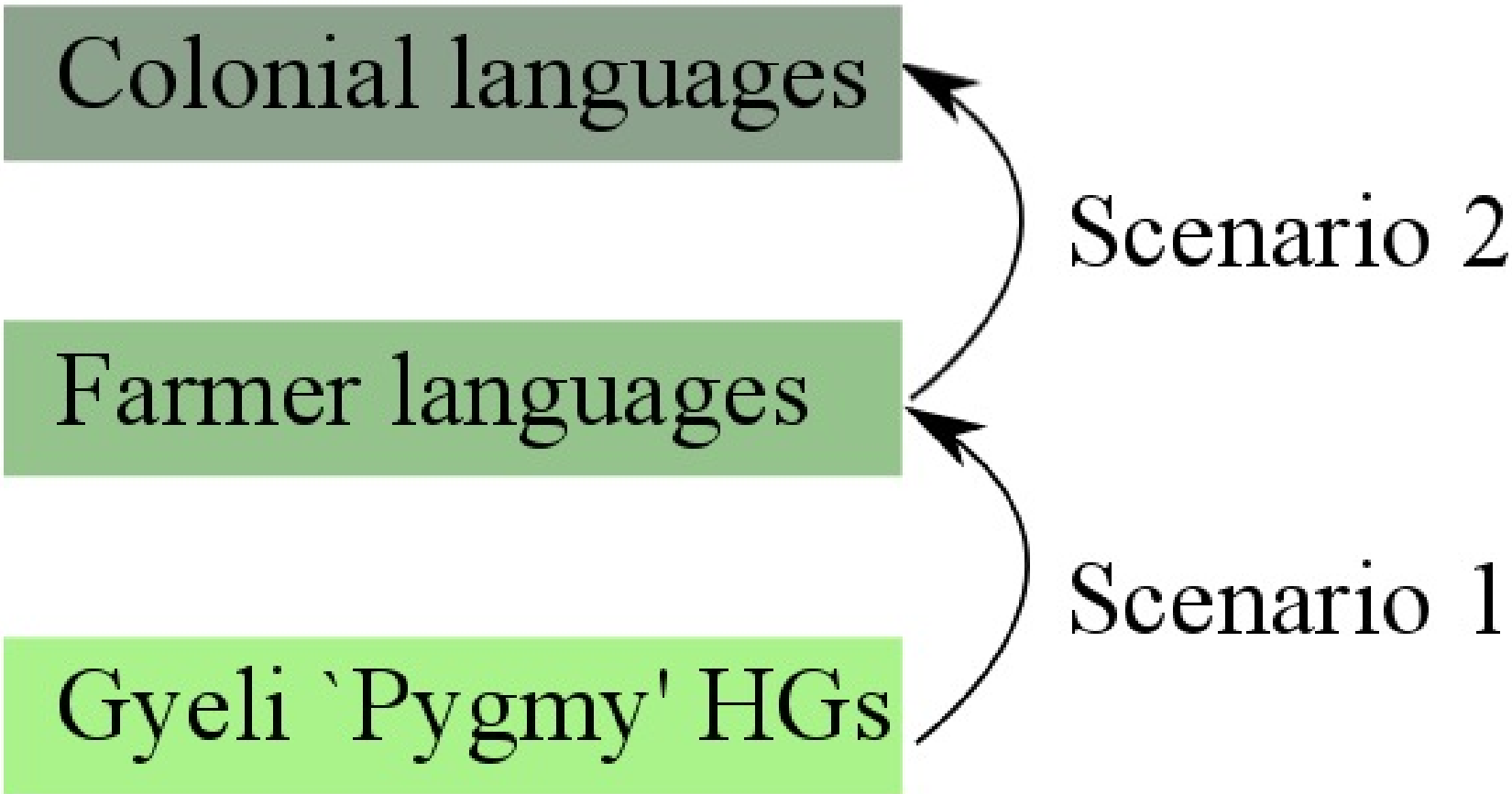
- limited set of lexical items
- 'measurability' of color categories

The issue

Borrowing colors

- What is borrowed when adopting ‘new’ colors from other languages: a lexical term, the entire category or both?
- If both the lexical term and the category are borrowed, which one is borrowed first?

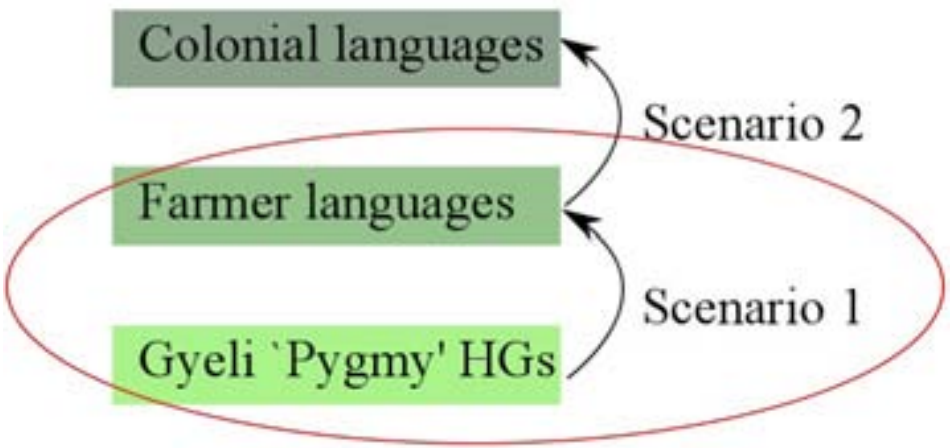
A complex language situation in southern Cameroon



Adopting a color term and/or category is a process that can go different ways

- Scenario 1: adopt color term first, then expand category
- Scenario 2: adopt color category first, then find a name for it

Scenario 1:
PHGs borrow from Bantu farmers



Colors in Gyeli

- originally three color categories
- original color terms are morphosyntactically special
- new color innovations are all nouns

Gyeli and Mabi	Bulu	
ná vyû	évìndì	‘black’
ná bì	évèlè	‘red’
ná mbàmbàlà	éfùmùlù	‘white’
mpúlɛ̀	mfóò	‘yellow’
máká	bìkáá bìlók	‘green’

Path of color borrowing in Gyeli

'Lexeme first'

- Gyeli borrows from Mabi
- first, borrow the use of a lexeme (that already exists in the languages of the area)
- then, add and expand a color category

The case of mpúl ‘yellow’

‘Yellow’ is a recent development

Originally:

- name for a tree with yellow bark
- used in compound with red
  - évèlè mfóòl, specification for type of red (Bates 1904)

Currently:

- no speaker awareness of the connection
- emerging use of ná particle

Enantia chlorantha
http://www.corbisimages.com/images/42-20700180.jpg?size=67uid=c9ef04c5-9476-4dc6-beaf-9e67ac413c43

