Unweaving the Interrogative Rainbow
The Interplay between Syntax, Semantics, and Prosody in Four Tano Languages

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Today we offer a glimpse into our ongoing comparative study of the *wh*-interrogative patterns of Tano languages, focusing on:

- Krachi
- Bono
- Wasa
- Asante Twi
Why Tano?

- Tano is wealthy in interrogatives.
- Nearly every color (variety) of the interrogative rainbow is attested in this language group:

  ▪ **INTONATIONAL QUESTIONS**
    
    (1) Bono
    
    \[2^{nd.\text{SG}} \text{see Kofi}\]
    
    ‘You saw Kofi.’ / ‘Did you see Kofi?’

  ▪ **Q PARTICLES**
    
    (2) Asante Twi
    
    a. \text{Kofi dɔ Ama.}
    
    Kofi love Ama
    
    ‘Kofi loves Ama.’
    
    b. \text{Kofi dɔ Ama anaa?}
    
    Kofi love Ama ə
    
    ‘Does Kofi love Ama?’
(3) Krachi

a. Kofi ε-dʒɪra [fé Ama ní [fé Kwáme ε-mo ne]]?
   Kofi PST-say COMP Ama know COMP Kwame PST-kill what
   ‘What did Kofi say that Ama knows that Kwame slaughtered?’

b. Kofi ε-dʒɪra [fé Ama ní [fé ne jí Kwáme ε-mo ___ ]]?
   Kofi PST-say COMP Ama know COMP what FOC Kwame PST-kill
   ‘What did Kofi say that Ama knows that Kwame slaughtered?’

c. Kofi ε-dʒɪra [fé ne jí Ama ní [fé ___ Kwáme ε-mo ___ ]]?
   Kofi PST-say COMP what FOC Ama know COMP Kwame PST-kill
   ‘What did Kofi say that Ama knows that Kwame slaughtered?’

d. Ne jí Kofi ε-dʒɪra [fé ___ Ama ní [fé ___ Kwáme ε-mo ___ ]]?
   what FOC Kofi PST-say COMP Ama know COMP Kwame PST-kill
   ‘What did Kofi say that Ama knows that Kwame slaughtered?’
Understanding or unwrapping the Tano interrogative rainbow requires an interface-based approach that recognizes the interplay between the syntactic, semantic, and prosodic components of grammar.
Roadmap

- Overview of the Tano languages
- Main clause *wh*- in-situ
- Embedded (complement) clause *wh*- in-situ
- Island phenomena
- Intervention effects
- Wrap up
The Tano languages (adapted from Williamson & Blench 2000):

- Kwa
- ...Potou-Tano...
- Potou
- Tano
  - Western Tano
  - Central Tano
    - Akan
    - Bia
  - Guang
  - Krobu
    - South
    - North
      - Akan (Twi-Fante)
        - Bono
        - Wasa
      - Krachi
        - Chumburung
        - Gonja
Overview: Krachi

- Alternate spellings: Kaakyi, Krache, Krakye
- Approximate population: 58,000
- Location: Centered in/around the town of Kete Krachi on Lake Volta
Overview: Bono

- Alternate spellings: Abron, Bron, Brong, Doma, Gyaman

- Approximate population: 1,050,000 in Ghana. 1,182,700 total.
- Location: Northwest of the Asante region; Zanzan Region, Côte d’Ivoire.
Overview: Wasa

- Alternate spellings: Wassa, Wasaw

- Approximate population: 309,000
- Location: Southwest Ghana
Overview: Asante Twi

- Alternate spellings: Asanti, Ashanti, Ashante, Achanti

- Approximate population: 2,800,000
- Location: South central Ghana
Roadmap

- Overview of the Tano languages
- **Main clause** *wh*- in-situ
- Embedded (complement) clause *wh*- in-situ
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- Wrap up
Wh-expressions in Krachi (and across Tano more generally) may appear either in-situ or in left peripheral focus positions, with no interpretative difference.

4. a. ɔʧíw ɛ-mo bwatéo momo?
   woman PST-kill chicken which
   ‘Which chicken did the woman slaughter?’

   b. Bwatéo momo jí ɔʧíw ɛ-mo?
   chicken which FOC woman PST-kill
   ‘Which chicken did the woman slaughter?’
(5) a. Ԋse ɛ-mo bwatéo?
   who PST-kill chicken
   ‘Who slaughtered the chicken?’

b. ɔʧíw ɛ-mo ne?
   woman PST-kill what
   ‘What did the woman slaughter?’

c. ɔʧíw ɛ-mo bwatéo ŋfré/kɛmeké/nɛnɛ?
   woman PST-kill chicken where/when/how
   ‘Where/when/how did the woman slaughter the chicken?’

d. *ɔʧíw ɛ-mo bwatéo nání?
   woman PST-kill chicken why

e. Nání jí ɔʧíw ɛ-mo bwatéo?
   why FOC woman PST-kill chicken
   ‘Why (for what reason) did the woman slaughter the chicken?’
Similar asymmetries involving *why* have been documented in other languages (both related and unrelated):

- Kiitharaka (Muriungi 2005)
- Bakweri (Marlo & Odden 2007)
- Zulu (Buell 2011)
- Lubukusu (Wasike 2007)
- Persian (Karimi 2005)
- Italian (Rizzi 2001)
- Romanian (Shlonsky & Soare 2011)
- New Testament Greek (Kirk 2010)
- Korean & Japanese (Ko 2005)
- Chinese (Lin 1992)
- Bono, Wasa & Asante Twi
Most *wh-* expressions in Bono may appear in-situ in main clauses.

(6) a. Bema kӗ kum aɓe?
    man the kill.\textsc{pst} what
    ‘What did the man slaughter?’

b. Bema kӗ kum akoko kӗ ahĩ/dabe/se?
    man the kill.\textsc{pst} chicken the where/when/how
    ‘Where/when/how did the man slaughter the chicken?’
Subject wh- items and ‘why’ may not appear in-situ in Bono.

(7) a. *Hwaе saе?
   who   dance>PST
   ‘Who danced?’

   b. Hwaе ne   saе?
      who   FOC   dance>PST
      ‘Who danced?’

