The Syntax of Light Nouns

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1. The observation
In the (Southern German) dialect Alemannic (ALM) there exists an infinitival form ending with a dental plosive (dental infinitive henceforth) instead of a schwa that occurs with infinitives in verbal complementation:

(1) a. Hond er ebbes z’trinkit?
    have you-pl something to drink
    “Do you have something to drink?”
    b. I wett gern ebbes trinke/z’trinkit
    I would prt something drink
    “I would like to drink something”

(2) a. I ha koa Ziit zum schpil/z’schpililt
    I have no time to play
    b. I bruuch der Lumpe zum butze/z’butzit
    I need this to clean

(3) a. Hond er ebbes/nünt/gnueg/zviel z’trinkit?
b. *Hond er a Bier/alles/jedes/z’trinkit?

→ dental infinitive only possible with indefinite pronouns (and degree adverbs)
→ the distribution indicates that this is not a surface kind of variation

It seems to be the overt marking of a contrast discussed first in Tappe (1984) for Standard German (SG):

(4) Im Kühlschrank steht etwas/ein Bier/alles zu trinken
    In-the fridge stands something/a beer/everything to drink
    “There is something to drink in the fridge”

The restriction cannot come solely from the matrix verb (Im Kühlschrank steht ein Bier is perfectly grammatical); it is obviously the construal with the infinitive which imposes the restriction on the noun.
Similar in English:

(5) a. Do you have something to drink?
   b. (*)Do you have a beer to drink?

(5b) is not really ungrammatical, cf. the contrast in (1) but reveals a rather strange interpretation: a beer which has the property of being drinkable (although 'beer' can normally be drunk).

\textit{Interpretation: something drinkable, something that can be drunk}

- the lexical content of the verb verb denotes a property of the noun
  (it does not have a deontic modality, but rather that of 'availability', Izvorski (1998), it does mean: “there is something that must be drunk”, see also Hackl/Nissenbaum (to appear))

- there is no (strict) Control relation (rather interpreted as \textit{pro}_{\text{arg}})
e.g. "Give me something to drink; I will bring it to the children (for them to drink)"

- the infinitive does not denote an event itself, rather an 'event type'

→ the infinitive is not clausal but 'predicative'
Intuition:

Something and nothing are "light nouns" and are 'deficient' in the sense that they merely determine the category noun (which fulfills the subcategorization frame of the matrix verb), but which get their 'lexical content' from the non-finite verb.

They are the mirror image of a light verb into which a noun incorporates (cf. 'conflation' in the sense of Hale/Keyser (1993)).

For structural reasons, the verb cannot incorporate into the noun which is its complement. Therefore, another kind of formal relationship between the two is needed.

→ Small Clause

(6)

light verb: light noun:

VP

|NP | V^0 |

| dance |

| NP | V^0 |

| something |

(7)

what we need:

NP

PredP

| something |

"Passive-like operation"

It is not really a passive:
- no by-phrase possible (*I brought something to drink by the children)
- the restriction on the type of NP (light noun) could not be explained

→ rather a kind of 'externalization', see Botwinik-Rotem (2004), but the restriction on the type of NP has to be explained otherwise

Questions:

➢ what is the structure of the infinitive such that it acts a purely predicative element??
➢ can we account for the semantic restriction in syntactic terms?
➢ how come that something/nothing and "degree adverbs" build a natural class?

Similar constructions:


(8) something new

something interesting

something to eat

*new something

*interesting something

# to eat something (possible as a inf. VP)
only with indefinites, nearly every kind of A can appear in post-nominal position, cf. *something white vs. *a cat white

"simple" N-raising is not sufficient, see Larson/Marusic (2004):
- no recursion
  every large heavy thing vs. *everything large heavy
- some adjectives occur only postnominally (present, alive, asleep…) even with common nouns (the children asleep vs ??the asleep children)

common property: construction limited (in the core cases) to light nouns

  - other postnominal infinitives:

    - infinitive dependent on degree words, see Dubinsky (1998), Hackl/Nissenbaum (to appear):

      (10) the best beer to drink is…
      (11) many topics to work on
      (12) a. * das einfachste Auto zu fahren
          b. das am einfachsten zu fahrende Auto
             that at easiest to drive-pres.part. car
          c. ein nicht zu trinkendes Bier
             a not to drink-pres.part. beer
      (13) a. viele Dinge zum Bearbeiten (colloq. SG)
          many things to work-on
          b. Bilder zum Anfassen
             pictures to touch

    - tough-construction:

      (14) this book is easy to read
      (15) dieses Buch ist leicht zu lesen
          this book is easy to read

common property:  - non-clausal infinitive with a pro_{arb} interpretation for the subject
    - default is the availability interpretation (could-reading in
      Hackl/Nissenbaum's sense)

  ➢ can we find a unified account for postnominal infinitival/adjectival modifiers?
  ➢ in which way do the constructions with a light noun differ from the others?