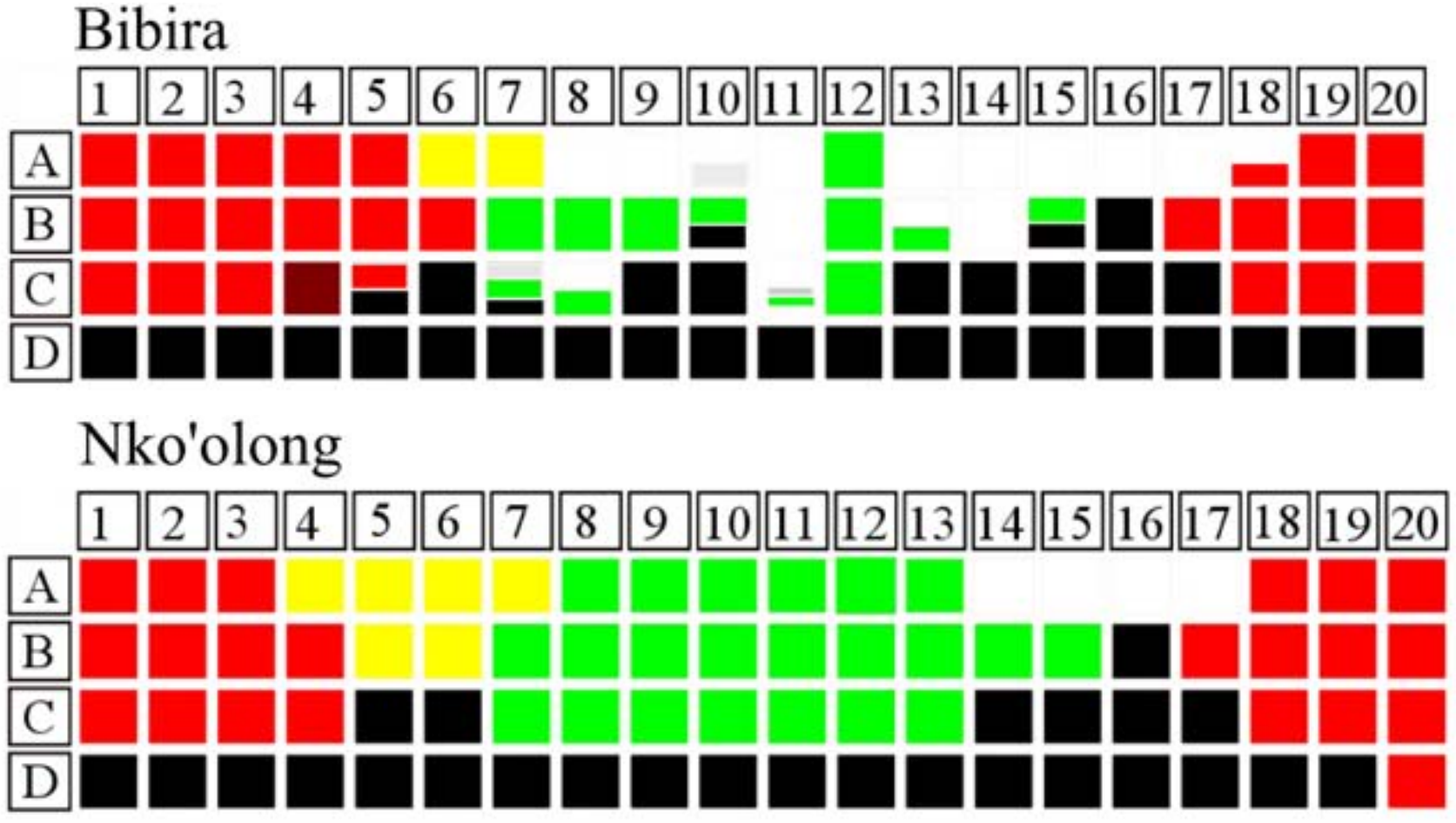
The partition of color space

Claim

- There are differences in the extension of color categories across speech communities which can be interpreted as representing different stages in the establishment of new colors.
- Generally, farmers' color systems are higher in the color evolution trajectory.

