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Variation and creativity with radically afeatureal Roots

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WORKSHOP At the Roots

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1. Minimalist Distributed Morphology

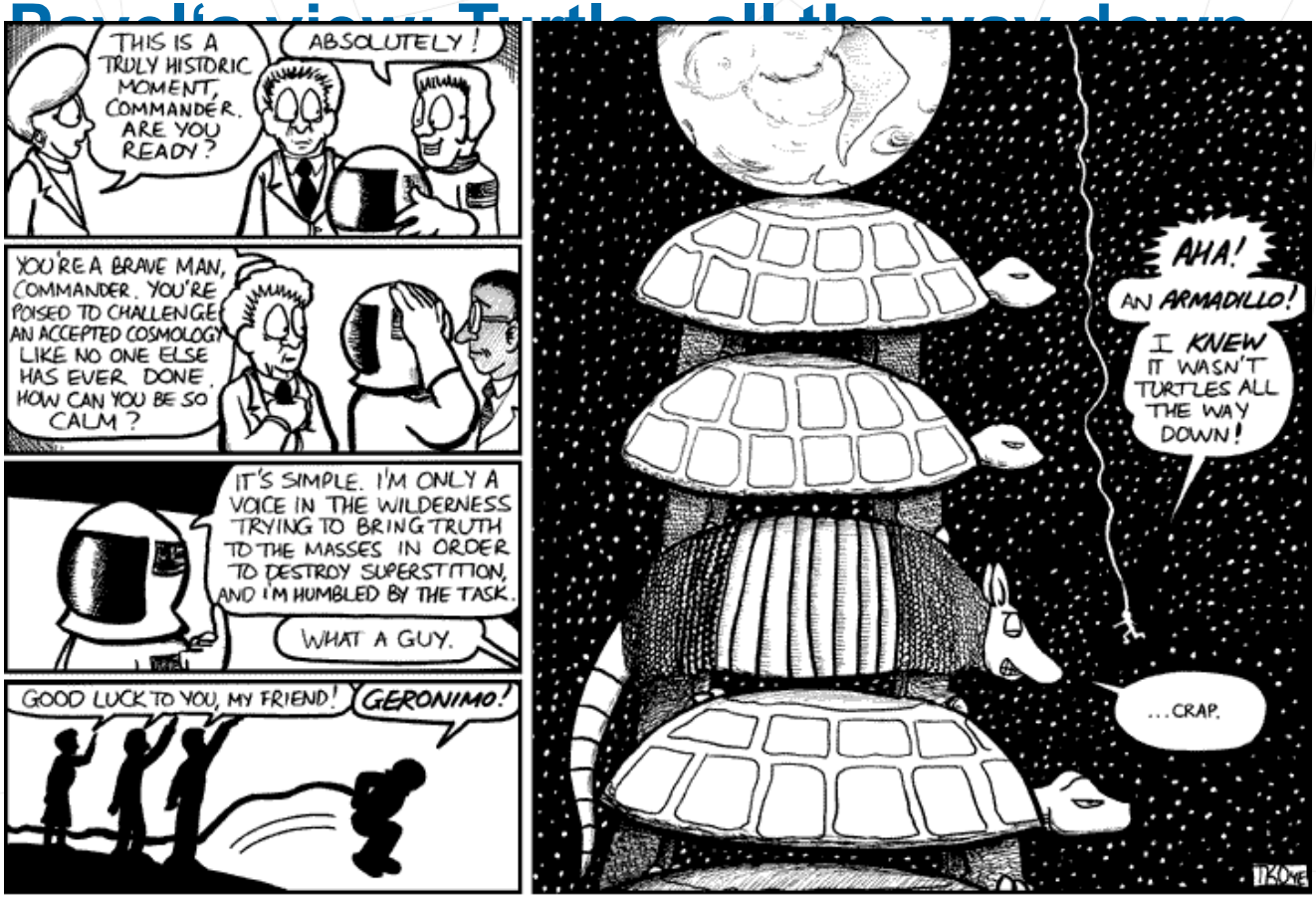
➢ The Minimalist Program (MP) (Chomsky 1995; 2000; 2001; 2008; 2013)