(8) a. *Bema kë  kum akoko kë  senti?
      man   the   kill>PST   chicken   the   why

   b. Senti ne bema kë  kum akoko kë?
      why   FOC   man   the   kill>PST   chicken   the
      ‘Why did the man slaughter the chicken?’
Similar restrictions on in-situ subject interrogatives have been documented in a variety of related and unrelated \textit{wh}- in-situ languages:

- Hausa (Green & Jaggar 2003)
- Zulu (Sabel & Zeller 2006)
- Kitharaka (Muriungi 2005)
- Kinyarwanda (Maxwell 1981)
- Dzamba (Bokamba 1976)
- Malagasy (Potsdam 2006)
- Wasa & Asante Twi
Wasa Main Clause *Wh*- In-Situ

- Most *wh*- expressions in Wasa may appear in-situ in main clauses.

  (9) a. Bɛɛma no kum **den**?
      man the kill.PST what
      ‘What did the man slaughter?’

  b. Bɛɛma no kum akoko no **ɛhĩfa/mmɛɛɛ bɛn/sen**?
      man the kill.PST chicken the where/time which/how
      ‘Where/when/how did the man slaughter the chicken?’
Subject *wh-* items and ‘why’ may not appear in-situ in Wasa.

(10) a. *Hwaе saaye?  
who  dance.PST

b. Hwaе ne  saaye?  
who  FOC  dance.PST
‘Who danced?’

(11) a. *Bɛɛma no kum akoko no  adiɛnti?  
man  the  kill.PST  chicken  the  why

b. Adiɛnti  ne  bɛɛma no kum akoko no?  
why  FOC  man  the  kill.PST  chicken  the  
‘Why did the man slaughter the chicken?’
Most Asante *wh*-expressions may appear in-situ in main clauses.

- (12) a. Ama ɓɔɔ hwan?
  
  Ama hit.PST who
  
  ‘Who did Ama hit?’

- b. Kofi ɓɔɔ Ama ɛhĩfa/(ɛ)berɛ bɛn/ɛn?
  
  Kofi hit.PST Ama where/time which/how
  
  ‘Where/when/how did Kofi hit Ama?’
Subject *wh*- items and ‘why’ may not appear in-situ in Asante.

- (13) a. *Hwan bɔɔ Ama?*
  who hit.PST Ama

  b. **Hwan na c-bɔɔ Ama?**
  who FOC 3rd.SG-hit.PST Ama

  ‘Who hit Ama?’

- (14) a. *Kwadwo bɔɔ Ama adɛn nti?* \(\text{(Saah 1988:20)}\)
  Kwadwo hit.PST Ama reason why

  b. **Adɛn nti na Kwadwo bɔɔ Ama?**
  reason why FOC Kwadwo hit.PST Ama

  ‘Why did Kwadwo hit Ama?’ \(\text{(Saah 1988:20)}\)
**Summary: Wh- In-Situ (Main Clauses)**

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Two constraints on main clause *wh*- in-situ in Tano:

(i) *‘why’ in-situ
(ii) *wh*-\textsubscript{SUBJ} in-situ

The constraint on ‘why’ in-situ appears to be semantic in nature.

The restriction on subject *wh*- items in-situ remains a mystery.
Analysis: *Why In-Situ*

- Reinhart (1998):
  - Interpretation of *wh*- in-situ via **CHOICE FUNCTIONS** (CFs).
  - CFs apply to non-empty sets and output members of those sets.
  - In order for a CF to apply, Dom(CF) must include a set of individuals.
  - *Wh*- adverbials like ‘why’ range over propositions, not individuals.
  - Therefore, CFs cannot apply to the denotations of *wh*- items like ‘why’.
  - In order to be semantically interpretable, then, ‘why’ must be generated peripherally, so as to merge directly with a proposition-denoting constituent.

- The cartographic approach to ‘why’ (Rizzi 2001, Shlonksy & Soare 2011) is consistent with this analysis.
Roadmap

- Overview of the Tano languages
- Main clause \textit{wh- in-situ}
- \textbf{Embedded (complement) clause \textit{wh- in-situ}}
- Island Phenomena
- Intervention Effects
- Wrap Up
Apart from ‘why’, Krachi wh- expressions may appear in-situ in embedded (complement) clauses.

(15) a. Kofi ni [fé nse ε-mo bwatéo]?  
   Kofi know COMP who PST-kill chicken  
   ‘Who does Kofi know slaughtered the chicken?’

   b. Kofi ε-dʒi ra [fé çtʃíw ε-mo ne]?  
      Kofi PST-say COMP woman PST-kill what  
      ‘What did Kofi say that the woman slaughtered?’

   c. Kofi ε-dʒi ra [fé çtʃíw ε-mo bwatéo ŋfré/kɛmekɛ/nɛɛe]?  
      Kofi PST-say COMP woman PST-kill chicken where/when/how  
      ‘Where/when/how did Kofi say it was that the woman slaughtered the chicken?’
Bono Embedded Wh- In-Situ

- Apart from $wh$-SUBJ and ‘why’, Bono $wh$- expressions may also appear in-situ in embedded (complement) clauses.

- (16) a. Wo dwene [sɛ bema kɛkum $abe$]?  
  \[2_{\text{nd, sg}} \text{think} \quad \text{COMP man the kill}.\text{pST} \text{ what} \]
  ‘What do you think that the man slaughtered?’

  b. Wo dwene [sɛ bema kɛkum akoko kɛ $ahī(fa)/dabe/sɛ$]?  
  \[2_{\text{nd, sg}} \text{think} \quad \text{COMP man the kill}.\text{pST} \text{ chicken the where/when/how} \]
  ‘Where/when/how do you think it was that the man slaughtered the chicken?’
In addition to \( wh_{-\text{SUBJ}} \) and ‘why’, which are independently unavailable clause-internally, \( wh \)- items are restricted from appearing in-situ in embedded (complement) clauses in non-echo questions.

(17) a. *Wo dwene [sɛ bɛɛma no kum edieɛ]?  
   2\text{ND.SG} think COMP man the kill.PST what

   b. *Wo dwene [sɛ bɛɛma no kum akoko no ehĩfa/mmɛɛbɛn]?  
   2\text{ND.SG} think COMP man the kill.PST chicken the where/time which  
   ‘Where/when do you think it was that the man killed the chicken?’
In addition to independently unavailable $wh_{-}\text{SUBJ}$ and ‘why’, $wh$-items may not appear in-situ within embedded (complement) clauses in non-echo questions.

