



## Characterizing quotation

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# Varieties of quotation

## Pure quotation (mention)

'Bachelor' has eight letters.

## Direct quotation (mention)

Quine says 'quotation has a certain anomalous feature'.

## Indirect quotation (use)

Quine says quotation has a certain anomalous feature.

## Mixed quotation (Davidson 1979)

Quine says quotation 'has a certain anomalous feature'.

Bush is proud of his 'eckullectic' reading list.

# Truth conditions of mixed quotation

Bush is proud of his 'eckullectic' reading list.

1. 'eckullectic' is used to mean  $f$ . ← mention
2. Bush is proud of his  $f$ (reading list). ← use

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Why **Bush's use**? Anaphora/presupposition resolved in parse.

What is **using to mean**? Utterance subevents, but not hierarchical.

Intuition: a context interprets a Gödel number; code generation.

Prevalence: curating meaning from other minds (elm, Aristotle).

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Quine says quotation 'has a certain anomalous feature'.

1. 'has a certain anomalous feature' is used to mean  $f$ .
2. Quine says quotation  $f$ .

Two dimensions of meaning:

1. Anaphoric presupposition (Geurts & Maier 2003);  
conventional implicature (Potts 2007)
2. 'At-issue' truth

## Well-formedness conditions of mixed quotation

1. \* Bush said his reading list 'eckullectic'.
2. \* Quine's 'has a certain anomalous feature' is trivial.
3. \* Bush said his reading list eclectic.
4. \* Quine's constitutes a knockdown argument is trivial.
5. \* Bush met the king of France.

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## This talk: **Generalized quotation**

**Syntax** Quoting categories embed quoted categories

**Semantics** Quoting contents are quoted characters (Kaplan)

**Other payoffs** Names and definitions (Kripke); unquotation;  
pure quotation; take over the world

## Starting with categorial grammar

$$A ::= A/B \ B$$
$$A ::= B \ B \backslash A$$
$$\text{DP} ::= \text{Bush}$$
$$(\text{DP} \backslash \text{S})/\text{S} ::= \text{says}$$
$$(\text{DP} \backslash \text{S})/\text{DP} ::= \text{is proud of}$$
$$\text{N}/\text{N} ::= \text{eclectic}$$
$$\text{N} ::= \text{reading list}$$



# Starting with categorial grammar

Abusing notation:  $\llbracket A \rrbracket$

$$A ::= A/B \quad B \qquad \llbracket A \rrbracket(w) = \llbracket A/B \rrbracket(w) (\llbracket B \rrbracket)$$

$$A ::= B \quad B \backslash A \qquad \llbracket A \rrbracket(w) = \llbracket B \backslash A \rrbracket(w) (\llbracket B \rrbracket)$$

$$DP ::= \text{Bush} \qquad \vdots$$

$$(DP \backslash S)/S ::= \text{says}$$

$$(DP \backslash S)/DP ::= \text{is proud of}$$

$$N/N ::= \text{eclectic}$$

$$N ::= \text{reading list}$$

The type of  $\llbracket A \rrbracket$  is  $\tau(A)$ , defined to be  $\langle s, \sigma(A) \rangle$ , where

$$\sigma(A/B) = \sigma(B \backslash A) = \langle \tau(B), \sigma(A) \rangle, \quad \sigma(DP) = e, \quad \sigma(S) = t, \quad \dots$$

## Quoting categories embed quoted categories

For each category  $A$  of the quoted language,  
the quoting language has a category  $A'$ .

' Bush English    \ Quine English    ...

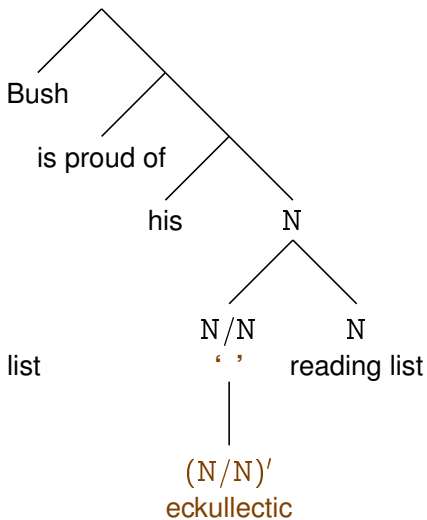
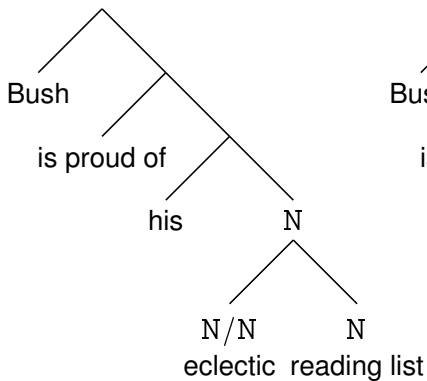
$A ::= 'A'$