- ❖ A **biolinguistic** perspective: the human specific and universal trait of acquiring, understanding, and using language is a biological system internal to the mind/brain of individuals (I-language) (Chomsky 1986; Hauser et al. 2002; Chomsky 2005; Berwick & Chomsky 2016).
- ❖ **Strong Minimalist Thesis (SMT)**: the narrow faculty of language is a computationally "perfect" mapping between the interfaces with language external motor/perceptual (PF) and cognitive/intensional (LF) systems.
- ❖ The syntactic operation **Merge** builds recursive hierarchical structures by combining two syntactic objects, either formatives or an object already constructed by Merge, to form a labelled set. The label is selected by a minimal search algorithm.
- ❖ Syntactic structures are spelled out to the interfaces for LF interpretation and PF externalization. SMT is evidently false for PF, so **narrow syntax builds LF**.

0. Review from the last times

- We have dispensed with the traditional notion of roots in morphology, reserving the term for a certain theoretical concept in syntax.
- Basic question: what is a syntactic Root? In other words, what is a lexical morpheme?
- What is the locus of form and idiosyncratic—i.e. non-compositional, non-grammatical, truth conditional—meaning?

0. Pavel's view: Turtles all the way down



1. Minimalist Distributed Morphology

- **Distributed Morphology (DM)**
  (Halle & Marantz 1993; Embick & Noyer 2007; Harley 2014; Nevins 2015)
  - "Word" formation is syntactic, i.e., **morphology is syntax**.
  - There is **no lexicon.**
    - There is **no lexicon** in the sense of a pre-syntactic structure building component.
    - There is **no lexicon** in the sense of a single pre-syntactic location for storage of phonological, semantic, categorical, or grammatical features.
    - There is **no lexicon**!
  - Phonological exponence for terminals is determined post-syntactically, i.e. late insertion.

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1.1 A strict 'Y' model

(1) MP-DM 'Y' model, with lists

1.2 List 1: The Formatives

(2) a. **Roots**: no categorial, phonological, semantic, or grammatical features (**no lexicon**)

E.g.: ... $\sqrt{}_{713}$, $\sqrt{}_{085}$, $\sqrt{}_{074}$ ...

b. **Feature bundles**: grammatical and categorial features, supplied by Universal Grammar and 'bundled' into terminal heads during acquisition

E.g.: ... *v, n*, $\text{Num}_{[\text{-singular}]}$, $\text{T}_{[\text{+past}]}$, $\text{D}_{[\text{+definite}]}$ ...

- Note the "bundling question": does syntax operate on feature bundles, as standardly assumed (e.g., Chomsky 2013, Parrott 2016), or single features, as in e.g., nanosyntax (e.g., Starke 2009; Caha 2009; Blix 2016)?

1.3 Narrow syntax: Structure building

(3) a. **Merge**: A single operation Merges two objects, Formatives ('heads') or phrases (objects already Merged), into a labeled phrase; the label is determined by a 'minimal search' algorithm.

