An investigation into learners’ and teachers’ attitudes towards learners’ self-assessment according to CEFR\(^1\) scales

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Abstract

Relative to research on learners’ involvement in language assessment, there have been fewer studies on the learners’ and/or teachers’ attitudes towards learners’ self-assessment (SA). Although some studies on the learners’ feelings towards peer assessment (PA) reported different results such as a positive attitude towards evaluating the peers’ written work (e.g. Birdsong & Sharplin, 1986), a less positive attitude towards assessing the peers’ oral presentation skills (e.g. Cheng & Warren, 2005) and a very negative attitude towards PA (e.g. Miller & Ng, 1994), studies focused on learners’ attitude towards SA can rarely be found. For example, a study of Thomson (1996) on SA in ‘self-directed learning’ reported that many students were comfortable with SA and had a positive attitude towards the SA project regardless of gender, age and nationality. To date, however, there has not really been a research on both learners’ and teachers’ attitudes toward learners’ SA. Thus, this study aims to compare the learners’ attitude towards SA based on two CEFR’s rating scales (i.e. a general retrospective SA based on the CEFR’s SA grid and an immediate retrospective SA based on the CEFR’s qualitative aspects of spoken language use) and also to compare with teachers’ attitude. Data was collected through a structured questionnaire and a follow-up interview of 20 English learners and 2 teachers in the UK. In order to compare attitudes between the learner and the teacher groups, the Mann-Whitney test was carried out; interview data was also qualitatively analysed to supplement information from quantitative findings. The findings suggest that both the learners and the teachers had positive attitudes towards SA regardless of the forms of SA; however, some learners found it difficult to do SA and the teachers were also concerned that the immediate retrospective SA might be difficult for some learners to do.

1. Introduction

The term of self-assessment (SA) is generally understood as a measurement carried out by learners themselves according to criteria in order (1) to assess their own performances of tasks in the target language or (2) to check the outcomes of their own learning or (3) to show their achievement after completion of their course to a certain period. The most critical issue of learners’ involvement in language assessment is ‘lack of objectivity’ in assessment. The reason is that it is largely believed that personal feelings are very much involved in learners’ assessments (Dickinson, 1987). However, many researchers claim that when learners have a clear understanding of (assessment) criteria through (rater) training, they can perform SA accurately (e.g. LeBlanc & Painchaud, 1985; Bachman & Palmer, 1989; Peirce, et al., 1993; Patri, 2002). In

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\(^1\) Common European Framework of Reference for Languages: Learning, Teaching, Assessment

\(^2\) In this paper, the terms of self-assessment and self-rating are interchangeably used depending on instruments.
this regard, the author investigated (1) whether learners could perform SA accurately when rater-training was sufficiently given and (2) their attitude towards SA. And the learners’ attitude was compared with the teachers’. In this paper, the author only focuses on the learners’ and teachers’ attitudes towards SA and reports about them. This paper has the following sections: first informants of this study, then instruments in relation to tasks (i.e. ratings and 2-3 minute talks) used in this study, followed by rater-training and then procedures of data collection. A results and discussion section looks at the findings of the study which comes to a brief conclusion in the end.

2. Informants

The informants of the study were 20 learners (9 males and 11 females) aged 18 to 40 and two ESOL teachers in the UK. The participants were voluntarily recruited for the research purposes from May 2010 to April 2011. The majority of the participant learners were the students from different departments of the University of Essex along with English learners who were taking the courses of ECDIS (English Classes for Dependants of International Students and Staff) at the International Academy. Their first languages were Chinese, Italian, Portuguese, Romanian and Spanish. Their levels of speaking proficiency were addressed as A2 to C2 according to the CEFR scales (for detailed descriptors of the CEFR levels, see Appendices 1 and 2). The teachers were native speakers of English and have been teaching English beginners to advanced learners, from young learners to adult learners for 4 to 37 years.

3. Instruments

In literature, the most commonly used technique in the most of SA studies is rating scales defined as a series of short descriptors of different levels of language ability aiming at describing what the typical learner at each level can do. The author investigated into rating scales used in literature and selected the CEFR scales as reliable measurement tools since they aim at ‘... the assessment of a particular spoken or written performance, and in relation to continuous teacher-, peer- or self-assessment’ (Council of Europe 2001, 19) which fit one of the author’s research purposes - i.e. comparison between learners’ and teachers’ assessments of learners’ oral proficiency. As addressed in the study of the author in 2006 (see Lim, 2007), four issues must be tackled to achieve this purpose: (1) when SA should be carried out (at the beginning, during or at the end of the project) (2) what type of SA (and how it should be constructed if rating scales are to be used for instance), (3) how training should be given to learners (and teachers) and (4) what kinds of tasks should be conducted for assessing learners’ oral proficiency.

Considering the issues (1) and (2) above, the self-assessment checklist (see Appendix 1) was adapted from the CEFR’s SA grid for a general retrospective SA of learners for two reasons: first, it does not provide a user with any space to tick either YES or NO for each statement.

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3 This paper describes part of an on-going PhD study of the author.
4 Basque, Bulgarian, Catalan, Chinese, Croatian Czech, Danish, Dutch, Estonian, Finnish, French, Galician, German, Greek, Hungarian, Icelandic, Italian, Latvian, Lithuanian, Maltese, Moldovan/ Romanian, Norwegian, Polish, Portuguese, Russian Slovakian, Slovenian, Spanish, Swedish and Turkish could only take part in the research since the bilingual materials were available in these languages.
5 The CEFR divides six levels as below: A1 (Breakthrough), A2 (Waystage), B1 (Threshold), B2 (Vantage), C1 (Effective Operational Proficiency) and C2 (Mastery).
Second, the author did not intend to test learners’ reading ability so the bilingual versions of the self-assessment checklist depending on learners’ first languages were given to all learners when the rater-training workshop was over in the first week of each cohort of the participant groups (for details, see Procedures of data collection section below).

Whereas the CEFR’s qualitative aspects of spoken language use (4QAOSLU hereafter, see Appendix 2) was modified for an immediate retrospective SA of learners since the task of learners’ oral performance of which learners and teachers rated was a monologue (i.e. 2-3 minute talks, see Tasks section below). Thus, four categories of range, accuracy, fluency and coherence as criteria were chosen from the CEFR’s qualitative aspects of spoken language use for rating of learners’ talks throughout the research project, that is, not only for (learners’) individual practice but also for the real (learners’ and teachers’) rating data that was collected in the final week of each cohort of the participant groups (for details, see Procedures of data collection section below).

Two sets of parallel attitude questionnaires for rating activities for learners and teachers were designed to compare learners’ and teachers’ attitudes as below:

- Q1. I liked self-assessment checklist.
- Q2. I found it difficult to do self-assessment checklist.
- Q3. I think my self-assessment checklist was accurate.
- Q4. I would continue to use self-assessment checklist afterwards.
- Q5. I liked self-rating of my talks.
- Q6. I found it difficult to do self-rating of my talks.
- Q7. I think my self-rating of my talks was accurate.
- Q8. I would continue to use self-rating of my talks afterwards.
- Q9. I think learners should take part in assessing their own performances.
- Q10. I think learners can make an accurate judgement on their own performances if rater-training is given.

Questions from 1 to 4 asked the participants about their feelings/thoughts on the rating activity with the SA checklists; questions from 5 to 8 asked them about their feelings/thoughts on the rating activity of the talks; questions 9 and 10 asked them about their thoughts on SA in general. All participants were asked to answer each question with 6-point Likert scales (1. strongly disagree, 2. disagree, 3. partially disagree, 4. partially agree, 5. agree, 6. strongly agree).

In addition, two sets of interview questions were designed for learners and teachers to determine their thoughts on their experiences of SAs and to explore issues of task familiarity, task difficulty, length of training and other attitudes.

- Q1. Have you ever had to speak for three minutes about anything before in English?
- Q2. Have you ever done any self-rating before? If you have already done any self-rating activities before, please tell me more about them.
- Q3. Did you find it easy or difficult to rate your talks? Please choose a point on the scale from ‘very easy’ to ‘very difficult.’ If it was easy or difficult, then please tell me why.
- Q4. Did you fully understand what was expected of you while rating? Please choose a point on the

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6 Different wording for the same questions of learners’ questionnaire was used in the teachers’ questionnaire. For example, question 2 ‘I found it difficult to do self-assessment checklist’ in the learners’ questionnaire was changed into ‘I thought this self-rating difficult for learners to do’ in the teachers’ case.
scale from ‘I understood very well’ to ‘I could not understand at all’. If you could not understand well, then please tell me why.

**Q5.** Here is the attitude questionnaire for self-rating activities you filled in. Would you like to tell me why you disagreed with … (if ticked either one of 1 - Strongly disagree, 2 - Disagree and 3 - Partially disagree):

- **Q5.1** When a participant would agree to continue to use SA checklist afterwards, would you tell me how you think you will use it?
- **Q5.2** When a participant would agree to continue to do self-rating of talks afterwards would you tell me how you think you will use it?

**Q6.** Do you think the rater-training workshop in the first week and the self-rating exercises three times afterwards were sufficient or insufficient to do the self-rating of your talk (yesterday)? If not, please tell me why?

**Q7.** Is there anything you would like to add or any comments you would like to make?

To summarise, four instruments were used in the study to achieve the research purposes. The SA checklist and 4QAOSLU were used for the rating activities whereas the attitude questionnaires and the interview questionnaires were used for investigation into learners’ and teachers’ attitudes toward learners’ SA in which we are mainly interested in this paper.

### 4. Tasks

When the learners’ rater-training workshop was over in the first week of each cohort of the project groups, each learner was asked to perform three tasks, i.e. two kinds of SAs and a 2-3 minute talk. First of all, all participant learners were asked to take the SA checklist with them which were supposed to return to the author in the following week when they had to come for their first individual rating practice as part of (STANDARDISATION) training (see **Rater-training** section below). Secondly, they were to produce 2-3 minute talks on the given topics, rate their talks according to the criteria (4QAOSLU) and compare their ratings with the teachers’ every week over the three weeks until the real self-rating data of the learners’ talks was collected in the final week of each cohort of the project groups. Every week a different topic card with an instruction was given to all participant learners for their talks. The following is an example of the topic cards given to them each week.

**INSTRUCTION**

You have 1 minute to prepare your talk on the topic below. You can make (bullet point) notes but are not allowed to take the notes with you when you do your talk.

**TOPIC**

First of all, introduce yourself and tell us about your family and the family system in your country.

A piece of paper and a pencil were provided on the table where participant learners sat and produced their talks. When one minute preparation time was over, they were to produce a talk
which was video-recorded every week. Four different topics were selected among eight topics below and given to the participants for four weeks (i.e. weeks 2-5) depending on their levels: topics 1-5 for the participant learners at the levels A2-B2 and topics 1-8 for the participant learners at the levels C1-C2.

<table>
<thead>
<tr>
<th>TOPIC 1</th>
<th>Difficulty of topics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tell us about your family and the family system in your country.</td>
<td>A2-B2</td>
</tr>
<tr>
<td>TOPIC 2</td>
<td>Tell us about your hobbies and interests.</td>
</tr>
<tr>
<td>TOPIC 3</td>
<td>Tell us about festivals in your country.</td>
</tr>
<tr>
<td>TOPIC 4</td>
<td>What country would you like to visit and why?</td>
</tr>
<tr>
<td>TOPIC 5</td>
<td>Tell us about differences between cultures in the UK and in your country.</td>
</tr>
<tr>
<td>TOPIC 6</td>
<td>Tell us about your favorite film or TV programme or book.</td>
</tr>
<tr>
<td>TOPIC 7</td>
<td>Tell us about the school system in your country and suggest any opinion to improve it if necessary.</td>
</tr>
<tr>
<td>TOPIC 8</td>
<td>Tell us about your future plans and what aspects of your plans can contribute to the society to which you belong.</td>
</tr>
</tbody>
</table>

For this rating activity, both the learners and the teachers followed the procedure as below:

Step 1 PREPARATION
A topic was given to a learner after the author and the teachers discussed beforehand. One minute was given to him or her to prepare a talk on that topic;

Step 2 PRESENTATION
S/he produced a talk which was video-recorded for Step 3;

Step 3 WATCHING THE TALK
Before watching the talk, laminated criteria sheets (4 QAOSLU) were given to the learner and the teachers each. Then s/he and the teachers together watched his or her video-recorded talk;

Step 4 RATING THE TALK
S/he and the teachers were asked to assign his or her level individually according to the rating criteria. And the author suggested to them circling levels of range, accuracy, fluency and coherence on the sheets with the water soluble marker pens; and

Step 5 COMPARISON OF RATINGS
Finally, s/he and teachers compared their ratings with each other and talked about what levels they assigned and why they assigned the level(s) they did.

5. Rater-training

7 The teachers and the author discussed about topics and selected eight topics in advanced. Although there was relative difficulty in the topics depending on individuals, the author found that the topics were more or less familiar with the participant learners after interviewing.
Some researchers such as Blue (1988), Rolfe (1990) and Patri (2001) suggest that certain SA techniques are difficult for some learners to cope with; therefore, learner training should be provided for them for the effective use of instrument. In this regard, it was necessary for the author to train all participants including the teachers for effective use of 4QAOSLU. The following describes how rater-training for both learners and teachers was planned and carried out until the real rating date was collected in the final week of each cohort of the learner participant groups.

As taking up the suggestion of the Manual, *Relating Language Examinations to the CEFR* (Council of Europe, 2009) regarding standardisation training, the rater- trainings for both teachers and learners followed two main procedures (FAMILIARISATION and STANDARDISATION) as below. (Note: The training for the teachers took place on two different days, preceding the learners’ training in order to make sure that teachers’ ratings should have been consistent among themselves as we understand that their ratings were supposed to indicate to what extent learners could accurately assess their own performances by comparison of learners’ and teachers’ ratings.) As shown in Table 1 below, the rater- trainings of teachers and learners were planned across two phases: phase 1-FAMILIARISATION and phase 2- STANDARDISATION. First of all, the teachers were trained by the procedures of FAMILIARISATION (briefly looking at the rating criteria, a sorting activity of the rating criteria, a reconstruction activity of the rating criteria) and of STANDARDISATION (illustrating the CEFR levels with the students’ DVD performances, individual rating practice with students’ DVD performances, individual rating exercises with the participant learners). In contrast, all participant learners were trained by the procedures of FAMILIARISATION (presentation of CEFR levels and descriptors and discussion, a sorting activity of the rating criteria, a reconstruction activity of the rating criteria) and of STANDARDISATION (illustrating the CEFR levels with the students’ DVD performances, rating practice in the group with the students’ DVD performances, individual rating practice with the students’ DVD performances, individual self-rating exercises). The approximate duration for each activity was as below:

**Table 1: Rater- trainings for teachers and learners**

<table>
<thead>
<tr>
<th>Phase 1: FAMILIARISATION</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>* Regarding <strong>the teacher training</strong>, this procedure took 1 hour:</td>
<td></td>
</tr>
<tr>
<td>(1) Briefly looking at the criteria</td>
<td>20 mins</td>
</tr>
<tr>
<td>(2) Sorting activity of the criteria</td>
<td>20 mins</td>
</tr>
<tr>
<td>(3) Reconstruction activity of the criteria</td>
<td>20 mins</td>
</tr>
<tr>
<td>* Regarding <strong>the learner training</strong>, this procedure took 1 hour 35 minutes:</td>
<td></td>
</tr>
<tr>
<td>(1) Presentation of CEFR levels and descriptors and discussion</td>
<td>45 mins</td>
</tr>
<tr>
<td>(2) Sorting activity of the criteria</td>
<td>25 mins</td>
</tr>
<tr>
<td>(3) Reconstruction activity of the criteria</td>
<td>20 mins</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Phase 2: STANDARDISATION</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>* Regarding <strong>the teacher training</strong>, the procedures of parts 1 and 2 took 1 hour and 30 minutes. And part 3 took about 20 minutes for each learner although these <strong>SA practice</strong> were carried out for 4 weeks.</td>
<td></td>
</tr>
<tr>
<td>Part 1: Illustrating the CEFR levels with the students’ DVD performances</td>
<td>30 mins</td>
</tr>
<tr>
<td>Step 1 - A 1-2 minute video performance x 2 times</td>
<td></td>
</tr>
</tbody>
</table>
Step 2 - Comparison of ratings  
(Steps 1-2 repeated 3 times with 3 examples)

Part 2: Individual assessment practice with the students' DVD performances  
Step 1 - A 1-2 minute video performance and assigning a level x 2 times  
Step 2 - Experts’ comments  
(Steps 1-2 repeated 3 times with 3 examples)

Part 3: Individual assessment practice with the participant learners  
Step 1 - (one minute) Preparation  
Step 2 - Presentation  
Step 3 - Watching the talk  
Step 4 - Assessing the talk  
Step 5 - Comparison of ratings  
(Steps 1-5 repeated 3 times until the final session for the real SA data)

* Regarding the learner training, the procedures of part 1, 2 and 3 took 1 hour 50 minutes. And part 4 took about 20 minutes for each learner although these SA practice were carried out for 4 weeks.

