# The 1AEX can be reduced to selection 

Jason Merchant<br>U Chicago<br>2015<br>the Hornucopia

## Perlmutter's Generalization

(1) In languages with passives of intransitives (impersonal passives), at most unergative verbs can passivize; unaccusatives have no passive forms.
(2) There is no passive of unaccusatives.

# What Larry taught me 

Winit Puint

Grammatical Relations
Linguistics 256/656
Spring term 1990
Larry Horn

## ตpammaxfeal Hele

## Annotations

CCL $=$ book on reserve in Cross Campus Library
$\mathbf{R}=$ unbound article on reserve shelf in LingSem (302HGS)
$\mathbf{R A}=$ book on reserve shelf in LingSem
$\mathbf{R B}=$ article reproduced in black bound vinyl volumes on reserve shelf (volumes labeled I and II)
SIRG 1 = article in Perlmutter, ed. (1983) Studies in Relational Grammar 1. U. of Chicago Press. (RA, CCL)
SIRG 2 = article in Perlmutter \& Rosen, eds. (1984) Studies in Relational Grammar 2. U. of Chicago Press.
$\mathbf{S O S}=$ article in Zaenen, ed. Subjects and Other Subjects. IULC (RA)
$\mathbf{S S 8}=$ article in Cole 8 Sadock, eds. (1977) Syntax and Semantics 8: Grammatical Relations. Academic Press. (CCL)
S\&T $=$ article in Ld, ed. (1976) Subject and Topic. Academic. (CCL)

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(cf. also D. Johnson (1977b), On Keenan's detinition of "subject or", L/E: 673-92.)
I. Wim *Keenan, E. \& B. Comrie (1977) Noun phrase accessibility and universal grammar. L/8: 63-99. (RB) [for more of the same, cf::

樶•1RE, IPSRE
$A+1$ ac



## II. RG: General papers on theory

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$5 / 49$

## What Larry taught me

Grammatical Relations
Linguistics 256/656

## Spring term 1990

Larry Horn

## PACKET

## April Readings

A B

1. More on thematic relations

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2.1 *Burzio, L. (1986) Italian Syntax, excerpts, pp. 20-31. Dordrecht. (revised version of 1981 MIT dissertation)
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3. RG strikes back

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## 3. RG strikes back

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3.1 *Perlmutter, D. (1984) The inadequacy of some monostratal theories of passivization. (SIRG 2)
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## 4. Patient subjects and the English "middle"

4.1 *Lakoff, G. (1977) Linguistic Gestalts, §6.1. CLS 13, 248-54.
4.2 *Oosten, J. van (1977) Subjects and Agenthood in English. CLS 13, 459-71.
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Fellbaum, C. (1985) Adverbs in Agentless Actives and Passives. CLS 21, Part 2 (Parasession on Causatives and Agentivity), 21-31
4.4 *Fellbaum, C. (1986) On the Middle Construction in English. IULC.

Hale, K. \& J. Keyser (1986) Some Transitivity Alternations in English (MIT Lexicon Project Working Paper \#7) RA
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4.5*Fagan, S. (1988) The English Middle. LI 19: 181-204.

## What Larry taught me

## Impersonal Passives and Spontaneous Chômage

cf. Keenan (1975), P\&P (1977), Comrie (1977)

1. GERMAN impersonal passives
a. Fir tanzten gestern.
we danced-1PL. yesterday.
b. Es wurde gestern (vol uns) getanzt.
it was- 3 sg . yesterday by us danced
'There was dancing yesterday (by us)'
c. Gestern wurde (ron uns) getanzt.
2. GERMAN dative passives
a. Der Lehrer half dem Scholer.
the teacher [NOM] helped the student-DAT
b. Es wurde dem Schuler (vom Lehrer) geholfen.
it was-356. the student-DAT by-the teacher helped $\}$ 'The student was helped
c. Dem Schaler wurde (rom Lehrer) geholfen. (by the teacher)'
3. LATIN impersonal passives