E.g.: ... $\sqrt{}_{713}$, $D_{[+definite]}$, *n* …

Merge *n*, $\sqrt{}_{713}$ = $[_{n}\ n\ [\sqrt{}_{713}]]$

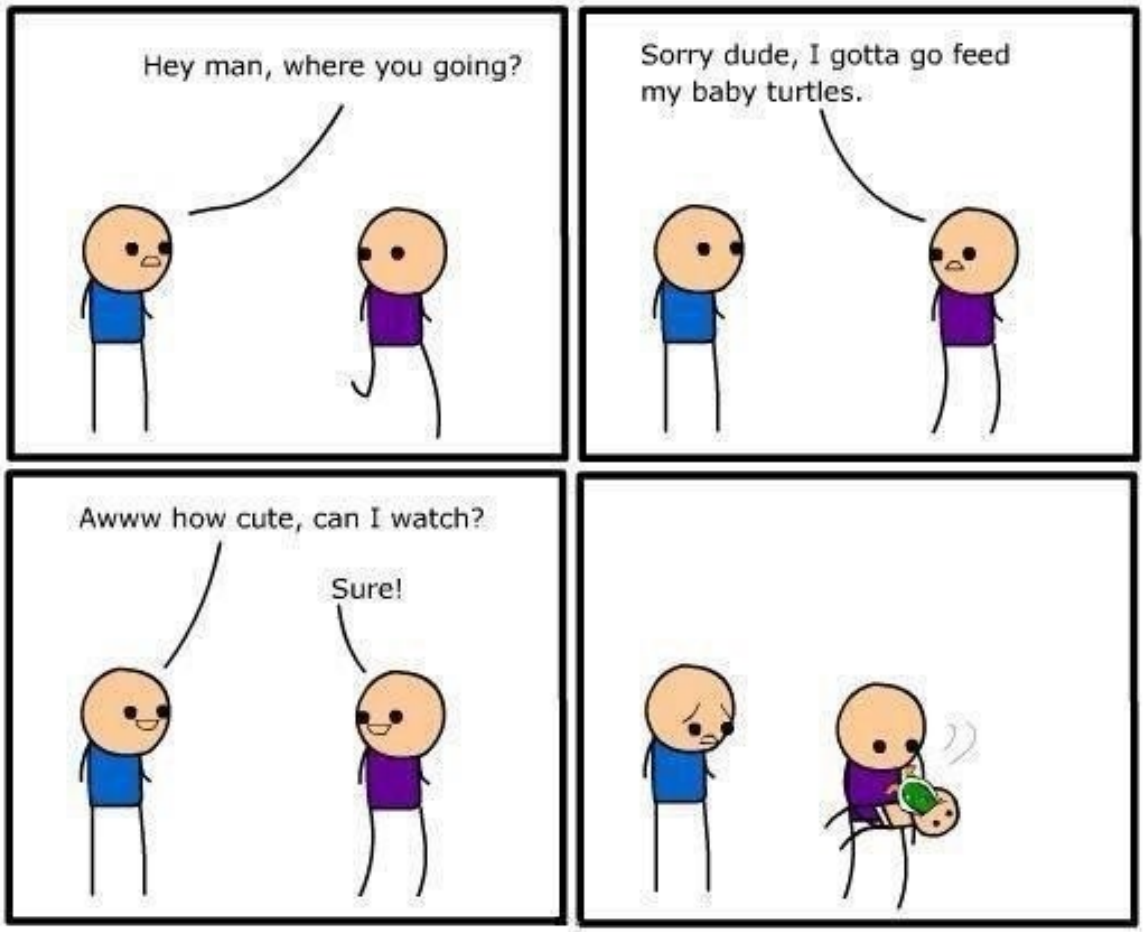
Merge $D_{[+definite]}$, $[_{n}\ n\ [\sqrt{}_{713}]]$ = $[_{DP}\ D_{[+definite]}\ [_{n}\ n\ [\sqrt{}_{713}]]]$)

'the tea'

b. **Agree**: feature matching and valuation under hierarchical dominance (c-command)

E.g.: $[_{TP}\ T_{[+past,\ u\varphi]} \dots [_{DP}\ D_{[+definite,\ \varphi]}\ [_{n}\ n\ [\sqrt{}_{713}]]]]$

- Note the "agreement question": is agreement an operation of narrow syntax, as standardly assumed (e.g., Chomsky 2000; Pesetsky & Torrego 2007; Zeijlstra 2012), or is it post-syntactic, as some have suggested (Bobaljik 2008; Parrott 2009)?


Hey man, where you going?
Sorry dude, I gotta go feed my baby turtles.
Awww how cute, can I watch?
Sure!

Is There a Bald Eagle Serial Killer on the Loose?

U.S. NEWS

1.4 Spellout to PF: Morphology

(4) a. **Linearization**: This is the only post-syntactic operation that is indispensable for externalization, since **syntax is non-linear but PF must be**. There is reason to think that linearization is simultaneous to or interleaved with Vocabulary Insertion (e.g., Embick & Noyer 2001; Embick 2007).

b. **Impoverishment**: This post-syntactic operation deletes features from fully specified terminals; Impoverishment is driven by **language-specific morphotactic markedness** and constrained by morphosyntactic locality (e.g., Halle 1997; Noyer 1998; Nevins 2011).

