Grammaticalizing mixed quotations

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Pure/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’.
Pure/direct quotation (mention)
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Mixed quotation by presupposition (Geurts & Maier 2003)
Bush is proud of his ‘eckullectic’ reading list.

‘eckullectic’ $\approx \exists x \in Q. \exists e(x, Q, ‘eckullectic’) \in Q$
Pure/direct quotation (mention)
Quine says ‘quotation has a certain anomalous feature’.

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Mixed quotation by presupposition (Geurts & Maier 2003)
Bush is proud of his ‘eckullectic’ reading list.

\[ \approx e \ Q \ E_e(Bush, Q, \text{‘eckullectic’}) \]

Bush is proud of his \( Q \) reading list

‘eckullectic’ \( \approx x \ e \ Q \ E_e(x, Q, \text{‘eckullectic’}) \ Q \)
Pure/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’.

‘has a certain anomalous feature’

\[ \approx x \in \mathcal{Q} \mathcal{E}_e(x, \mathcal{Q}, \text{‘has a certain anomalous feature’}) \mathcal{Q} \]

Mixed quotation by presupposition (Geurts & Maier 2003)
Bush is proud of his ‘eckullectic’ reading list.

\[ \approx e \in \mathcal{Q} \mathcal{E}_e(\text{Bush}, \mathcal{Q}, \text{‘eckullectic’}) \]

Bush is proud of his \( \mathcal{Q} \) reading list

‘eckullectic’ \( \approx x \in \mathcal{Q} \mathcal{E}_e(x, \mathcal{Q}, \text{‘eckullectic’}) \mathcal{Q} \)
Pure/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’.
\[ \approx \exists e \ Q \ E_e(\text{Quine}, Q, \text{‘has a certain anomalous feature’}) \]
Quine says, \( e \) quotation \( Q \)
‘has a certain anomalous feature’
\[ \approx x \ e \ Q \ E_e(x, Q, \text{‘has a certain anomalous feature’}) \]

Mixed quotation by presupposition (Geurts & Maier 2003)
Bush is proud of his ‘eckullectic’ reading list.
\[ \approx e \ Q \ E_e(\text{Bush}, Q, \text{‘eckullectic’}) \]
Bush is proud of his \( Q \) reading list
‘eckullectic’ \( \approx x \ e \ Q \ E_e(x, Q, \text{‘eckullectic’}) \)
The syntax of mixed quotation

Hard vs soft presupposition failure?

1. Bush is proud of his ‘eckullectic’ reading list.
2. Bush is proud of his ‘misunderestimate’ reading list.
3. Bush says his reading list ‘eckullectic’.
4. Bush met the king of France.
The syntax of mixed quotation

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4. Bush met the king of France.

This talk

What To enshrine presupposition failure in mixed quotation as ungrammaticality

How A modal interface between syntax and semantics

On the way Semantic interjection
Quoted languages are like possible worlds
Starting point

\[
A ::= A/B \ B \\
A ::= B \ B/\ A
\]

DP ::= Quine
DP ::= Bush
DP ::= quotation

\[
(DP/S)/S ::= \text{says} \\
TV ::= \text{is proud of} \quad (TV = (DP/S)/DP) \\
N/N ::= \text{eclectic} \\
N ::= \text{reading list}
\]
Starting point

Abusing notation: $[A]$

$$A ::= A / B \ B \quad [A](w) = [A/B](w)([B])$$

$$A ::= B \ B\backslash A \quad [A](w) = [B\backslash A](w)([B])$$

DP ::= Quine

DP ::= Bush

DP ::= quotation

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

TV ::= is proud of \quad (TV = (DP\backslash S)/DP)

N/N ::= eclectic

N ::= reading list

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

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

\[ A ::= '...' \quad [A] = x \in \mathbb{Q} E_e(x, A, \mathbb{Q}, '...') \mathbb{Q} \]

The type of \( \mathbb{Q} \) is \( \tau(A) \).

\[ \exists e. \exists Q. E_e(\text{Bush}, \text{N/N}, Q, 'eckullectic') \]
\[ \exists e. \exists Q. E_e(\text{Bush}, \text{TV}, Q, 'misunderestimate') \]
\[ \neg \exists e. \exists Q. E_e(\text{Bush}, \text{TV}, Q, 'eckullectic') \]
\[ \neg \exists e. \exists Q. E_e(\text{Bush}, \text{N/N}, Q, 'misunderestimate') \]

Quoted ungrammaticality is presupposition failure.
Composing mixed quotes

Assumption: the quoted language is compositional (enough).
Payoff: *semantic interjection*.