The color space

Gyeli partition of color space

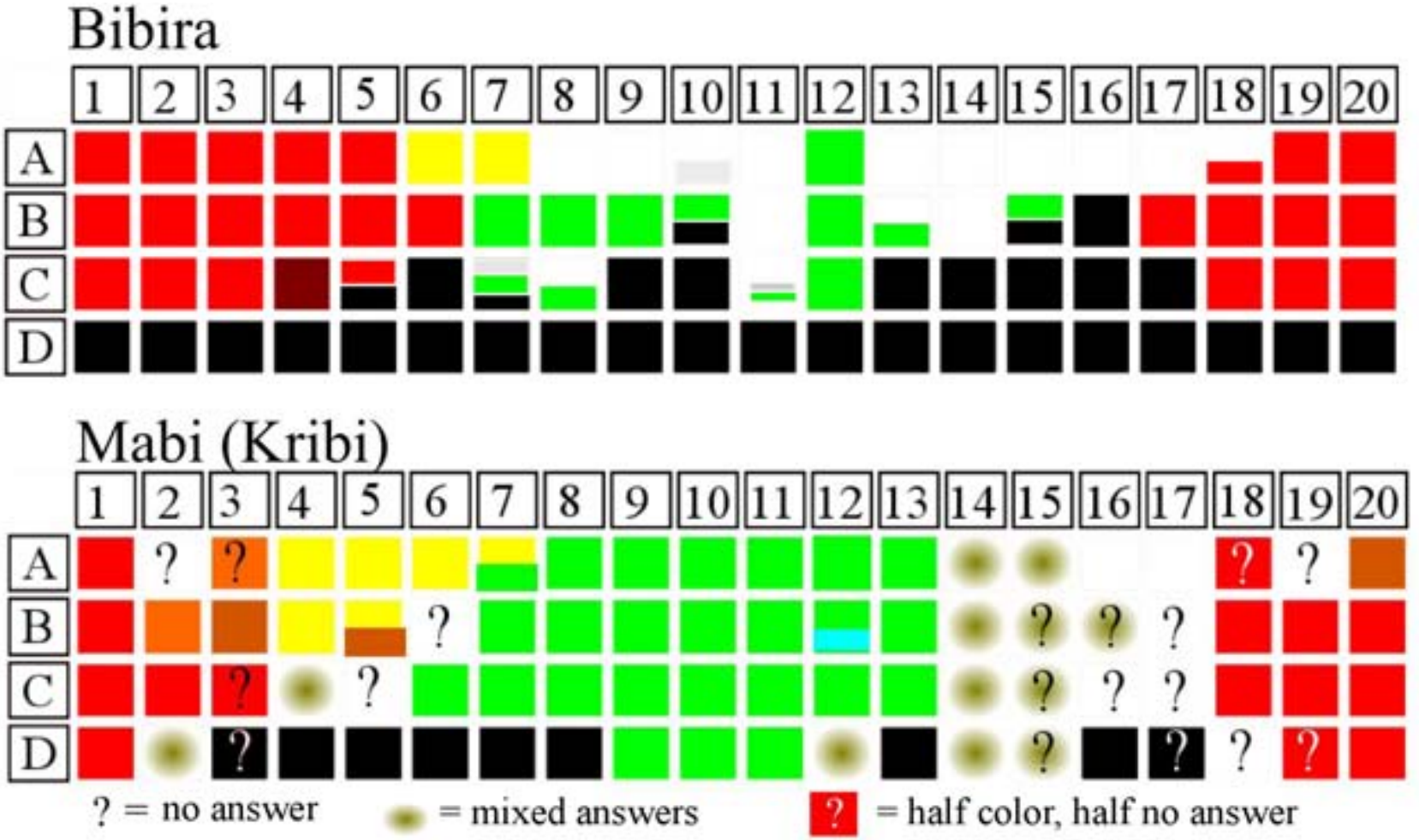


Extension of color space in Gyeli varieties

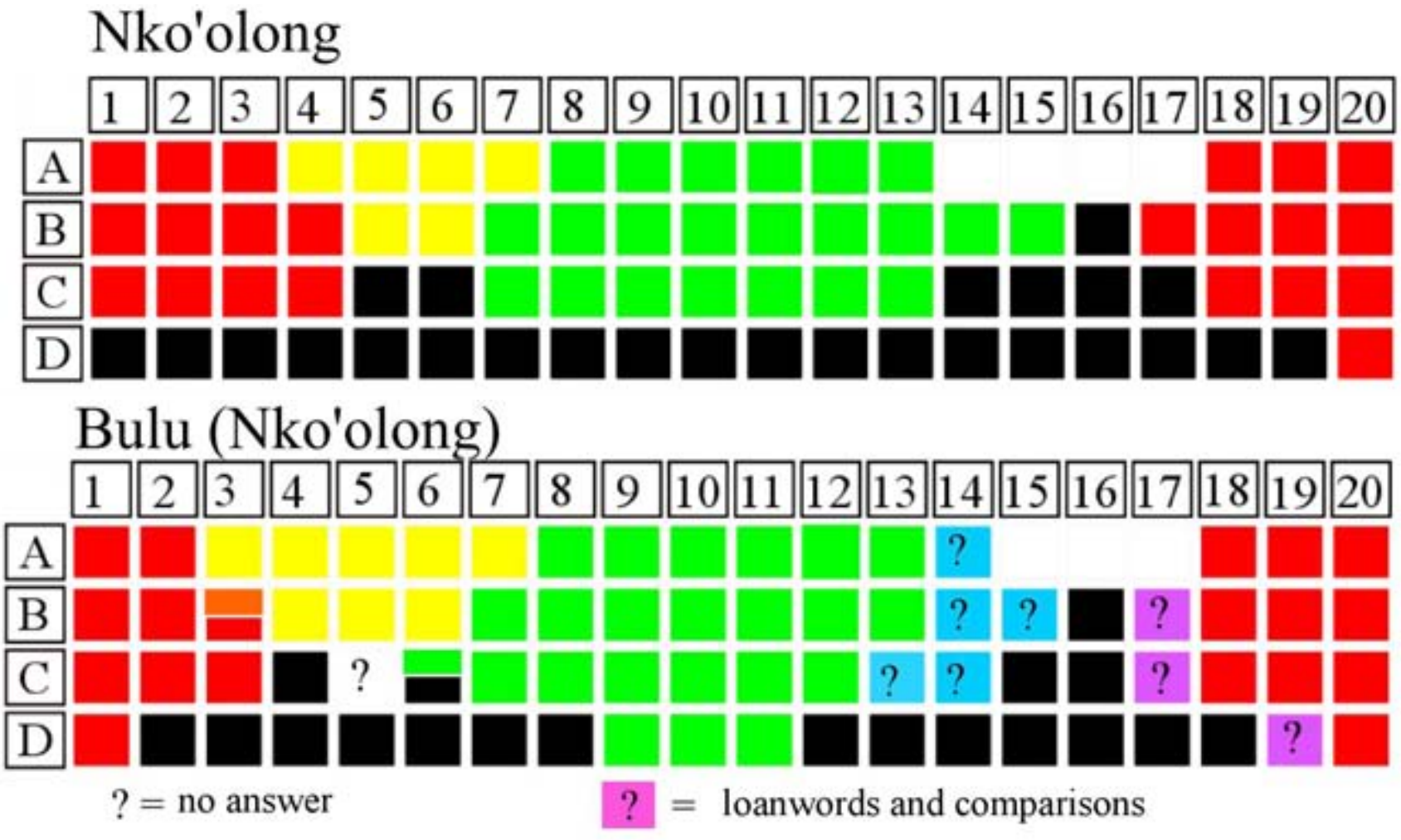
Bibira variety more conservative than Nko'olong variety

- traditional color categories larger extension in Bibira, especially *white* category
- newly innovated categories smaller in Bibira than in Nko'olong

PHG vs. farmer color space – Mabi area



PHG vs. farmer color space – Bulu area

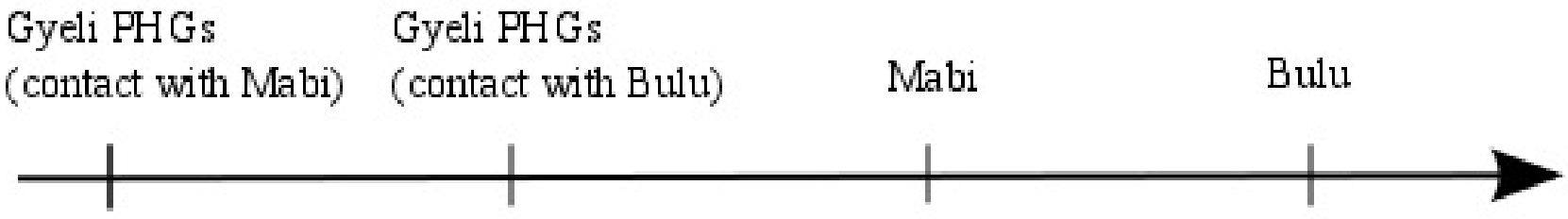


Comparison of extension of color space between Gyeli and farming neighbors

Gyeli more conservative than farmers' languages

- farmers' languages have more color categories than Gyeli PHGs
- traditional color categories larger extension in Gyeli than in farmers' languages
- newly innovated categories smaller in Gyeli than in farmers' languages

Color evolution trajectory



Color evolution trajectory

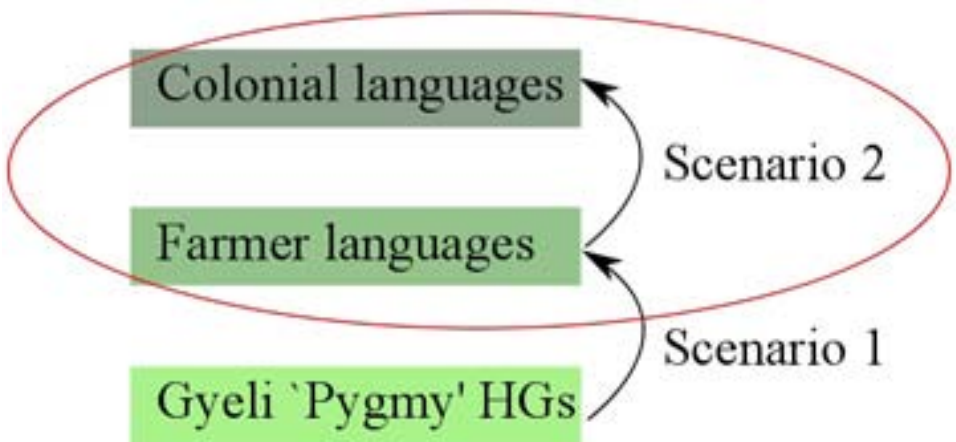
Argument

- According to the Basic Color Term theory, languages add colors (rather than losing them)
  → farmers' languages have more color categories than Gyeli PHGs, i.e. they display a more evolved color system
- Direction of borrowing is that PHGs borrow from farmers (not the other way around), as expected from language contact situations
  → Gyeli PHGs orient themselves towards the farmers color systems when establishing the extension of a color category
  → Gyeli PHG varieties reflect the differences in the color evolution trajectory of their respective contact farmer groups

Interim summary

- Gyeli PHGs use the same lexemes for ‘yellow’ and ‘green’ as their Mabi farming neighbors, but the color categories are not yet as expanded.
- While borrowing the color term from Mabi, Gyeli PHGs orient themselves towards their immediate farming neighbors in establishing a color’s semantics, i.e. the category extension in the color space.