E.g., Categorical [±sg] Impoverishment rule for English T [±past φ]

[±sg] → [Ø] / [+part –auth __]

- Morphological operations may apply after syntax in order to prepare hierarchical structures for externalization. The nature and number of post-syntactic operations and their order of application is under investigation (e.g., Kandybowicz 2007; Arregi & Nevins 2012; Parrott 2015).

1.5 List 2: The Vocabulary

(5) a. **Vocabulary Items**: The Vocabulary are a list of phonological exponents and instructions for their insertion into terminals. Vocabulary consist of substantive features identifying a terminal (left of the arrow) and phonological features (right of the arrow).

E.g., Vocabulary for English T [BE +past φ]

[+sg]	⇔	/wʌz/
elsewhere	⇔	/wəɹ/

b. **The Subset Principle for Vocabulary Insertion (Halle 1997)**:

"**The Subset Clause**: A phonological exponent realizes a morpheme in the terminal string if the item matches all or a subset of the grammatical features specified in the terminal morpheme. Insertion does not take place if the Vocabulary item contains features not present in the morpheme.

The Maximal Subset Clause: Where several Vocabulary items meet the conditions for insertion, the item matching the greatest number of features specified in the terminal morpheme must be chosen."

1.6 Why late insertion? Allomorphy!

- Exponence depends on syntactic context, therefore phonological features are not present before syntax.

(6) a. kid – kids

b. child – children – *childs

[-sg] ⇔ /ən/ / [[{…$\sqrt{}_{074}$, $\sqrt{}_{565}$ …} *n*] __]

...

elsewhere ⇔ /z/

c. see – saw

d. buy – bought

e. talk – talked

T[+past] ⇔ /Ø/ / [[{…$\sqrt{}_{943}$, $\sqrt{}_{397}$ …} *v*] __] ‘strong’

T[+past] ⇔ /t/ / [[{…$\sqrt{}_{820}$, $\sqrt{}_{047}$ …} *v*] __] ‘weak’

elsewhere ⇔ /əd/

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1.6 Why late insertion? Allomorphy!

- Handling allomorphy in a pre-syntactic lexicon is of course possible but not parsimonious because it unnecessarily recapitulates syntax.
- **No lexicon!**

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2. Roots

- Marantz 1996, 1997; Harley 2014 (cf. responses in the same volume)
  - Roots are '**blank**' pieces of structure.
  - Roots have **no features**, only a numerical index corresponding to Vocabulary and Encyclopedia entries (...$\sqrt{}_{713}$, $\sqrt{}_{085}$, $\sqrt{}_{074}$ …).
    - No category
    - No phonology
    - No semantics
    - No grammatical features
  - Roots cannot be pronounced or interpreted without a syntactic structural context…like Schrödinger's cat (Nevins 2015)!


Schrodinger's cat
wunderz how YOU liekz it?!?
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3. Roots

- Although this view may appear excessively radical, violating commonly felt lexicalist intuitions, there is plentiful evidence that the listed pronunciation or meaning of Root morphemes depends on their local morphosyntactic context.

3.1 Roots at PF

- Is there late insertion for Roots, i.e., does Root suppletion exist? **Yes!**

(7) a. go – went – *goed

$[\sqrt{}_{231}]$ ⇔ /wen/ / [[___ *v*] T[+past]]

- See Harley (2014) for results of a cross linguistic survey of Root suppletion.

(8) a. steal – thief – *stealer

$[\sqrt{}_{348}]$ ⇔ /steal/ / [___ *v*]

$[\sqrt{}_{348}]$ ⇔ /thief/ / [[___ *v*] $n_{\text{-er}}$]

- There is no blocking because there are no words and no lexicon (Embick 2007a; Embick & Marantz 2008).