(18) a. *Wo dwene [sɛ Kofi bɔɔ hwan]?  
    $2_{\text{ND.SG}}$ think COMP Kofi hit.$\text{PST}$ who

    b. *Wo kaa [sɛ Kofi dii dɛn]?  
    $2_{\text{ND.SG}}$ say.$\text{PST}$ COMP Kofi eat.$\text{PST}$ what

    c. *Wo nim [sɛ Kofi saa $\text{ɛhĩfa}/(\varepsilon)\text{bere }\varepsilon\text{n}\text{en}$]?  
    $2_{\text{ND.SG}}$ know COMP Kofi dance.$\text{PST}$ where/time which
Interim Summary: *Wh*- In-Situ (Embedded (Complement) Clauses)

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<td><em>Wh</em>- in-situ (embedded (complement) clauses)</td>
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<td>✗</td>
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Analysis: Wh- In-Situ (Embedded (Complement) Clauses)

◆ One possible approach:
  
  ◆ Q operator must enter into an Agree/Binding relationship with wh-.
    (Cheng 1991; Beck 1996; Hagstrom 1998; Pesetsky 2000; Cable 2007)
  
  ◆ In Krachi and Bono, this relationship is achievable non-locally.
    ◆ Matrix Q binds/agrees with embedded wh-. Embedded wh- in-situ possible.
  
  ◆ In Wasa and Asante, this relationship is not achievable non-locally.
    ◆ Embedded wh- inaccessible to matrix Q. Embedded wh- in-situ unavailable.
  
◆ Prediction:
  
  ◆ Wasa & Asante-type languages should not allow partial wh- movement
to a position below embedded C (i.e. to a non phase edge position).
Asante Partial Wh- Movement

- The prediction is borne out in Asante. Partial wh- movement is unavailable.

- (19) a. *Wo dwene [sɛ hwan na ɔ-bɔɔ Ama]?  
  2ND.SG think COMP who FOC 3ND.SG-hit.PST Ama

  b. *Wo kaa [sɛ dɛn na Kofi diiyɛ]?  
  2ND.SG say.PST COMP what FOC Kofi eat.PST

  c. *Wo nim [sɛ ehĩfa/(ɛ)bere bɛn na Kofi saayɛ]?  
  2ND.SG know COMP where/time which FOC Kofi dance.PST

- Note that wh- movement to an embedded position above C is also unavailable: *Wo kaa [dɛn na sɛ Kofi diiyɛ]?
Non-interrogative focus is not constrained in this way. Short focus movement is possible in the language.

\[(20)\]

a. Wo dwene [sɛ \textit{Kofi} na ṣ-bɔɔ Ama].
   2\textsuperscript{nd}.SG think COMP Kofi FOC 3\textsuperscript{rd}.SG-hit.PST Ama
   ‘You think that its KOFI who hit Ama.’

b. Wo kaa [sɛ n\textit{konya no} na Kofi diiyɛ].
   2\textsuperscript{nd}.SG say.PST COMP cake the FOC Kofi eat.PST
   ‘You said that it’s the CAKE that Kofi ate.’

c. Wo nim [sɛ \textit{ɛnora} na Kofi saayɛ].
   2\textsuperscript{nd}.SG know COMP yesterday FOC Kofi dance.PST
   ‘You know that its YESTERDAY that Kofi danced.’
The prediction fails to hold, however, in Wasa. Partial wh- movement is robust.

All Wasa wh- items may undergo partial movement regardless of thematic status.

(21) a. Wo dwene [sɛ bɛɛma bɛn na o-kum akoko no]?  
   2<sup>nd</sup>.SG think COMP man which FOC 3<sup>rd</sup>.SG-kill.PST chicken the  
   ‘Which man do you think slaughtered the chicken?’

   b. Wo dwene [sɛ edien(ti) na bɛɛma no kumiye]?  
   2<sup>nd</sup>.SG think COMP what FOC man the kill.PST  
   ‘What do you think that the man slaughtered?’

   c. Wo dwene [sɛ ehĩfa/adiɛnti na bɛɛma no kum akoko no]?  
   2<sup>nd</sup>.SG think COMP where/why FOC man the kill.PST chicken the  
   ‘Where/why do you think that the man slaughtered the chicken?’
In addition to Wasa, partial wh- movement is attested in Krachi.

(22) a. Fe nu [fé **nsɛ** jí ɛ-mò bwatėo]?
   2nd.SG know COMP who FOC PST-kill chicken
   ‘Who do you know slaughtered the chicken?’

   b. Fe nu [fé **ne** jí Kofi ɛ-mò]?
   2nd.SG know COMP what FOC Kofi PST-kill
   ‘What do you know Kofi slaughtered?’

   c. Fe nu [fé **nfrɛ/kɛmeke** jí Kofi ɛ-mò bwatėo]?
   2nd.SG know COMP where/when FOC Kofi PST-kill chicken
   ‘Where/when is it that you know Kofi slaughtered the chicken?’
Partial *Wh*- Movement in Tano (an Aside)

- Bono joins Wasa and Krachi as another Tano partial *wh*- movement language.

(23) a. *Wo dwene* [sɛ **mmema benie** ne be-kum akoko kɛ]?
    2\text{nd}.sg think COMP man which FOC 3\text{rd}.sg-kill.PST chicken the
    ‘Which men do you think slaughtered the chicken?’

    b. *Wo dwene* [sɛ **abe** ne mmema kɛ kumye]?
    2\text{nd}.sg think COMP what FOC men the kill.PST
    ‘What do you think the men slaughtered?’

    c. *Wo dwene* [sɛ **sen/dabe** ne Kofi kum akoko kɛ]?
    2\text{nd}.sg think COMP how/when FOC Kofi kill.PST chicken the
    ‘How/when do you think Kofi slaughtered the chicken?’
The partial movement facts previously discussed are typologically significant. To the best of our knowledge, this is the first report of the existence of partial wh- movement in any Kwa language.

Situating this breed of wh- movement typologically:

- Tano partial movement is **NAKED PARTIAL WH- MOVEMENT** (Fanselow 2006).
  - The partially-moved interrogative is unaccompanied by an overt Q-particle in the clause where it takes scope (i.e. the main clause).