'There was running' [lit., '[it] was run]
4. Latin dative passives

## What Larry taught me

7. FRENCH indefinite (intransitive) extraposition

Des femmes sontarrivees $\Rightarrow \Rightarrow$ Il est arrive des femmes.
some women-F.PA are arrived-3F.PL it is arrived-M.SG
='There arrived some women'
a. On a mangé des pommes. one has eaten- 356 some apples
b. Des pommes ont été mangés
were eaten-3PL
c. Il a etté mange des pommes. it has been eaten-356
7'. II a été dormi hier soir. . 'There was sleeping [lit., it was slept] last night' It has been slept-3s6 yest. evening
$\cong$ 'Some apples were eaten',
'There were apples eaten'
8. TURKISH dative/comitative passives
a. Ahmet kadın-la konuş-to. A. (NOM) woman-with talk-PAST( $3 S G$.)
b. Kadın-la konuş-ul-du. 'The woman was talked with' woman-with talk-PASV-PAST(3SG.)
c. Ben(im)-le konuş-ul-du(-*m). 'I was talked with' [lit., '[it] was talked with me'] I-with
9. MODERN ARABIC oblique passives
a. Bahaba 'ani 1-muwazzafin.
he-lonked (ZGE) for tho-omnlinyose-กRI

## What Larry taught me

## The impersonal passive in Dutch and German1

Jason R. Merchant 5/6/1991<br>Linguistics 491b: The Senior Essay<br>Prof. Laurence Horn<br>Yale University<br>"Though this be madness, yet there is method in't" (Hamlet II.ii.204)<br>1 Introduction

In this paper, I discuss two competing analyses of the impersonal passive construction in Dutch and German within the Relational Grammar framework: the spontaneous demotion analysis proposed in Keenan (1975) and the advancement analysis argued for in Perlmutter (1978). I conclude

## Perlmutter 1978

Passives of transitives ('personal passives'):
(3) De kinderen eten de kaas. the children eat the cheese
(4) De kaas werd door de kinderen gegeten. the cheese was by the children eaten 'The cheese was eaten by the children.'


## Perlmutter 1978

Passives of intransitives ('impersonal passives'):
(5) De kinderen schaatsen op het ijs. the children skate on the ice
(6) $\operatorname{Er}$ werd door de kinderen op het ijs geschaatst. there was by the children on the ice skated roughly: 'There was skating on the ice by children.'


## Vorgänger

... One gate there was only (Milton) ... The best name would probably be "existential there", as it generally indicates (vaguely) the existence of something on which fuller information is to follow... It is not absolutely necessary that the sentence contains [sic] a "subject" though this seems to be the invariable rule in English: in Danish we have such passive construction as der danses 'there is dancing', cp. the G. es in es wird getanzt. (Otto Jespersen Analytic Syntax 1937:130, UChicago Press)
(7) Die Griechen tanzen $\rightarrow$ Von den Griechen wurde getanzt / Es wurde (von den Griechen) getanzt.
(Duden: Grammatik der deutschen Gegenwartssprache, 4th edition (1984), p. 177)

## Perlmutter 1978

But passives of some intransitives (the unaccusatives) fail to be well-formed:
(8) In dit weeshuis groeien de kinderen erg snel. in this orphanage grow the children very fast 'Children grow very quickly in this orphanage.'
(9) *In dit weeshuis wordt er door de kinderen erg snel in this orphanage is there by the children very fast gegroeid.
grown
(Intended: 'There is very quick growing by children in this orphanage.')

Likewise for ontbinden 'decompose', verdampen 'evaporate', blijven 'stay', duren 'last', overleven 'survive', gutsen 'gush', ontploffen 'explode', verflensen 'wilt', verdwijnen 'disappear', verstikken 'suffocate', ontspruiten 'sprout', gebeuren 'happen', branden 'burn', sterven 'die', verdrinken 'drown'

## Perlmutter 1978

(10) The Unaccusativity Hypothesis:

Certain intransitive clauses have an initial 2 but no initial 1. (Some surface subjects are underlying objects.)


## Perlmutter 1978

(11) The Unaccusativity Hypothesis:

Certain intransitive clauses have an initial 2 but no initial 1. (Some surface subjects are underlying objects.)