Part 1: Illustrating the CEFR levels with the students’ DVD performances  
Step 1 - A 1-2 minute video performance x 2 times  
Step 2 - Experts’ comments  
(Steps 1-2 repeated 3 times with 3 examples)

Part 2: Assessment practice in the groups with the students’ DVD performances  
Step 1 - A 1-2 minute video performance as a warm-up x 2 times  
Step 2 - Assigning a level  
Step 3 - Experts’ comments  
(Steps 1-3 repeated 3 times with 3 examples)

Part 3: Individual SA practice with the students' DVD performances  
Step 1 - A 1-2 minute video performance x 2 times  
Step 2 - Assigning a level  
Step 3 - Experts’ comments  
(Steps 1-3 repeated 3 times with 3 examples)

Part 4: Individual SA exercises  
Step 1 - (one minute) Preparation  
Step 2 - Presentation  
Step 3 - Watching the talk  
Step 4 - Assessing the talk  
Step 5 - Comparison of ratings  
(Steps 1-5 repeated 3 times until the final session for the real SA data)

Especially, the students’ performances of the CIEP’s DVD Spoken performances\(^8\) were used for the activities of illustrating the CEFR levels and individual rating practice with several reasons as below: First, this DVD was the outcome of a cross-language benchmarking seminar to calibrate examples of spoken production with regard to the six levels of the CEFR held in 2008 in Sèvre, France so that each student in video was presented by the CEFR level. Second, the students’

performances in video were assessed by the same criteria (i.e. the CEFR’s qualitative aspects of spoken language use) which the author intended to use for the study. Third, it provided the experts’ comments on the assigned levels on the students’ performances so that all participants could compare their ratings with the experts’ rating of the same students’ performance in video.

6. Procedures of data collection

All data (learners/teachers ratings, attitude questionnaires and interview data) were completely collected after three times practice of the (learners’) individual self-ratings as shown in Table 2 below. Especially, the bilingual SA checklists depending on participants’ first languages were given to each learner when the rater-training workshop was over in the first week, and the participant learners were suggested returning to the author in the following week (week 2). When the participant learners finished their final rating activity of own talks, they were invited to follow-up interviews which were set dates for either the following day or another day depending on their schedules. The author met up with individual participants for their interviews on the days as scheduled. All participants first answered the attitude questionnaire and then the author interviewed them with the semi-structured interview questionnaire (see Interview questions in Instruments section above) afterwards.

Table 2: Five consecutive weeks’ activities of learners and teachers and data collection

<table>
<thead>
<tr>
<th>ACTIVITIES</th>
<th>DATA (COLLECTED)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Week 1</td>
<td>A half-day workshop for rater-training (FAMILIARISATION and STANDARDISATION)</td>
</tr>
<tr>
<td>Week 2-4</td>
<td>Individual self-rating practice each week (3 rounds of practice)</td>
</tr>
</tbody>
</table>
| Week 5     | A self-rating activity, an attitude questionnaire and an interview | • Learners’ ratings  
• Teachers’ ratings  
• Attitude questionnaires  
• Interview questionnaires |

7. Results and discussion

As mentioned earlier, we are only interested in the data of the attitude questionnaires and the interview questionnaires, focusing on the learners’ and teachers’ attitudes towards SA. Thus, the following findings are based on the data of the attitude questionnaires and the interview questionnaires, collected in the final week (week 5) as shown in Table 2.

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9 The majority of the participant learners were able to do all activities during five consecutive weeks of the research project; yet its duration was extended for some participants due to their personal reasons. Thus, data collection strictly applied to those who only practised the individual self-rating with the teachers three times.

10 The teachers’ attitude questionnaires and interviews were carried out when the project was completed with the first cohort of the project groups.
First of all, while interviewing, all participants said that they had never experienced SA activities before. It means that SA was a new way not only for the learners but also for the teachers to assess language ability. It implies that SA might be widely used in other educational settings but not in language assessment yet. Secondly, SA was a new way to assess language ability, yet all of them said that they liked SA though they preferred to do the self-ratings of talks (Q1 Mean = 4.91, Q5 Mean = 5.27) as shown in Table 3 below. Thirdly, some participant learners found it difficult to do SA as shown by the Mean ratings of Q2 and Q6 in brackets- are lower than other items (Q2 Mean = 2.75, Q6 Mean = 3.30). From the interview data, the reasons were as below: (1) some learners said that they could not tick either YES or NO to some ‘can-do’ statements in the SA checklist as the statements seemed to depend on individual contexts and (2) some learners said they were not convinced whether they assigned a right level for their own talk; especially their levels who seemed to be between two adjacent levels. Interestingly, even those who matched their ratings with the teachers’ ratings over the four weeks said that they found it a bit difficult to do self-ratings of their talks. It implies that SA seems to be much related to a person’s self-concept regardless of his or her accuracy in language assessment. Fourthly, many learners felt that their SAs were accurate as we see the Mean ratings of Q3 and Q7 in brackets (Q3 Mean = 4.35, Q7 Mean = 4.60). It implies that the participant learners generally felt that they could assess accurately although they acknowledged its difficulty. Fifthly, all participants showed a positive attitude toward learners’ involvement in assessment (Q9 Mean = 5.00) and also thought that learners can make an accurate judgment on their own performance if (sufficient) training is given (Q10 Mean = 4.77). Sixthly, the participant learners showed a positive attitude, regarding continuation of SA (Q4 Mean = 4.95, Q8 Mean = 4.35). Also the teachers said that they would encourage learners to do SA after the research project.

Table 3: Attitude towards learners’ self-assessment (N=22)

<table>
<thead>
<tr>
<th>Question</th>
<th>Mean*</th>
<th>SD*</th>
<th>Mann-Whitney test</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q1. I liked self-assessment checklist.</td>
<td>4.91 (4.90)</td>
<td>.684 (.718)</td>
<td>-.253 .800</td>
</tr>
<tr>
<td>Q2. I found it difficult to do self-assessment checklist.</td>
<td>2.91 (2.75)</td>
<td>1.269 (1.209)</td>
<td>-1.790 .073</td>
</tr>
<tr>
<td>Q3. I think my self-assessment checklist was accurate.</td>
<td>4.32 (4.35)</td>
<td>.780 (.813)</td>
<td>-.646 .518</td>
</tr>
<tr>
<td>Q4. I would continue to use self-assessment checklist afterwards.</td>
<td>4.95 (4.95)</td>
<td>.785 (.759)</td>
<td>-.063 .950</td>
</tr>
<tr>
<td>Q5. I liked self-rating of my talks.</td>
<td>5.27 (5.30)</td>
<td>.703 (.733)</td>
<td>-.749 .454</td>
</tr>
<tr>
<td>Q6. I found it difficult to do self-rating of my talks.</td>
<td>3.45 (3.30)</td>
<td>1.335 (1.261)</td>
<td>-1.580 .114</td>
</tr>
<tr>
<td>Q7. I think my self-rating of my talks was accurate.</td>
<td>4.55 (4.60)</td>
<td>.800 (.821)</td>
<td>-1.120 .263</td>
</tr>
<tr>
<td>Q8. I would continue to use self-rating of my talks afterwards.</td>
<td>4.36 (4.35)</td>
<td>1.217 (1.268)</td>
<td>.000 1.000</td>
</tr>
<tr>
<td>Q9. I think learners should take part in assessing their own performances.</td>
<td>5.00 (5.00)</td>
<td>.617 (.649)</td>
<td>-.156 .876</td>
</tr>
<tr>
<td>Q10. I think learners can make an accurate judgement on their own performances if rater-training is given.</td>
<td>4.77 (4.85)</td>
<td>.922 (.933)</td>
<td>-1.330 .184</td>
</tr>
</tbody>
</table>

(Responding scale from 1=Strongly disagree to 6=Strongly agree)
* Mean ratings and SDs in brackets represent the participant learners only.
While interviewing, the author asked the learners about *how the learner would use it* if they answered with agreement. Here are a few examples: some said that they would use the SA checklist every 6 months to gauge whether they would be improved or whether they could achieve to the next level. Some said that they would use their computers and web cameras to do self-rating of their talks as they did during the research project.

Overall, both the learners and the teachers had positive attitudes towards learners’ SA with respect to difficulty; as shown in Table 3, $p$ values of all items are greater than the midpoint (3.5) except the Mean rating for Q2 (Difficulty) of the learner group (2.91) although this difference is not significant ($p = .073$); there is no significant difference between the two groups according to the Mann-Whitney test.

7. Conclusion

The findings we have discussed so far suggest that both the learners and the teachers had positive attitudes towards SA regardless of the forms of SA (i.e. a general retrospective SA according to the SA checklist and an immediate retrospective SA according to 4 QAOSLU). However, some learners found it difficult to do SA due to lack of assurance and confidence in their decisions. And the teachers were also concerned that the ratings of talks might be difficult for some learners to do.

Acknowledgement
I would like to thank all participants and my friends who made this research project possible.

References


Website

**Appendix 1** Self-assessment checklist
(Modified from self-assessment grid of the CEFR; Council of Europe, 2001: 26-27)

**Self-assessment checklist**

<table>
<thead>
<tr>
<th>Name</th>
<th></th>
<th></th>
</tr>
</thead>
</table>

Read each ‘can-do’ statement and tick (√) in the third column if you think you can do it (easily). If not, tick in the fourth column.

**Spoken Production**

<table>
<thead>
<tr>
<th>A1</th>
<th>I can use simple phrases and sentences to describe where I live and people I know.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>
## Appendix 2 Four qualitative aspects of spoken language use (4QAOSLU)
(Modified from the qualitative aspects of spoken language use, Council of Europe, 2001: 28-29)

<table>
<thead>
<tr>
<th>RANGE</th>
<th>ACCURACY</th>
<th>FLUENCY</th>
<th>COHERENCE</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>C2</strong></td>
<td>Shows great flexibility reformulating ideas in differing linguistic forms to convey finer shades of meaning precisely, to give emphasis, to differentiate and to eliminate ambiguity. Also has a good command of idiomatic expressions and colloquialisms.</td>
<td>Maintains consistent grammatical control of complex language, even while attention is otherwise engaged (e.g. in forward planning, in monitoring others’ reactions).</td>
<td>Can express him/herself spontaneously at length with a natural colloquial flow, avoiding or backtracking around any difficulty so smoothly that the interlocutor is hardly aware of it.</td>
</tr>
<tr>
<td><strong>C1</strong></td>
<td>Has a good command of a broad range of language allowing him/her to select a formulation to express him/herself clearly in an appropriate style on a wide range of general, academic, professional or leisure topics without having to restrict what he/she wants to say.</td>
<td>Consistently maintains a high degree of grammatical accuracy; errors are rare, difficult to spot and generally corrected when they do occur.</td>
<td>Can express him/herself fluently and spontaneously, almost effortlessly. Only a conceptually difficult subject can hinder a natural, smooth flow of language.</td>
</tr>
<tr>
<td><strong>B2</strong></td>
<td>Has a sufficient range of language to be able to give clear descriptions, express viewpoints on most general topics, without much conspicuous searching for words, using some complex sentence forms to do so.</td>
<td>Shows a relatively high degree of grammatical control. Does not make errors which cause misunderstanding, and can correct most of his/her mistakes.</td>
<td>Can produce stretches of language with a fairly even tempo; although he/she can be hesitant as he or she searches for patterns and expressions, there are few noticeably long pauses.</td>
</tr>
<tr>
<td><strong>B1</strong></td>
<td>Has enough language to get by, with sufficient vocabulary to express him/herself with some hesitation and circumlocations on topics such as family, hobbies and interests, work, travel, and current events.</td>
<td>Uses reasonably accurately a repertoire of frequently used &quot;routines&quot; and patterns associated with more predictable situations.</td>
<td>Can keep going comprehensibly, even though pausing for grammatical and lexical planning and repair is very evident, especially in longer stretches of free production.</td>
</tr>
<tr>
<td><strong>A2</strong></td>
<td>Uses basic sentence patterns with memorised phrases, groups of a few words and formulae in order to communicate limited information in simple everyday situations.</td>
<td>Uses some simple structures correctly, but still systematically makes basic mistakes.</td>
<td>Can make him/herself understood in very short utterances, even though pauses, false starts and reformulation are very evident.</td>
</tr>
<tr>
<td><strong>A1</strong></td>
<td>Has a very basic repertoire of words and simple phrases related to personal details and particular concrete situations.</td>
<td>Shows only limited control of a few simple grammatical structures and sentence patterns in a memorised repertoire.</td>
<td>Can manage very short, isolated, mainly pre-packaged utterances, with much pausing to search for expressions, to articulate less familiar words, and to repair communication.</td>
</tr>
</tbody>
</table>
A Reanalysis of Anatomical Changes for Language: 
Re-Dating the Loss of Laryngeal Air Sacs in *Homo sapiens*

Richard Littauer

*University of Edinburgh, U.K.*

**Abstract**

Laryngeal air sacs occur in many different species of primates. In the case of *Homo sapiens*, their presence has been lost. This has been argued to have occurred before *Homo heidelbergensis*, due to a loss of the bulla in the hyoid bone from *Australopithecus afarensis* (Martinez, 2008), at a range of 500kya to 3.3mya. (de Boer, to appear). Justifications for the loss of laryngeal air sacs include infection, the ability to modify breathing patterns and the reduction of a need for an anti-hyperventilating device (Hewitt et al, 2002), and linguistic selection against air sacs as they are disadvantageous for subtle, timed, and distinct sounds. (de Boer, to appear). Further, it has been suggested that the loss goes against the significant correlation of air sac retention to evolutionary growth in body mass (Hewitt et al., 2002). I argue that the loss of air sacs may have occurred more recently than 3.3mya, as the loss of the bulla in the hyoid does not exclude the possibility of airs sacs, as laryngeal air sacs can herniate between two muscles regularly in other species (Frey et al., 2007), and as vestigial air sacs in *Homo sapiens* indicate a shorter evolutionary timescale. Further, I argue that *Homo sapiens* was not an exception to the smaller body weight and loss correlation, as a size reduction in *Homo sapiens* from *Homo heidelbergensis* was not accounted for in the previous synchronic study. It is hoped that these arguments will shed light on the anatomical pre-adaptations or adaptations for language use in hominins.

1 Introduction

Air sacs are found in a wide variety of different animals; in mammals, they appear in bats, cetaceans, and ungulates, among other orders (Bradbury 1998). Laryngeal air sacs, which are connected to the vocal tract and situated above the vocal folds, appear in many primates – including all of the apes, excluding *Homo sapiens*. Many studies, citing Avril (1963), associate the bulla, an extension of the hyoid bone, as being incontrovertibly linked with the presence of air sacs in the ape lineage. From this, it is postulated that air sacs in *Homo* were lost between 3.3 million and 500 thousand years ago, as shown by the presence or lack of the bulla in the fossil record. Further to this, there exists a statistically significant correlation between a reduction in body mass and the loss of air sacs in primates. Hewitt *et al.* (2002) demonstrate, using a synchronic analysis, that *Homo sapiens* is an exception to this trend. Language may be a justification for this, as the loss of air sacs has been suggested as being part of the general change in the vocal tract due to selection for linguistic production (Tomasello and Bates 2001),

However, I will present evidence against using the loss of the bulla as an argument for the co-occurrence of loss of air sacs in *Homo*. This leaves the dating of the loss of air sacs open. I will then go on to suggest that the Hewitt *et al.* (2002) study of body mass reduction and air sac loss, where *Homo sapiens* was an exceptional case, did not fully account for the lineage of
current hominins. Using a diachronic analysis of hominin species, it is possible that *Homo sapiens* are not an exception to this correlation. This would mean that linguistic adaption may not have been significant factor in the loss of laryngeal air sacs in modern anatomical humans.