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3.1 Roots at PF

- Notice that the default (least specified) exponent ‘steal’ reappears when the Root is spelled out in a different (morpho)syntactic context!
- English incorporation compounds

(9) a. kill stealer – *kill thief

b. thunder stealer – *thunder thief

- A baseball example

(10) a. fly – flew – *flied

b. pop fly – pop flied – *pop flew

3.1 Roots at PF

- Examples from Korean (Choi & Harley 2016: 19)

(9') *Examples of honorific suppletion:*

a. *ca-* 'sleep' ~ *cwumwusi-* 'sleep.HON'

b. *mek-* 'eat' ~ *capswusi-* 'eat.HON'

c. *iss-* 'exist' ~ *kyeysi-* 'exist.HON'

(10') *Examples of negative suppletion:*

a. *al-* 'know' ~ *molu-* 'know.NEG'

b. *iss-* 'exist' ~ *eps-* 'exist.NEG'

[https://en.wikipedia.org/wiki/Korean_honorifics]

3.2 List 3: The Encyclopedia, or Roots at LF

- In parallel at LF, the truth-conditional interpretation of Roots depends on their morphosyntactic context, as listed in the Encyclopedia.
- The Encyclopedia is a list of interpretations for roots in morphosyntactic structural context. In other words, there is allosemy of roots!

(11) 'throw' (adapted from Harley 2014, Nevins 2016)

$[\sqrt{}_{795}]$	⇔	'a light blanket'	/	[___ *n*]
	⇔	'vomit'	/	[[___ *v*] p_{up}]
	⇔	'launch by hand'	/	[___ *v*]

(12)
a. schwindelig (Adj) ⇔ 'dizzy'
b. der Schwindel (N) ⇔ 'swindle', 'dizziness'
c. zu schwindeln (V) ⇔ 'to swindle'
d. die Schwineligkeit (N) ⇔ 'dizziness', '*swindle'

3.2 List 3: The Encyclopedia, or Roots at LF

- Look at these beautiful Czech examples!

(11') a. ten detektiv
⇔ 'the investigator (male or female)'

b. ta detektivka
⇔ 'the detective genre'
⇔ 'female investigator'

(12') a. vyprostit ⇔ 'extricate'

b. vyprošťovák ⇔ 'hangover cure, hair of the dog', literally 'extricator'

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3.2 List 3: The Encyclopedia, or Roots at LF

- Many Roots have no interpretation outside of a particular morphosyntactic context. These are known as ‘cranberry morphemes’ (because *cran) but Harley (2014) calls them ‘caboodle items’ because they need not be bound morphemes!
- Examples abound!

3.2 List 3: The Encyclopedia, or Roots at LF

(13) reckless – *reck/*reckful

= [$\sqrt{}_{497}$] ⇔ ‘caution’ / [___ $adj_{\text{-less}}$]

(14) a. kit and caboodle (*caboodle) ‘every last thing’

= [$\sqrt{}_{238}$] ⇔ ‘collection’ / [[$\sqrt{}_{\text{KIT}}$][Co^0[___]]]

b. chit chat (*chit)

= [$\sqrt{}_{559}$] ⇔ ‘trivial’ / [[___][$\sqrt{}_{\text{CHAT}}$]]

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3.2 List 3: The Encyclopedia, or Roots at LF

- At least since Marantz (1997), we have known that the domain for interpretation of Roots is syntactic and not limited to the 'word'. This domain is a *v*P (i.e., a phase). Therefore phrasal idioms do not involve **agentive** subjects.

(15) a. jump the shark 'become bad (TV)'
b. take a shower 'to shower'
c. the shit hit the fan 'the bad thing happened'
d. that ship has sailed 'the opportunity passed'

3.2 List 3: The Encyclopedia, or Roots at LF

- In some compound or phrasal idioms, both Roots receive a special interpretation in each other's context (16a-b); in others, only one Root does (16c-d).

(16) a. kick ('lose') the bucket ('life')
b. wall ('shy') flower ('person')
c. take ('climb') the stairs ('stairs')
d. bucket ('life') list ('list')


IN CASE OF FIRE, TAKE STAIRS
11/23
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3.3 Radically afeatural Roots!