Dozens of phenomena that diagnose a split in intransitives (Assamese case, Hidatsa agreement, N-incorporation in S.Tiwa, German split phrases, Russian genitive of negation, Russian distributive po, Georgian case-marking in II series, Italian ne-cliticization, Hebrew/Tzotzil possessor raising, resultatives, Jim's 'crude' test, Hittite clitics....)

## Perlmutter 1978

(12) The 1-Advancement Exclusiveness Law ('1AEX' to its friends): No clause can involve more than one advancement to 1 .


## Perlmutter 1978

8. Conclusions for the Grammar of Dutch and Universal Granmar
What must be stated in the grammar of Dutch to account for the data on impersonal passives presented here? Under the proposal advanced here, the grammar of Dutch needs only:
(92) a. a statement that impersonal passives of intransitive clauses are possible in Dutch.
b. a rule stating the conditions under which the dummy appears in the surface string.

## Perlmutter 1978

The contrasts between grammatical and ungrammatical impersonal passives presented here follow entirely from principles of universal grammar. They are:
(93) a. the universal advancement analysis of impersonal passives imposed by the Motivated Chomage Law
b. the predictability of initial unergative vs. unaccusative strata in accordance with the strong version of the Unaccusative Hypothesis sketched in (17c)
c. the 1-Advancement Exclusiveness Law
d. the Final 1 Law, the Relational Succession Law, and the Active Dummy Law, which together ensure that every clause with an unaccusative stratum involves an advancement to 1 (cf. fn. 5) ${ }^{10}$

## What Larry taught me

## 8 Conclusion

This paper examined the impersonal passive construction in Dutch and German, and some arguments for and against the advancement analysis originally proposed in Perlmutter (1978).

It was shown that the crucial independent motivation for the 1AEX, namely the data from Dutch and German indefinite extraposition, was flawed. Of course, it can be claimed that the 1AEX does find support from the fact that it correctly predicts some of the workings of impersonal passives. On the other hand, the advancement analysis of a dummy inserted as a 2 and advancing to 1 has been claimed to receive support from the 1AEX; but this reasoning is circular. The 1 AEX works with the advancement analysis and the P\&P's (1977) universal characterization of passive because that was what it was designed to do. Independent motivation for it is weak or non-existent.

## Geometric casting of unaccusativity



## The Internal Subject Hypothesis

Kitagawa, Koopman and Sportiche, Kuroda, Rosen, Speas, Woolford, Zagona, McCloskey, Chomsky, Bobaljik ...


## The Internal Subject Hypothesis, Kratzer's version


(13) $\llbracket$ Voice $_{a c t} \rrbracket=\lambda x \lambda e[\operatorname{Agent}(x)(e)]$

## The Internal Subject Hypothesis, Kratzer's version


(14) $\llbracket$ Voice $_{a c t} \rrbracket=\lambda x \lambda e[\operatorname{Agent}(x)(e)]$

Generative semantics + formal semantics $=$ this!

## The Internal Subject Hypothesis, Kratzer's version



## Kratzer's Voice + Unaccusativity $=$ Uh-oh...

Nothing blocks passives of unaccusatives:
(15) *Gorillas are died.


## Kratzer's Voice + Unaccusativity = Uh-oh...

Nothing blocks passives of unaccusatives:
(16) *Gorillas are died.


## Recent approaches to the passive and split voice

Wurmbrand; Bruening; Legate; Alexiadou, Anagnostopoulou, and Schäfer; Kallulli; Collins; Embick ...


## A proposal



## A syntactic argument for separating Voice from VP

In High/Big Ellipses (sluicing, fragment answers, gapping, and stripping), elided material and antecedent phrase must match in voice.
(17) Sluicing
a. *Someone murdered Joe, but they don't know who by. <he was murdered>
b. *Joe was murdered, but they don't know who. <murdered him $>$

## A syntactic argument for separating Voice from VP

In Low/Little Ellipses (verb phrase ellipsis), elided material and antecedent phrase may mismatch in voice.
(18) Passive antecedent, active ellipsis
a. The system can be used by anyone who wants to. <use it>
b. This information could have been released by Gorbachev, but he chose not to. <release it> (Hardt 1993:37)
c. This problem was to have been looked into, but obviously nobody did. <look into this problem> (Kehler 2002:53)
(19) Active antecedent, passive ellipsis
a. The janitor must remove the trash whenever it is apparent that it should be. <removed>
b. "No-one can hypnotize me."
"Usually the people who are certain they can't be are the easiest to do it to." <hypnotized> (corpus)