2 Morphological History

Air sacs are cavities that are attached to the vocal apparatus. They are present in many mammals (Frey *et al.*, 2007), but only lateral ventricle air sacs occur in the ape line (Hewitt *et al.*, 2002). *Homo sapiens* no longer have air sacs, except in rare pathological cases and in certain specific circumstances involving irregular behaviour-caused modification of the vocal tract.

There are several reasons that have been suggested for the loss of air sacs. For instance, air sacs are prone to a common ailment called ‘airsacculitis’: infection of the air sac. This is often posited as a pressure for the loss of air sacs in mammals – however, the lack of a cross-species study of the functions and uses of air sacs, particularly prior to being lost, has not yet been done (Hewitt *et al.*, 2002). Other justifications given in the literature include the ability to modify breathing patterns and reduce need for a device that would prevent hyperventilating (Hewitt *et al.*, 2002). MacLarnon and Hewitt (1999) similarly suggest that the loss of air sacs may be beneficial towards fine breathing control, which is also necessary for modern human speech.

A linguistic justification is given by de Boer (to appear), who argues using a computer model that there is selection against air sacs as they are disadvantageous for subtle, timed, and distinct sounds, which are necessary for human speech. However, they may be advantageous for paralinguistic noises such as booms or other pre-linguistic calls similar to the chimp pant hoot: a lower F0 is more beneficial than fine control in male-to-male competition, which often drives the descent of the larynx in other species (Fitch and Reby, 2002).

3 The Bulla

A reliable indicator of the presence of air sacs in *Homininae* has been taken to be the bulla, which is a small extension of the hyoid bone that allows for the attachment of the laryngeal air sac to the vocal tract (de Boer, to appear, and references therein.) Fossilised hyoid bones of *Homo sapiens, neanderthalensis, and heidelbergensis* lack a clear bulla (Martínez *et al.*, 2008), but is present in *Australopithecus afarensis* (Alemseged *et al.*, 2006) This data has led to suggestions that the loss of the laryngeal air sac must have occurred between 3.3mya and 500kya (de Boer, to appear). It is impossible to fine-tune the date more than this based on the hyoid bone, as there are none extant (at the time of publication) in the archaeological record from *Australopithecus afarensis* to *Homo heidelbergensis*, a gap of 2.8 million years.

The loss of air sacs may have occurred more recently, as the loss of the bulla in the hyoid bone does not necessarily exclude the possibility of non-vestigial airs sacs, as laryngeal air sacs can regularly project between, reposition, and herniate muscles in the larynx (Giovanniello *et al.*, 1970). In primates, “A maximum of four types of [laryngeal] air sac
(lateral ventricular, subhyoid, infraglottal and dorsal) have been identified, but no single source describes the morphology and summarises the distribution of all the types of air sac.” (Hewitt et al., 2002; 71) These four types occur in different species, but there are individual differences in air sac morphology, as well.

Laryngocoeles (non-fully formed or species-regular air sacs) can occur in pathological cases in humans. They can occur congenitally, or be acquired later in life. In such cases, the impetus is often due to an excessive build up in pressure in the glottis, which stretches the internal wall to form a sac. This has been reported most in trumpet players, glass blowers, and other professionals who depend on pressure in the glottis. Internal pouches can block the vocal tract and result in hoarseness of breath and speech defects, but the air sacs can also herniate the surrounding tissue and sit between the muscles and the skin, creating a bulge (Giovanniello et al., 1970). This bulge is a regular feature in other primate species, as seen in the non-pathological case of the Siamang Symphalangus syndactylus in Figure 1.

**Figure 1**: Siamang air sac bulge

In some cervids, such as the Mongolian gazelle *Procapra gutturosa*, bulges (here the larynx) are part of the regular species morphology, but are not reflected in the bulla of the hyoid bone (Frey and Gebler, 2003; 460). The fact that vestigial air sacs occasionally occur in humans, along with the possibility for sacs to herniate the locale and vary between individuals, suggests that the lack of a hyoid bulla alone cannot adequately excuse a species from having air sacs, especially when considering that the bulla and air sacs need not disappear simultaneously, as bone and muscle morphology is little understood diachronically, and as there has been no detailed cross-species study of air sac morphology and use (Hewitt et al. 2002).

Furthermore, a major study looking at air sacs in primates in order to judge the acoustic effect of air sacs on call duration found that the bulla can exist in some species, but not in others, regardless of the presence of air sacs (Hewitt et al. 200). They note that the ancestral line of primates was likely to have had air sacs. This suggests that current bone morphology may be vestigial of previous states. But as Lovejoy (2009, p. 74e8) noted,

“There is no correlation between hyoid inflation and the presence or absence of air sacs in primates. For example, *Cercopithecus aethiops* lacks air sacs, whereas *Cercopithecus mitis* exhibits them. We have observed that the hyoid bodies of both species are equally inflated.”
In light of this, and in light of the evidence provided above regarding air sac morphology, the presence of the bulla cannot be taken as irrefutable evidence of air sacs being present. The dating of the loss of air sacs therefore becomes an open question.

4 Size Reduction and Air Sac Loss

Hewitt et al. 2002 found a significant correlation between body size and presence of air sacs in primates, looking at 18 divergent cases. However, they performed a synchronic study, and so did not control for evolutionary changes that might have occurred after a split between a species with sac and one without (such as, for instance, Homo sapiens and Pan.) There were four exceptions to this correlation – Homo sapiens being one of them.

“The exceptions were the evolution of Microcebus murinus, A. trivirgatus, Callicebus moloch and Homo sapiens, the first 3 species having evolved sacs without an increase in body weight (2 negative contrasts and 1 zero contrast) and human evolution involved an increase in body weight and the loss of air sacs (negative contrast).” (Hewitt et al. 2002, p. 79)

However, this is dependent on a steady, continual increase in average body size from Homininae to Pan and Homo. This is not the case; as early as 40kya Homo sapiens were significantly larger than modern population (in some cases) (Hermanussen et al., 2003). There was a marked decrease in size from Homo heidelbergensis to Homo sapiens (Although not from Homo ergaster to Homo heidelbergensis) (Soligo et al., 2006). This suggests that using the weight measurements of living species as a justification for the loss of air sacs despite a gain in body mass is unfounded given paleontological evidence, which suggests that it is possible that the laryngeal air sacs may have been lost only after size reduction in Homo sapiens from Homo heidelbergensis, or that it alternatively may have been lost during a state of relative stasis in total body mass between Homo ergaster and heidelbergensis.

5 Conclusion

If it is the case that the lack of a bulla in Homo heidelbergensis does not necessarily indicate lack of laryngeal air sacs, and that body size in Homo correlate with other losses, then the environment in which this change may have occurred must be examined. It is possible that the change in environment from forest to grassland may have been significant, or that other functional aspects of the breathing apparatus may have influenced the loss of air sacs in Homo sapiens. More studies on how environmental acoustics, in particular in evolutionary settings, affect anatomical changes remains an exciting area for future research on other possible justifications for air sac loss.

There is also other work that is needed on this topic. There has been to date few detailed published studies of air sacs across a wide variety of species and orders, either morphologically or based on their usage. There is little research into the evolution of air sacs or their disappearance. There have been few studies on hyoid bones outside of primates regarding air sacs, as most hyoid studies tend to focus on the position of the larynx. Additionally, there are few evolutionary archaeological findings of hyoid bones, as it is one of the smallest, and the only unconnected bone in the body. It may yet be correlated to air sacs in the Homo line, but currently there is no conclusive proof that this is the case. As well, studies are necessary regarding breathing regulation involving air sacs, and there is a dearth of
morphological research into this area, although there has been extensive modeling (de Boer, to appear).

It is hoped that study into these areas will provide illumination on the situation involving air sacs in the *Homininae* lineage. In turn, this will contribute to understanding how language has shaped, and will contribute to shape, the anatomy of *Homo sapiens*.

**References**


*Siamang* [Figure 1] (2011). Retrieved from http://en.wikipedia.org/wiki/Siamang


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An Integration of Corpus-based and Genre-based Approaches in EAP: National English Examinations in Turkey

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Uludag University, TURKEY

Abstract

This paper draws heavily on large self-compiled and specialized corpora based on three national English examinations in Turkey, including Interuniversity Foreign Language Examinations (for sciences, social sciences and health sciences), Foreign Language Examination for Civil Servants and Residency Examination for Medical Doctors. I aim to build specialized corpora to show the relevance of using corpus data in mainstream ESP/EAP classrooms by (1) using basic corpus linguistic techniques, (2) investigating high-frequent transitional words and indicate communicative purposes of the transitional words by integrating corpus-based and genre-based approaches and (3) designing classroom materials from corpus data. Employing both qualitative and quantitative approaches, the results of the analyses reveal that the most frequent transitions in the specialized corpora are because (848 occurrences), such (795 occurrences), still (452 occurrences), although (451 occurrences) and however (433 occurrences) and the most frequent keywords are passage, people, years, countries and world. The results also suggest that the integration of corpus-based and genre-based approaches could scaffold EAP teachers and learners by highlighting the significance of concordances and communicative purposes of the target words and also teachers can produce classroom materials specific to learners’ needs. Suggestions for further research and pedagogical implications are provided considering the findings.

Keywords: corpus linguistics, specialized corpora, national English examination, higher education.

1. Introduction

Developments in technology have paved the way for new approaches to language teaching including corpus linguistics, which is not a new branch or a new theory of language (c.f., Tognini-Bonelli, 2001) but a powerful linguistic methodology (c.f., Widdowson, 2000) based on collections of electronic texts systematically (Gavioli, 2005; Granger, 2002; Hunston, 2002; McEnery, Xiao, & Tono, 2006; O’Keeffe, McCarthy & Carter, 2007; Stubbs, 1996). Recently, there is a growing research into the use of language corpora and computer tools for language education. The findings of various empirical studies (e.g., Aston, 1995; Cobb, 1997; Cullen & Kuo, 2007; Davies, 2009; Sinclair, 1991; Thurstun & Candlin, 1998) suggest that corpora can be a valuable resource for teachers to produce classroom materials. However, there are some criticisms regarding using corpus. For example, Widdowson (2000) points out that corpus data is partially real because it provides decontextualized language and needs to be recontextualized in the classroom. Swales (2002) criticizes that corpora require a bottom-up approach. Some researchers (e.g., Gavioli, 2005; Romer, 2004, 2006) discuss the potential use of corpus data as course materials and highlight that corpus-based activities have not completely reached the classroom. There is “very little request from teachers and learners, who either ignore the possibility of using corpora inside classroom activities or do not see
their relevance for teaching/learning” (Gavioli, 2005, p. 1). Although general and specialized corpora could be even better exploited to positively affect the life of teachers and learners, there are a lot still remains to be done (Romer, 2006).

Considering these discussions and gaps in a real teaching context in Turkey, this study pinpoints some crucial issues that have been pointed out about the needs for designing corpora and realizing the relevance of corpus data in classrooms. Accordingly, this research aims to highlight the relevance of using corpus data in a mainstream ESP/EAP classroom by suggesting selfcompiled specialized corpora and use some basic corpus linguistic techniques to provide a wider perspective into how teaching ESP/EAP may work with the use of corpus effectively. The paper is organized as follows. First, the terms general and specialized corpora will be defined and the advantages of specialized corpora will be discussed to demystify the significance of corpus data instead of using available course books or general corpora. Second, the criteria in the corpus design will be presented with some sample computer analyses based on basic corpus linguistic techniques. Third, corpus-based and genre-based approaches will be integrated to show the communicative purposes of the transitional words. Finally, sample corpus-aided exercises for classroom materials and activities will be presented with some implications.

2. General corpora and specialized corpora
There are a variety of definitions of corpus (e.g., Conrad, 2002; Kennedy, 1998) but in this paper I will use McEnery, et al.,’s (2006) description, which concentrates on the central premises of a corpus: “a corpus is not a random collection of text but a collection of (1) machine-readable (2) authentic texts (including transcripts of spoken data) which is (3) sampled to be (4) representative of a particular language or language variety” (p. 5). There are two types of corpora considering text categories as general and specialized corpora. General corpora refer to overall description of a language and language variety (e.g., British National Corpus). On the other hand, specified corpora are designed for the purpose of “creating a sample of specialized language either by collecting texts of similar content or similar text-type of genre…” (Gavioli, 2005, p.7). Specialized corpora in this study refer to a collection of texts, namely testing designed for specific purposes (e.g., testing for sciences, social sciences) tailored to practitioners’ and learners’ needs. Fostering the use of specialized corpora in ESP classrooms may be of great value to the ESP/EAP practitioners and learners thanks to the methodological advantages that specificity brings. They are “(1) carefully targeted (2) specialized structures are likely to occur with more regular patterning and distribution (3) the pedagogical goals in terms of how they are used and applied are likely to be easier to define and delimit” (O’ Keeffe et al., 2007, p. 198). Therefore, “the more highly specialized the language to be sampled in the corpus, the fewer will be the problems in defining the texts to be sampled” (Atkins, Clear & Ostler, 1992, p. 7).

3. Present Study
3.1 Corpora design in ESP/EAP
In this study four groups of criteria were considered for reliable and generalizable results in light of the literature in corpus linguistics (see Aston & Burnard 1998; Biber, 1993; Flowerdew, 2004; Hunston, 2002).

(1) The material actually selected for inclusion/content
Internet is a valuable resource of corpus data and highly exploited by researchers, so web is easy to reach to collect texts relevant to teaching. In the present research, the specialized corpora are created from three national English examinations in higher education in Turkey,
which are available online in PDF. The PDF files were converted into word documents. In order to select carefully chosen and appropriately constructed texts and size of the corpora, three criteria were considered following Bhatia (1993, 2004). First, the texts included in each corpus belonged to a specific genre, namely national English examinations. Second, based on their communicative purposes they were distinguishable from other genres (i.e., tests versus research articles). Third, for a reasonable selection of corpus, a large sample of texts was analyzed to reveal “a few specified features through easily identified indicators” (Bhatia, 2004, p. 165). The examinations in the corpora are in the form of tests made up of multiple choice questions mainly on reading passages, translations, grammar and vocabulary. There is not any question on listening, writing and speaking and each examination has different target groups (see Table 1). There are 100 questions in each examination but UDS, which has 80 questions, and these examinations have very similar generic structures.

Table 1
National English examination in Turkey in higher education

<table>
<thead>
<tr>
<th>1. Foreign Language Examination for Civil Servants (KPDS):</th>
<th>A prerequisite to be a post-graduate student or an academic at the universities.</th>
</tr>
</thead>
<tbody>
<tr>
<td>2. Residency Examination for Medical Doctors (TUS):</td>
<td>A prerequisite for students who graduated from Faculty of Medicine to expertise in a specific field in medicine.</td>
</tr>
<tr>
<td>3. Interuniversity Foreign Language Examinations (UDS):</td>
<td>A prerequisite to be post-graduate students and an academic. UDS is more specific than KPDS. Both students and academics can take the examination considering their field of study. This examination is divided into three examinations, namely (1) social sciences, (2) health sciences and (3) sciences.</td>
</tr>
</tbody>
</table>

(2) The size of the corpus and of component parts
The present corpora including five sub-corpora are comprised of 690,791 words as shown in Table 2. Since the number of tokens in the corpora is more than 250,000 words, it is considered large corpora (Flowerdew, 2004).

Table 2
Number of words in national English examinations

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<tbody>
<tr>
<td>Years of examinations</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Word counts</td>
<td>195,439</td>
<td>145,300</td>
<td>129,860</td>
<td>147,920</td>
<td>72,272</td>
<td>690,791</td>
</tr>
</tbody>
</table>

(3) Representativeness
Representativeness, a key issue in corpus design, here refers to “the extent to which a sample includes the full range of variability in a population” (Biber, 1993, p. 243). McEnery et al., (2006) suggest that there are two significant factors to call corpora as representative, namely “the range of genres included in a corpus and how text chunks for each genre are selected” (p.13).
Permanence

Permanence is regarded as a dynamic language model to include all the potential changes in the target texts. Hunston (2002) highlights the importance of diachronic aspect, which is sometimes overlooked in the literature and suggests that “any corpus that is not regularly updated rapidly becomes unrepresentative” (p. 30).

