### Expectations and Observations

Intensional Transitive Verbs (ITVs) are verbs like *want* and *need* that can combine directly with noun phrase complements and endow them with an intensional interpretation. Some ITV's also have infinitival paraphrases.

Received wisdom is that the infinitival and the nominal constructions of these verbs are semantically equivalent. Accordingly, a variety of mechanisms have been explored that make them equivalent either in the syntax or in the semantics (McCawley 1974, Fodor & Lepore 1998, and others).

An unexpected difference emerges between the two constructions when we look at modal ITVs and how flexible they are with respect to the type of modality they can express.

E.g. *I need (to take) a break:*  

- Teleological (goals) ✓ ✓ ✓  
- Deontic (rules) ✓ ✓ ✓  

Circumstantial Modalities

The transitive construction is restricted to a subset of circumstantial (or root) modalities.

### The Crucial Context

Contexts that bring out the difference are ones in which the rules (+external) conflict with internal circumstances (-internal).

- Gina has had an aversion to chocolate since childhood. She hates it in her food, in her drink, even as a garnish. Today as part of her job as a restaurant critic, she was sent by mistake to review a cafe that specializes in hot chocolate. She can’t be assigned to a different restaurant and the review is due on the boss’s desk tomorrow morning.

- It is necessary to look at an ITV which is in general flexible in terms of type of modality (not want).
- Following the rules is often beneficial and a goal in itself...
- “Anti-circumstantial” contexts uncover the difference between need-DP and need-IP constructions.

Two experiments tested the correlation between the syntactic configuration of *need* and its semantic interpretation in different discourse contexts.

### Results of Experiment 1 and 2

Need-DP sentences received significantly lower ratings than need-IP sentences in Exp. 1 ($t = 7.155, p < 0.001$). In Exp. 2, the ratings in the two conditions did not differ ($t = 0.43, p = 0.66$). The models fitted were linear mixed models with crossed random effects for subjects and items. Between experiments, a *t*-test revealed that the difference among the need-IP sentences was significant as well ($t = 6.45, p < 0.001$).

### Results of Experiment 2'

A significant tendency for external-deontic interpretations to be paired with the IP configuration of the verb (2.16 times higher odds than in the transitive configuration, *p < 0.001*) was found in a mixed logit model.

<table>
<thead>
<tr>
<th>Response Type</th>
<th>Deontic</th>
<th>Teleological</th>
</tr>
</thead>
<tbody>
<tr>
<td>DP condition</td>
<td>13.5</td>
<td>10.7</td>
</tr>
<tr>
<td>IP condition</td>
<td>99</td>
<td>141</td>
</tr>
<tr>
<td>Total</td>
<td>232</td>
<td>248</td>
</tr>
</tbody>
</table>

### Conclusions

Overall, these findings establish a clear difference between *need* and *need to* in terms of the type of modality they can express.

- **Transitive need** can express only a proper subset of the root modalities.  
  - It is naturally used to express internal-teleological modality.  
  - It cannot readily acquire deontic interpretations, even with supporting context.
- **Need to** is open to both teleological and deontic interpretations.

Attitude verbs that express only one type of modality across the board, like *want* (Heim 1992), have obscured the different modal potential of the two syntactic configurations.

### Theoretical Implications

A new look at the syntax-semantics mapping of modal verbs and their context dependency.

- Deontic and teleological modalities are usually taken to be subtypes of circumstantial modality (Krater 1981), distinguished only by features of the contexts in which they are uttered. However, we have seen that in fact the grammar keeps them apart in at least one environment.
- This is not evidence against a covert relation in the syntax or semantics of need-DP constructions. As far as modal meanings are concerned, explaining the ban on deontics is difficult either way.
- It seems instead that an investigation into the grammatical limitations on the context dependency of modals is the place to look. This approach also has much precedence in the literature.

### Selected References


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