Sag 1976, Hankamer 1976, Dalrymple 1991, Hardt 1993, Fiengo \& May 1994, Kehler 2002, Arregui et al 2006, Kim et al. 2010, Merchant 2013

## A syntactic argument for separating Voice from VP

## VP-ellipsis: Voice mismatch allowed

This problem was to have been examined, but obviously nobody did. [DP This problem $]_{1}$ was to have been


$$
v \mathrm{P}_{A}=v \mathrm{P}_{E}
$$

## A syntactic argument for separating Voice from VP

## Sluicing: Voice match required

*Someone murdered Joe, but we don't know \{by whom/who by\}.

$\mathrm{TP}_{A} \neq \mathrm{TP}_{E}$

## A proposal



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(2) How do we capture Perlmutter's Generalization?

Answer: Voice[pass] selects for $v$.
There is no $v_{\text {unacc }}$, so it can't be selected for.
Perlmutter's Generalization emerges from the lexicon.

## Selection/subcategorization

$=\mathrm{a}$ way of ensuring that the right things go together

## Selector ... Selectee

(20) We rely \{on / *in $\}$ him.
(21) \#Sincerity may admire the boy. (McCawley)

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(25) We rely \{on / *in $\}$ him.
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$=$ a way of ensuring that the right things go together

## Selector ... Selectee

(30) We rely $\left\{o n / *_{\text {in }}\right\}$ him.
(31) \#Sincerity may admire the boy. (McCawley)
(32) rely, V, [_[ [PP on ... ] ]
(33) rely $\left[\begin{array}{cc}\text { cat } & {[V]} \\ \text { infl } & {[\ldots]} \\ \text { sel } & {[o n]}\end{array}\right]$ or rely $\left[\begin{array}{ll}\text { cat } & {[V]} \\ \text { infl } & {[\ldots]} \\ \text { sel } & {[P f o r m: o n]}\end{array}\right]$

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(39) rely:: =on - $\phi$ V

## Selection/subcategorization

(40) We rely \{on / *in\} him.
(41) rely $\left[\begin{array}{cc}\text { cat } & {[V]} \\ \text { infl } & {[\ldots]} \\ \text { sel } & {[o n]}\end{array}\right]$
(42)


## Selection/subcategorization

(43) $\operatorname{Merge}(\alpha, \beta)$

For any syntactic objects $\alpha, \beta$, where $\alpha$ bears a nonempty selectional list $\ell=\left\langle\mathrm{F}_{1}, \ldots, \mathrm{~F}_{n}\right\rangle$ of selectional features, and $\beta$ bears a categorial feature $F^{\prime}$ that matches $F_{1}$, call $\alpha$ the head and
a. let $\alpha=\{\gamma,\{\alpha, \beta\}\}$
call $\gamma$ the projection of $\alpha$, and
b. if $\mathrm{n}>1$, let $\ell=\left\langle\mathrm{F}_{2}, \ldots, \mathrm{~F}_{n}\right\rangle$, else let $\ell=\emptyset$, and
c. let $\gamma=\left[\begin{array}{ll}\text { cat } & {[\operatorname{cat}(\alpha)]} \\ \text { sel } & {[\ell]}\end{array}\right]$

## English passive

Voice[pass] $\left[\begin{array}{ll}\text { cat } & {\left[\text { Voice }_{\text {pass }}\right]} \\ \text { sel } & {\left[v_{t r}\right]}\end{array}\right]$


## English passive

Voice $^{[p a s s]}\left[\begin{array}{ll}\text { cat } & {\left[\text { Voice }_{\text {pass }}\right]} \\ \text { sel } & {\left[v_{t r}\right]}\end{array}\right]$


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## German passive of intransitive (unergative)

