Depictives in English: An LTAG Approach

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Motivation

How can long distance modification be modeled with LTAG?

Depictives are similar but different:

(1) John$_i$ left the room tired$_i$.

Previous approaches in other frameworks:
Generative Grammar (e.g. Geuder 2004) & HPSG (e.g. Müller 2008)
Secondary Predicates

Secondary Predicate: a typically sentence final, adjectival element that predicates one of the (main) verbal predicate’s arguments; we call the predicated element the **TARGET**.

**Resultatives** characterize states that are brought about by the event that is expressed by the main verb.

(2) Sean stomped the can\textsubscript{i} flat\textsubscript{i}.

**Depictives** express properties that hold for at least some part of the event time, but do not immediately result from the verb event.

(3) Tom ate the pizza\textsubscript{i} cold\textsubscript{i}.
Outline

The Data

LTAG Approaches

Remaining Issues & Conclusion
Possible Targets I

Target Ambiguity

Based on their semantic compatibility, depictives either target the subject or the object.

(4)  a. Kim ate the steak\textsubscript{i} raw\textsubscript{i}.
    b. Kim\textsubscript{i} ate the steak hungry\textsubscript{i}. 

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(4) a. Kim ate the steak\textsubscript{i} raw\textsubscript{i}.
   b. Kim\textsubscript{i} ate the steak hungry\textsubscript{i}.

If both verbal arguments are semantically compatible with the depictive TARGET AMBIGUITY arises.

(5) Kim\textsubscript{i} ate the apple\textsubscript{j} unwashed\textsubscript{i/j}.
**DEPICTIVE STACKING** is possible, but generally seems to decrease acceptability.

(6)    a. ? Kim_i ate the steak_j raw_j hungry_i.
    b. ?? Kim_i ate the steak_j hungry_i raw_j.
    c. ?? Kim ate the steak_j raw_j salted_j.

Wellnested stacks with alternating targets seem more acceptable than illnested or non alternating stacks.
Possible Targets III

Unrealized Arguments

Depictives may target unrealized agents, see (7-a), or theme arguments, see (7-b).

(7) a. The book$_j$ is to be read naked$_i$/*$j$.
    b. We$_i$ usually bake gluten-free$_i$/*$j$.
Possible Targets III
Unrealized Arguments

Depictives may target unrealized agents, see (7-a), or theme arguments, see (7-b).

(7)  a. The book$_j$ is to be read naked$_i/\ast_j$.
    b. We$_i$ usually bake gluten-free$_i/\ast_j$.

In some instances, like in (8) from Roberts [4], one could argue for an adverbial interpretation, where *barefoot* lacks the prototypical morphology of English adverbials.

(8) The game$_j$ was played barefoot$_i/\ast_j$. (Roberts 1987)
Impossible Targets I
Oblique Arguments

Oblique verbal arguments, i.e. non-direct objects and PP-objects, do not constitute viable targets.

(9)  a. The cash machine\textsubscript{i} gave John\textsubscript{j} the money\textsubscript{k} hungry\textsubscript{*i/^j/*k}.
  b. Peter crashed into him\textsubscript{i} tired\textsubscript{*i}. 

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Impossible Targets II

Non-Arguments

Depictives cannot target modifying constituents like PP-adjuncts.

(10) John drilled a hole with a power tool\textsubscript{i} new\textsubscript{*i}. 
Impossible Targets II
Non-Arguments

Depictives cannot target modifying constituents like PP-adjuncts.

(10) John drilled a hole with a power tool new.

Neither the genitive noun in (11-a) nor the single conjuncts in (11-b) constitute viable targets.

(11) a. John met Maria’s father naked.
    b. [John and Paul] met [Maria and her boyfriend] naked.
Three Viable LTAG Approaches

**Syntactic** ambiguity approach:
Distinct syntactic derivations for subject & object depictives

**Interface** ambiguity approach:
Uniform syntactic derivation using *disjunction* in interface features

**Semantic** ambiguity approach:
Uniform syntactic derivation using *disjunction* in the semantics
(6a) ?Kim\(_i\) ate the steak\(_j\) raw\(_j\) hungry\(_j\).
Syntactic Ambiguity Approach

(6b) ??Kim$_i$ ate the steak$_j$ hungry$_i$ raw$_j$.

Problem II: ill-nested stacking cannot be derived.
Syntactic Ambiguity Approach

The auxiliary trees of the depictives are adjoined at different levels of the elementary tree.

At the S node, the subject’s frame information are accessible in the elementary tree.

The object’s information are accessible at the VP node. This enables the unification of the NP and the depictive frames.
Interface Ambiguity Approach

(6a) ?Kim$_i$ ate the steak$_j$ raw$_j$ hungry$_i$.

Problem: introduction of description variables in TAG feature structures.
Semantic Ambiguity Approach

(6a) \( ?Kim_i \text{ ate the steak}_j \text{ raw}_j \text{ hungry}_i \).

Problem: the disjunction in the depictive’s frame description needs to list all thematic role attributes it could potentially modify.
Semantic Ambiguity Approach

The depictive adjunct tree is adjoined at the VP node.

At the VP node all of the event frame information are accessible.

The disjunction between AGENT and THEME in the depictive frame enables it to unify with either the AGENT or THEME subframe of the event.

This analysis requires only one kind of depictive tree and also enables stacking.
The solution: abstraction over thematic roles using semantic macroroles, i.e. actor and undergoer (see Van Valin, Jr. 2005).

The bearers of these macroroles are determined based on the thematic roles given in an event frame: very roughly put,

The most agent-like participant receives the actor role.

The most patient like participant receives the undergoer role.

Oblique arguments do not receive macroroles; they are macrorole empty.
Actor-Undergoer-Linking II

Linking between thematic roles and macroroles is implemented in Kallmeyer et al. (2016) the verb frames are enriched with these features:

There is a uniform adjunction tree for both subject and object depictives:
Remaining Issues I – Oblique Arguments

Non-Actor/Undergoer Targets

Contrary to our analysis oblique arguments might in fact be possible targets of depictives.

(12) a. You can’t give them injections unconscious.
   Simpson [5]

b. (When) I talked to Sue drunk, she was really talkative). (From an online forum post)

Reanalysis of these examples as light or particle verb construticons might be a solution to this puzzle.
Constituents of complex arguments could be targets of depictives.

(13) If you’re an investment banker, don’t choose a profile of yourself [drunk at a house party].
Conclusion

With our semantic approach with actor-undergoer-linking target ambiguity can be modeled.

Depictive stacking is possible via iterative adjunction.

We achieve a uniform syntactic derivation for subject and object depictives.

Prediction: only actor and undergoer can be targeted by a depictive; non-actor and non-undergoer arguments cannot.

The next step: more empirical work to double check our observations about the data.
Thank you for your kind attention!