To make the corpora representative and permanent, the corpora have included all the national English examination questions in higher education that have been asked in the last ten years in Turkey. The sub-corpus TUS is smaller in size since the questions before 2006 could not be found available online. The texts in the corpora have a very similar genre due to the fact that these are national English examinations in the form of tests. Each sub-corpus includes the tests specific to discourse of the discipline. All in all, main criteria discussed in the literature are fulfilled to make the corpora representative. The similarity in the integral structure highlights the genre of the examinations; the size is enough to generate a lot of corpus data, the corpora include all the recent examinations and are prepared for a specific purpose that make the corpora specified and representative enough to conduct comprehensive research and produce course materials (J. Swales, personal communication, April, 11, 2011).

4. Basic corpus linguistic techniques

Corpus linguistics embodies various basic techniques for language learning, including concordancing, frequencies, keyword analysis, and collocations. Here I will focus on three techniques concordancing, frequency wordlist and keywords analysis and provide some examples based on computer analyses by using Laurence Anthony’s AntConc (2008).

4. 1 Concordancing

Concordancing, the core tool in corpus linguistics, is a collection of the occurrences of a word-form or phrase, each in its own textual environment in a database by using corpus software (Conrad, 2002; Sinclair, 1991). The importance of concordancing has been emphasized by a number of researchers in the literature (e.g., Flowerdew, 1993; Hanson-Smith, 1993; Sinclair, 1991). When sub-corpus TUS was investigated for the concordances lines for the medical word ‘mortality’, the analysis provided 40 occurrences and when I looked at the word ‘research’, there are 404 occurrences in all corpora which can be evidence to show how specific and rich the corpora are. Moreover, this finding shows that concordances allow us “to observe the behaviour of a particular word-form in detail” (McEnery, et al., 2006, p. 147). Compared to dictionaries and available course books regarding medical English, the concordance lines can provide richer insights into how the word ‘mortality’ specific to medicine collocates with other words (see Table 3).

Table 3

Concordance lines for the word mortality from TUS sub-corpus

| 1. hreatening illness with significant morbidity and mortality rates, especially when associated with necrosis i |
| 2. lifetime risk of ovarian cancer is very low, the mortality rate is high, and the 5-year survival rate is less |
| 3. d treatable. The main reason why malaria-related mortality has increased while mortality associated with mo |
| 4. ed after a wait, the child may have an increased mortality risk after stage 1 surgery |
We can see recurrent features of words specific to discipline, in this example a medical word, mortality, and use the concordances as valuable tools to produce materials.

**4.2 Frequency word lists:** We can reach a rank ordering of all the words in our corpora by running a word frequency list and understand the tendencies in terms of genre and context of the texts in our corpora with frequency counts and word frequencies reveal core vocabulary, too (Hyland, 2008; O’Keeffe, et al., 2007). When the word frequencies are compared in the corpora, the words give clues about both the genre (e.g., the word passage which is a common word in four sub-corpora can be a sign that there are written texts/reading in the corpora) and the content of the texts (e.g., the frequent words such as scientists in sub-corpus of UDS Sciences or cancer and disease in sub-corpus of TUS). O’Keefe, et al., (2007) suggest that generating frequency list for specialized corpora and comparing it with other specialized corpora can show us the distinctive features emerge “providing a fingerprint for the type of language” in the specialized corpus (p. 202). In this context, the frequency lists in Table 4 show the differences among the disciplines which can boost learner motivation to concentrate.

**Table 4**

*Word frequency comparisons across corpora*

<table>
<thead>
<tr>
<th></th>
<th>Words</th>
<th>Frequencies</th>
</tr>
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<tr>
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<td>437</td>
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<tr>
<td></td>
<td>world</td>
<td>291</td>
</tr>
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<td></td>
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<td>283</td>
</tr>
<tr>
<td></td>
<td>years</td>
<td>247</td>
</tr>
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<td>patients</td>
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<td>countries</td>
<td>194</td>
</tr>
<tr>
<td></td>
<td>century</td>
<td>189</td>
</tr>
</tbody>
</table>

**4.3 Keyword analysis:** Keywords, also called keyness, are unusually frequent in the target corpus when they are compared to a reference corpus (O’Keeffe, et al., 2007; Scott, 1999);
therefore, it does not mean that they are the high-frequent words in the target corpora. To find keywords, I compared two wordlists in software: pre-existing target wordlists based on the text we are studying and a larger wordlist as a reference corpus the Corpus of Contemporary American English (COCA), which is bigger than the specialized corpus to compare. The underlying reason why I have chosen COCA is that the tendency towards teaching American English in Turkey. I found out the keywords in five sub-corpora as shown in Table 5 by using keyword tool in AntConc. The most frequent keywords across corpora are passage, people, years, countries and world, which means a very rich material impossible to find as specific as this corpus data considering the genre of the examinations.

Table 5

The first five keywords in the 5 sub-corpora

<table>
<thead>
<tr>
<th>Keywords</th>
<th>Rank</th>
<th>Frequency</th>
<th>Keyness</th>
</tr>
</thead>
<tbody>
<tr>
<td>passage</td>
<td>1</td>
<td>437</td>
<td>1.602.906</td>
</tr>
<tr>
<td>people</td>
<td>2</td>
<td>450</td>
<td>1.224.720</td>
</tr>
<tr>
<td>Europe</td>
<td>3</td>
<td>187</td>
<td>712.274</td>
</tr>
<tr>
<td>countries</td>
<td>4</td>
<td>197</td>
<td>698.220</td>
</tr>
<tr>
<td>economic</td>
<td>5</td>
<td>215</td>
<td>662.431</td>
</tr>
<tr>
<td>patients</td>
<td>1</td>
<td>185</td>
<td>978.841</td>
</tr>
<tr>
<td>disease</td>
<td>2</td>
<td>168</td>
<td>716.969</td>
</tr>
<tr>
<td>risk</td>
<td>3</td>
<td>146</td>
<td>537.431</td>
</tr>
<tr>
<td>cancer</td>
<td>4</td>
<td>112</td>
<td>443.592</td>
</tr>
<tr>
<td>associated</td>
<td>5</td>
<td>89</td>
<td>401.293</td>
</tr>
<tr>
<td>passage</td>
<td>1</td>
<td>464</td>
<td>1.954.537</td>
</tr>
<tr>
<td>scientists</td>
<td>2</td>
<td>237</td>
<td>982.926</td>
</tr>
<tr>
<td>Earth</td>
<td>3</td>
<td>212</td>
<td>921.717</td>
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<tr>
<td>used</td>
<td>4</td>
<td>232</td>
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<td>years</td>
<td>5</td>
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<td>470</td>
<td>1.630.661</td>
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<tr>
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<td>3</td>
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<td>1.041.490</td>
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<td>cells</td>
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<td>people</td>
<td>2</td>
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</tr>
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<td>783.914</td>
</tr>
<tr>
<td>Europe</td>
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</tr>
<tr>
<td>US</td>
<td>5</td>
<td>140</td>
<td>591.895</td>
</tr>
</tbody>
</table>

4.4 Integrating corpus-based and genre-based approach to text analysis

Genre analysis is mostly associated with moves but it also embodies grammatical aspects of written academic discourse including hedges (Hyland, 1998). Although there is a small amount of context in the concordances, we can still categorize the transitional words as a grammatical aspect considering their communicative purposes. All national examinations in Turkey include some questions on transitions. Transitions are significant to reading passages as well.
The concordance lines reveal that the most frequent transitions in the corpora are because (848 occurrences), such (795 occurrences), still (452 occurrences), although (451 occurrences) and however (433 occurrences).

Sample concordance lines for transitions across corpora:
1. ies. It is clearly a very serious situation. However, it's surely better to wait a while before ventur
2. nesses in which international prices are falling because of global competition and technological change.
3. er, have an increased incidence of breast cancer, although this increase is limited to small, localized, sol
4. make go up by more than 1.000% in his life time. Yet prolonged inflation is a comparatively recent
5. make life easier with their increasing efficacy; as a result, as computer use becomes more widespread
6. h in marine species found only in small areas and therefore highly vulnerable to extinction
7. s a problematic and complicated process which is, nevertheless, desirable
8. s differ and that they come from distinct places. Accordingly, the characteristics of mesosiderites suggest the
9. en, and ultraviolet. Flowers pollinated by bees, hence, tend to be in those colors and usual
10. reduces the effects of chance errors; modelling, on the other hand, is much less familiar to practicing scientists.

5. Designing classroom materials
As the foregoing discussion indicates, corpora could provide relevant and rich corpus data to use in the classrooms. Available course books tend to provide the questions and answers of previous years’ examinations in Turkey, so “the materials remain unchanged, dispensing intuitive judgments, which fail learners and teachers” (Harwood, 2005, p. 156). However, specialized corpora can be built to meet both practitioners’ and learners’ needs to improve the teaching context thanks to specificity and rich data. Concordances as corpus-data can be very useful for us while designing classroom activities and materials (Tribble & Jones, 1990) as a resource for learners especially regarding the topics when traditional teaching materials are not sufficient in mainstream ESP/EAP classrooms. We can design classroom materials for various purposes, including teaching punctuation, propositions, collocations of the target words, transitions, technical and semi-technical vocabulary and grammar (see Appendix A for sample classroom materials to teach collocations and transitions that are prepared from the corpus-data). The concordance lines can be used to create materials. Although technical and semi-technical vocabulary specific to the discipline are of paramount importance in ESP, there are few resources both for learners and teachers. There are really few dictionaries and course books on ESP, including medicine and science course books, and the available ones are also very limited in terms of specificity indeed. Moreover, considering the fact that most of the ESP/EAP practitioners including me do not have subject knowledge and we need to study before teaching to the students, the concordance lines may be an invaluable resource not only for learners but also for practitioners to produce exercises. For example, to my best knowledge, there is not any suggestion on teaching punctuation with the help of concordances. In my view, the concordances can be also effective not only to teach transitions but also how to use punctuation. The punctuations can give clues to learners while they are answering the questions as shown in the following concordances lines:
1. Desert soil is poor in organic material but, nevertheless, it is often rich in minerals.
2. Opening a drawbridge inconveniences motorists, however, and can cause a dangerous delay for ambulances.
3. Antibacterial soaps, such as chlorhexidine, may also help.
4. The Greek and Roman civilizations, for instance, which extended from about 600 B.C.

The high frequency content words in the corpora also could be target words during the term and we can prepare a pre-test and post-test to reveal the vocabulary and grammar knowledge of my students to decide which specific vocabulary we could focus on considering their deficiencies. Teachers can encourage learners to conduct a self-test. Before presenting the reading passage(s), a set of target words can be given to the learners to assess their vocabulary knowledge (Schmitt & Schmitt, 2005). This activity may also promote learner autonomy since students could take charge of their responsibilities in their learning.

6. Conclusion and implications
In this research, I have discussed and elucidate the issues concerning building and investigating corpora with some practical implications, particularly constructing specialized corpora, using basic corpus techniques, integrating corpus-based and genre-based approaches to indicate that we should not ignore the benefits of using corpus data in the classroom. It is evident that corpus data provide us with the description of text. We should be aware of the relevance of corpora for our teaching as discussed in this study. In light of this investigation, ESP practitioners can easily create a corpus and use basic corpus techniques to produce relevant teaching materials to meet learners’ needs in various languages. Further research could focus on students’ and teachers/practitioners’ opinions regarding the use of corpus data to reveal their perceptions on the effectiveness of corpora in the classrooms.

References


Gea-Valor (Eds.). *Corpus-based approaches to English language teaching* (pp. 18-35). London: Continuum.


Appendix A- Sample classroom materials prepared from the corpus-data

I. Fill in the gaps by using the words below. Use as many contextual clues as you can both before and after the gaps. The 10 missing words are:

Concordance lines for the word research

1. According to the passage, some recent research ______ concerning morphine
2. tions to many fields of knowledge. (III)His research ______ important facts about
   the intellect
3. or him any longer! 55. A junior member of the research ______ has messed up a long term laboratory experi
4. sest to a genuinely objective form of ______ research. These privileged amateurs
   enjoyed a financial
data
5. One of the research ______ in your department has written an abst
6. of the most exciting and fearful areas in ______ research today is the cloning of
   animals
7. But they've been ______ research on volcanoes for years! How is it we know so litt
8. the timing or location of the next one but recent research ______ this may not be the
   case.
9. the Dutch armed forces B) oversees all major research ______ being carried out in
   the country C)
10. They're advertising for a postdoctoral research ______ with experience in
    immunology.
II. Fill in the blanks with the suitable transition from the list

however (x2) as a result (x2) thus (x2)

1. Ionizing radiation has proved to be most valuable, for example, in clinical diagnosis and radiotherapy. _________, inadvertent exposure to relatively high doses of ionizing radiation is capable of injuring and killing cells, inducing mutations, producing developmental abnormalities in fetuses exposed in utero, or even producing latent cancers.

2. These tumours are rarely lethal. Normal skin cells are _________ transformed into basal-cell carcinomas.

3. Combat stress may arise when an event, situation or condition in a fighting zone requires a soldier to alter his or her behaviour in response to new demand. _________, certain situations could have placed so much strain on an individual that he or she could not maintain a normal level of functioning.

4. Commonly cited explanations for this gap range from charges of sex discrimination to claims that women are more sensitive than men to work versus family conflicts and _________ less inclined to make sacrifices for their careers.

5. In comparison, an estimated 150 million women have been sterilized worldwide; _________, in several countries, vasectomy incidence approaches that of female sterilization.

6. Decaying radioactive isotopes release heat. _________, high-level waste must be constantly cooled; otherwise, it becomes dangerously hot.

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The Structure of Restrictive Relative Clauses in Lattakian Syrian Arabic

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Abstract

A number of analyses have been proposed for the structure of relative clauses (RCs) in Arabic dialects. The main distinction between them is centred on the presence or absence of head raising. In a head raising analysis, for example Darrow’s discussion of Damascene RCs (2003), the antecedent NP starts out inside the RC and then moves in front of it; whereas in a non-head raising analysis the antecedent is base-generated and some other element moves. For example, Shlonsky (1992), discussing Palestinian examples, claims that the head of the RC is merged with a CP in which an empty operator moves to the Spec of that CP. Similar proposals have been made by Elomari (1998) on the basis of data from Moroccan Arabic, and Aoun and Choueiri (1997) for Lebanese Arabic.

In this paper, I consider the arguments for and against each analysis as descriptions of RCs in Lattakian Syrian Arabic (LSA) and conclude that base-generation of the head of RCs and the movement of an empty operator is the appropriate analysis. The paper will also consider the status of resumptive pronouns in a movement account.

1. Introduction

This paper has three interrelated aims: first, to present data about relative clauses from Lattakian Syrian Arabic (LSA), a variety in which clitics are an important aspect as in some other languages; and second to review some of the relevant literature about Arabic relative clauses, and then to investigate the different analyses against the LSA data in order to decide which analysis is the most appropriate for Syrian, if any.

2. The distribution of resumptive pronouns in Syrian

Two different types of RRCs are distinguished in LSA; definite relatives and indefinite relatives. The first are always used with an element which can be argued to be a complementizer, actually LSA does not have overt relative pronouns\(^1\). The other type is used with no overt complementizer which could be endowed with features that differ from those of the overt one, i.e. it could be indefinite whereas the overt one is definite.

LSA makes use of clitics (clitics are resumptive pronouns) for the formation of both definite and indefinite RRCs. Descriptively, there is one pattern with two aspects for the distribution of clitics in LSA: in certain contexts, clitics are obligatory. In other contexts, clitics are ruled out. There are no contexts in which both gaps and clitics can appear. The distribution of clitics is illustrated as follows:

i. Clitics are required in all non-subject positions:

\(^1\)This is unlike interrogatives in LSA where there are overt interrogative pronouns.
Direct object position:
1. a lktāb [yalli drast-o]  
   the-book [that studied,1S-it]  
   The book that you studied

   b ktāb [drast-o]  
   book [studied,1S-it]  
   A book you studied

Embedded object positions
2. a lktāb [yalli fekkart-e ʾinno shtarait-o]  
   the book [that thought,2SF that bought,1S-it]  
   The book that you thought that she bought

   b. ktāb [fekkart-e ʾinno shtarait-o]  
   book [thought,2SF that bought,1S-it]  
   A book you thought that she bought

Object of preposition positions:
3. a lktāb [yalli smeʿt ʾann-o]  
   the book [that heard,1S about-it]  
   The book that you heard about

   b ktāb [smeʿt ʾann-o]  
   book [heard,1S about-it]  
   A book you heard about

Possessor position:
4. a lmuʾallef [yalli krīna ktāb-o]  
   the author [that read,1p book-his]  
   The author whose book we read

   b muʾallef [krīna ktāb-o]  
   author [read,1p book-his]  
   An author whose book we read

However, although clitics are allowed in relativized object position, they are not when object positions are questioned:

5. Shu ʾakal-t-(*a)?  
   what eat-you-(*it)?  
   What did you eat?

   ii. Clitics do not occur when the highest and embedded subject position is relativized.