- Tano partial movement (at least the case of Wasa) is typologically odd.
Partial Wh-Movement in Tano (an Aside)

◆ Fanselow’s (2006) Generalizations:

◆ **Generalization S1**: If a language tolerates naked partial movement, it also tolerates *wh*- elements in-situ and allows full *wh*- movement.
  ◦ Krachi: [✓ naked partial movement; ✓ *wh*- in-situ (main & embedded clauses)]
  ◦ Bono: [✓ naked partial movement; ✓ *wh*- in-situ (main & embedded clauses)]
  ◦ Asante: [N/A: ✗ naked partial movement]
  ◦ Wasa: [✓ naked partial movement; ✓ *wh*- in-situ (main clauses)]

◆ **Generalization S2**: If a construction is grammatical with naked partial movement, it can also be constructed with a *wh*- phrase in-situ.
  ◦ Krachi: [✓ naked partial movement; ✓ embedded *wh*- in-situ]
  ◦ Bono: [✓ naked partial movement; ✓ embedded *wh*- in-situ]
  ◦ Asante: [✗ naked partial movement; ✗ embedded *wh*- in-situ]
  ◦ **Wasa**: [✓ naked partial movement; ✗ embedded *wh*- in-situ]
### Summary: Partial *Wh*- Movement

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<tr>
<td>Partial <em>wh</em>-movement</td>
<td>✓</td>
<td>✓</td>
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*Wh*- in-situ (embedded (complement) clauses)
To recap:

- Krachi & Bono allow *wh*- in-situ in embedded (complement) clauses.
- Wasa & Asante do not.
- An analysis that appeals to Q-*wh*- dependency formation to license *wh*- in-situ cannot explain all relevant interrogative patterns.
  - ✔️ Krachi & Bono *wh*- items may be licensed non-locally; both allow embedded *wh*- in-situ and partial *wh*- movement to a sub-C position.
  - ✔️ Asante *wh*- items may not be licensed non-locally; neither embedded *wh*- in-situ nor partial *wh*- movement to a sub-C position is possible.
  - ✗ Wasa in-situ *wh*- items may not be licensed non-locally; nonetheless, partial movement to a sub-C position is available.
**Wh-In-Situ in Embedded (Complement) Clauses: A Prosodic Analysis**

- **Framework of assumptions:**
  - **The Prosodic Hierarchy** (Selkirk 1984, Nespor & Vogel 1986): Prosodic constituents are hierarchically structured:
    - Intonational Phrase (ι) > Phonological Phrase (ϕ) > Prosodic Word (ω)
  - **Prosodic Mapping** (Selkirk 2011): Prosodic structures are built from & largely correspond to syntactic structures.
  - **(Prosodic) Derivation by Phase** (Chomsky 2000, Kratzer & Selkirk 2007): Syntactic structures are built bottom-up in phases. The introduction of a phase head (ν₀, C₀) triggers the spell-out of its complement. Spell-out domains (SODs) are prosodic constituents: SOD(ν₀) = ϕ; SOD(C₀) = ι.
Prosodic licensing of wh: In Tano, wh- items must be ι-internal at Spell-Out.

Which syntactic constituents are mapped onto ι-phrases?

- Only root clauses (Downing 1970)
- Root clauses and in some languages, embedded clauses (Truckenbrodt 2005)

Embedded (complement) clauses are parsed as ι-phrases in some, but not all Tano languages.

- In Krachi & Bono, SOD(embedded C^0) = ι. ✓ wh- in-situ licensed
- In Wasa & Asante, SOD(embedded C^0) ≠ ι. ✗ wh- in-situ licensed
The Prosodic Status of Embedded (Complement) Clauses in Krachi

- Phonetic correlates of right edge \( \iota \)-phrase boundaries in Krachi:
  - L\% (also a right edge \( \varphi \)-marker in Krachi (Kandybowicz & Torrence 2012))
  - Pause
  - Pitch reset

- Prosodic behavior of Krachi embedded (complement) clauses:
  - Lexically H-bearing \( C^0 \) \( \text{fé} \) surfaces with an L/falling tone.
  - Pause separates \( C^0 \) from embedded subject.
  - Pitch reset affects f0 range of tones in embedded clause.
'That Kofi danced is strange.'
‘That Kofi danced angered me (i.e. made my heart boil).’
‘You think that the woman slaughtered the chicken.’
The Prosodic Status of Embedded (Complement) Clauses in Bono

- Phonetic correlates of right edge ρ-phrase boundaries in Bono:
  - L% (also a right edge ϕ-marker in Bono)
  - Pause
  - Pitch reset

- Prosodic behavior of Bono embedded (complement) clauses:
  - Lexically H-bearing C0 surfaces with a sharp falling tone.
  - Pause separates C0 from embedded subject.
  - Pitch reset affects f0 range of tones in embedded clause.
(27) (sɛ Kofi kum akoko kë), (yɛ Ama nwanwa),
  ‘That Kofi slaughtered the chicken surprised Ama.’
‘Which men do you think slaughtered the chicken?’
‘You think that the men killed the chicken.’
The Prosodic Status of Embedded (Complement) Clauses in Wasa

- Wasa embedded (complement) clauses do not have the prosodic status of I-phrases, assuming the existence of comparable phonetic correlates of right edge I-phrase boundaries (see next slide):
  - L%
  - Pause
  - Pitch reset

- Prosodic behavior of Wasa embedded (complement) clauses:
  - Lexically H-bearing $C^0$ $sε$ surfaces with an H tone.
  - No significant pause separates $C^0$ from embedded subject.
  - No pitch reset in embedded clause.
Because he was hungry, Kofi slaughtered the chicken.
‘You think that the man killed the chicken.’
Like Wasa, Asante embedded (complement) clauses do not have the prosodic status of $\iota$-phrases, assuming the existence of comparable phonetic correlates of right edge $\iota$-phrase boundaries (see next slide):

- L%
- Pause
- Pitch reset

Prosodic behavior of Asante embedded (complement) clauses:

- Lexically H-bearing $C^0$ surfaces with an H tone.
- No significant pause separates $C^0$ from embedded subject.
- No pitch reset in embedded clause.
(32) (ɔkraman bi kuu ɔkraman bi)ₙₙ na (o- kuu ɔkraman bi)ₙₙ
"A dog killed a dog and he killed a dog."
Kofi said that it was possible that I loved Ama.
(34) Yaw kaa sɛ Kofi bɔɔ Ama

‘Yaw said that Kofi hit Ama.’
## Summary: Wh- In-Situ (Embedded (Complement) Clauses)

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Roadmap

- Overview of the Tano languages
- Main clause *wh*- in-situ
- Embedded (complement) clause *wh*- in-situ
- **Island Phenomena**
- Intervention Effects
- Wrap Up
Islands

The four languages differ not only in whether they allow for wh-in-situ in embedded clauses. In what follows, we show that they differ in whether they allow wh-in-situ inside of islands.