2. Analysis of the dental infinitive

2.1. What is category of the infinitive?

Restrictions on the embedded verb:

  type of embedded verb:

only transitive verbs are possible, see also Tappe (1984):

  - no dative arguments:

      (16) *hosch em Pfarrer ebbes z’beichtit ALM
          have-2sg the priest-dat something to-confess
      (17) *ich ha ihm nünt z’gebit
          I have him-dat nothing to-give
• no oblique (PP)-arguments
(18) *ich ha nünt uff de Tisch z'stellit
I have nothing on the table to-put
(19) *ich swech ebbes z'schriibit
I look-for something to-write(with)

• no intransitives (unergatives and unaccusatives):
(20) *mir hond gnueg z'danzt
we have enough to-dance
(21) *do het's gnueg z'stinkit
there has-it enough to-stink
An exception seems to be the intransitive verb 'laugh'
(22) du hesch nünt z'lachit
you have nothing to-laugh
but: (i) idiomatic reading in the sense of "there is no reason for you to laugh", cf. was
lachst du denn so (lit. what do you laugh so, why do you laugh?)
(ii) not fully productive with degree adverbs: ?*jetzt hast du ein wenig/genug zu la
chen

• no particle verbs (that introduce obligatorily an argument)
(23) *ich hett etz gern ebbes z'uustrinkit
I would-haveprt something to-up-drink
"I would like to have something to drink up"
(24) *hond ihr no ebbes z'wegkalet
have-you.pl still something to cast away
o the verbs require an accusative DO (intransitives, obliques and prepositional objects
are excluded)
o the transitive verbs are object-drop verbs, i.e. transitive verbs that can be used as
activity verbs with an understood, but unspecified object (this excludes particle verbs
because these require their argument to be overt)
o mental state verbs like look, think etc. are possible but not verbs of creation like build,
write, i.e. the object exists independently

→ verbs that have a DO in their argument structure but that are not forced (for syntactic
reasons) to project them overtly

• no control relation
(25) Ich ha vergesse ebbes (z') esse / *z'essit ALM
I have forgotten something eat / to-eat

• no modification with adverbials
(26) *ich hättte gern ebbes gmüetlich z'trinkit ALM
I had-conj prt something cozily to drink
"I would like to have something to drink cozily"

Together with the restrictions from above, this suggests that the verb in this case does not
project a vP. This fits very well with the interpretation of this infinitive:
- no event-reading, but property reading
- pro as the subject

Verbs themselves denote eventualities, Bach (1986), they correspond to mass nouns in the
sense that they refer only to a type and are thus not referential.
Suggestion: The special morphology "keeps" the verbs as eventualities, i.e. they cannot
merge with little v and therefore they cannot discharge their arguments in the syntax.
Crucially, it is not a nominalization, taking place in the lexicon, i.e. it is a syntactic process similar to passive but not identical because it does not "promote" the DO.

\[
\begin{array}{c}
\text{VP}_{\text{pred}} \\
\downarrow \\
V \\
\downarrow \\
eat + \text{it}
\end{array}
\]

2.2. What is z’?

Some background:
ALM has a different distribution of the infinitival marker (IM) than Standard German, especially it uses no IM (although some speakers optionally) in lexically restructuring contexts, see (25). Under propositional verbs – where SG has always an IM – ALM can have only finite clauses; but with the dental infinitive, z’ must occur:

(27) *I suech ebbes essit
    I search something eat-dental-inf.

heads a functional projection
originally a preposition with directional meaning → future meaning → potential future → modal existential meaning (not a Tense-marker!), cf. Hackl/Nissenbaum (to appear) and Botwinik-Rotem (2004) for a similar point for tough-constructions.

applied to the predicative VP, it gives the meaning:

(28) X [CAN [pro_{\text{arb}} activity-type]] (e.g. x with the property that one can one eat it)

z’ = predicate head of SC (Bowers 1993) denoting availability-modality

2.3. What is X?

Restrictions on the matrix predicate:
The infinitives are only possible under verbs that do not affect their nominal complement in the sense of "change of state", but rather foreground the EXIST-Component (Szabolsci 1986). This is similar to the Modal Existential Construction, discussed in Grosu (2002) and Izvorski (1998) (although the infinitival complement in these constructions is different in nature in that they are really clausal)

\begin{itemize}
\item geben - there exists (existence predicate), sein - there is (existence predicate) haben - have, geben - give, nehmen - take, machen - make, kriegen - get, mögen - like/want, wollen - want, suchen - look-for, finden - find, holen - fetch/bring, sehen - see.
\end{itemize}

