On compositional (a)telicity in adult and child Hebrew

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BACKGROUND
Properties of telic predicates

- **Endpoint**: point of culmination is an integral part of predicate (completion inference)

- **Non-homogeneous**: a part is not same as the whole (drawing part of a flower $\neq$ drawing whole flower)
Telicity and the direct object

✓ The direct object plays a crucial role in the derivation of telicity
  (e.g. Verkuyl, 1972; 2005; Dowty, 1991; Krifka, 1989; 1992; Tenny, 1994)

✓ Telicity value of predicate is determined by whether the direct object NP is quantized
  (e.g. Verkuyl, 1985, Krifka, 1989, Tenny, 1994)
Quantization is taken to be motivated by the nominal properties of the internal argument: noun-type and/or definiteness
HYPOTHESES & PREDICTIONS
Hypothesis (1)
Telic predicates (=incremental dynamic verb + quantized object) are only true as descriptions of completed events

Prediction (1)
Adults will reject telic predicates as descriptions of incomplete events
Hypothesis (2)
Atelic predicates (incremental dynamic verb + non-quantized object) are true as descriptions of completed and incomplete events

Prediction (2)
Adults will accept atelic predicates as descriptions of incomplete events
METHODOLOGY
**Knowledge of compositional telicity**

(inspired by van Hout, 2003)

Yes/no Truth Value Judgment Task

(Crain & McKee, 1985; Crain & Thornton, 1998)

<table>
<thead>
<tr>
<th>Definiteness</th>
<th>NP type</th>
<th></th>
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</thead>
<tbody>
<tr>
<td></td>
<td>Singular count</td>
<td>Plural count</td>
<td>Mass</td>
<td></td>
</tr>
<tr>
<td>+</td>
<td><em>litsboa et haribua</em></td>
<td><em>litsboa et haribuim</em></td>
<td><em>litsboa et habad</em></td>
<td></td>
</tr>
<tr>
<td></td>
<td>paint-inf 'et' the-square</td>
<td>paint-inf 'et' the-squares</td>
<td>paint-inf 'et' the-material</td>
<td></td>
</tr>
<tr>
<td>-</td>
<td><em>litsboa ribua</em></td>
<td><em>litsboa ribuim</em></td>
<td><em>litsboa bad</em></td>
<td></td>
</tr>
<tr>
<td></td>
<td>paint-inf (a) square</td>
<td>paint-inf squares</td>
<td>paint-inf material</td>
<td></td>
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</table>

6 conditions, 5 items per condition
Procedure

• The participant is told that the experimenter was asked to videotape people doing various things; but

• Having shot the videos, experimenter is not sure whether friends did what they were told

• Participant is asked to judge whether the friend did what s/he was told

• Experimenter tells subject what friend was told to do

• Participant watches video and asked to judge
Definite singular-count condition

**EXP:** amarti letara litsboa et haribua
   told-1sg to-Tara paint-inf ‘et’ the-square
   ‘I told Tara to paint the square.’

**Video clip**

**EXP:** tara asta ma sheamarti la?
   Tara did-3sgf what that-told-1sg to-her
   ‘Did Tara do what I told her (to do)?’

**Target response:** lo no
Test-sentence is always non-tensed (e.g. *litsboa ribua* ‘paint-inf square’)

Reason:
Native intuitions, early pilot study suggests Hebrew past tense may be ambiguous between perfective/imperfective reading → unwanted influence on telicity value of predicate

Example:
*tsav’a ribua* (‘painted a square’) = painted a square (perfective) = was painting a square (imperfective)
Participants

23 Hebrew-speaking adults (aged 27-60)
RESULTS
Acceptance rate of predicates as descriptions of incomplete events

- **Singular Count**: 19% definite, 22% indefinite
- **Plural Count**: 15% definite, 89% indefinite
- **Mass**: 40% definite, 90% indefinite

Noun Type
Predictions (1) and (2) were borne out:
Telic predicates are rejected
Atelic predicates are accepted as descriptions of incomplete events
BUT...
Quite a lot of individual (subject/item) differences in interpretation
Pragmatics plays a role in derivation of telicity...?
DISCUSSION
Some background
Pragmatic strategies (Grice 1975)

The cooperative principle
✓ Make your contribution as is required, when it is required, by the conversation in which you are engaged

Maxim of Quality
✓ Contribute only what you know to be true
✓ Do not say false things
✓ Do not say things for which you lack evidence

Maxim of Quantity
✓ Make your contribution as informative as is required
✓ Do not say more/less than is required
Our proposal (a sketch)
Example test item:
(1) *litsboa et haribua* (‘paint the square’)

- The noun *ribua* (‘square’) standardly denotes the whole
- However, the sentence in (1) is underspecified
- It does not provide finer details, such as part/whole
- The more specific/informative alternatives to (1) are (2) and (3):
  (2) *litsboa et kol haribua* (‘paint the whole square’)
  (3) *litsboa xelek me-haribua* (‘paint part of the square’)


(1) *litsboa* *et haribua* (‘paint the square’)

(2) *litsboa* *et* *kol* *haribua* (‘paint the whole square’)

(3) *litsboa* *xelek* *me-haribua* (‘paint part of the square’)

- The alternatives in (2),(3) are at least as relevant as (1)
- The availability of these alternatives in the computation makes (1) ambiguous:
  i. When the alternative to (1) is (2), (1) is interpreted as the negation of ‘the whole square’
  ii. Conversely, when the alternative to (1) is (3), (1) is interpreted as the negation of ‘part of the square’
Hence, this ambiguity leads to the following two competing pragmatic strategies
Implicature 1