An island is an environment out of which a wh-expression cannot move:

(35) a. You talked to the man [that read the book]
   b. *What did you talk to the man [that read ___] Relative Clause Island
   c. [that Bill read the book] surprised Mary
   d. *What did [that Bill read ___ ] surprise Mary Sentential Subject Island
In Krachi, wh-items cannot be moved out of sentential subjects:

    COMP Kofí PST-kill chicken PST-be strange/surprising
    ‘That Kofí slaughtered the fowl is surprising.’

    b. *Ne ḟi [ke Kofí ε-mò ___ ] ε-wa ṅwaŋwa?
       what FOC COMP Kofí PST-kill PST-be strange/surprising

However, a wh-item in-situ inside of a sentential subject is fine:

    c. [Ke Kofí ε-mò ne] ε-wa ṅwaŋwa?
       COMP Kofí PST-kill what PST-be strange/surprising
       ‘That Kofí slaughtered WHAT is surprising?’
In Krachi, a wh-item cannot be moved out of a relative clause:

(37) a. [ɔʧɪw ke c-mò bwatéó] bò ɲfi.
    woman COMP PST-kill chicken  LOC  here
    ‘The woman who slaughtered the fowl is here.’

    b. *Ne ți [ɔʧɪw ke c-mò __] bò ɲfi?
    what  FOC  woman COMP PST-kill  LOC  here

However, a wh-expression can remain in-situ in a relative clause:

    c. [ɔʧɪw ke c-mò ne ] bò ɲfi?
    woman  COMP PST-kill  what  LOC  here
    ‘The woman who killed WHAT is here?’
Relative clauses are islands for movement in Bono:

(38) #Dabe ne Kofi hu bema [kē o-kum akoko kē]? when FOC K. see.PST man the 3SG-kill.PST chicken the
   ‘What time x is such that at x Kofi saw the man who killed the chicken?’
*‘What time x is such that Kofi saw the man who, at x, killed the chicken?’
Unlike Krachi, wh-items in Bono cannot surface inside of a sentential subject:

(39) a. *[Sɛ Kofi kum abe] yɛɛ Ama nwonwa?
   COMP Kofi kill.PST what make.PST A. surprise
   Intended: ‘That Kofi killed WHAT surprised Ama?’

   b. *[Sɛ Kofi kum akoko kẽ ahîfa/dabe/sɛ/senti] yɛɛ Ama nwonwa?
   COMP K. kill.PST chicken the where/when/how/why make.PST A. surprise
   ‘That Kofi killed the chicken where/when/how/why surprised Ama?’
Bono Relative Clause Islands

Wh-expressions are also banned from surfacing inside of relative clauses in Bono:

(40) a. Kofi hu [bema kɛ (o-)kum akoko kɛ].
   K. see.PST man the 3rd.SG-kill.PST chicken the
   ‘Kofi saw the man who killed the chicken.’

b. *Kofi hu [bema kɛ (o-)kum abe]?
   K. see.PST man the 3rd.SG-kill.PST what

c. *Kofi hu [bema kɛ (o-)kum akoko kɛ ahīfa/dabe/se/senti]?
   K. see.PST man the 3rd.SG-kill.PST chicken the where/when/how/why
   (OK with matrix construal of where (e.g. ‘Where did Kofi see...?’))
In Wasa, relative clauses are islands for movement:

(41) a. Wɔ bɔɔ [bɛɛɛma na o-kum akoko no]
    2SG hit.PST man REL 3SG-kill.PST chicken the
    ‘You hit the man who killed the chicken.’

    b. *ɛdien na wo bɔɔ [bɛɛɛma na o-kum ____]
       what FOC 2SG hit.PST man REL 3SG-kill.PST
       Intended: ‘What did you hit the man that killed?’
However, wh-items cannot surface in-situ in relative clauses either in Wasa:

(42) a.*Wɔ bɔɔ bɛrɛma [na o-kum ɛdɪɛn] (no)
   2SG hit.PST man REL 3SG-kill.PST what the
   Intended: ‘You hit the man who killed what?’

   b. *Wɔ bɔɔ bɛrɛma [na o-kum akoko no mmerɛ ben/ɛhĩfa/ kwae ben so]
   2SG hit.PST man REL 3SG-kill.PST chicken the time which/where/road which on
   Intended: ‘You hit the man who killed the chicken when/where/how?’
Wasa Sentential Subject Islands

Wh-items cannot surface inside of sentential subjects in Wasa:

(43) a. *[Sɛ hwae na o-kum akoko no] yɛɛ Ama hum?
    COMP who FOC 3SG-kill.PST chicken the do.PST A. body

    b. *[Sɛ Kofi kum akoko no ehĩ/mmɛре ben/kwaе ben so ] yɛɛ Ama hum?
    COMP K. kill.PST chicken the where/time which/road which on do.PST A. body
Asante Adjunct Clause Islands

In Asante Twi, wh-items cannot surface inside of a temporal adjunct clause island, which has the form of a relative clause:

(44) a. *Na mee sua ade [abere aa hena bɔɔ Ama no]
PST 1ST.SG study.PROG thing time REL who hit.PST A. the
Intended: ‘I was studying when WHO hit Ama?’

b. *Na mee sua ade [abere aa Kofi bɔɔ hena no]
PST 1ST.SG study.PROG thing time REL K. hit.PST who the
Intended: ‘I was studying when Kofi hit WHO?’
While Krachi allows for wh-items to surface inside of islands (45a), wh-in-situ is not completely immune to island effects.