Voice[pass] $\left[\begin{array}{ll}\text { cat } & {\left[\text { Voice }_{\text {pass }}\right]} \\ \text { sel } & {[v]}\end{array}\right]$


## German passive of intransitive (unergative)

Voice[pass] $\left[\begin{array}{ll}\text { cat } & {\left[\text { Voice }_{\text {pass }}\right]} \\ \text { sel } & {[v]}\end{array}\right]$


## German passive of intransitive (unergative)



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## German passive of intransitive (unergative)



## Syntactic type-shifters

Argument 'demotion' or 'suppression' is due to elimination of selection features:

$$
\text { (44) } \operatorname{EX}\left(X\left[\text { sel: }<\mathrm{F}_{1}, \ldots, \mathrm{~F}_{n}>\right]\right)=\mathrm{X}\left[\text { sel }:<\mathrm{F}_{2}, \ldots, \mathrm{~F}_{n}>\right]
$$

Applied to $\mathrm{v}_{\text {tr }} \mathrm{P}$ :
(45)


## Cross-linguistic differences

English:
Voice[pass] $\left[\begin{array}{ll}\text { cat } & {\left[\text { Voice }_{\text {pass }}\right]} \\ \text { sel } & {\left[v_{t r}\right]}\end{array}\right]$

German:
Voice[pass] $\left[\begin{array}{ll}\text { cat } & {\left[\text { Voice }_{\text {pass }}\right]} \\ \text { sel } & {[v]}\end{array}\right]$

## The end

## Thank you, Larry!

## Some definitions

(1) A grammar $G$ consists of a pair of a set of lexical elements $L$ and a set of operations $O$ : $G=<L, O\rangle$
(2) A derivation on a numeration $D_{N}$ is a pair:
$D_{N}=<N,<P M_{1}, \ldots, P M_{n} \gg$, where

1. $N$, called the Numeration, is a nonempty set of lexical elements drawn from $L$ and a possibly empty set $S$ of phrase markers PM (each of which is itself the result of a separate convergent or semi-convergent derivation), and
2. $<P M_{1}, \ldots, P M_{n}>$ is an ordered $n$-tuple of phrase markers $P M$.
(3) A derivation $D_{N}$ is said to be convergent (or to converge) ${ }^{\mathbf{1}}$ iff
3. $P M_{n}$ contains no unvalued (: ${ }_{-}$) features
4. $P M_{n}$ contains no strong (*) features
5. $P M_{n}$ contains no selectional features
6. All elements in the Numeration have been Merged
7. For each adjacent pair of phrase markers $<P M_{k}, P M_{k+1}>$ in $D_{N}$, there is an operation $\omega \in O$ such that $\omega$ applied to $P M_{k}$ yields $P M_{k+1}$.
(4) A phrase $P$ (including a sentence) is well-formed iff there is at least one convergent derivation for $P$.
(5) The Minimalist Program, in essence $=\min |O|$ (Minimize the number of operations in O ).
${ }^{1}$ A derivation $D_{N}$ is semi-convergent iff it satisfies conditions 2-5 of this definition.

## Some definitions: Operations

(46) $\operatorname{Adjoin}(\alpha, \beta)$

For any syntactic objects $\alpha, \beta$, where neither $\alpha$ nor $\beta$ has any unchecked selectional feature, call $\alpha$ the host, and
a. let $\alpha=\{\gamma,\{\alpha, \beta\}\}$
call $\gamma$ the label (or projection) and
b. let $\gamma=\alpha$
(47) Agree ( $\mathrm{X}, \mathrm{Y}$; F ) (read: ' X triggers agreement on Y with respect to F ' or ' Y agrees with X in F ' or ' X controls agreement on target $Y$ for $F^{\prime}$ )
For any syntactic objects X and Y in a phrase marker, where X bears a feature F with value $\operatorname{Val}(\mathrm{F})$ and Y bears a matching ${ }^{2}$ unvalued ${ }^{3}$ inflectional feature $F^{\prime}$ : _ , and either $X c$-commands $Y$ or $Y$ c-commands $X$,
a. let $\operatorname{Val}\left(F^{\prime}\right)=\operatorname{Val}(F)$
(48) $\operatorname{Move}_{\text {head }}(\mathrm{X}, \mathrm{Y})$ (read: ' $Y$ moves to $X$ ')