6.a lmuʾallef [yalli katab lktāb]  
   the author [that wrote the-book]  
   The author that wrote the book
b muʾallef [katab lktāb]
author [wrote the-book]
An author that wrote the book

7. a lmuʾallef [yalli fekkatr-e ʾinno katab lktāb]
the author [that thought,2S that wrote the-book]
The author that you thought that wrote the book

b muʾallef [fekkatr-e ʾinno katab lktāb]
author [thought,2S that wrote the-book]
The author that you thought that wrote the book

In focus contexts, however, a resumptive pronoun could appear in both highest and embedded subject positions:

8. lmuʾallef [yalli huwī katab lktāb]
the author [that he wrote the-book]
The author that he wrote the book

9. lmuʾallef [yalli fekkatr-e ʾinno huwī katab lktāb]
the author [that thought,2S that he wrote the-book]
The author that you thought that wrote the book

One point to mention here is that although both yalli and ?inno (?inno in examples 7 and 9) are complementizers, they differ in that yalli introduces relative clauses, whereas ?inno introduces non-relative subordinate clauses.

3. Analysis
The question is whether RRCs are derived by promotion or by movement or by neither.

3. 1 Head-raising analysis
In a head raising analysis, the antecedent starts out inside the relative clause and then moves in front of it. Darrow’s analysis (2003) is an example. He assumes that what is raised is an NP and that a D, which may be phonologically empty, is left behind. His main argument for head-raising comes from reconstruction effects: variable binding condition and C condition.
Darrow argues that under the head raising analysis, variable binding conditions is satisfied:

10. [[aṭṭahʔiiʔ ʕaleyu pro₁ illi [wala ṭaʿalib]₁ maa-ḥabbu pro₂]]
QP subject, DEF:research of,3MS C no student NEG-liked,3MS relativised object
The investigation of him that no student liked … (63)

On Darrow’s analysis aṭṭahʔiiʔ ʕaleyu [investigation of him] originates in a position which is c-commanded by wala ṭaʿalib [no student]. And that is why [no student] behaves as the antecedent. In other words, the variable-binding of pro₁ is available with a relative clause containing a gap in object position, and QNP subject wala taʿalib
[no student]. This is not the case in (1) where the gap is not c-commanded by the QNP in the antecedent hence the ungrammaticality of (1):

11. *[att{h?ii? ʕaleyu pro}12 [ill{t2 zaʔaal} wala ʕalib]1]]
   *QP object, DEF.investigation of.3ms C upset no student relativized subject
   The investigation of him{1 that upset no student{1 … (63)

In addition to variable binding condition, Darrow depends on condition C (Condition C forbids names bound by pronouns or other names) (64):

12. *ʔaqṭirāḥtu [liqtirāḥ ʔinnu aḥmed ḥabb layla]12 [yalli t2
   Suggest(PERF),1cs DEF.suggestion C loved C
   zaʕaalha pro1 …kathiiran]
   bothered.3fs very much
   I made [the suggestion that Ahmed loved Layla]2 that t2 bothered her1 very much (67).

The definite antecedent liqtirāḥ ʔinnu aḥmed ḥabb layla [DEF.suggestion C aḥmed loved layla] containing an embedded name layla{1 originates in the subject gap position within the relative clause. The gap c-commands pro{1 which is coindexed with the name layla{1. This is acceptable for Darrow, as the object pro{1 is c-commanded by the name layla{1, and therefore Condition C is satisfied.

Sentence 12 becomes unacceptable when the name and the pronoun are reversed as in 13. This is because the name ‘layla{1’ can no longer c-command pro{1 leading to a violation of Condition C:

13. *ʔaqṭirāḥtu [liqtirāḥ ʔinnu aḥmed ḥabbha]12 [yalli t2
   Suggest(PERF),1cs DEF.suggestion C loved.3fs pro C
   zaʕaal layla1 …kathiiran]
   bothered very much
   I made the suggestion that Ahmed loved Layla1 that bothered her very much (67)2.

3.1.1 Weaknesses of the raising analysis

There are relative clause structures where the idea that there is movement is problematic, especially examples where prepositional object position and possessor position are relativized.

14. rrijjal yalli ḥkait ma`-o
   the man that talked-I with-him
   The man I talked [PP to-CI]

15. rrijjal yalli sta`ar-t siyyart-o
   the man that borrowed-I car-his
   The man that I borrowed [NP car-CI]

2 Indices were added to the translation for clarification.
There is no evidence that movement is possible from these positions. For example, *wh*-questions with a gap in these positions are ungrammatical.

16. *Miin ḥkai-t ma` ?
   who talked-you with?
   Who you talked [PP to ___]?

17. *Miin sta`ar-t siyyart?
   who borrowed-you car?
   Who you borrowed [NP car ___]?

The above discussion casts doubt on the head-raising analysis and suggests that the antecedent is base-generated. I will assume that this is right and go on to consider why movement is not possible from relativized object position. Three proposals, Aoun and Choueiri’s, Shlonsky’s and Elomari’s, assume that there is movement of some empty element in examples without a clitic.

3. 2 The non-head raising analysis

3.2.1 Aoun and Choueiri (1997)
A pro-movement analysis was proposed by Aoun and Choueiri (1997) in their analysis of Lebanese Arabic. A&C argue that movement is involved even when a clitic occurs in the same construction. In case there are no islands to separate the antecedent from the resumptive pronoun, a pro moves from inside the relative clause to a position in front of yalli, Spec CP as in the following representation:

18. Definite relativized Dp₁ … [pro₁-yalli … VP RP₁ ……]

A&C claim that it is pro that is moved and nothing else: it accounts for why adjuncts may not be relativized in Lebanese:

19. *ssabab yalli rafit-o…
    the-reason C left₁₅.₃MS
    The reason that/why I left… (60)

3.2.1.1 Weaknesses of Aoun and Choueiri’s
A&C’s claim that it is pro that is being moved is not tenable as movement is possible from an adjunct position as shown from examples 22-23:

22. wişl-o ssa`a lli ghādar-t
    Arrived-they hour that left-I
    The time when I left

23. rakd-o lmīl yalli ḥaddid-o-līn yah
    Ran-they the mile that specified-they₂₉pl it
    They ran the mile that they specified for them

These are instances where a gap in an adjunct position appears, where little pro or any sort of pronominal cannot occur.
3.2.2 Shlonsky (1992)
Shlonsky argues for an operator movement analysis for the analysis of Palestinian RCs. In particular, he claims that an empty operator moves to Spec CP and that the preceding NP is base-generated. Clitics and gaps are in complementary distribution in this dialect, i.e. when there is no clitic there is a gap (resulting from A'-movement). Thus, a gap appears in the highest subject position since there is nothing to block movement from Spec IP to Spec CP; ‘it follows by economy’ (Shlonsky: 449) that a clitic is prohibited. This means that where a gap appears in the highest subject position, there is no phonetically null resumptive pronoun, rather a trace. What prevents a gap from appearing in object of preposition position, NP-internal position, embedded subject position (as in 3) is that this leads to a violation of the empty category principle ECP. (footnote: Shlonsky did not spell out which version of ECP he is referring to).

the-girl that you thought that going to house.
The girl that you thought is going home (450).

Rather different, movement from direct object position is not allowed due to Specified Subject Condition (SSC), i.e., no movement across one A-position to another A-position is allowed. This is because, for Shlonsky, Spec CP is an A-position rather than A’ position, thus movement from direct object position to Spec CP is a movement across Spec IP to Spec CP position. This movement, however, is illicit because it violates SSC.

3.2.2.1 Weaknesses of Shlonsky’s proposal
Shlonsky’s analysis has some dubious features:
It predicts incorrectly that movement is also impossible from object position in a wh-question, i.e. his analysis predicts that it should be impossible to move an object wh-phrase to Spec CP in wh-questions and that a clitic should be obligatory:

25. shu ‘akalt?
what ate-you?
What did you eat?

-Shlonsky's idea, that Spec CP is an A-position in this language, is non-standard as in a standard view Spec CP occupies an A’ position (This is why movement across a subject to Spec CP is possible in most languages).
-In order to get the interpretation of the operator right at LF, Spec CP has to be A’ position. This requires some mechanism that changes the status of Spec CP; from A position into A’ position. However, this process is a complicated one. Elomari argues instead that ‘any specifier that hosts an operator must be an A’-position and that this status is indelible and unalterable through the derivation’ (52)
-Shlonsky’s analysis cannot be extended to a dialect which has a gap in object position e.g. Moroccan, we cannot assume that it is a little pro without any clitic to identify it.

The problems above renders Shlonsky’s proposal weak. Another proposal which is based on an operator movement analysis was proposed by Elomari.
3.2.3 Elomari (1998)
Based on data from Moroccan Arabic, Elomari (1998) argues that the structure of RRCs is derived via movement of an operator to an A’ position. He assumes two different structures for RRCs: where a clitic appears, the relative is made out of a CLLD sentence such as (26) in which the operator moves to spec CP and leaves a trace in the Spec TopP position; and where a gap appears, there is movement from within VP to Spec CP.

   Nadia saw-3SM-her Karim yesterday
   Nadia, Karim saw her yesterday (Aoun & Benmamoun, 1998)

In particular, he assumes that (i) a gap is present in subject position since movement from Spec-IP to Spec-CP is not blocked; (ii) there is an obligatory clitic inside PPs and NPs, as P and N do not let their complement move. Extraction from DP and PP would only be possible via the specifier of those categories (because of Shortest Move) but Arabic does not allow a specifier within DP and PP as is the case of lots of other languages; (iii) all kinds of islands require the use of a resumptive, as the occurrence of a gap would violate subjacency / the ECP / minimality. Instead, relativization is possible only when a resumptive pronoun is co-indexed with the operator which is generated outside the island; (iv) there is apparent free variation between clitics and gaps in VP object position. This optionality is due to the existence of two types of relatives that have the same surface spellout realization: (i) where there is a gap, the relative CP dominates an IP as in (a) below; (ii) Where there is no gap, the relative CP dominates a CLLD structure which is related to the resumptive as in (b).

a. [CP Op_i [TP t_i]]

27. l-ktab lli qra-w l-awläd
   the-book that read-3IP-it the children
   The book that the children read (Elomari: 57)

b. [CP Op_i [TopP t_i [TP RP]]]

28. hada huwa l-ktab lli saçaḍa šuf-na-ha ka-ta-qra-h
   this is the-book that Saida saw-1P-3FS PROG-3FS-read-it
   This is the book that we saw Saida reading (Elomari: 53)

(TopicP is a phrase that lies between CP and IP)

4. Which analysis?
The analyses presented above differ from each other in certain aspects: Shlonsky’s and Elomari’s analysis differs from Aoun and Choueiri’s in two respects: first, Aoun and Choueiri reject the idea that movement and clitics cannot happen in the same construction because, for them, movement in certain cases is possible even in the presence of resumptive clitic. Second, Shlonsky claims operator movement to a Spec CP in case there is a gap rather than pro movement. Where there is a resumptive, he
claims a base-generated operator in Spec CP. These two, however, differ from Darrow’s which argues for head-raising. The discussion so far suggests that focus should be made not on whether there is a gap or a clitic in various positions but about what properties relatives have when various positions are relativized. The most important point is that there is an obligatory clitic when object position is relativized, whereas there is only an optional clitic when object position is relativized in some other dialects and no clitic when object position is questioned.

I follow Elomari in assuming that a relative clause is based on a CLLD structure, and that there is movement involved not of the DP head, nor of a pro, rather it is the movement of a relative operator to Spec CP. Assuming a CLLD structure for relatives is necessary especially to account for the fact that, in relatives, object clitics are obligatory in LSA.

5. Analysis of RRCs in LSA
Assuming that the complementizer yalli is generated in the head C position, this would mean that an element is necessary to check the features of yalli (definiteness and φ features). I identify this set of features with an operator. This is because the operator can be related not only to an argument position but also to an adjunct position.

a. In the case of high subject position and embedded subject position, there is a pro within the relative clause. The only movement involved is that of an operator from Spec TopP to Spec CP.

b. A clitic is obligatory in possessor and prepositional object position. This is because DPs and PPs are islands in LSA as well as in many languages.

c. A phonetically null resumptive pronoun fills the position of the direct object licensed by an obligatory clitic. There are various attempts to explain the impossibility of a gap in object position in most Arabic dialects and not all of them are entirely satisfactory. Shlonsky argues that movement from object position to Spec CP is impossible because Spec CP is too far away because it is an A-specifier and Spec TP is a nearer A-specifier. Aoun and Choueiri don't discuss it.

An alternative approach to these approaches could be the following: minimalist assumptions about phases entail that movement of an object to Spec CP is via Spec vP. (This is an extra Spec vP in an example with an agentive subject, which originates in Spec vP). So ‘who Kim likes’ has the following structure (where I use traces instead of copies):

29. [CP who, [TP Kim, [vP t, t, likes t]]]

Given this, one might propose that some languages do not allow movement of a constituent to Spec vP. All these approaches seem to predict that one cannot move any constituent of vP to Spec CP in Arabic dialects, not just objects. This means that it should not be possible to have a gap in an embedded subject position. So one should have a resumptive element in something like ‘who Kim thinks is/was clever’. However, what is noticeable about this approach is that it excludes cases like:

30. Ma’ min ḥkai-t?
   with whom talked-you
   To whom did you talk?
31. ’aymat shif-t  li?  
when saw-you Lee  
When did you see Lee?

In this case, the prepositional phrase is extracted from little vp; and the temporal adverb when originates inside vP, the fact that renders the approach weak. A more plausible analysis of the impossibility of a gap in object position involves assuming a complex structure, that is, there is CP, Top P and then TP. The complementizer yalli has a topic phrase as its complement not a TP. No movement takes place within the TP. The topic in Spec TopP is co-indexed with the object inside TP. The only movement that occurs is that of the Spec Top to Spec CP as in (33). I assume that there is another simple structure when object position is questioned as in (32)

32.

33.

With (32) movement to Spec CP is possible from various positions including object position. With (33) the only movement will be from Spec TopP to Spec CP. On the assumption that there is no movement in a clitic left dislocation structure, there will be no other movement here, but there will be a pro somewhere coindexed with the empty operator in Spec TopP. If pro is in object position it will need to be identified by a clitic. LSA only has the structure in (33)
This analysis is supported by the fact that there is no clitic when an object is questioned, and there is no difficulty moving a PP complement or an adverbial expression out of VP

34. ʾaymat/wēn/ kīf shef-t John?
   when/where/ how saw-you John?
   When/where/how did you see John?

The objections to the idea that there is no movement out of VP involved wh-questions with a fronted PP. There are no relative clauses in Syrian in which a PP is fronted. There is a movement out of VP in wh-questions but not out of VP in relative clauses. The question, then, is why is there no movement out of VP in relative clauses? The answer is that relative clauses have a more complex structure (33) than wh-questions along the lines suggested by Elomari as in tree (32). Elomari, as mentioned earlier, assumes that there are two different structures for relativizing the object, a simple structure (that is found in wh-questions) above which allows movement, and a more complex one which is based on a CLLD structure and which does not allow movement as it is far away because there is a TopP between CP and TP/IP and therefore involves the resumptive clitic.

However, adverbial relatives pose a problem for this position.