Surprisingly, if the island is embedded within another island (45b), the result is ungrammatical (45c):

(45) a. [Ke {ɔtʃw  ke  c-mò  bwatéó} bò  n̩fì] ɛ-wa ŋwaŋwa.
    COMP  woman  COMP  PST-kill  chicken  LOC  here  PST-be  surprising
    ‘[That the {woman that killed the fowl} ] is here was surprising.’

b. [Sentential Subject {Relative Clause} ]

c. * [Ke {ɔtʃw  ke  c-mò  ne} bò  n̩fì] ɛ-wa ŋwaŋwa?
    COMP  woman  COMP  PST-kill  what  LOC  here  PST-be  surprising
    Intended:  ‘[That the {woman that killed what} is here] is suprising?’
    (‘Which x is such that the fact that the woman that killed x is here is surprising?’)
French Islands-in-Islands

The *islands-in-islands* facts from Krachi are similar to those in French, as reported in Obenauer 1994.

Wh-movement and wh-in-situ are possible in French:

    where have-you found it
    ‘Where did you find it?’

    b. *Tu as trouvé ça *ôù* (Obenauer 1994, p. 291: 20c)
    you have found it where
    ‘Where did you find it?’

NB: All glossing and translations from Obenauer are ours.
French Islands-in-Islands

Similar facts obtain for wh-adjuncts:

(47) a. *Combien* as-tu payé ce livre
    how.much have-you paid this book
    ‘How much did you pay for this book?’

    b. Tu as payé ce livre *combien?*
        you have paid this book how.much
        ‘How much did you pay for this book?’

    (Obenauer 1994, p. 291: 19f)

    (Obenauer 1994, p291: 20f)
It is possible to have wh-in-situ in embedded clauses in French:

(48) a. Il pense qu’il serait plus prudent de [passer par Arvieux et le col d’Izoard] he thinks that-it would.be more prudent de pass.INF through A. and the pass of’Izoard ‘He thinks that it would be more prudent [to go through Arvieux and the Izoard pass]’ (Obenauer: 25a’, p. 295)

b. Tu pense qu’il serait plus prudent de [passer par où]? you think that-it would.be more prudent de pass.INF through where ‘Where do you think that it would be more prudent to pass through?’ (Obenauer: 26a’, p. 295)
French Islands-in-Islands

It is also possible for a wh-item to surface in-situ inside of an island, such as an adverbial clause:

(49) a. *Qui$_i$ s’est-il défendu [en accusant e$_i$]? (Obenauer: 28a, p. 296)
    who self’is-he defended by accusing

    b. Il s’est défendu [en accusant qui]? (Obenauer: 28b, p. 296)
    he self’is defended by accusing who
    ‘He defended himself by accusing who?’
French Islands-in-Islands

However, when a wh-item is in an island inside of an island, the result is ungrammatical:

(50) a. Contexte: Max a failli désespérer, mais finalement il est tombé sur la solution par hasard
    Context M. has almost despair but finally he is fallen on the solution by chance
    ‘Context: Max almost fell into despair, but finally he came upon the solution by chance.’

    b. Il est tombé sur la solution [\(\alpha\) en faisant quoi]?
       he is fallen on the solution by doing what
       ‘He came upon the solution by doing what?’

    c. *Il a failli désespérer [\(\beta\) avant de tomber sur la solution [\(\alpha\) en faisant quoi]]?
       he has almost despair.INF before de fall.INF on the solution [ by doing what

NB: These examples correspond to Obenauer’s (29), p. 296
French Islands-in-Islands

Similar facts obtain with complex NPs. Consider the context in (51a):

(51) a. Contexte: Je connais des gens qui ont de la place chez eux
   context I know some people who have de the space home their
   ‘I know people who have space in their home.’

If the *wh* is embedded in one island, the result is grammatical:

b. Vous connaissez [NP des gens qui pourraient héberger combien de personnes]?
   you know some people who could host how many de people
   ‘You know people who could host how many people?’

c. *Vous connaissez [NP des gens qui ont [NP une maison où héberger combien de personnes]]?*
   you know some people who have a house where accommodates how many de people
## Summary: Wh-in-situ in Islands

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Intervention Effects

Bono allows for embedded in-situ *wh*, but not in islands!

Why this effect?

• The effect cannot be blamed on the prosody: Bono allows *wh* in-situ in embedded clauses, but not in islands.

• The Bono, Wasa, and Asante, facts represent a type of *intervention* effect: the *wh*-item cannot be in the c-command domain of particular operators (Beck 1996).

  • Relative clauses involve a relative operator in SpecCP ($Op_{REL}$).


In the cases of Bono, Wasa, and Asante Twi, *wh*-in-situ is constrained by syntactic/semantic properties.
Intervention Effects

We might therefore look for other operators/elements that constrain wh-in-situ.

• Generally, an intervention effect arises when one of a certain class of items, an intervener, c-commands a wh-expression on the surface.

Intervention Configuration:

\[(52) \quad * \text{[...intervener [...wh-item...]]} = \]

\[\text{Intervener} \]

\[\text{........} \]

\[\text{wh-item} \]

Common cross-linguistic interveners: negation, only, even, every/all, always, often
An intervention effect in German:

(53) a. Wen hat wo niemand gesehen? (Beck 1996: 1a)
   who.ACC has where nobody.NOM seen
   ‘Who did nobody see where?’

   b. *Wen hat niemand wo gesehen? (Beck 1996: 1b)
      who.ACC has nobody.NOM where seen
      Intended: ‘Who did nobody see where?’

• Wh- item wo ‘where’ c-commands the negative expression (53a): **Grammatical**

• Negative expression c-commands the wh- item (53b): **Ungrammatical**
Intervention Effects

Two major classes of analysis:

• **Intervention effects are syntactic**: Beck 1996, Hagstrom 1998, Pesetsky 2000
  
  • A wh-expression must move/agree with a +Q complementizer. Interveners disrupt the movement/agreement relation between the [+Q]C° and wh-item.