Scenario 2:
Farmer languages borrow from colonial languages



Ongoing changes in the farmer color system

Farming communities and French colors

- most farmers are fluent in French
- most farmers have received school education in French for several years (Bulu more than Mabi)
- running the color experiment in French showed results nearly as one would expect for French speakers
- most farmers do know two color systems (Mabi/Bulu and French)

Path of borrowing in farmer languages

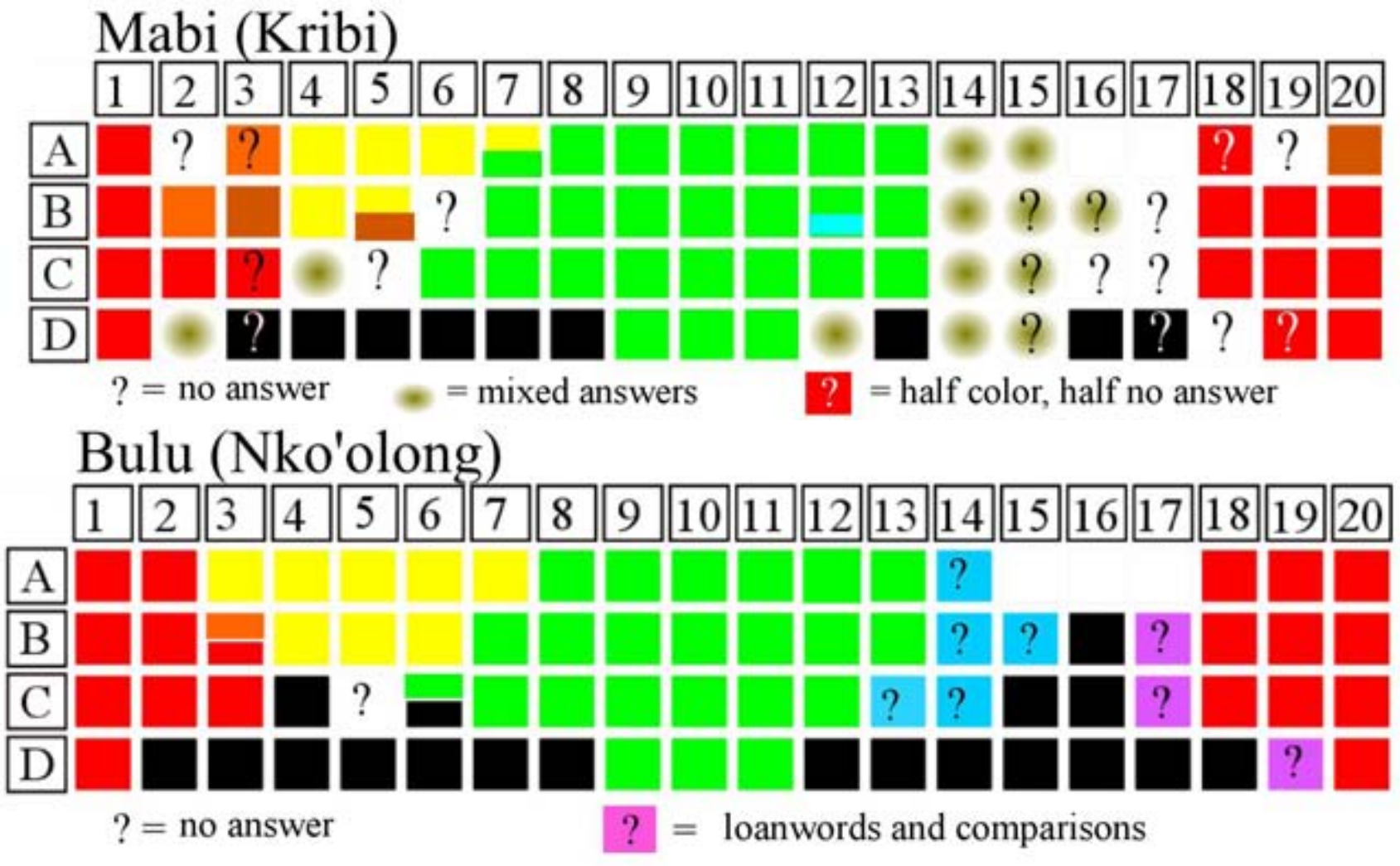
'Category first'

- farmer languages borrow from colonial languages, especially French
- first, take (part of) a category
- then find a name for it

Differences among the partition of color space in farmers' languages

- number and type of color categories
- extension of color categories
- category boundaries

Farmer partition of color space



Transition phase

- entrance of new color category into language is accompanied by phase of transition
- new categories expand and take up part of the space of previously existing categories
- new category boundaries need to be defined
- in phase of transition, extension and boundaries of categories have not conventionalized and stabilized yet