35. wişl-o ssaʿa lli ghādar-t
   arrived-they hour that left-I
   The time when I left

36. rakd-o lmīl yalli ḥaddid-o-līn yah
   ran-they the mile that specified-they-pl it
   They ran the mile that they specified for them

If Syrian only has the structure in (33) it should only have relatives which look like clitic left dislocation structures without the initial topic. Adverbial relatives don’t look like this. I think the best solution is to assume that Syrian has structures like (32) but only for adverbial relatives. It is not hard to implement this idea. One can propose that Syrian has two relative complementizers, one taking a TopP complement and a nominal specifier and one taking a TP complement and an adverbial specifier. The simple structure occurs in LSA but with an adverbial specifier. This claim is supported by the fact that it is not unusual for a language to have more than one relative complementizer with different selectional properties. English, for example, seems to have one relative complementizer taking a finite complement and allowing an NP, a PP or an empty operator as its specifier and another taking a non-finite complement and allowing only a PP or an empty operator as its specifier.

37. The man
   
   who we rely on
   
   on whom we rely
   
   we rely on
Therefore, there is nothing unusual in the analysis of Syrian proposed here.

References


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On the Movement of Verbal Forms in Romance and English

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Abstract

This paper takes a fresh look at question of V-movement in Romance (Brazilian Portuguese and Italian) and English, by assuming Cinque's (1999, 2004, 2005, 2006, 2009a,b, 2010) Cartographic framework. It investigates the cross-linguistic differences among these languages concerning the different landing sites for the movement of distinct V forms.

1 Introduction

Since Pollock's (1989) seminal work on V movement, it has been assumed that V necessarily leaves the VP in French (all V forms raising from V to I) but not in English (where only have and be would raise). Pollock thus set the stage for the Cartographic endeavour. Cinque (1999) split the IP even more, into almost 40 FPs (of Modal, Mood, Tense and Aspect import):

(1) The universal hierarchy of clausal FPs (Cinque 1999:106; modified in Cinque 2006) – only the semantic label of each FP is represented:

\[
\begin{align*}
\text{Mood} & : \text{Speech Act} > \text{Mood}\text{Evative} > \text{Mood}\text{Evidential} > \text{Mod}\text{Epistemic} > \text{T}\text{Past} > \text{T}\text{Future} > \text{Mood}\text{Irrealis} > \text{Mod}\text{Necessity} > \\
\text{Mod} & : \text{Projectivity} > \text{Asp}\text{Repetitive} > \text{Asp}\text{Frequentative} > \text{Mod}\text{Volitional} > \text{Mod}\text{Celerative} > \\
\text{T} & : \text{Anterior} > \text{Asp}\text{Terminative} > \text{Asp}\text{Perfect} > \text{Asp}\text{Prospective} > \text{Asp}\text{Progressive} > \\
\text{Asp} & : \text{Inceptive} > \text{Mod}\text{Obligational} > \text{Mod}\text{Ability} > \text{Asp}\text{Prurientive} > \text{Mod}\text{Frustative/Success} > \text{Mod}\text{Permission} > \text{Asp}\text{Conative} > \\
\text{Voice} & : \text{Perception} > \text{Causative} > \text{Asp}\text{Inceptive(I)} > \text{Asp}\text{Frequentative(I)} > \text{Asp}\text{Continuative(II)} > \text{Andative} > \text{Asp}\text{Inceptive(II)} > \\
\end{align*}
\]

According to Cinque's proposal, each IP-related FP would host in its Spec one AdvP which would (semantically) correspond to the functional head (a particle, a bound morpheme, a free morpheme, a restructuring verb, a modal verb, an auxiliary, etc.) found to the left. The immediate question which may arise concerns the way V-to-I movement would be accounted for in such a fully-fledged structure. It will be the main topic of section 4.

In Cinque (1999, 2004), it is shown, on the basis of Romance data, that different V-forms behave differently with regards to obligatory and optional movements in the clausal structure. So, in Italian (IT, henceforth), the active past participle must move to the left of tutti 'all' and each AdvP following it in the hierarchy given in (1), whereas in Brazilian Portuguese (BP) it must raise a little more, namely, to the left of completamente 'completely' (Asp\text{Completive(I)}).

The question of V(P) to I(P) in Romance (IT and BP) and English is revisited, by assuming Cinque's universal hierarchy of FPs. Another important issue to be readdressed here is the apparent paradox posed by higher AdvPs to Cinque's theory (see sections 2 and 4), namely, how one would explain the appearance of the lexical V to the left of a higher AdvP (cfr. (2)) if higher AdvPs cannot appear in the post-complement position (cfr. (6)) unless they are de-accented (cfr. (7)). A possible solution to this puzzle will be suggested in section 4.3.2. Cinque's (1999) universal hierarchy will be maintained and so his idea on deriving the sentences by only assuming phrasal movement (Cinque 2005, 2010).

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2 Higher AdvPs: an apparent paradox for Cinque's (1999) theory

Belletti (1990) and Cinque (1999:30ff.) noticed that higher AdvPs can be used as focusing adverbials, when they appear to the immediate left of the constituent under their scope:

(2) a. Gianni mangia probabilmente la pasta. (IT)  
   a’. O João come provavelmente ‘massa’. (BP)  
   ('G./J. eats probably pasta.')

But even appearing to the left of the V, which would suggest that the AdvP is occupying the Spec position where it has entered the derivation (in the case of (3), [Spec,AdvEpistemicP]), higher AdvPs can still count as focusing adverbials, but ambiguously taking under their scope everything following them (the propositional content) (cfr. paraphrase (4)) and/or one of the constituents found to their left (focusing-like reading) (see 5).

(3) a. Gianni probabilmente mangia la pasta.  
   a’. O João provavelmente come massa.  
   ('G./J. probably eats pasta').

(4) It is probable that Gianni/João eats pasta.
(5) It is probably pasta that Gianni/João eats.

(2) is only compatible with the focusing reading (cfr. 5), whereas (3) allows either the scope over the proposition reading (see 4) or the focusing one (5).

Another property of higher AdvPs which distinguishes them from those adverbs belonging to the 'lower' zone of the clause is the fact that higher AdvPs cannot appear in the post-complement space (see (6)), unless they are 'deaccented' (Cinque 1999: 15) (cfr. 7a,a').

(6) a. *Gianni mente probabilmente (IT)  
   a’. *O João provavelmente (BP)  
   ('G./J. tells lies probably')

(7) a. Gianni mente, probabilmente. (IT)  
   a’. O João mente, provavelmente. (BP)  
   ('G./J. tells lies, probably')

(6) may be taken as evidence that X°-movement to the left of higher AdvPs is not possible.\(^1\)

(2), showing a higher AdvP which surfaces to the right of the V, apparently suggests some

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\(^1\) An alternative explanation to the oddity of sentence (6) would be that "in the absence of a complement the adverb would receive a focus interpretation", as the anonymous reviewer reminded me. Though interesting, this alternative hypothesis is not assumed here given the fact that (realis) mood adverbs like certamente/di sicuro/sicuramente ‘surely’ (Italian) and certamente ‘surely’/realmente ‘really’ (BP) can appear in the end of the sentence, in case they receive a focus interpretation, even if they are not prosodically marked, as Cinque (1999: 180, endnote 80) had already pointed out (see (i)):

(i) a. Gianni lo merita sicuramente di sicuro / etc. / ??senza dubbio. (Italian)  
   b. ‘G. deserves it surely/undoubtedly.’ (Cinque 1999: 180, endnote 80)

That realis mood AdvPs (like sicuramente ‘surely’) pattern different from other higher AdvPs is also suggested by the fact that they allow their complement to raise past them (Cinque 1999: 180, endonte 80). See (ii) (with sicuramente ‘surely’), where the complement is raised past the AdvP (cfr. (iia)) versus (iii), having probabilmente ‘probably’ which does not allow its complement to raise past it (iiia) — (ii) and (iii) from Italian.

(ii) a. A NOI SICURAMENTE, lo darà.  
   'To us surely (focus), he will give it’  
   (Cinque 1999: 180, endnote 80)  
   b. SICURAMENTE A NOI, lo darà

(iii) a. *A NOI PROBABILMENTE/FORTUNATAMENTE, lo darà. (Cinque 1999: 180, n. 80)  
   'To us probably/luckily (focus), he will give it'  
   b. PROBABILMENTE/FORTUNATAMENTE A NOI, lo darà.

These realis AdvPs are probably merged in a lower position in the structure (in the “low IP area” (Belletti 2004) and that could explain the reason for their grammaticality in the end of the sentence.
movement of the V crossing over the AdvP, which might be paradoxal: how the theory would explain the fact that, though the VP cannot move to the left of a higher AdvP (see 6), V may surface to the left of a higher AdvP (see 2)? By following Cinque (1999, 2004, 2005, 2009a, 2010), it will be suggested that three instances of movement may be at issue here: obligatory phrasal-movement, optional phrasal-movement and other more complex cases involving the movement of the remnant as in Kayne (2005). By obligatory movement, it is understood the mandatory movement of the VP to the left of some material, in the extended projection of the V. In BP, for instance, this movement takes place to the left of completamente 'completely' (Asp SingCompletive(1)), except in passives. As far as 'optional' movement is concerned, even though its existence has been questioned (Chomsky 1995, Kayne 2008), it will be assumed here as a stylistic process. From a certain point, VP movement to [Spec,F] will no longer be possible (cfr. 6a,a'). In these cases, the suggestion is to assume a process à la Kayne (2005) to derive the ultimate position of the V, to the left of the higher AdvP, which creates the illusion (Matushansky 2006) that one has achieved V°-movement.

3 Theoretical Assumptions

As stated before, the paper assumes Cinque's (1999, 2004, 2005, 2006, 2009a,b, 2010) Cartographic approach. One of the central acknowledgements of Cinque's theory is the premise that all functional heads should (always) project, either with their default or their marked choices (cfr. Cinque 1999, §6.1; see also (1) in this paper for the semantic labels of each FP). Thus, each sentence would be the realization of almost 40 distinct FPs (in the IP space) each one characterized by a distinctive (semantic) feature (see Cinque 1999, §6.1, table 6.1), in line with Kayne's (2005) One Feature, One Head Principle.

In Cinque (2010, §5), it is conjectured that all functional material found in the extended projection of the N and the V need to inherit the [+V(/N)] feature of the lexical X°, thus 'fully qualifying' as part of the extended projection. Such a feature is transmitted from the 'engine' of movement (the lexical nucleus (V or N)). Once an auxiliary/modal verb is found in the extended projection of V, it will become the engine of movement up to the merger of another auxiliar/modal/restructuring verb.

As for the derivation of attested orders, in line with Cinque (2005, 2010), it is assumed that UG makes available only two types of (XP) movement: XP-movement without pied-piping and XP movement pied-piping in the whose-pictures or in the pictures-of-whom type. The acknowledgement of these two premises of Cinque's theory—namely, that all FPs must always project (Cinque 1999) and that all F-material must have its features checked once merged (Cinque 2010, §5)—has, I think, an interesting theoretical implication: movement must always take place, not only when an overt F-material enters the derivation, but also when the default features of a F° are merged (e.g. in the absence of overt material in the numeration). The feature of these FPs must also fully qualify as part of the extended projection of V. Thus, movement is always necessary to check the features of each FP. Such an acknowledgement brings to light the question of cross-linguistic variation. Studies on V-movement have always taken the different landing sites for the movement of (different) V-forms (see Pollock 1989; Belletti 1990; Cinque 1999) to be one of the hallmarks of cross-linguistic variation. Something must be said if movement is assumed to always take place.

The premise that movement must always take place, independently of the morphophonological realisation of a given functional notion, would be illustrated with the expression of the speaker's commitment to what they are saying in the propositional content. According to Cinque (1999, §6.1), when the speaker is not committed to the validity of the propositional content, they can express ‘their absence of commitment’ through the use of an epistemic AdvP (probably) or an epistemic modal (must). Thus, the ‘absence of commitment’ is the marked choice. In case the speaker is fully committed, they do not need to use an
epistemic AdvP or modal, according to Cinque. Nevertheless, as the author mentions, the epistemic modality is present, since the speaker is committed to what they are saying. It has to be projected through the assignment of a default feature to that FP. So, if the epistemic adverb or modal need to have their features checked by the engine of movement (Cinque 2010 §5) one could say, by following the same rationale, that the default features of this FP must also be checked. The idea is that even those FP lacking overt material must inherit some feature from the 'engine' so as to fully qualify as part of the extended projection of V. Therefore, movement is assumed to always take place. Cross-linguistic variation should be seen as a consequence of obligatory movements and some (stylistic) possibilities opened by optional movements.

4 On VP movement in BP, IT and English

It will be shown that in both IT and BP the object can be found in adjacency with a higher AdvP (i.e., surfacing to its immediate right). This is due to the fact that in BP and IT the V does not need to pied-pipe the direct object which is merged to its left (in Cinque 2010), contrarily to what happens in English. Moreover, the VP, in English, does not move as high as it does in BP, which in turn moves less than it does in IT. Therefore, higher AdvPs cannot surface to the immediate left of direct objects in English (as will be argued in section 4.1.1). English PPs can surface to the right of higher AdvPs ('getting focused'), resembling BP complements. That will be argued to follow from the fact that the complement of Ps is not directly merged with them (Kayne 2000, 2005), but must move to check its Case, P being merged after that movement and triggering remnant movement to its Spec. “V(P) + direct object” in English, on the other hand, get frozen in some lower Spec, possibly in a Spec to the immediate left of AspComplete(I)P, thus apparently not allowing for the extraction of its subparts.

4.1 On obligatory V-movement in BP, IT and English

4.1.1 English

Cinque’s (2005, 2009, 2010) 'left to right asymmetry' is assumed, according to which nothing enters the derivation to the right of the lexical head (N and V—cfr. also Kayne 2008). Hence, V arguments and Circumstantial complements (Locatives, Temporal AdvPs) must have a dedicated position of Merger but to the left of the VP (see Cinque 2010; also Barbiers 2000). In Cinque (2006) the ultimate position of Circumstantial is the result of movement, which may give us the illusion that they could freely adjoin.

Fig.1 (below) illustrates the possibilities for obligatory VP-movement in the lower zone of the IP. There are some differences regarding the position the lexical V must occupy in the three languages examined here. There are also differences concerning the position different V forms come to occupy in the same language, as will be discussed latter.

In English, the lexical finite V must obligatorily raise at least a little (Cinque 1999: 214, endnote 7; Barbiers 2000) to the left of early, little/much (G. Cinque, p.c.) and well (except in passives with the latter two) (see 13). In the lower zone of the English IP there is also the possible (optional) raising of whatever has been generated to the left of completely (but only if the entire chunk has raised to the Spec of a FP to its left, 'getting frozen' there, as suggested by the data in (9-10)).

(8) He (*well) works well with traditional elements. (Haumann 2005: 130)
(9) a. *He recovered completely early.
   b. He completely recovered early.
   c. He [recovered early] completely t_{recovered early}. (Cinque 1999: 214, endnote 7)
(10) a. George will have read the book completely.
b. *George will have read completely the book. (Radford 1988: 241, his (46))

(11) a. He handed the napkin (secretly) to her (secretly).
    b. He handed her (*secretly) the napkin (secretly). (Haumann 2005: 31)

(12) a. Ted ate his Wheeties completely. (Jackendoff 1972: 70)
    b. Stanley completely ate his Wheeties (Jackendoff 1972: p. 53)

(13) a. John looked well at the picture. (Costa 1996)
    a'. * John looked at the picture well.
    b. * John speaks well French.
    b'. John speaks French well.

**Fig. 1: On the obligatory movement of the V(P)**

Why should (11b) be ungrammatical? The suggestion is that on its movement, the V(P) must pied-pipe the Direct Object in English, merged to the left—see fig. 1 and the data in (13)b,b'—, a reminiscent of whatever would follow from the **Adjacency Condition on Case Assignment**, attributed to Tim Stowell. If the chunk V + Direct Object find a manner AdvP, this adverb may be pied-piped or not (see (11a)). The data in (11b) would imply that, once the indirect object is pied-piped, the direct object must be so, otherwise, the result would be ungrammatical.

V(P) movement in English must pied-pipe the direct object (In BP and IT it does not have to, so the object can be focalized by a higher AdvP, i.e., the object will be free to raise and get focused—see the discussion in § 4.3.1.2).

Summarising things a little, the lexical VP (in English) must carry along everything it pied-pipes before getting frozen in a Spec position to the left of completely(I). The fact the VP must pied-pipe direct objects once found will be taken to be the reason for the absence of movement of subparts of this chunk to a Spec-position immediately c-commanded by the higher (focusing) AdvP to be focalized (it will rule out the English equivalent for (2)).