## Quoting categories embed quoted categories

Enshrine quoted syntax in quoting syntax:

- ▶ Bush is proud of his 'eckullectic' reading list.
- ▶ \* Bush said his reading list 'eckullectic'.

$$A ::= 'A'$$
$$(N/N)' ::= \text{eckullectic}$$
$$\vdots$$



## Quoting contents are quoted characters (Kaplan)

Each quotation level introduces a new context argument.

- ▶ The politician said she is ‘sorry to have used an ‘epithet’’.

$$A ::= 'A'$$

$$(N/N)' ::= \text{eckullectic} \quad \llbracket (N/N)' \rrbracket(i) = \llbracket \text{eckullectic} \rrbracket^i$$

$$\vdots$$



## Quoting contents are quoted characters (Kaplan)

Diagonalizing (Stalnaker) and quantifying, not just code switching:

- ▶ To be 'eckullectic' is to have never been seen by Bush.
- ▶ 'Hesperus' is 'Phosphorus'. (quoting English itself)
- ▶ Danes and Norwegians eat 'frokost' at different times.

$$A ::= 'A'$$
$$\llbracket A \rrbracket(w) = \llbracket A' \rrbracket(\text{Bush English in } w)(w)$$
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# Quoted productivity and compositionality

Two kinds of unquotation:

**de Quine** Bush boasted of ‘an [expletive] reading list’. ,  
Every boy liked ‘the gift [his uncle’s name] gave me’.

**de re** Bush boasted of ‘an [eclectic] reading list’. ’ ,  
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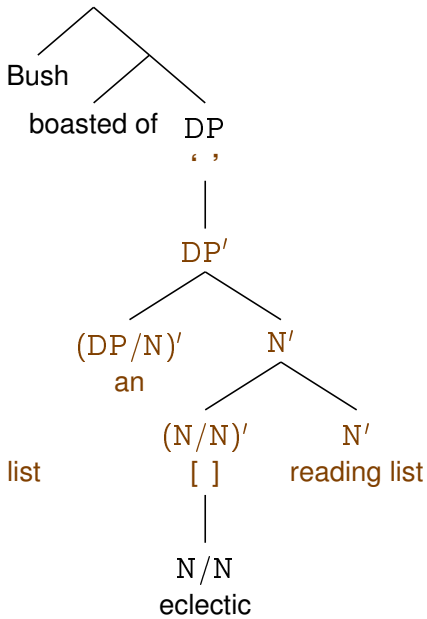
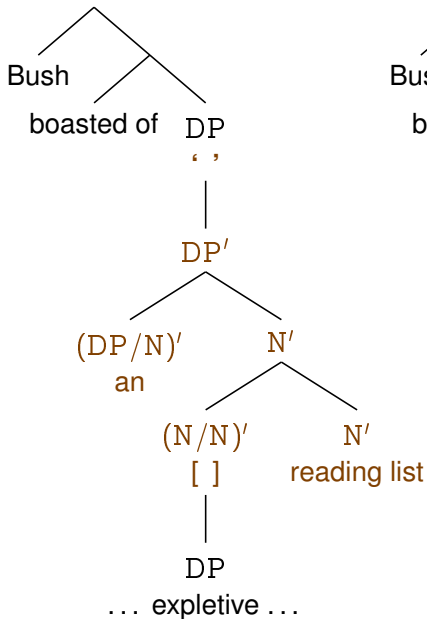
$A' ::= (A/B)' B'$

$\vdots$

$A' ::= [\text{DP}]$

$A' ::= [A]$





# Varieties of unquotation

## Mixed-quote of non-constituent

Mary allowed as how her dog ate ‘odd things,  
when left to his own devices’.

(Abbott 2003)

Mary Fido devoured odd things, when left to his own devices.

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## Mixed quote of construction

Trying to show off his French at the restaurant, John ordered not ‘[some dessert] à la mode’ but ‘à la mode [some dessert]’.

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## Pure unquotation

de Quine Ralph would assent to ‘[Ortcutt’s name] is a spy’.

de re ? Ralph would assent to ‘[Ortcutt] is a spy’.