Asserted proposition p:
*litsboa et haribua* (‘paint the square’)

Alternative q:
*litsboa et kol haribua* (‘paint the whole square’)

→ Implicature:
→ *litsboa et kol haribua* (¬ ‘paint the whole square’ = ‘paint part of the square’)}
The reasoning process for implicature 1
a. **Contextual premise**

It is mutual, public information that the speaker conveys an instruction that she wishes the addressee to follow

b. Assume the speaker is cooperative

c. Then she will assert what is maximally informative and true

d. The proposition $q$ ‘paint the whole square’ is relevant as an instruction to the addressee

e. $q$ is more informative than $p$ because it provides more specific information than $p$
f. The speaker chose not to assert \( q \)

\[ \rightarrow \]

The speaker does not wish the addressee to perform \( q \)

\[ \rightarrow \]

The speaker does not wish the addressee to paint the whole square, and her assertion ‘paint the square’ has the meaning: ‘paint part of the square’
Implicature 2

Asserted proposition p: 
*litsboa et haribua* (‘paint the square’)

Alternative q: 
*litsboa xelek me-haribua* (‘paint part of the square’)

→ Implicature: 
→ *litsboa xelek me-haribua* (→ ‘paint part of the square’ = paint the whole square)
The reasoning process for implicature 2
a. **Contextual premise**

It is mutual, public information that the speaker conveys an instruction that she wishes the addressee to follow.

b. Assume the speaker is cooperative.

c. Then she will assert what is maximally informative and true.

d. The proposition q ‘paint part of the square’ is relevant as an instruction to the addressee.

e. q is more informative than p because it provides more specific information than p.
f. The speaker chose not to assert q

→

The speaker does not wish the addressee to perform q

→

The speaker does not wish the addressee to paint only part of the square, and her assertion ‘paint the square’ has the meaning: ‘paint the whole square’
Crucially...
• The two implicatures are not equally salient
• The salient implicature is the one that results in the telic reading (*paint the square* = *paint the whole square*)
• Its saliency comes from the visual world
• When a square is visually available, it is more natural to assume that the speaker is referring to it as a whole and not just to a part of it

→ The visual presence of a square makes the maximal reading more salient
Empirical support for the saliency claim
Compare:

i. (in)definite singular count: ‘a/the square’

ii. definite plural: ‘the squares’

iii. definite mass: ‘the rice’

Less clear what *the whole* is with a definite mass
With a telic predicate such as ‘collect the rice’, in which the direct object is a definite mass, this saliency effect does not arise.

In other words, the salient interpretation is not necessarily ‘collect all the rice’.

Hence, the prediction is that non-culminating readings will be more freely licensed in the definite mass condition.
This is indeed borne out by our data
Acceptance of telic predicates as descriptions of incomplete events

- Def singular count: 19%
- Indef singular count: 22%
- Def plural: 15%
- Def mass: 40%
Interim summary
Telicity judgments are affected by two competing implicatures. This competition is responsible for the variation in adult language.
What about child Hebrew?
Crosslinguistically, children’s knowledge of the aspectual notion of telicity has been demonstrated to be present from early on (Aspect First Hypothesis, e.g. Bronckart & Sinclair, 1973)

Hypothesis (3)
Hebrew speaking school-age children have adultlike knowledge of (a)telicity
Prediction (3)
Hebrew speaking children will **reject** telic predicates as descriptions of incomplete events

Prediction (4)
Hebrew speaking children will **accept** atelic predicates as descriptions of incomplete events
Participants

58 Hebrew speaking children aged 7;1-17;11

Group 1: 7-8 year olds (N=10)
Group 2: 9-10 year olds (N=15)
Group 3: 11-12 year olds (N=12)
Group 4: 13-14 year olds (N=10)
Group 5: 16-17 year olds (N=11)
Acceptance rate of telic vs. atelic predicates by age group

<table>
<thead>
<tr>
<th>Age Group</th>
<th>Telic</th>
<th>Atelic</th>
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</thead>
<tbody>
<tr>
<td>7-8 yr olds</td>
<td>38%</td>
<td>59%</td>
</tr>
<tr>
<td>9-10 yr olds</td>
<td>40%</td>
<td>55%</td>
</tr>
<tr>
<td>11-12 yrs</td>
<td>76%</td>
<td>40%</td>
</tr>
<tr>
<td>13-14 yrs</td>
<td>37%</td>
<td>80%</td>
</tr>
<tr>
<td>16-17 yr olds</td>
<td>45%</td>
<td>97%</td>
</tr>
<tr>
<td>ADULTS</td>
<td>24%</td>
<td>90%</td>
</tr>
</tbody>
</table>
What is going on...?

• Hebrew-speaking children do distinguish between telic and atelic predicates

• Although very differently than adult speakers

• In the younger groups
  ➢ Non-culminating readings of telic predicates
  ➢ But also culminating readings of atelic predicates!

• Development towards adultlike behavior for atelic predicates

• Steady, non-adultlike performance in telic conditions
Open questions (a categorically non exhaustive list!)

• The role of the mass/count distinction in telicity derivation?
• Is Hebrew changing into a Hindi-like language in terms of licensing non-culminating readings of telic predicates?
• Are telicity and atelicity two sides of the same coin?
• Are the derivations of telicity and atelicity qualitatively different?
THANK YOU!