Effects of transition phase

Effects of instability and transformation

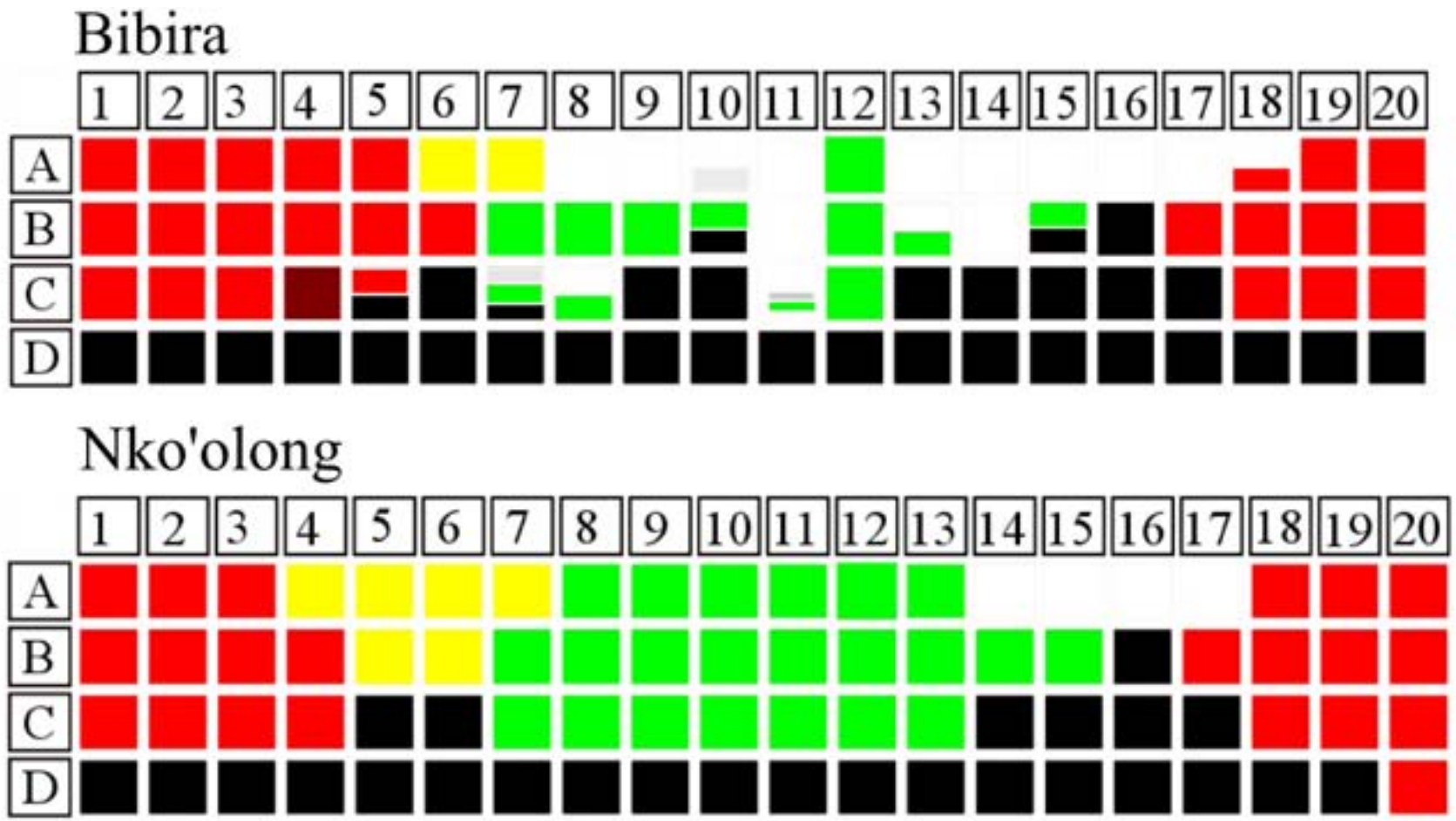
→ differ across speech communities

→ correlate with the path of borrowing

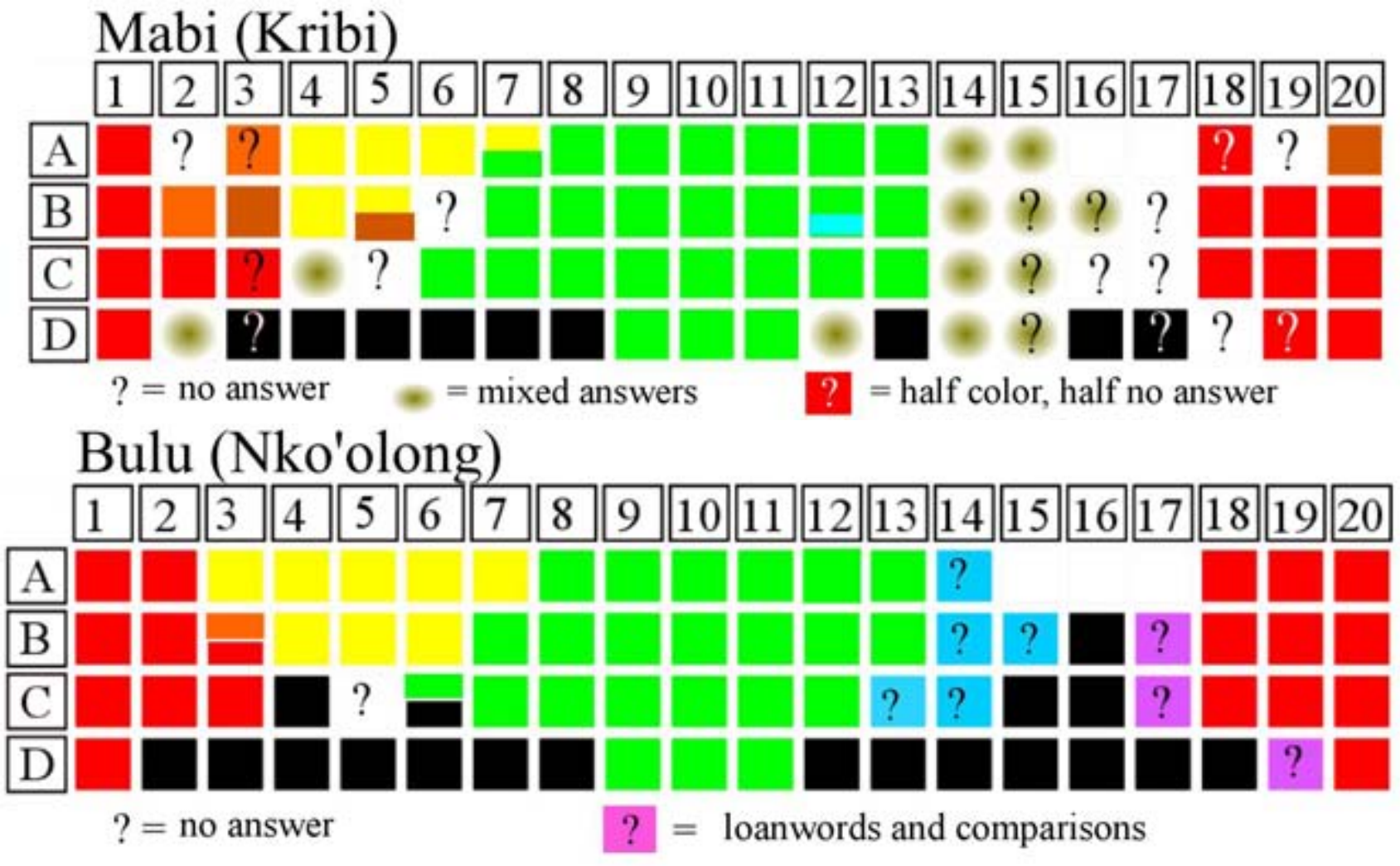
Effects of transition phase

	Gyeli PHGs		Bantu farmers	
	Nko'olong	Bibira	Mabi	Bulu
discontiguous areas	✗	✓	✓	✓
lack of majority answer	✗	✓	✓	✗
loanwords	✗	✗	✗	✓
gaps	✗	✗	✓	✓
boundaries look:	'well-defined'		'fuzzy'	

Gyeli partition of color space



Farmer partition of color space



Gaps in the color space

- not expected under the Basic Color Term theory
- gaps cluster around *brown* and *purple* area in color space
- $\rightarrow$ early stage in acquiring new color category

How do the effects of a transition phase correlate with the paths of borrowing?

- Gyeli PHGs → well-defined boundaries
  - borrow color term first, then expand category
  - only need to conventionalize the semantics of a color
- Bantu farmers → fuzzy boundaries
  - adopt part of a color category first, then find name for it
  - need to conventionalize both the semantics and the linguistic expression

Interim conclusion

Different paths of borrowing colors

- Scenario 1: PHGs borrow from farmer languages
  - lexeme first
  - then expand the category in the color space
- Scenario 2: Farmer languages borrow from colonial languages
  - category first
  - then find a name for the new category

Beyond paths of borrowing...