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$$\begin{aligned} A &::= 'A'' & \llbracket A \rrbracket(w) &= \llbracket A' \rrbracket(\text{Bush English in } w)(w) \\ (N/N)' &::= \text{eckullectic} & \llbracket (N/N)' \rrbracket(i) &= \llbracket \text{eckullectic} \rrbracket^i \\ &\vdots & & \\ A' &::= (A/B)' B' & \llbracket A' \rrbracket(i) &= \llbracket A ::= A/B B' \rrbracket^i \\ &\vdots & & \llbracket (A/B)' \rrbracket(i), \llbracket B' \rrbracket(i) \\ A' &::= [\text{DP}] & \llbracket A' \rrbracket &= \text{character of } \llbracket \text{DP} \rrbracket \\ A' &::= [A] \end{aligned}$$



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$\vdots$	
$A' ::= (A/B)' B'$	$\llbracket A' \rrbracket(i) = \llbracket A ::= A/B B' \rrbracket^i$
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$A' ::= [\text{DP}]$	$\llbracket A' \rrbracket = \text{character of } \llbracket \text{DP} \rrbracket$
$A' ::= [A]$	$\llbracket A' \rrbracket(i) = \llbracket A \rrbracket$ directly referential

# Recap

**Put the mental in fragment.**

Payoffs:

- ▶ Mixed quotes can be ill-formed
- ▶ Names and definitions are mixed quotes
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# Recap

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- ▶ Pure quotation; take over the world

# What is in a context?

A context is: **an argument to characters?**

a function from words and constructions?

a tuple of **semantic** values and combinators?

Herbrand/identity interpreter  $\rightarrow$  pure quotation/hyperintensionality

$A ::= 'A'$	$\llbracket A \rrbracket(w) = \llbracket A' \rrbracket(\text{Bush English in } w)(w)$
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$A' ::= (A/B)' \ B'$	$\llbracket A' \rrbracket(i) = \llbracket A ::= A/B \ B \rrbracket^i$
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$$\begin{array}{ll} A ::= 'A' & \llbracket A \rrbracket(w) = \llbracket A' \rrbracket \quad (\lambda u. \llbracket u \rrbracket^{\text{BE}w}) \quad (w) \\ (N/N)' ::= \text{eckullectic} & \llbracket (N/N)' \rrbracket(i) = i(\text{eckullectic}) \\ \vdots & \\ A' ::= (A/B)' \ B' & \llbracket A' \rrbracket(i) = i(A ::= A/B \ B) \\ \vdots & (\llbracket (A/B)' \rrbracket(i), \llbracket B' \rrbracket(i)) \\ A' ::= [\text{DP}] & \llbracket A' \rrbracket = \text{character of } \llbracket \text{DP} \rrbracket \\ A' ::= [A] & \llbracket A' \rrbracket(i) = \llbracket A \rrbracket \end{array}$$


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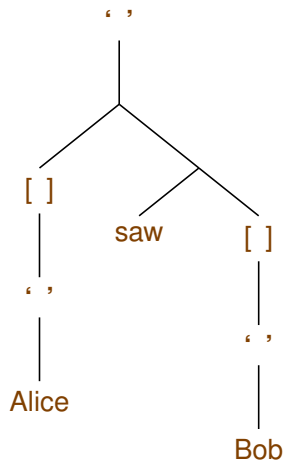
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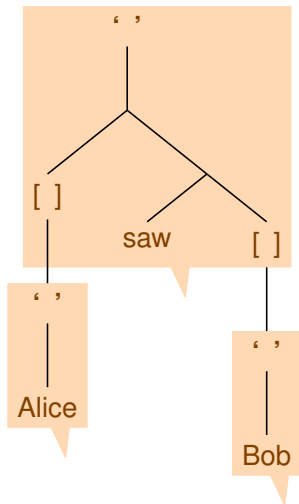
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$$\begin{array}{ll} A ::= 'A' & \llbracket A \rrbracket(w) = \llbracket A' \rrbracket \left( \begin{array}{c} \llbracket \text{eckullectic} \rrbracket^{\text{BE}w}, \\ \llbracket A ::= A/B \ B \rrbracket^{\text{BE}w} \end{array} \right)(w) \\ (N/N)' ::= \text{eckullectic} & \llbracket (N/N)' \rrbracket(i) = \begin{array}{c} i_1 \\ \swarrow \quad \searrow \\ \text{red arrows} \end{array} \\ \vdots & \\ A' ::= (A/B)' \ B' & \llbracket A' \rrbracket(i) = \begin{array}{c} i_2 \\ \text{red arrow} \end{array} \\ \vdots & \quad \quad \quad ((\llbracket (A/B)' \rrbracket(i), \llbracket B' \rrbracket(i)) \\ A' ::= [\text{DP}] & \llbracket A' \rrbracket = \text{character of } \llbracket \text{DP} \rrbracket \\ A' ::= [A] & \llbracket A' \rrbracket(i) = \llbracket A \rrbracket \end{array}$$