- Numerous similar examples can be adduced in English and cross-linguistically.
- For this reason, we are empirically forced to admit some mechanism (here, late insertion of listed Vocabulary and Encyclopedia entries) for context-dependent allomorphy and allosemy of Roots.
- Pre-syntactic lexical storage of PF, LF, and categorial features of Roots thus constitutes an additional, unforced mechanism, which by parsimony should be eliminated in favor of late insertion for all Roots (Marantz 1996).
- The remaining, quantitative question of why many (or most?) Roots do not seem to have special context-dependent pronunciations or interpretations can plausibly be attributed to more general principles of acquisition (e.g., Yang 2016).

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4. Variation and the Encyclopedia

- We must distinguish inter- (crosslinguistic) and intra-individual (sociolinguistic) variation.
- In previous work I have argued that the mechanisms of variation are at the PF interface (Parrott 2009b,a; Nevins & Parrott 2010).
- What about variation in the meaning of words and phrasal idioms?

(17) a. disinterested 'not invested' or 'not interested'

b. enormity 'great evil' or 'enormousness'

c. beg the question 'raise the question' or 'assume the conclusion'

(http://tinyurl.com/p73hz92)


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"I haven't enjoyed myself since '93, and I'm comfortable being the disinterested jerk people hardly tolerate," Miller said from the back of the room.
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thehardtimes.net
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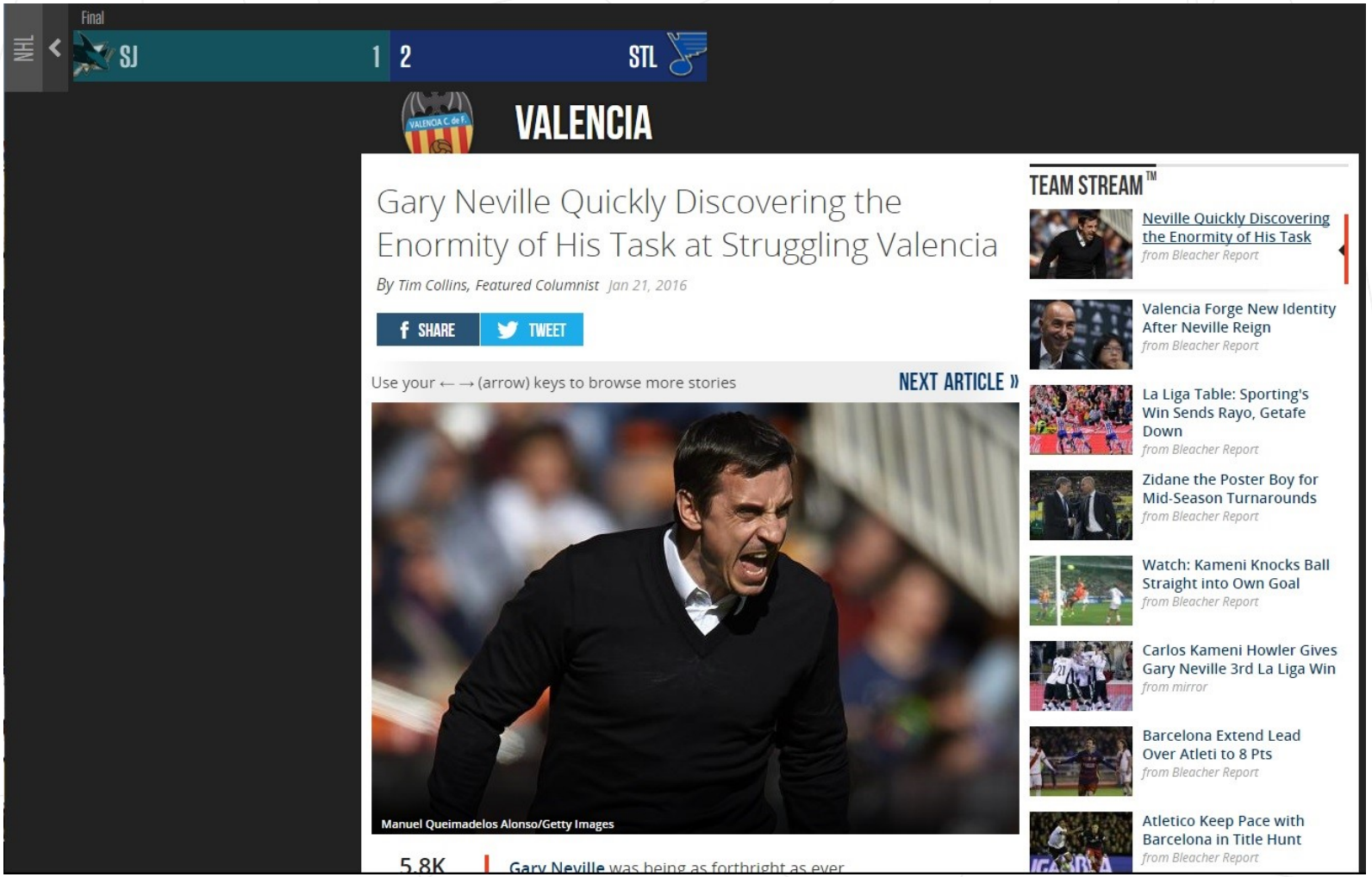
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Watch: Kameni Knocks Ball Straight into Own Goal
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Carlos Kameni Howler Gives Gary Neville 3rd La Liga Win
from mirror
Barcelona Extend Lead Over Atleti to 8 Pts
from Bleacher Report
Atletico Keep Pace with Barcelona in Title Hunt
from Bleacher Report