• **Intervention effects are semantic**: Beck 2006, Cable 2007
  
  • When an intervener c-commands the wh-item, the result is a semantically uninterpretable string and the derivation crashes.
In what follows, we show that:

• All four languages exhibit intervention effects

• The set of interveners varies across the languages
French: Negation as an Intervener

French (like Krachi, Bono, Wasa, and Asante Twi) allows for wh-in-situ and wh-movement:

(54) a. Jean mange quoi?  
    J. eat.3sg what  
    ‘What does Jean eat?’

b. Qu’est-ce que Jean mange?  
    what’is-it that J. eat.3sg  
    ‘What does Jean eat?’
Bošković 1997 observes that when negation c-commands a wh-expression in French, the result is highly marginal or ungrammatical ((55)a) and wh-movement becomes obligatory ((55)b):

(55) a. ?*Jean ne mange pas quoi?  
   J. NEG eat.3SG NEG what  
   ‘What does Jean not eat?’

b. Qu’est-ce que Jean ne mange pas?  
   what’is-it that J. NEG eat.3SG NEG  
   ‘What does Jean not eat?’
In Krachi, like French, negation cannot c-command a wh-item:

(56) a. *ʧɪw ɛ-n-dìkɛ ne?
    woman PST-NEG-cook what

b. Ne ʧɪw ɛ-n-dìkɛ?
    what FOC woman PST-NEG-cook
    ‘What didn’t the woman cook?’

c. *ʧɪw ɛ-n-dìkɛ kudʒó nɛnɛ?
    woman PST-NEG-cook yam how

d. Nɛnɛ ʧɪw ɛ-n-dìkɛ kudʒó?
    how FOC woman PST-NEG-cook yam
    ‘How didn’t the woman cook yam?’
Bono: Negation as an Intervener

In Bono, a wh-expression cannot be c-commanded by negation:

(57) a. *Bema kě en-kum ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̃ ̢
Wasa: Negation as an Intervener

In Wasa, a wh-item cannot be c-commanded by negation:

(58) a. *Bɛrɛma no n-kum den/ɛdɪɛn?
    man the NEG-kill.PST what

    b. Den ne bɛrɛma no n-kum?
       what FOC man the NEG-kill.PST
       ‘What didn’t the man kill?’

    c. *Bɛrɛma no n-kum akoko no ɛhĩfa/ mmɛrɛ bɛn/sen?
       man the NEG-kill.PST chicken the where/when/how

    d. ɛhĩfa/mmɛrɛ bɛn/sen ne bɛrɛma no n-kum akoko no?
       where/when/how FOC man the NEG-kill.PST chicken the
       ‘Where/when/how didn’t the man kill the chicken?’
Surprisingly, the wh-item *who* can occur in the scope of negation in Wasa:

(59) Bɛrɛma no n-hu hwaɛ?  
    man the NEG-see who  
    ‘Who did the man not see?’
In Asante Twi, wh-items cannot be c-commanded by negation:

\[(60) \quad \text{a. } *\text{Kofi } a\text{-}m\text{-bɔ } \text{hena?} \]

\[\text{K. PST-NEG-hit who} \]

\[\text{b. } \text{Hena na Kofi } a\text{-}m\text{-bɔ } (\text{no})? \]

\[\text{who FOC K. PST-NEG-hit 3^{rd}.SG} \]

‘Who didn’t Kofi hit?’

\[\text{c. } *\text{Kofi } a\text{-}n\text{-ko } \text{he/(ε)berɛ ben/sɛn?} \]

\[\text{K. PST-NEG-go where/when/how} \]

\[\text{d. He/(ε)berɛ ben/sɛn } \text{na Kofi } a\text{-}n\text{-ko?} \]

\[\text{where/time which/how FOC K. PST-NEG-go} \]
In both Korean and French, a wh-item cannot be c-commanded by an *only*-phrase:

**Korean**
(61) a. *?Minsu-man nuku-lûl manna-ss-ni?  
    Minsu-only who-acc meet-past-Q  
    ‘Who did only Minsu meet?’

  b. **Nuku-lûl** minsu-man manna-ss-ni?  
    who-acc minsu-only meet-past-Q  
    ‘Who did only Minsu meet?’

**French**
(62) a. *Seulment* Jean arrive à faire quoi?  
    only Jean arrives to do what  
    ‘What does only Jean manage to do?’

  b. **Qu’est-ce que seulment** Jean arrive à faire?  
    what is-it that only Jean arrives to do  
    ‘What does only Jean manage to do?’
Next, we consider ‘only’ phrases in Krachi:

(63) Ɔɲɪ́nó dòò ğì c-mò bwatéó.
    man only FOC PST-kill chicken
    ‘Only the man killed the chicken.’

In Krachi, ‘only’ phrases can c-command wh-items:

(64) a. Ne ğì Ɔɲɪ́nó dòò c-mò?
    what FOC man only PST-kill
    ‘What did only the man kill?’

  b. Ɔɲɪ́nó dòò ğì c-mò ne?
    man only FOC PST-kill what
    ‘What did only the man kill?’
Adjuncts too can appear under ‘only’ phrases:

(65) a. \textit{Kɛmeké/nɛne} ŋi ɔŋinó dòò c-mò bwatéó?
   when/how FOC man only PST-kill chicken
   ‘When/how did only the man kill the chicken?’

   b. ɔŋinó dòò c-mò bwatéó \textit{Kɛmeké/nɛne}?
   man only PST-kill chicken when/how
   ‘When/how did only the man kill the chicken?’
In Bono, a wh-expression can be c-commanded by an *only*-phrase:

(66) a. Bɛma kɛ nkwaan kum akoko kɛ.
  man the only kill.PST chicken the
  ‘Only the man killed the chicken’

(67) a. Abe ne bɛma kɛ nkwaan kumiye?
  what FOC man the only kill.PST
  ‘What did only the man kill?’

b. Bɛma kɛ nkwaan kum abe?
  man the only kill.PST what
  ‘What did only the man kill?’
‘Only’ phrases have no effect on adjunct wh-items either:

(68) a. Sen/ahĩ/dabe ne bɛma kẽ nkwaan kum akoko kẽ? how/where/when FOC man the only kill.PST chicken the ‘How/where/when did only the man kill the chicken?’

b. Bɛma kẽ nkwaan kum akoko kẽ se/ahĩ/dabe? man the only kill.PST chicken the how/where/when ‘How/where/when did only the man kill the chicken?’
Wasa too shows no intervention effect with ‘only’:

(69) a. Bɛɛma no nkwaan kum akoko no. man the only kill.PST chicken the ‘Only the man killed the chicken.’

b. Ḗdiën na bɛɛma no nkwaan kumie? what FOC man the only kill.PST ‘What did only the man kill?’

c. Bɛɛma no nkwaan kum den? man the only kill.PST what ‘What did only the man kill?’
In Wasa, adjuncts are immune to intervention by ‘only’:

(70) a. Kwae bɛn so/ɛhifa na bɛɛma no nkwaan kum akoko no? road which on/where FOC man the only kill.PST chicken the ‘How/where did only the man kill the chicken?’