4.1.2 BP & IT

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2 The reviewer of the Proceedings considers (13a) ungrammatical.

3 In Cinque (1999), a given FP hosted in its Spec the AdvP matching the semantics of the F° which heads that FP. Thus, the EpistemicP, in English, would host probably in its Spec and the epistemic must in its F°. In Cinque (2010) each IP-related FP (of his 1999 monograph) has been split in two FPs, the highest one hosting the AdvP in its Spec, and the lowest being the one where the auxiliary/modal/Restructuring Verb (in Romance and English) would be merged. I will refer to this set of projections as Cinque’s-shell or X-shell (where X stands for the semantic label of the shell). In Fig. 1, for instance, Cinque’s (1999) VoiceP, which hosted the MannerAdvP in its Spec, and the Voice morpheme in its F°, is split in two FPs, the highest one having an adverbial-like head to license the manner AdvP in its Spec; the lowest being the one whose Spec will receive the VP on its movement to check the (default/marked) [passive] feature of that projection.

4 It will be argued that the complement of Ps is not directly merged with them (Kayne 2000, 2005). Hence, indirect objects and circumstantial complements may be extracted. That explains why they can surface to the immediate right of higher AdvPs (and get focused).
IT and English behave almost alike with regard to the position the VP must reach. In BP, the VP must raise more. In BP, the V(P) must move to the left of *completamente* ('completely') and each AdvP found to its right, independently of the V form, except in passives, which will be discussed later.

(14) a. *O João completamente acabou seu trabalho (see also: *completamente seu trabalho acabou).* The J. completely finished his work. ('J. completely finished his work."

b. O João acabou completamente o seu trabalho. (a,b from Galves 1994: 109)

J. finished completely the his work

c. O João acabou o seu trabalho completamente.

The J. finished the his work completely.

(15) a. O João (*tudo) fez (tudo) a tarefa.

The J. (all) did (all) the homework. ('J. did all the homework.') (AspPICompletive)

b. O João (*fluente) fala (fluente) francês.

The J. fluently speaks fluently French. ('J. speaks French fluently') (Voice)

c. O João (*cedo) acordou (cedo).

The J. got up early. ('J. got up early.')

(14) shows that the VP must move to the left of *completamente* ('completely'), its relative position to the object not being the issue here. (15) shows that all AdvPs following *completamente* generate ungrammatical sentences if they are found to the left of the VP.

In IT, as reported in Cinque (1999: 214, endnote 7; 228, endnote 16), there is an obligatory movement of the finite V(P) to the left of *bene* 'well' (see 16b) and all the AdvPs following it (e.g. presto 'early' (16a)) with finite Vs:

(16) a. *Maria presto si alzava ogni mattina.

M. early would get up every morning. ('M. would get up early every morning."

a'. Maria si alzava presto ogni mattina.

M. would early every morning

b. *Maria bene fece tutti i compiti.

M. well did her homework ('M. did well her homework.')

b'. M. fece bene tutti i compiti.

M. did well all the homeworks

c. *Maria completamente distrusse tutto quello che aveva fatto fino ad allora.

M. completely destroyed all that that had done till then

('M. completely destroyed all that she had done till then.'

The data in (14-15) above would at least suggest that in BP those AdvPs found to the right of *completamente* 'completely' (this one included), must be crossed over by the V(P), the movement of the object being optional. The object can be found to the left of *bene* 'well' and *completamente* 'completely', optionally. In IT, the finite V must cross over all AdvPs following *bene* 'well', *tutto* 'all', i.e., it obligatorily raises but a little less. IT and English, thus, would pattern almost alike with regard to obligatory VP-movement.

As far as other V-forms are concerned, in BP there seems to be no variation with regard to different V-forms, the only exception being the passive past participle, which moves to [Spec,Voice], necessarily, so as to check the passive morphology of that FP. As a consequence, *bene* 'well' need not to be crossed over by the passive past participle. The same behaviour is reported with the passive past participle in IT and English.

(17) BP:

a. Meu trabalho foi maravilhosamente cumprido. ('My job was well done.')

b. Meu trabalho foi cumprido maravilhosamente.

(18) IT:

a. (?) Per fortuna, è stato tutto bene arrangiato.

Luckily, is been everything well arranged ('Luckily, everything has been well arranged.')

b. Per fortuna, è stato tutto arrangiato bene.

Luckily, has been everything arranged well.
c. Per fortuna, è stato arrangiato tutto bene.
   Luckily, has been arranged everything well.

Summarising, in BP the obligatory movement of the VP reaches a FP higher than it does in IT and English.

4.2 On 'optional' movement

4.2.1 English

As shown in 4.1, VP movement in English must take place to the left of well, early and a little, necessarily. In Passives, it does not need to raise to the left of well (e.g. “The work was well done”). As shown by the data in (9c), the complex containing the lexical V and the adverbs following well (this one included) may be raised to the left of completely. In this case, the VP is the highest constituent of the complex recovered early. A movement of the whose-pictures type is applied to the left of completely and this adverb comes to be the most embedded constituent.

After the next AdvP enters the derivation, VP cannot move to its left any longer. Hence, stylistic movement is not available in English as it is for instance in IT and BP.

4.2.2 IT & BP

As far as the 'optional' movement is concerned, attention must be paid to see what type of movement, if any, would be covered by this label. As in Cinque (1999, 2010), optional movement is also assumed to be a locus for cross-linguistic variation. The dynamics of VP movement, Spec-to-Spec, from its launching site, seems to be limited to the lower portion of the IP. This portion of the clause is closed off by the AspDelayed-shell. From AspHabitualP on, as noticed by the data in (6-7), only more complex movements will be allowed (see § 4.3).

Regarding optional VP movement in BP, V(P) would optionally move to the left of those lower AdvPs located between TAnterior and AspCompletive(I).

(19) BP (de Figueiredo Silva (1996: 48))
   a. O João sempre lê os jornais. (AspPerf)
      the J. always reads the newspapers
      (J. always reads the newspapers)
   a'. O João lê sempre os jornais.
       the J. reads always the newspapers
   b. O João raramente lê os jornais. (AspFrequent)
      the J. hardly ever reads the newspapers
         ('J. hardly ever reads the newspapers.')
   b'. O João lê raramente os jornais.
       the J. reads rarely the newspapers

(20) Spanish (Silva 2001: 49-50)
   a. Siempre estudia sus lecciones. (AspPerf)
       always study.3SG.PRES their lectures
       ('One always studies their lectures.')</n   b. Estudia siempre sus lecciones.
       Study.3SG.PRES their lectures

(19a,a') illustrates the position of the VP relative to sempre 'always'. The preferred order in BP is the one where sempre is found to the left of the lexical VP, suggesting that, in this language, VP may actually raise a little less. In IT, to judge from Cinque (1999), the preferred order of the V relative to sempre is 'V sempre '. Thus, in IT the VP raises more.

In (19b,b') one is playing with two distinct positions for the Frequentative AdvP raramente 'rarely', both in the lower zone of the VP. Since the lexical V in BP cannot move to the left of TAnteriorP (cf. 22a, 23b), the data shown in (19b,b') would be interpreted as involving the movement of V to the left of the lowest Frequentative AdvP (as in 19b') but not to the left of the highest one, since (23b) is ungrammatical. Remember that the highest raramente 'rarely' (AspFrequentative(II)) c-commands já 'already' ([Spec,TAnterior]). Thus, the movement of the VP to the left of the highest raramente would not be possible. The contrast shown in (21)
also gives support to this idea. If two *raramente* are generated in the same sentence (which
does not go against Jackendoff’s (1972) premise that adverbs of the same class cannot appear
in the same sentence, since the two *raramente* belong to different FPs in the clause), the
highest one cannot be crossed over by the lexical V:

(21)  a. (?O J. *raramente* lê os jornais *raramente*
The J. *rarely* reads the newspaper *hardly ever.* (‘J. rarely reads the newspaper hardly ever.’)
b.  *O J. lê *raramente* os jornais *raramente.*
    The J. reads *rarely* the newspapers *hardly ever.*

The relative position of the AdvAnteriorP, *já,* to the V seems to be what differentiates BP and
IT as far as optional movement of the lexical V is concerned. The following data is from Silva
(2001: 33); (22e,f; 23f,g) from European Portuguese and BP are from Modesto 2000: 27.

(22)  a.  Eu *já* sei português. (BP) (I *already* know Portuguese)
    b.  *Yo* *ya* sé español. (Spanish) (I *already* know Spanish)
    c.  Io so *già* l’italiano. (neutral reading) (IT) (I know *already* Italian)
    d.  *Je sais* *déjà* le français. (French) (I know *already* French)
    e.  A Maria já não come nada, não devia fazer dieta. (BP, European Portuguese)
        the M. *already* not eats anything, *not should* do diet.
        (‘M. *already* doesn’t eat anything, *she shouldn’t* be in a diet’)
    f.  A Maria já tinha comido. (BP, European Portuguese)
        the M. *already* had eaten (‘M. had *already* eaten’)

To judge from Silva (2001) and Modesto 2000), again, (23) is more marked than (22):

(23)  a.  Eu sei português *já.* (BP) (I know Portuguese *already*)
    b.  *Eu sei* *já* português. (BP) (I *know already* Portuguese)
    c.  *Yo sé* español *ya.* (Spanish) (I *know already* Spanish)
    d.  *?Yo sé* *ya* español. (Spanish) (I *know already* Spanish)
    e.  *Io* *già* so l’italiano. (Italian) (I *already* know Italian)
    f.  *A Maria* já não come *já* nada, não devia fazer dieta. (*PB; OK em PE)
        the M. *already* not eats *already* anything, *not should* do diet.
        (‘M. *already* doesn’t eat anything, *she shouldn’t* be in a diet’)
    g.  *A Maria* tinha já comido. (*PB; OK in EP) (I *already* knew 
        the M. *already* had eaten (‘M. had *already* eaten’)

In my interpretation of Silva’s (2001) and Modesto’s (2000) data, the VP raises more in the
lower zone in IT (see also Cinque 1999, appendix 1) than it does in Spanish (see 23d,e). In
BP, the movement of the lexical V would be even shorter: VP would not cross over the
position occupied by the AdvAnteriorP, *já,* ‘already’.

(23a)  would bring an interesting question to the debate: since in BP and Spanish VP
cannot move to the left of the AdvAnteriorP, *já* ‘already’, why are these sentences possible? One
could assume that a more complex constituent containing the VP (23a) is moved to the left (as
in Cinque 1999, §1.4), pied-piping the object and the traces left by the movement of the VP:

(23a)  Eu sei português *já.* (I know Portuguese *already*)

XP-movement pied-piping in the whose-pictures type

This is the general picture for optional movement in English, IT and BP. In the next section,
those cases will be examined where the V is found to the left of a higher AdvP.

4.3 On the movement of V forms to the left of a higher AdvP
4.3.1 English
In BP and IT it is possible to extract the object out of, say, the 'vP' (see (2)). In English, on the other hand, since the VP must obligatorily pied-pipe the direct object (see 13b,b'), the extraction of the object will not be possible, leading to an ungrammatical result (cfr. 24).

(24) *George has read probably the book. (Kim 2000: 477, his (47d)).

In (24), the book cannot be attracted to [Spec,FP] prior to the merger of the AdvP probably, due to the fact that the V and its complements get frozen in the [Spec,FP] to the immediate left of AspSingCompletive(P). This projection would correspond to the “left edge” of the vP in English. No extraction from this FP being possible, no sentence like (24) will be allowed. However, the data presented below would apparently weaken the analysis proposed here.

(25) Terry will run probably to Brooklyn. (Koktova 1986: 27)

In line with Kayne (2000, 2005), what looks like the 'complement' of Ps is not directly merged with them, but enters the derivation to the left of the VP (Cinque 2006), say, in the argumental structure of the V (prior to the merger of Cinque's (1999) adverbial-related FPs), being further moved to the Spec of a licenser head, followed by the movement of the remnant (containing the V) to their left. Thus, their behaviour (relative to higher AdvPs) resembles that of direct objects in BP and IT in that they can be extracted and moved to get focused. With regard to sentences having more than one auxiliary, Jackendoff (1972) shows that between two auxiliaries, both a higher AdvP (e.g. probably) or a lower Aspect AdvP (such as completely) are possible in English:

(26) George has probably/completely read the book. (from Jackendoff 1972: 50)

The derivation suggested here for (26)–having the epistemic AdvP probably would proceed as follows:

(i) merger of the VP; merger of the Patient Object in a Spec to the left of the VP (as in Cinque 2010; Barbiers 2000); movement of the VP to the left of the Object; movement of the Object to a Spec,F to the left to get its Case features checked; movement of the VP to the left of the Direct Object:

(26a) [[F4P [VP read] [F3P [F1P the book F30 [F2P [F1P the book F30]]]]]

(ii) merger of each Cinquean F° each time triggering the movement of the chunk VP + Direct Object to its Spec, up to the merger of the features of the AspConativeP, the projection to the immediate left of the AdvAspSingCompletive(P), completely.

(26b) [[F4P [VP read] [F3P [F1P the book]] [Completive] [f_r [f_r read] [f_r the book]] [Voice] [f_r [f_r read] [f_r the book]] [Causative] [f_r [f_r read] [f_r the book]] [AspConative] [f_r [f_r read] [f_r the book]] [InceptiveII] [CompletiveI] [f_r [f_r read] [f_r the book]] [Andative] [f_r [f_r read] [f_r the book]] [RepetitiveII] [f_r [f_r read] [f_r the book]] [FrequentativeII] [f_r [f_r read] [f_r the book]] [F4P [VP read] [f_r [f_r read] [f_r the book F30 [F2P [F1P the book F30]]]]]]
(iii) merger of the features of those projections c-commanded by $T_{\text{Anterior}}^\circ$. When the features of $T_{\text{Anterior}}^\circ$ are merged, movement of $\text{Asp}_{\text{Terminative}}^\circ$ to $[\text{Spec},T_{\text{Anterior}}^\circ]$ is triggered so as to check the anterior reading of (21a). $\text{Asp}_{\text{Terminative}}^\circ$ contains $F_P$ having, in its Spec, the engine of the movement which will also be pied-piped in the pictures-of-whom mode.

(iv) Merger of the default features of $\text{Asp}_{\text{CELERATIVE}}^0$, $\text{Mod}_{\text{volition}}^0$, $\text{Asp}_{\text{FREQUENTATIVE}}^0$, $\text{Asp}_{\text{PREDIPOSITIONAL}}^0$, $\text{Asp}_{\text{DELAYED}}^0$, $\text{Asp}_{\text{HABITUAL}}^0$, $\text{Mod}_{\text{POSSIBILITY}}^0$, $\text{Mod}_{\text{NECESSITY}}^0$, $\text{Mood}_{\text{IRREALIS}}^0$ and $T_{\text{FUTURE}}^\circ$. After that, $\text{as}$ enters the derivation in $T_{\text{PAST}}^\circ$. Each time a new V form (auxiliary, modal, Restructuring Verb) is merged, two Kaynean heads (from Kayne 2000, 2005, §9.5.4.3) enter the derivation to the left. The most embedded attracts the complement of the auxiliary (auxiliary = 'V', in Kayne). The highest one (the prepositional complementizer $P^\circ/C^\circ$ (Kayne 2005)) attracts the remnant (which contains the auxiliary and the traces of previous movements).

**Fig. 3: Merger of EvidentialP**

(v) merger of the features of $\text{Mod}_{\text{Epistemic}}^0$, movement of $[\text{Spec}, P_{\text{P/C}}^0, P]$, i.e., the remnant ($\text{has}$ (plus traces)) to $[\text{Spec}, \text{Mod}_{\text{Epistemic}}^0]$. Merger of $\text{probably}$ in $[\text{Spec}, \text{Adv}_{\text{Epistemic}}^0]$. Merger of $\text{Mod}_{\text{Epistemic}}^0$, and movement of $\text{has}$ ($[\text{Spec}, P_{\text{P/C}}]$) to its Spec. (fig. 3)

As far as those sentences with more than one auxiliary are concerned, judging from Jackendoff (1972), the higher AdvP can be found in between the two auxiliaries (see (27) but not to their right (cf. 28).