- Color evolution trajectory
  - Bantu farmers have more evolved color systems than Gyeli PHGs.
  - Evolutionary differences within farmer groups are reflected in PHG groups.
- Effects of transition phase
  - reflect degree of conventionalization and stability of color categories
  - vary across speech communities
  - Gyeli PHGs display fewer effects than farmers
  - correlation between transition effects and path of borrowing

Future work

- track how the color systems of the four speech communities (and possibly other languages of the area) develop over time
- test whether new color categories of the Bantu farmers also trickle down into the Gyeli PHGs language
- compare color borrowing in other contact situations

Color variability

Color theories

Basic Color Term (BCT) theory (universalist view)

- hue spectrum is universally a natural semantic field which is systematically covered by a lexical set
- color categories are organized around focal colors with variable boundaries
- evolutionary stages for languages with less than maximum 11 BCTs Berlin and Kay (1969), World Color Survey, Kay/Regier (2003)

Most color theories...

- compare color systems across languages
- abstract away from language internal diversity

The issue

Language-internal speaker variation

‘Significant degrees of speaker variation exist, which do not, on the face of it, look like systematic sociolinguistic variation.’ (Levinson 2001: 8)

Four languages/dialects used in color comparison

- Bantu ‘Pygmies’
  - Gyeli variety in contact with Mabi (Bantu A80)
  - Gyeli variety in contact with Bulu (Banu A80)
- Bantu farmers
  - Mabi (Bantu A80)
  - Bulu (Bantu A70)

Language situation

- all languages are closely related
- all languages are in close contact with one another

→ one would expect high similarities in color terms and color categories

→ However, there is a high degree of (individual) variability in all four speech communities.
→ These languages do not treat color as a unitary domain.

Formal variation

Variation in parts of speech

Gyeli/Mabi:

- traditional color terms:
  → POS on their own (?), derived from verbs
- innovated color terms:
  → nouns (class 3 and 6)

Bulu

- traditional color terms:
  → nouns of class 7, derived from verbs
- innovated color terms:
  → nouns of other classes (3 and 8)

Gyeli and Mabi	Bulu	
ná vyû	évìndì	‘black’
ná bì	évèlè	‘red’
ná mbàmbàlà	éfùmùlù	‘white’
ná yɛ̂		‘white?’
ná pfû		‘white?’
mpúlɛ̀	mfóò	‘yellow’
máká	bìkáá bìlók	‘green’

→ Traditional and newly innovated color terms are morphosyntactically distinct

white terms in Gyeli and Mabi

both additional *white* terms imply a change of color

- ná yɛ̂ → ‘bleached out’
- ná pfû → ‘*sombre, bizarre*’

both additional *white* terms do not show up in the average picture of a speech community

Gyeli and Mabi	Bulu	
ná vyû	évìndì	‘black’
ná bì	évèlè	‘red’
ná mbàmbàlà	éfùmùlù	‘white’
ná yɛ̂		‘white?’
ná pfû		‘white?’
mpúlɛ̀	mfóò	‘yellow’
máká	bìkáá bìlók	‘green’

Further formal variation

Reduplication

- all non-nominal color terms in Gyeli and Mabi can be reduplicated, e.g.:
  - ná vyû 'black' → ná vyûvyû
  - ná mbàmbàlà 'white' → ná mbàmbàlàmbàmbàlà
- no obvious pattern
  - intensifier?
  - hedging?

Use of noun class prefixes

The nominal color má-ká 'green/leaves' may be used with its singular prefix (lé-ká) or without any prefix altogether (ká).
→ lack of conventionalization

Lexical variation

Choice in use of color terms

Not all speakers use the same color terms

- some speakers use all available ‘conventional’ color terms
- some speakers lack 1 to 4 ‘conventional’ color terms
- no implicational scale for lack of color terms
- some similarities in lack of color terms within speech communities

Choice in use of color terms

Gyeli speaker	(Bulu contact)	1	2	3	4	5	6	7	8	9	10	11	12
ná vyû	‘black’	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
ná bì	‘red’	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
ná mbàmbàlà	‘white’	✗	✓	✓	✗	✓	✓	✓	✓	✓	✗	✗	✗
ná yɛ̂	‘white?’	✓	✗	✗	✗	✗	✓	✗	✗	✗	✗	✗	✗
ná pfû	‘white?’	✓	✓	✓	✓	✓	✓	✗	✗	✓	✓	✓	✓
mpùlɛ́	‘yellow’	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
máká	‘green’	✓	✗	✗	✓	✓	✓	✓	✓	✗	✓	✓	✓

→ Not all speakers use the same color terms

Lack of color terms compared among Gyeli dialects

Gyeli speaker	(Bulu contact)	1	2	3	4	5	6	7	8	9	10	11	12
ná vyû	'black'	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
ná bì	'red'	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
ná mbàmbàlà	'white'	✗	✓	✓	✗	✓	✓	✓	✓	✓	✗	✗	✗
ná yɛ̂	'white?'	✓	✗	✗	✗	✗	✓	✗	✗	✗	✗	✗	✗
ná pfû	'white?'	✓	✓	✓	✓	✓	✓	✗	✗	✓	✓	✓	✓
mpùlɛ́	'yellow'	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
máká	'green'	✓	✗	✗	✓	✓	✓	✓	✓	✗	✓	✓	✓

Gyeli speaker	(Mabi contact)	1	2	3	4	5	6	7	8	9	10	11	12
ná vyû	'black'	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
ná bì	'red'	✓	✓	✗	✓	✓	✓	✓	✓	✓	✓	✓	✓
ná mbàmbàlà	'white'	✓	✓	✗	✓	✓	✓	✓	✓	✗	✓	✓	✗
ná yɛ̂	'white?'	✓	✓	✗	✓	✓	✓	✗	✓	✓	✗	✓	✓
ná pfû	'white?'	✗	✓	✗	✓	✓	✗	✓	✓	✗	✗	✓	✗
mpùlɛ́	'yellow'	✓	✓	✓	✓	✗	✗	✗	✗	✓	✓	✗	✗
máká	'green'	✓	✓	✓	✗	✗	✗	✗	✗	✓	✓	✓	✗

Summary point:
Many speakers lack the same ‘conventional’ color term within a speech community and these differ across dialects.