Matrix predicates which force – and highlight – a change of state, accomplishment verbs, are excluded:

(30) *D’Muetter het ebbes z’alegit gnäht ALM
    the-mother has something to-on-putting sewed
    "Mother sewed something to put on"
(31) "i ha ebbes z'essit kocht
I have something to eat cooked

→ the matrix verb can not impose selectional restrictions on the argument

some-thing, no-thing = existential quantifier (negation) + light noun

(32)
etwas = et(e) + was
nichts = ne + wiht (MHG:'thing') (with an original genitive ending)

Assumption: the matrix verb selects for the quantifier (as a D₀) and the light noun is inserted in a "last resort" fashion, i.e. to provide the category 'noun' (et- and ne- are affixes and can not stand alone)
This explains why only –was is possible and not even a 'light' element like somebody since this would require some information about the selectional restrictions of the embedded verb.

(33) *ich suech ebber z'liebit
I search somebody to-love

(34) du hesch nünt z'lachit
you have nothing to-laugh

→ the light noun does not originate in the VP, i.e. the verb can not impose lexical restrictions

(35)

\[
\begin{array}{c}
\text{V (matrix)} \\
\text{D₀} \\
\text{et-} \\
\text{ne-} \\
\text{some-} \\
\text{no-} \\
\text{PredP (=NP)} \\
\text{NP} \\
\text{PredP} \\
\text{was (wiht)} \\
\text{thing} \\
\text{z'} \\
\text{VPₚₑₜ} \\
\text{V}
\end{array}
\]

• etwas is contextually "identified" with the DO of the embedded verb
• case is assigned by the matrix verb

(36) wir haben nicht mit etwas zu essen gerechnet
we have not with something to eat reckoned

• the analysis does not exclude that etwas/something can be used as a simple DP:

(37) I have seen something (I don't know what it was)
but only these nouns have the precondition to build this type of construction

2.4. 'Classical' Light Noun construction:

(38) something new  *new something
something interesting *interesting something
something to eat # to eat something
Adjectives are inherently predicative; they merge directly with the NP:

```
D^0  SC
   NP  AP
```

There seems to be no 'matrix verb effect', i.e. every type of matrix verb (I have built something new) is possible; this could be related to the fact that adjectives do not 'affect' the NP they modify; they build only a subset. In contrast to the infinitives where the property assigned to the light noun corresponds to the activity described by the verb.

3. Degree adverbs

The dental infinitive is also possible with degree adverbs:

(40) Hond er gnueg/viel/a weng z’trinkit?
    Have you-pl enough/many/a bit to-drink

Degree adverbs express 'cardinality' (Milsark 1974,1977) and are not quantifiers; instead they are predicates; they compose "via predicate modification with their sister node", according to Hackl/Nissenbaum (to appear). This corresponds in syntax exactly to a small clause.

According to Doetjes (2002), adverbs expressing quantity (in contrast to iterativity) can modify not only verbal expressions but also nominal and adjectival ones:

(41) a. I slept a bit/enough/a lot
    b. I had a bit/enough/a lot of wine
    c. I was a bit tired

They can thus also occupy the D-position, cf. (b) and have as their complement an empty NP

```
D^0  DP
       NP  pro
```

German allows degree adverbs also with adjectives:

(43) viel neues  *a lot new  but: a lot of news
    wenig neues  *a bit new  a bit new stuff
    genug neues   *enough new  enough new things

Neues is not an inflecting adjective but a genitivus partitivus, cf. Schirmunski (1962).
**Assumption:** there is a Pred-head too, expressing ‘partitivity’. In German it is empty (affixed to the noun) but in English and also French it is overt, cf *quelque chose de beau*, see Leu (2004) for discussion.

Since they refer only to ‘amount’ and not to an entity in their nominal usage they must combine with something that denotes a set, i.e. a nominal. English does not have nominalized adjectives (cf. *the blue/the blue one*) and therefore the construction is not possible.