Alfred Pennyworth: Strange injuries, a non-existent social life, these things **beg the question** as to what exactly does Bruce Wayne do with his time and his money.
Bruce Wayne: And what does someone like me do?
Alfred Pennyworth: Drive sports cars, date movie stars, buy things that are not for sale... who knows, Master Wayne? You start pretending to have fun, you might even have a little by accident.


PLAYER IS BEGGING THE QUESTION
TRIED TO ASSUME THEIR
PREMISE WAS ALREADY CORRECT
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4. Variation and the Encyclopedia

- Accepting the radically afeatural Root hypothesis allows an appealing analysis of linguistic variation and creativity.
- For example, *disinterested* can mean 'not invested' if an individual has listed in her Encyclopedia a special interpretation for $\sqrt{}_{\text{INTEREST}}$ in the context of *dis-*; if not, the Root will have the default interpretation, yielding 'not interested'.
- For *beg the question,* both $\sqrt{}_{\text{BEG}}$ and $\sqrt{}_{\text{QUESTION}}$ can have a special contextual interpretation listed in their respective Encyclopedia entries ('assume the conclusion', like *kick the bucket*), or $\sqrt{}_{\text{BEG}}$ can have a special interpretation while $\sqrt{}_{\text{QUESTION}}$ gets the default ('raise the question', like *take the stairs*).

5. Linguistic creativity and humor

- Speakers can freely merge roots with novel syntactic structure and (re)populate their Encyclopedia. Consider comedy!

(18) a. "I catharted so hard!"

b. "Let's turn this debacle into a straight up bacle!"

c. "You cannot be seen stopping by for any chits and/or chats!" (a-c from Brooklyn Nine-Nine)

d. "voring" (backformed from 'carnivore')

- The humor comes from the fact that the new morphosyntactic context for a root is not already listed (i.e., it is unexpected and therefore funny).

5. More (!!) examples

(19) a. “He’s a **criminal** attorney.” (Breaking Bad)

b. “Gangsterka” (Czech film title)

c. ara fris (*fris) ‘not at all’ (Georgian)

d. consult the big ‘drink raki’ (Turkish)

e. niet mals ‘harsh’ (mals ‘tender’, Dutch)

f. ridiculize - ridicule

g. walker - pedestrian

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6. Conclusion

- Thus, word meaning and in fact linguistic creativity generally is possible because of hierarchal structure created by Merge (Berwick & Chomsky 2016).