Bush says ‘I have an [eclectic] reading list’.
Composing mixed quotes

Assumption: the quoted language is compositional (enough).
Payoff: *semantic interjection*.

Bush says ‘I have an [eclectic] reading list’.

Add a syntactic category $A'$ to the quoting language for each syntactic category $A$ of the quoted language.

\[
A ::= 'A'
\]

\[
A' ::= \ldots
\]

\[
A' ::= (A/B)' B'
\]

\[
A' ::= B' (B\backslash A)'
\]

\[
A' ::= [A]
\]
Composing mixed quotes

Assumption: the quoted language is compositional (enough).
Payoff: semantic interjection.

Bush says ‘I have an [eclectic] reading list’.

Add a syntactic category $A'$ to the quoting language
for each syntactic category $A$ of the quoted language.

\[ A ::= 'A' \]
\[ [A] = [A'](x \ e \ I_e(x)) \]
where \( I_e(x)(A ::= q) = Q \ E_e(x, A, Q, q) Q \)

\[ A' ::= \ldots \]
\[ [A'](i) = i(A ::= \ldots) \]
—may be undefined

\[ A' ::= (A/B)' \]
\[ A' ::= B' \ (B \ A)' \]
\[ \vdots \]
\[ A' ::= [A] \]
Composing mixed quotes

Assumption: the quoted language is compositional (enough).
Payoff: *semantic interjection*.

Bush says ‘I have an [eclectic] reading list’.

Add a syntactic category $A'$ to the quoting language for each syntactic category $A$ of the quoted language.

$$A ::= 'A'$$

$$[A] = [A'](x \in I_e(x))$$

where $I_e(x)(A ::= q) = Q \ E_e(x, A, Q, q)\ Q$

$$A' ::= \ldots$$

$$[A'](i) = i(A ::= \ldots) \quad —may \ be \ undefined$$

$$A' ::= (A/B)' \ B'$$

$$[A'](i) = i(A ::= A/B B) ([A'/](i), [B'](i))$$

$$A' ::= B' \ (B\setminus A)'$$

$$[A'](i) = i(A ::= B B\setminus A) ([B'](i), [(B\setminus A)'](i))$$

\vdots

$$A' ::= [A]$$
Composing mixed quotes

Assumption: the quoted language is compositional (enough).
Payoff: *semantic interjection*.

Bush says ‘I have an [eclectic] reading list’.

Add a syntactic category $A'$ to the quoting language for each syntactic category $A$ of the quoted language.

$A ::= 'A'$  \[ [A] = [A'](x \in I_e(x)) \]

where $I_e(x)(A ::= q) = Q E_e(x, A, Q, q) Q$

$A' ::= \ldots$  \[ [A'](i) = i(A ::= \ldots) \quad \text{—may be undefined} \]

$A' ::= (A/B)' B'$  \[ [A'](i) = i(A ::= A/B B) ([A'](i), [B'](i)) \]

$A' ::= B' (B\setminus A)'$  \[ [A'](i) = i(A ::= B B\setminus A) ([B'](i), [(B\setminus A)'](i)) \]

\[ \vdots \]

$A' ::= [A]$  \[ [A'](i) = [A] \quad \text{—ignoring the interpreter } i \]
Enshrining quoted grammaticality

Replace $A'$ by $A^\alpha, A^\beta, \ldots$:

$$A ::= 'A'$$

$$A' ::= [A]$$
Enshrining quoted grammaticality

Replace $A'$ by $A^\alpha$, $A^\beta$, ...:

$$A ::= 'A^\beta'$$

$$A^\beta ::= [A]$$
Enshrining quoted grammaticality

Replace $A'$ by $A^\alpha, A^\beta, \ldots$:

\[
A ::= 'A^\beta',
\]
\[
A^\beta ::= [A]
\]