- Only intersective (nominalized) adjectives are possible:

<table>
<thead>
<tr>
<th>Nominalized Adjective</th>
<th>English Equivalent</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>viel angebliches</em></td>
<td><em>much alleged</em></td>
</tr>
<tr>
<td><em>genug potentielles</em></td>
<td><em>enough potential</em></td>
</tr>
<tr>
<td><em>genug früheres</em></td>
<td><em>enough former</em></td>
</tr>
</tbody>
</table>

  (45) ![Diagram](image)

A possible counter-argument:

The two constituents can be divided by topicalization to Spec-CP, but never to an extraposed position:

- (46) a. *z’essit het’s gnueg gea*
  - *to-eat* has it enough given
  - "There was enough food"

- (47) a. *ich hab ihn schon immer gehalten für einen Idioten*
  - I have him prt always considered for an idiot

But this is also true for other small clauses in German:

- (47) a. *für einen Idioten hab ich ihn schon immer gehalten*
  - for an idiot have I him prt always considered
  - "I always considered him an idiot"

- (48) a. *roh wurde das Fleisch geschnitten*
  - raw has-been the meat cut

In sum:

- Light nouns are semantically deficient, they infer their lexical content from a predicative element (predicative VP, AP, NP)

- A movement analysis is neither adequate for the dental infinitival construction nor for the light noun construction

- The small clause structure as a basic application of MERGE is able to capture the formation of a predication relation between two predicative elements such that the
output is again a predicate which is then input to other Merge-operations (e.g. with a functional element)

- The predicates of these light noun construction behave like other predicates of small clauses in terms of topicalization and movement possibilities
- The postnominal position follows without further assumptions

4. Infinitives introduced by zum

4.1. Prepositional adjuncts

NPs with a restrictor and strong quantifiers are excluded with z’ (+ -it) but possible with zum. This contrast is also found in Bavarian:

(49) *Es het a Bier/ alls * z’trinkit/zum trinke gea

it has a beer/ all to-drink/to-the drinking existed
“There was everything to drink”

(50) Es hot a Bier/ allas *z’trinka/zun trinka geem

it has a beer/ all to-drink/tothe drinking existed
“There was everything to drink”

The examples with the zum-version are judged grammatical but they are pragmatically odd in that they are felt to be redundant. cf. the English example above. They get better if e.g. a contrastive reading is forced (I hab dir des Bier zum trinke gea und it zum wegleere I gave you that beer for drinking and not for tipping away).

The restrictions from the light noun construction do not apply and we have a purpose/instrumental reading:

- All types of verbs are possible in the embedded structure

(51) ich suech ebber zum helfe
I sear somebody to help

(52) Ich suech ebbes zum schriibe
I search something to write (with)

(53) I ha nünt zum uff de Tisch schtelle
I have nothing to-the on the table put

(54) I such was auf’n Tisch zun schtelln
I search something on the table to-the put

Alemannic and Bavarian differ in the position of zum but otherwise the distribution is the same, see Brandner (2004, ms), Bayer (1993).

- no restriction concerning the matrix verb

(55) do schtoht ebbes zum wegkaie
there stands something to cast away

(56) ich koch mir etz ebbes zum esse
I cook me noe something to eat

(57) B’Muatta  muass hoam zun kocha  / *z’kocha
the-mother must home to-the coking / to-cook
“Mother must go home to cook (dinner)”

(58) Ich muss hom gi koche/* z’kochit
I must home Gi cook / to-cook
The *zum*-construction is a PP with the nominalized verb as its complement; it functions merely as a modifier and as a complete functional phrase it can adjoin to any constituent; it can even be extraposed, cf. the restrictions on the small-clause predicates.

Standard German does not have *zum* occurring with infinitives. In order to get a grammatical output for (49), a purpose clause with *um*….zu has to be invoked:

Zum can only be used with pure nominalizations in SG:

4.2. Other post-nominal constructions

Dubinsky (1998):

Zu turns it into a predicative element (cf. CAN-modality)

V+ -it removes all arguments from the verb (type reading of an activity)
Assume with Botwinik-Rotem (2004) that to (zum in ALM) additionally externalizes the DO if X is the internal argument of V, the vacuous reading arises. According to Dubinsky (1998), the post-nominal infinitive is licensed by a Degree Phrase (which can also be realized by a tough-type adjective). This modification induces a type-reading of the NP and as such it is again a good candidate for a predication relation.

The present participle in SG and the –it ending in Alemannic have the same historical source (inflected infinitive zi essenne → zi essende), since SG lacks zum it can not externalize the DO within a predication. It uses the bare VP-projection, turns it into an adjective and combines it with a noun in a usual adjective construction, cf. (70)

Open question:
Tough-constructions are possible in all variants:

(72) a. this car is easy to drive
    b. des Auto isch guet zum fahre
    c. dieses Auto ist gut zu fahren

Speculation:
Here, the externalization does not target a position within a small clause, so the base structure is in fact a complex predicate as proposed in Botwinik-Rotem (2004) and since the movement ends up in the subject position of a finite clause we have a finite predication relation which is (of course) also possible in SG.

References

Brandner, E. ms. Bare infinitives in Alemannic and the categorial status of infinitival complements.