If $Y$ is a head with feature $F, X$ a head with a matching feature $F$, and $X$-commands $Y$, and $F$ is a strong inflectional feature on either Y or X , then
a. let $\mathrm{X}=\{\mathrm{X},\{\mathrm{Y}, \mathrm{X}\}\}$ and
b. let $\mathrm{F}^{*}=\mathrm{F}^{<*>}$, and
c. let $Y=\langle Y\rangle$
(49) $\operatorname{Move}_{\text {phrase }}(\mathrm{Y}, \mathrm{X})$ (read: ' Y moves to specXP')

If $X$ is a projection with a feature $F, Y$ a maximal projection with a matching feature $F$, and $X$ contains $Y$, and F is strong (marked $\mathrm{F}^{*}$ ) on X or Y or both, then
a. let $\mathrm{X}=\{\mathrm{X},\{\mathrm{Y}, \mathrm{X}\}\}$ and
b. let all occurrences of $\mathrm{F}^{*}$ on $\mathrm{X}, \mathrm{Y}=\mathrm{F}^{<*>}$, and
c. let $Y=\langle Y\rangle$

[^0]
## Pseudopassives vs. *pseudomiddles

(50) This thermostat can't be relied on easily.
(51) a. *This thermostat doesn't rely on easily.
b. *This thermostat doesn't rely easily.
(52) Cf. This thermostat doesn't install easily.
(53) a. These people don't deceive easily.
b. *These people don't lie to easily.
(54) a. Large murals don't paint easily.
b. *Large murals don't work on easily.

## Pseudopassives vs. *pseudomiddles

(55) Most kids can't play this minuet on this flute easily.
(56) a. This minuet can't be played on this flute easily (by most kids).
b. This flute can't be played on (by most kids).
c. *This flute can't be played this minuet/anything on (by most kids). Cf. This candy can't be given the children./*These children can't be given candy to.
(57) a. This minuet doesn't play easily (on most flutes).
b. This flute doesn't play easily. (for me, *by me)
c. *This flute doesn't play on easily.
d. *This flute doesn't play anything on easily.

Postal 2010: 201, Baltin and Postal 1996:134-135fn9; Fagan 1988: 194-195; Fellbaum and Zribi-Hertz 1989:45;
Huddleston 2002a:308n63; Keyser and Roeper 1984:400; Pollock 1979:126-127n22; Roberts 1987:222

## Pseudopassives vs. *pseudomiddles

Conclusion: on assigns accusative case (or selects NP[acc]) only when embedded under a local Voice[Act].


Middle formation is lexical in a way that passive (including pseudopassive) is not.

## Pseudopassives vs. *pseudomiddles

(58) This topic should not have been gone into at all.
(59) This topic has been worked on by many linguists.


- It's about Voice (in the traditional sense), not $\mathrm{v}_{\text {tr }}$ or [acc], or Kratzer's (Legate, Alexiadou, etc.) Voice. A verb doesn't need an external argument, or the ability to assign [acc], to occur in the (pseudo)passive. (Speculation: such freakish behavior necessarily piggybacks on the resultative participle? What about deponents like ergazome 'work' and kimame 'sleep'?)


## No pseudo -able adjectives

(60) a. This paper is unreadable.
b. This show is unwatchable.
(61) a. He's an often relied-on substitute host.
b. He is very reliable (*on).
c. *This show is unlookable at.

Like pseudomiddles:
dependable (*on), dispensable (*with), laughable (*at).

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Like pseudomiddles:
dependable (*on), dispensable (*with), laughable (*at).
And in compounds:
(65) a. a drug-independent (*from) life; his drug-independence (*from)
b. a drug-dependent (*on) life; his drug-dependence (*from)
c. a time-sensitive (*to) matter; the matter's time-sensitivity (*to)


[^0]:    ${ }^{2} A$ feature $F$ matches a feature $F^{\prime}$ iff $F=F^{\prime}$.
    ${ }^{3} A$ feature $F$ is unvalued iff $\operatorname{Val}(F)=\emptyset$.