Replace the catch-all rule by individual rules:

\[
A' ::= \ldots
\]
Enshrining quoted grammaticality

Replace $A'$ by $A^\alpha$, $A^\beta$, ...:

$$A ::= 'A^\beta'$$
$$A^\beta ::= [A]$$

Replace the catch-all rule by individual rules:

$$(N/N)^\beta ::= \text{eckullectic}$$
$$TV^\beta ::= \text{misunderestimate}$$
Enshrining quoted grammaticality

Replace $A'$ by $A^\alpha, A^\beta, \ldots$

\[
A ::= 'A^\beta,' \quad A^\beta ::= [A]
\]

Replace the catch-all rule by individual rules:

\[
(N/N)^\beta ::= \text{eckullectic} \quad TV^\beta ::= \text{misunderestimate}
\]

Semantics 1: Code switching (Recanati; Stainton?)

Bush is proud of his ‘eckullectic’ reading list.
Enshrining quoted grammaticality

Replace $A'$ by $A^\alpha$, $A^\beta$, ...:

$$A ::= 'A^\beta','$$

$$[A] = [A^\beta]$$

$$A^\beta ::= [A]$$

$$[A^\beta] = [A]$$

Replace the catch-all rule by individual rules:

$$(N/N)^\beta ::= eckullectic$$

$$[(N/N)^\beta] = eclectic$$

$$TV^\beta ::= misunderstand$$

$$[TV^\beta] = misestimate$$

Semantics 1: Code switching (Recanati; Stainton?)
Fix a finite number of environment classifiers.
Use one classifier to quote each speech event $e$ (and speaker $x$).
Then, just get rid of the interpreter.
Enshrining quoted grammaticality

Replace \( A' \) by \( A^\alpha, A^\beta, \ldots \):

\[
A ::= \text{'}A'\text{'} \\
A^\beta ::= \left[ A \right] \\
\left[ A^\beta \right] = \left[ A \right]
\]

Replace the catch-all rule by individual rules:

\[
(N/N)^\beta ::= \text{eckullectic} \\
\left[ (N/N)^\beta \right] = \text{eclectic} \\
TV^\beta ::= \text{misunderestimate} \\
\left[ TV^\beta \right] = \text{misestimate}
\]

Semantics 2: Closures (Kameyama, Kiselyov & Shan)

Every president is proud of their ‘eckullectic’ reading list.
Enshrining quoted grammaticality


Replace $A'$ by $A^\alpha$, $A^\beta$, ...:

\[ A ::= 'A^\beta', \quad [A] = [A^\beta] \] (eclectic, misestimate)

\[ A^\beta ::= [A], \quad [A^\beta](i) = [A] \]

Replace the catch-all rule by individual rules:

\[ (N/N)^\beta ::= \text{ecuklectic}, \quad [(N/N)^\beta](e, m) = e \]

\[ TV^\beta ::= \text{misunderestimate}, \quad [TV^\beta](e, m) = m \]

Semantics 2: Closures (Kameyama, Kiselyov & Shan)

Fix a finite number of environment classifiers. Some classifiers may be used to quote multiple speech events. Then, pass a ‘slim interpreter’ like a world.

\[ \tau(A^\beta) = \langle \beta, \tau(A) \rangle \]
Enshrining quoted grammaticality


Replace \( A' \) by \( A^\alpha, A^\beta, \ldots : \)

\[
A ::= 'A^\beta', \quad [A] = [A^\beta] (\text{eclectic, misestimate}) \\
A^\beta ::= [A], \quad [A^\beta](i) = [A]
\]

Replace the catch-all rule by individual rules:

\[
(N/N)^\beta ::= \text{eckullectic} \quad [(N/N)^\beta](e, m) = e \\
TV^\beta ::= \text{misunderestimate} \quad [TV^\beta](e, m) = m
\]

Semantics 3: Extensible parsing? Dependent types?

A man walks in the park.
He uses the word ‘eckullectic’ as an adjective.
He is proud of his ‘eckullectic’ reading list.
The syntax of mixed quotation

Hard vs soft presupposition failure?

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