b. Bɛɛma no nkwaan kum akoko no kwae bɛn so/ɛhifa? man the only kill.PST chicken the road which on/where ‘How/where did only the man kill the chicken?’
Asante: ‘Only’ as an Intervener

Unlike Krachi, Bono, and Wasa, Asante Twi wh-items cannot surface in the c-command domain of an only-phrase:

(71) a. Hena na Kofi nkoara bɔɔ (no)?
   who na Kofi only hit.PST 3sg
   ‘Who is it that Kofi didn’t hit?’

   b. *Kofi nkoara bɔɔ hena?
      Kofi only hit.PST who
      ‘Who did only Kofi hit?’
Japanese: ‘Every’ as an Intervener

In Japanese, a universal quantifier acts as an interverner:

(72) a. ?* Dono hito-mo nani-o yonda no?  (Pesetsky 2000: 164a)
    every person what-ACC read Q
    ‘What did every person read?’

    b. Nani-o dono hito-mo yonda no?  (Pesetsky 2000: 165b)
      what-ACC every person read Q
      ‘What did every person read?’
Unlike Japanese, Krachi wh-items can surface in the c-command domain of a universal quantifier:

(73) a. Ne ji ɔτʃi biàà ɛ-diké?
    what FOC woman every PST-cook
    ‘What did every woman cook?’

b. ɔτʃi biàà ɛ-diké ne?
    woman every PST-cook what
    ‘What did every woman cook?’

c. Frɛ/kɛmekɛ ji ɔτʃi biàà ɛ-diké kudʒó?
    where/when FOC woman every PST-cook yam
    ‘Where/when did every woman cook yam?’

d. ɔτʃi biàà ɛ-diké kudʒó nfrɛ/kɛmekɛ?
    woman every PST-cook yam where/when
    ‘Where/when did every woman cook yam?’
In Bono, ‘every’ is not an intervener:

(74) a. Bɛma biaa huu hwan?
  man every see.PST who
  ‘Who did every man see?’

  
  b. Hwan ne bɛma biaa huye?
  who FOC man every see.PST
  ‘Who did every man see?’

  
  c. Dabe/ahīfa ne bɛma biaa kane nwoma kɛ?
  when/where FOC man every read.PST book the
  ‘When/where did every man read the book?’

  
  d. Bɛma biaa kane nwoma kɛ dabe/ahīfa?
  man every read.PST book the when/where
  ‘When/where did every man read the book?’
In Wasa, ‘every’ does not count as an intervener:

(75) a. Mmɛɛma no nyinaa kae krataa no.
    men the all read.pst book the
    ‘All the men/every man read the book.’

    b. Den na mmɛɛma no nyinaa kaeyɛ?
       what foc men the all read.pst
       ‘What did all the men read?’

    c. Mmɛɛma no nyinaa kae den?
       men the all read.pst what
       ‘What did all the men read?’
Wasa: ‘Every’ and Intervention

Wasa adjuncts are unaffected by being commanded by ‘every’:

(76) a. Ɛhifa/mmɛɾɛ bɛn na mmɛɾɛma no nyinaa kae krataa no where/time which FOC men the all read.PST book the ‘Where/when did all the men read the book?’

b. Mmɛɾɛma no nyinaa kae krataa no Ɛhifa/mmɛɾɛ bɛn? men the all read.PST book the where/time which ‘Where/when did all the men read the book?’
Asante: ‘Every’ and Intervention

In Asante Twi, universal quantifiers do not act as interveners:

(77) a. Osuani biara bɔɔ hena?
   student every hit.PST who
   ‘Who did every student hit?’

   b. Hena na osuani biara bɔɔɛ?
   who FOC student every hit.PST
   ‘Who did every student hit?’
In French, wh-items cannot be c-commanded by a focused phrase with *even*:

(78) a. *Même JEAN arrive à faire quoi?
    even J. arrives to do what

    b. Qu’est-ce que même JEAN arrive à faire?
    what’s-it that even J. arrive to do
    ‘What does even JEAN manage to do?’

NB: Adapted from Mathieu 1999, (13a)-(13b).
In Krachi, a wh-expression \textit{can} be c-commanded by a focus phrase with \textit{even}:

(79) a. ɔɲínó kóráá ε-mò bwatóé.
    man even PST-kill chicken
    ‘Even the man killed a chicken.’

   b. Ne jì ɔɲínó kóráá ε-mò?
      what FOC man even PST-kill
      ‘What did even the man kill?’

   c. ɔɲínó kóráá ε-mò ne?
      man even PST-kill what
      ‘What did even the man kill?’
‘Even’ phrases have no effect on adjuncts in Krachi:

(80) a. ṁɛɛɛ/kɛmekɛ́ jì ọgịno kóráá ɛ-mò bwatéó?
    how/when FOC man even PST-kill chicken
    ‘How/when did even the man kill the chicken?’

    b. ọgịno kóráá ɛ-mò bwatéó ṁɛɛɛ/kɛmekɛ́?
    man even PST-kill chicken how/when
    ‘How/when did even the man kill the chicken?’
In Asante, wh-items *cannot* surface in the c-command domain of an *even*-phrase:

(81) a. *Kofi mpo bɔɔ hena?
    Kofi even hit.pst who
    ‘Who did even Kofi hit?’

    b. Hena na Kofi mpo bɔɔ (no)?
    who foc Kofi even hit.pst 3sg
    ‘Who is it that even Kofi hit?’
A Krachi-specific Intervener

In Krachi, the modal *fiŋki “might” acts as an intervener:

(82) a. *ćeʧiʋ  fiŋki  kɛ-mo  ne?  
    woman might  FUT-kill  what
    Might c-commands what

b. Ne  jì  ćeʧiʋ  fiŋki  kɛ-mo?  
    what  FOC woman  might  FUT-kill
    ‘What might the woman kill?’
    What c-commands might
# Summary: Intervention in Tano

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Overall Summary

• The Tano interrogative rainbow:
  • Full Movement
  • Wh-in-situ (in matrix and embedded clauses)
  • Partial wh-movement

• We’ve argued that unweaving these patterns requires a holistic interface-oriented approach to language documentation and analysis:
  • Wh-in-situ in embedded clauses implicates syntax/phonology interface.
  • Intervention effects implicate the syntax/semantics interface.
Yε daa se!