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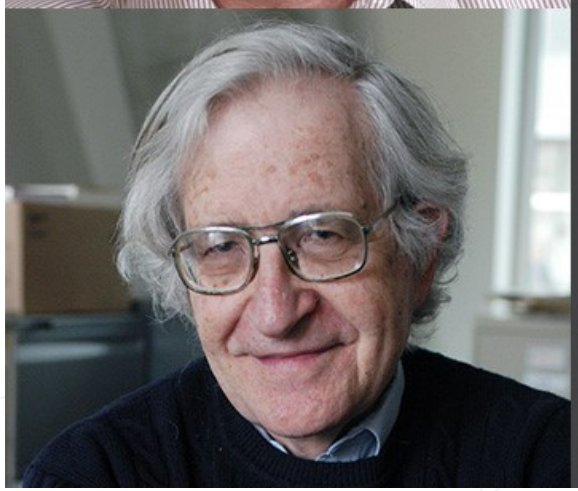

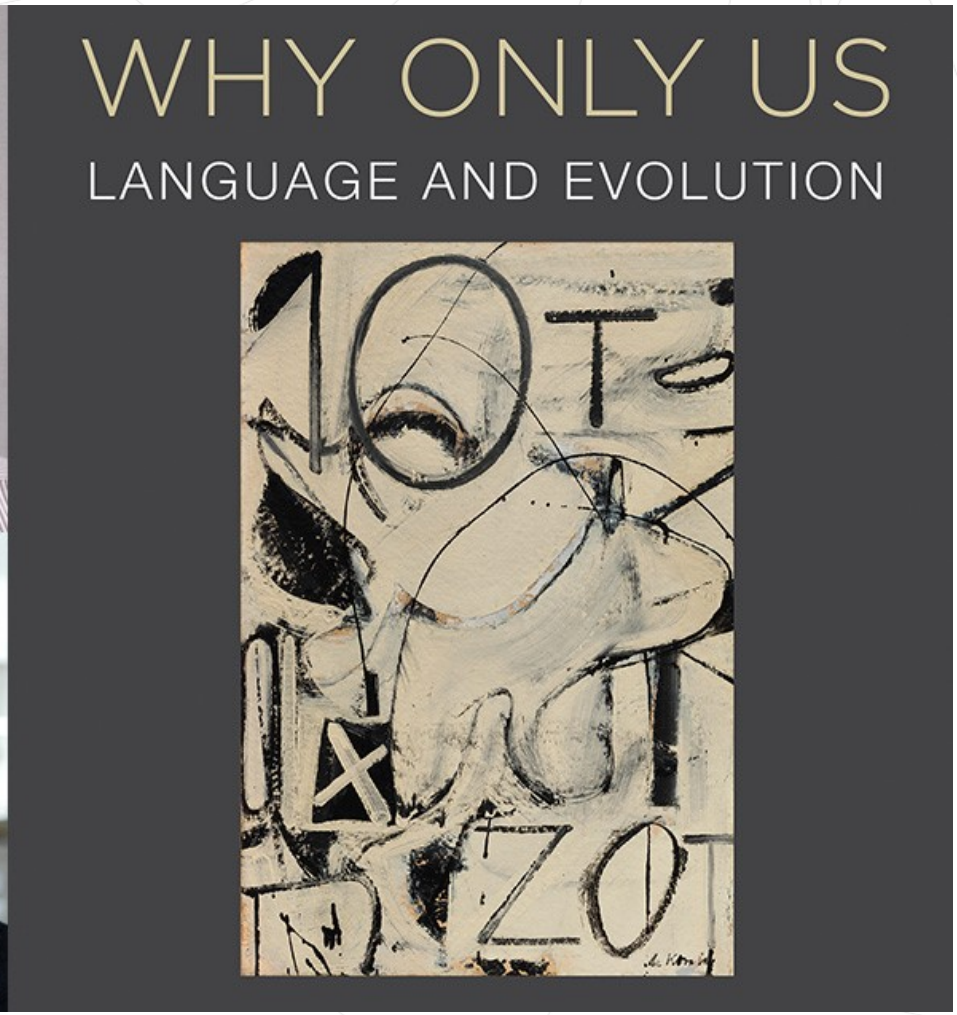

Jeffrey Keith Parrott, “Variation and creativity with radically afeatural Roots”, jkparrott@gmail.com

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4. Variation and the Encyclopedia

➢THANK YOU!