Choice in use of color terms

Mabi speaker	(Bantu A80)	1	2	3	4	5	6	7	8	9	10	11	12
ná vyû	‘black’	✓	✓	✓	✓	✓	✓	✓	✗	✓	✓	✓	✓
ná bì	‘red’	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
ná mbàmbàlà	‘white’	✓	✓	✓	✗	✓	✓	✗	✓	✓	✓	✓	✓
ná yɛ̂	‘white?’	✗	✗	✗	✗	✓	✓	✗	✗	✗	✗	✗	✗
ná pfû	‘white?’	✓	✗	✗	✓	✗	✗	✓	✓	✗	✗	✗	✗
mpùlɛ́	‘yellow’	✓	✓	✓	✓	✓	✓	✗	✓	✓	✓	✓	✓
máká	‘green’	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

Bulu speaker	(Bantu A70)	1	2	3	4	5	6	7	8	9	10	11	12
évìndì	‘black’	✓	✓	✓	✓	✓	✓	✓	✓	✓	✗	✗	✓
évèlè	‘red’	✓	✓	✗	✓	✓	✓	✓	✓	✓	✓	✓	✓
éfùmùlù	‘white’	✓	✓	✓	✗	✗	✓	✓	✓	✓	✓	✓	✓
mfòó	‘yellow’	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
bìkáá bìlók	‘green’	✓	✓	✓	✓	✓	✓	✓	✗	✓	✓	✓	✓

Summary points:

- What is true in the Gyeli dialects also holds in farmer languages.
- Any ‘conventional’ color term can be absent in an individual’s color naming system.

Unconventional expressions of colors: Colors by comparison

Color terms may be replaced/complemented by nominal comparisons

- many speakers describe colors by comparison with objects in the world, mostly plants
- comparisons vary in number and degree of specification
- sometimes these comparisons overwrite conventional color term meaning (e.g. sometimes ‘color of leaves’ does not designate green, but red)

Dillenia retusa
http://www.gardenworldimages.com/ImageThumbs/ADE_080417336/3/ADE_080417336_YOUNG_LEAF_OF_DILLENIA_RETUSA.jpg