# Curating meaning from other minds

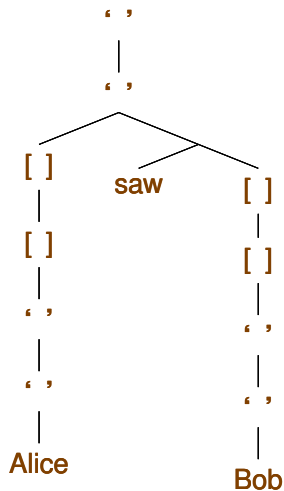
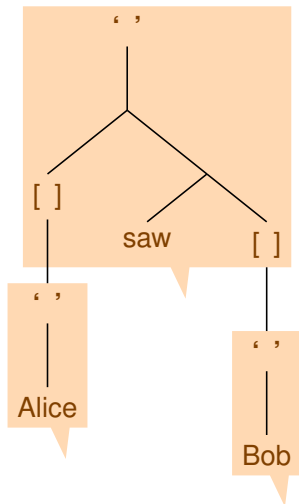


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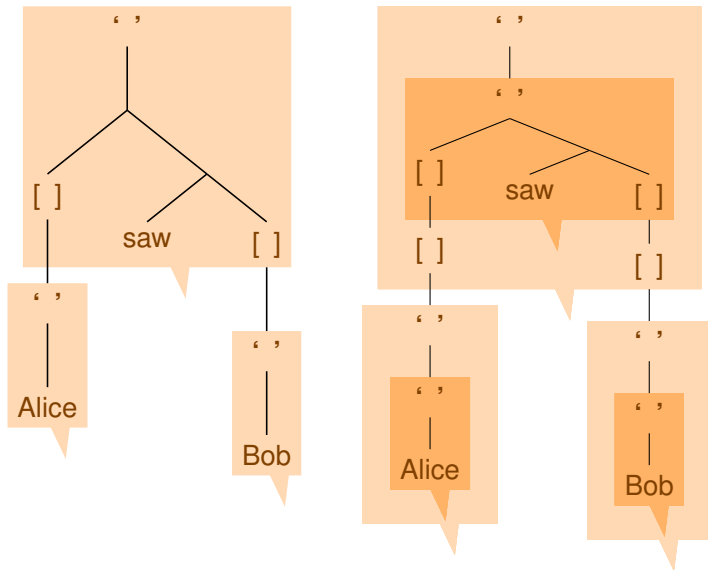




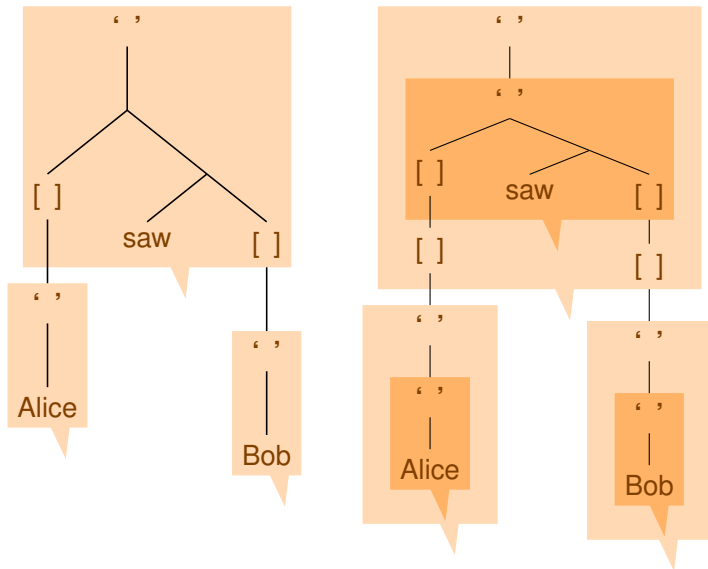
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... but isn't all this nesting terribly inefficient?





## Reducing interpretive overhead

If the quoted and quoting languages are identical, then the extra level of quotation can be ignored.

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some composition rules in

If the quoted and quoting languages are identical,  
then the extra level of quotation can be ignored.

for those composition rules

That is, much of the nested context shifting can be **compiled away**.

# Conclusion

## **Put the mental in fragment.**

Quotation has **linguistic** structure and can be studied **formally**:  
syntactic and semantic, recursive and compositional

Dynamic semantics, in the sense of **simulating pragmatics**:  
**context dependence and theory of mind**  
(rather than anaphora and nondeterminism)