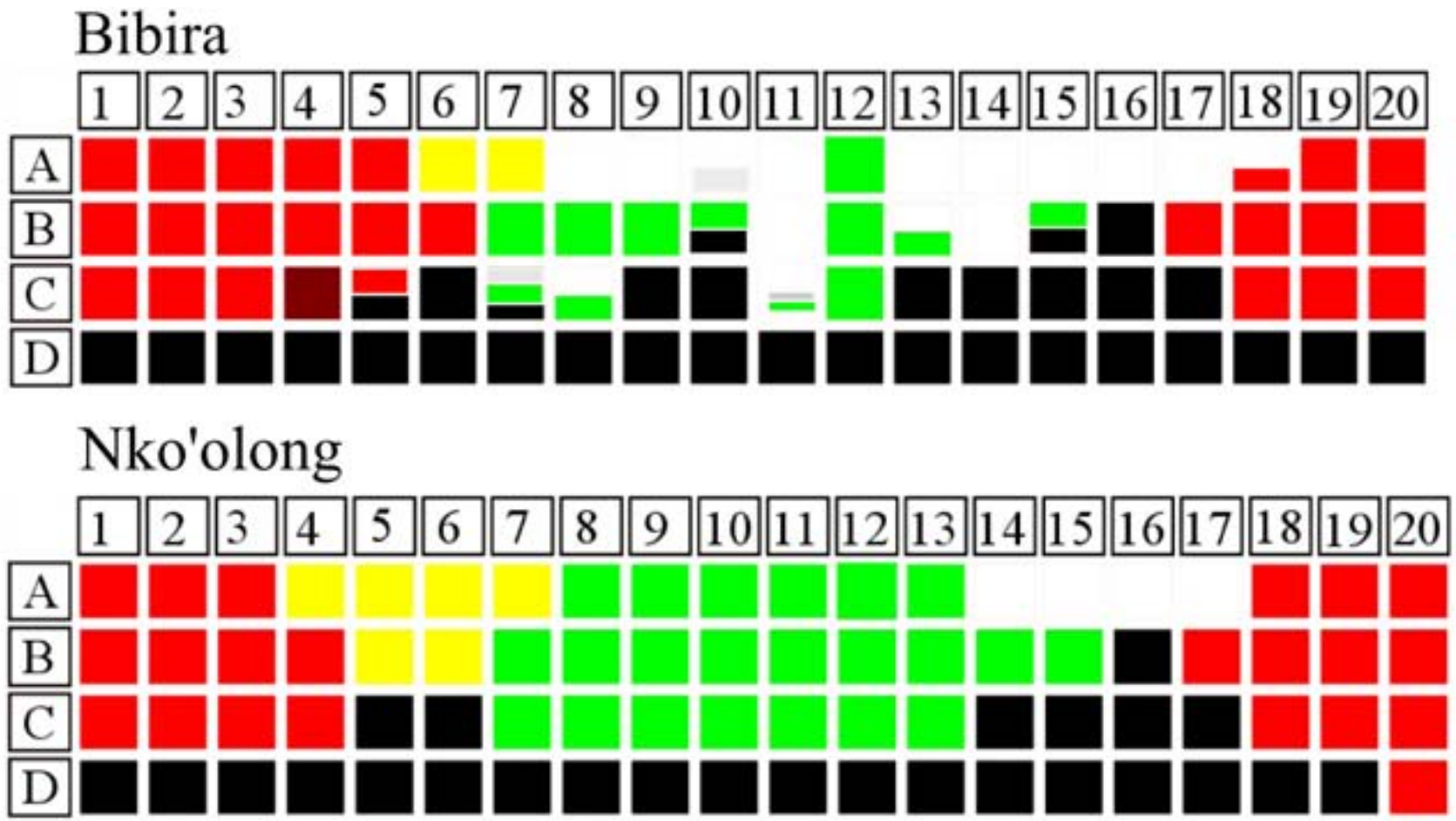
Semantic variation

Semantic variation

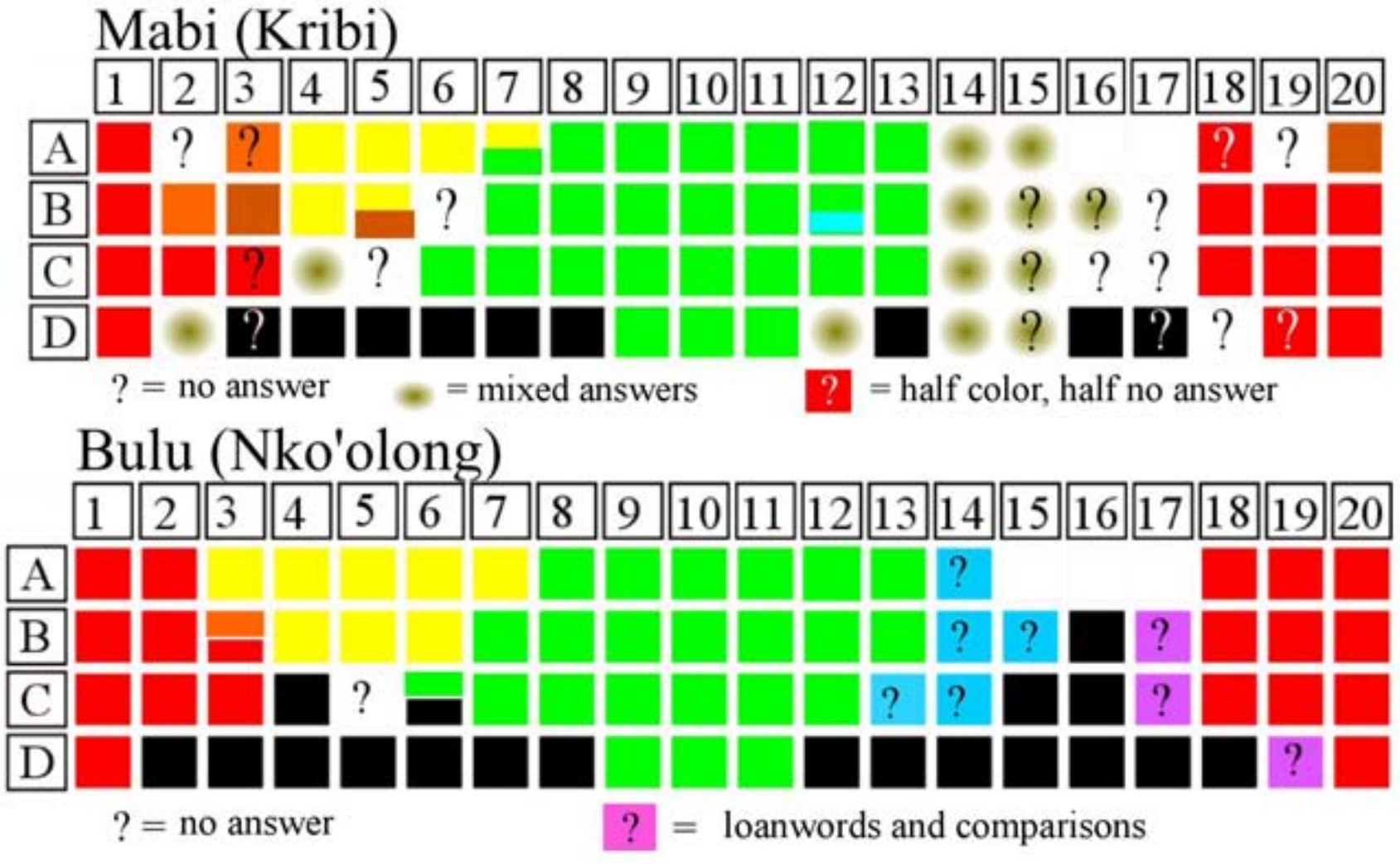
Variation of partition of color space

- across dialects and languages
- among individuals of the same speech community

Color space variation across dialects



Color space across languages

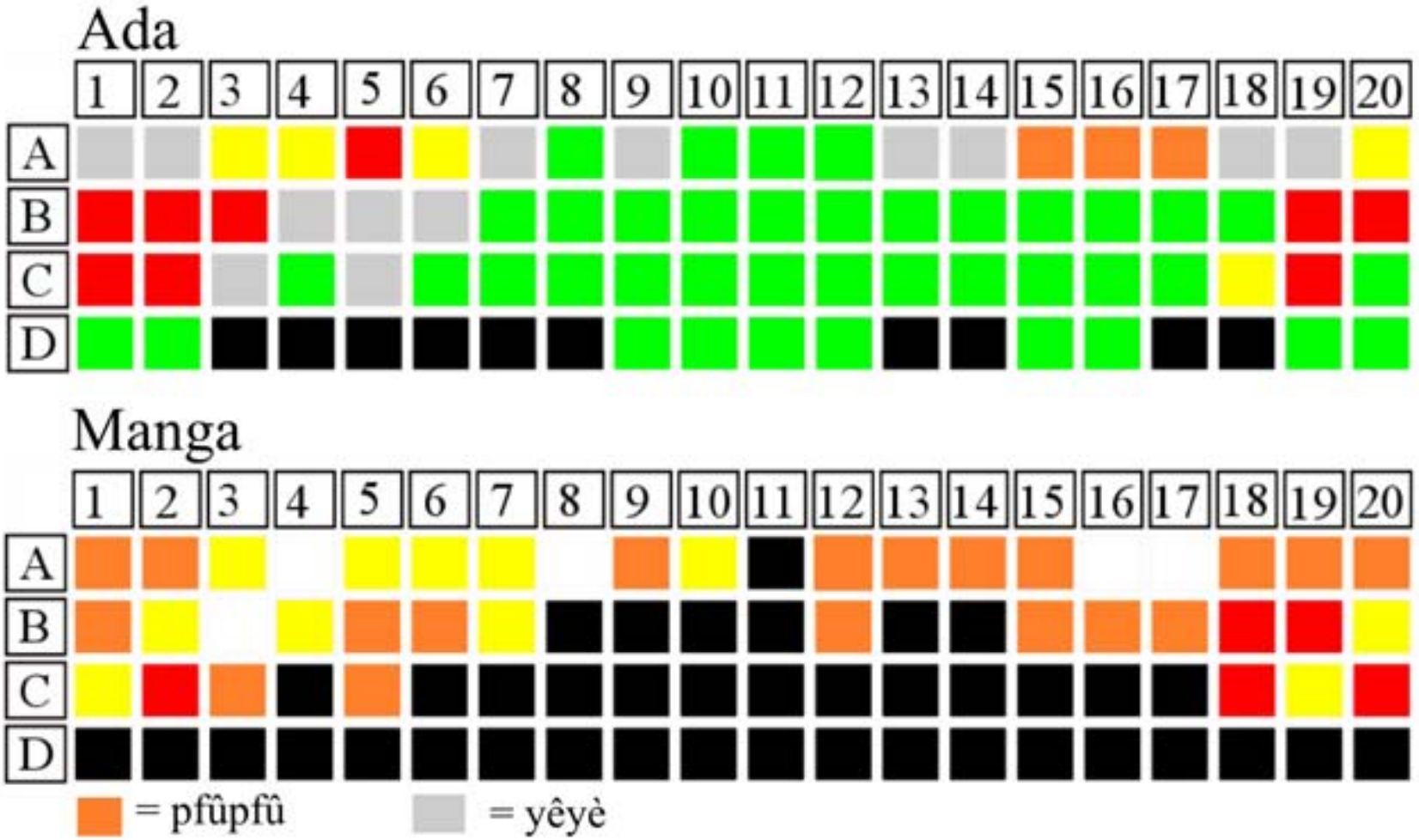


→ The partition of color space varies across dialects and languages in terms of:

- the extension of single colors
- (fuzzy) boundaries
- gaps
- presence and number of newly emerging color terms

→ color categories are (more or less) contiguous
→ some color terms (ná yɛ̂, ná pfû) do not show up at all in the average picture

Examples of extreme diversity within the same speech-community



→ color categories are comparatively quite discontiguous
→ some color terms show up that are completely lost in the average picture
→ the extension of colors in the color space differs extremely

Concluding remarks

Summarizing

- high color variability among speakers of the same community in terms of
  - formal variation
  - lexical variation
  - semantic variation

→ These languages do not treat color as a naturally given and unitary domain.

On the relevance for color theories

Difficulties for the Basic Color Term theory

- color space is not systematically covered by a set of lexemes
- high variability among individuals support that color is not a unitary domain
- various white hues in some languages/dialects challenge evolutionary stages
- color innovations in Mabi do not follow predicted color evolution trajectory

In favor of the BCT theory

- focal colors less variability
- evolutionary stages right for Bulu and recent color innovations (except Mabi)

‘... in some societies color terms carry such a low functional load that there is no fully systematized lexicon of color’ (Levinson 2000: 43)

(which makes all kinds of interesting variation happening!)

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What is appropriate to include in the grammatical description?