The AdvP $\text{completely}$ can appear to the left of the lexical V (see 28), as expected, for the reasons mentioned above, but not to the left of any auxiliary (cf (27)). This is because the auxiliary is merged higher than $\text{completely}$ in the structure, thus, the AdvP cannot precede it. What could then be said about the impossible appearance of $\text{probably}$ to the right of the second auxiliary (in (28)), i.e., how to rule out this sentence?

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5 The reviewer considers (28) with $\text{probably}$ reasonably possible in his/her English, which means that in this variety of English it is possible to extract a big chunk to be directly focused by the higher AdvP. See also Cinque (1999: 213-214) which reports (28) as possible in Richard Kayne’s English. Cinque also conjectures that (28) would be considered grammatical given the fact that $\text{have}$ could actually be a prepositional complementizer (in Kayne’s 2000 sense).
Traditionally speaking, (28) would be ruled out by some restriction underlying the Head Movement Constraint (Travis 1984) (or the Relativized Minimality on chains (Rizzi 1990)), or whatever would follow from such a constraint.

Paraphrasing it under (our interpretation of) the framework assumed here (Cinque 2010), where head-movement has been dissolved into XP movement, one would say that, after the merger of the epistemic AdvP probably, the chunk “will have” (cfr. (28)) was preposed, an illicit operation, given that it does not count as a Kaynean (1998, 2005) constituent, thus not being an operation accepted under current parameters of movement (Cinque 2005, 2010).

The ungrammaticality of sentences like (28) (and other examples with two or more auxiliaries) could be seen as a consequence of the fact that the V and its complements get frozen in a [Spec,FP] to the immediate left of Asp\text{Sing\text{Completive}I}P (or, say, no movement of the “VP” (plus object) out of vP is possible in English). No fronting of this material being possible, no higher AdvP can appear to the immediate left of the focused constituent. Thus, only (26)—where the XP (containing the auxiliary) has crossed over the position occupied by the AdvP—and (29)—exhibiting two auxiliaries (but only the XP containing the highest auxiliary being moved to the left of probably)—are possible in English.

### 4.3.2 BP & IT

In IT and BP, sentences like (2) seem to allow only the reading in which the AdvP has scope over the object, thus being derived by a more complex process, where what looks like the lexical V, to the left, is actually a bigger constituent, the remnant. I will suggest this Kaynean type of derivation for these sentences, thus solving the apparent paradox mentioned in § 2.

(29) a. O João vai ter estragado provavelmente o livro.
   The J. will have damaged probably the book.
   (J. will have damaged probably the book)

b. O João vai ter provavelmente estragado o livro.
   The J. will have probably damaged the book.

c. O João vai provavelmente ter estragado o livro.
   The J. will probably have damaged the book.

d. O João provavelmente vai ter estragado o livro.
   The J. probably will have damaged the book.

e. Provavelmente o João vai ter estragado o livro.
   Probably the J. will have damaged the book.

How can the focusing use of the AdvP in the sentences presented in (29) be derived? As far as (29a) is concerned, I will suggest that its derivation starts with the merger of the VP (estragado ‘damaged’) followed by the merger of the Direct Object in the Specifier of a FP to the left. In the sequence, the VP moves to the left. The object moves to a Spec-like position to have its case checked. The VP, thus, moves to the Spec of the lowest F° to check its feature. This movement continues Spec to Spec from each (of Cinque’s) I\text{I} to the next up to the merger of ter ‘have’ in T\text{anterior}°. Each time an Auxiliary/modal/restructuring Verb enters the derivation, it automatically triggers the creation of two Kaynean heads K° and P°/C°. K° attracts the complement of the auxiliary; C°/P° attracts the remnant to its Spec (the remnant being the auxiliary form previously merged and the trace of its complement). After that, the (default) features of Asp\text{CelerativeI}, Mod\text{Volition}, Asp\text{FrequentativeI}, Asp\text{RepetitiveI}, Asp\text{PredispI}, Asp\text{Delayed}, Asp\text{Habitual}, Mod\text{Possibility}, Mod\text{Necessity} and Mood\text{irrealis} are merged each time triggering the movement of the ‘remnant’ (namely, ter + t) to their Spec. The auxiliary vai ‘will’ is then merged in T\text{Future}, triggering the creation of two heads to the left again, the Spec of whose will receive the complement of T\text{Future}, and the remnant, respectively. After that, T\text{Past}° is merged.
The remnant (containing vai ‘will’) moves to its Spec so as to check the default features of that FP. Epistemic° is merged, triggering the movement of the XP containing the auxiliary vai ‘will’ and the trace of its complement to its Spec. A [+focus] head (corresponding to K° in Kayne’s (2005) (which would remind us of only° (from his previous analysis (Kayne 1998)) is merged to attract the object o livro ‘the book’ to get focused. The head licensing the AdvP\textsubscript{Epistemic} provavelmente ‘probably’ is merged (interspersing the two Kaynean projections). Kayne’s C°/P° is merged in the sequence and the remnant is attracted to the left (cfr. Fig. 4).

The difference between (29a) and (29b) concerns what is attracted by the Kaynean head to the left of Epistemic°. In (29b), a larger chunk (containing the BP equivalent for damaged the book) is attracted. After this attraction, the adverbial head is merged to license provavelmente ‘probably' in its Spec, followed by the merger of the Kaynean complementizer which attracts the remnant to its Spec.

As far as the derivation of (29c,d) is concerned, the suggestion is to keep with Cinque’s (1999: § 5.1; 2004: 705) derivations, with one proviso: XP-movement (as in Cinque 2010) instead of head-movement of the V forms. (29d) would have a derivational history much similar to (29a,b), the difference being that, after the merger of Epistemic°, no (Kaynean) KP would intersperse between EpistemicP and Adv\textsubscript{Epistemic}P (thus, no attraction of any chunk prior to the merger of the epistemic AdvP probably). (29c) would be derived from (29d) (by moving the Spec containing the auxiliary vai ‘will’ to the left of the epistemic AdvP).

(29e) would also be derived from (29d), the difference being the movement of the adverb to Rizzi’s [Spec,ModP] in the CP domain.

The IT correspondents for (29) should be derived in the same way, the difference being that the auxiliary avere ‘have’ once merged (probably in T\textsubscript{Anterior}) further raises to [Spec,TFut] to check the future features in that projection (cfr. avrà rovinato... 'have.FUT damaged').

5. Summary

It has been shown that the VP in English must carry along the direct object before ‘getting frozen’ in a Spec position to the left of completely\textsubscript{(i)}. The complement of a P, on the other hand, is not directly merged with it (Kayne 2000; Cinque 2006). So, it will be possible to extract this complement.

The behaviour of PP complements in English (relative to higher AdvPs) resembles that of Direct Objects of BP, IT in that they can be extracted and moved to get focused. In BP and IT, the object need not be pied-piped by the V (thus, it can move to the left and get focused by a higher AdvP).

V moves obligatorily more in BP than in IT. However, in BP, the lexical V(P) may (optionally) raise less, since it cannot move to the left of já ‘already’, whereas in IT it can.

In the three languages studied, from their position of merger and even in the absence of movement of the focused constituent, higher AdvPs can take under their scope the object, the “vP”, or even more complex chunks, which seems to be an inherent property of higher AdvPs.
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Second Language knowledge of Cantonese Neg-wh-quantifiers: A pilot Study

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Abstract

This paper reports a second language study on Cantonese negative-wh-quantifiers which are morphologically composed of a negative morpheme mou and any wh-phrases (e.g. mou-bingo ‘nobody’, mou-matje ‘nothing’ and mou-bindou ‘nowhere’). Such morphological composition gave strong quantifiers with both non-existential and additional existential readings. The results show that learners are not aware of the additional reading where neg-whQs are involved. It concludes to support Slabakova’s Bottleneck Hypothesis (2008) that form-meaning mappings associated with the functional morphology of Cantonese neg-whQs is particularly difficult and predicted to be less likely acquirable for second language (L2) learners even at native-like level.

1 Introduction

There are empirical literatures on the grammar of Mandarin (the written Chinese) but a few on the grammar of Cantonese. However, Cantonese is never taught and only the standard Chinese is used in academic settings to Cantonese natives. SVO is the canonical structure for Cantonese, but where neg-wh-quantifiers (Neg-whQ) are involved the order is SOV. Nevertheless, neg-wh-quantifiers mou-bingo ‘nobody’, mou-matje ‘nothing’ and mou-bindou ‘nowhere’ in the combination of the negative morpheme mou and wh-phrases are ambiguous between non-existent and implied existential interpretations depending on different contexts. They are very colloquial and are not as frequently used as the other. This study investigates claims from previous studies (Sorace & Filiaci 2006, Yuan 2007, 2008) about problems at the syntax-semantics interface in second language (L2) acquisition.

2 Neg-whQ and the Overt Quantifier Raising Phenomenon in Cantonese

The morphology of Cantonese negative-wh-quantifiers (Neg-whQ) is the composition of a negative morpheme mou with any wh-phrases, for example mou-bingo (no-who), mou-matje (no-what) and mou-bindou (no-where). They are most likely equivalent to the English non-existent ‘nobody’, ‘nothing’ and ‘nowhere’ in semantics. However, Neg-whQs give not only a non-existent interpretation, but also an existential presupposition or sentential negation interpretation. In certain contexts (with the help of the sentence final particles), (1) can either be interpreted as the non-existent interpretation as in (a) and possibly the existential presupposition interpretation as in (b).
1) Ngo mou-matje sik-guo (wo).
   a) “I ate nothing.”
   b) “I ate only a few.”/ “I did not eat anything (something).”

Neg-whQs are unique among the other (strong) non-existential quantifiers, as they give the exceptional existential or sentential negation interpretation. As illustrated in (2), the ordinary non-existential quantifier mouje in the combination of the negator mou and a noun gives only the non-existential interpretation. This parallels with (3) with the wh-word licensed matje as polarity items and the ordinary negative polarity item (NPI) jamhoje in negated context.

2) Ngo mouje sik-guo.
   “I ate nothing.”

3) Ngo mou sik-guo matje/jamhoje.
   “I didn’t eat anything.”

The SOV word order is the canonical structure for Cantonese, it is observed even in interrogatives as a wh-in-situ language. In general, SOV structure is prohibited and therefore the SOV structure as in (4) leads to ungrammaticality. However the SOV structure is observed only with strong quantifiers such as neg-whQs. Mou-bingo in (5) must precedes the verb whereas (6) is ungrammatical where it appears in default object position. The neg-whQ construction in (4), not only gives the ordinary non-existential interpretation as in (5a), but also the exceptional existential presuppositions as in (5b). I argue that neg-whQ undergoes overt movement (Lee, 2010) in order to obtain full interpretation. Object neg-whQs take both wide and narrow scope, and therefore give rise to both interpretations.

4) *Ngo nei zunji.
   “I like you.”

5) Ngo mou-bingo zunji (jie).
   a) “I like nobody.”
   b) “I only like a few people.”/ “I don’t like anybody (someone).”
6) *Ngo zungji mou-bingo.
   I like no-who

In contrast to English, the negative indefinite in (7) parallels with the NPI that co-occur with negation in (8). Constructions in (7-8) give rise to only the non-existential interpretation, with the negative indefinite taking wide scope and the NPI taking narrow scope.

7) He ate nothing.
8) He didn’t eat anything.

However, constructions with existential quantifiers that co-occur with negation are different from above, that (9) gives both the sentential negation interpretation (wide-scope reading) and the existential interpretation (narrow-scope reading).

9) He didn’t eat something.

Regardless the same syntactic properties Mandarin Chinese and Cantonese share, that their wh-phrases can be licensed as indefinites (see Huang 1982; Li 1992; Li 1995; Cheng 1994; 1995; Lin 1996; 1998; Yuan 2007b; 2009; 2010), the observed SOV with neg-whQs is unique in Cantonese. The exceptional SOV order can be observed with strong quantifiers such as the universal quantifier in (10) in Mandarin, but it is not the case with neg-whQ such as meiyou-shei in (11). The Neg…NPI constructions are preferred structures to represent a non-existential object interpretation in Mandarin Chinese.

10) Zhangsan shenme dou chi.  
    Zhangsan what all eat  
    “Zhangsan eats everything.”

11) *Wo meiyou-shei, xihuan ti  
    I no-who like  
    “I like nobody.”

I follow Kratzer’s (1995), Potts’ (2000) and Penka & von Stechow’s (2001) account that negative phrases can actually be decomposed into negation and an existential/indefinite element and hereby argue that neg-whQs in Cantonese, in the combination of a negative morpheme and a wh-phrase, are in effect the Spellout of ‘not+any/some’ (Kayne, 1998:130). This is why both existential and non-existential interpretations are available where neg-whQs raise to preverbal positions. Neg-whQ (mou-matje ‘no-what’, mou-bingo ‘no-who’, etc.) constructions parallel to Neg…existential
quantifier constructions, ordinary negative quantifiers (mou-jan ‘nobody’, mou-je ‘nothing’, etc.) are like negative quantifiers in English and Neg…wh/NPI in Cantonese are like Neg…NPI in English.

3 L2 Context

Many L2 studies suggest that grammatical phenomena at an interface between syntax and other cognitive domains may not be acquirable in L2 acquisition and mappings between the L1 and L2 grammars affect L2 acquisition. This section provides evidence from two related studies and one recent hypothesis.

3.1. Previous studies

Sorace & Filiaci’s (2006) study on Italian intrasentential anaphora postulates that near-native speakers of Italian display L1 (English) effect at interface, even they have fully acquired the grammatical representations in their L2 syntax. The results show their differences to Italian natives in their antecedent preferences for an overt pronoun or a null subject pronoun in subordinate clauses at syntax-discourse interface. Besides, Yuan’s (2007, 2008) studies on Chinese existential polarity wh-words also prove that adult learners showed deficits in fully acquiring the licensor-licensee relationships at syntax-semantics interface. It is suggested that whether or not L2 acquisition at interface is successful, depends very much on whether or not such relationship is available in some forms in learners’ L1 (English). It is believed that L2 acquisition of grammatical items involving an interface would not be successful if such an interface is not established in learners’ L1 grammar, even if learners at their advanced proficiency level attain the syntactic and semantic functions in a non-interface domain.

3.2. Slabakova’s (2008) Bottleneck Hypothesis

The aim of this study is to test the bottleneck hypothesis, which says, “functional morphology is the bottleneck, syntax and semantics flow smoothly.” (p.100) Slabakova suggested that syntax and semantics alone are innately given, so they are themselves the easy parts in L2 acquisition. However, functional morphology is difficult because it is not usually represented overtly by the same lexical category in both L1 and L2 (simply no one-to-one match). An example of a mismatch is the aspectual marking in English and Chinese. The linguistic forms that encode the meaning of past event in English include the inflectional morphology (e.g. -ed) attaching to every regular verb in English whereas this is not necessarily and overtly marked in Chinese grammar. The hypothesis suggests mapping semantics to new morphology and other grammatical morphemes slows down acquisition. To test the hypothesis, this study investigates whether L2 acquisition of strong quantifier sense of neg-whQ presents difficulty to adult (near-native) learners, since neg-whQ is morphologically composed of a negative morpheme plus a wh-phrase. The functional morpheme, the negative morpheme mou, combining to wh-phrases in Cantonese license the whole as a strong quantifier and allows both implied existential and absolute non-existential interpretations. This study predicts that L2 acquisition of Cantonese neg-whQs is a challenge to learners and slows down
acquisition of overt movement and interpretations related at morphology-syntax and syntax-semantics interfaces.

### 3.3. Research Questions

The research questions investigated in this paper are as follows:

12) Can English speaking L2 learners of Cantonese acquire the syntax (SOV) and interpretation of Neg-whQ?
13) Is this a ‘bottleneck’ (Slabakova 2008) in L2 Cantonese?

### 4 The Study

The present study was part of my PhD dissertation on second language acquisition of Cantonese neg-whQ by English speaking adult learners. The data follows were obtained from a test including three tasks, which are an acceptability judgment task, a context-based interpretation task and a picture judgment task. These tasks aim to investigate learners’ ability in acquiring Cantonese constructions involving neg-whQ, including its observed SOV word order, its additional existential presupposition and scope taking. This paper limits the scope to task two only and the hypothesis is here:

- Natives and learners will differ in their preferences on neg-whQ (question) constructions (with the additional implied existential presupposition) depending on different interpretations (existential or non-existential) implied in contexts. Natives tend to prefer such question construction in existential contexts rather than non-existential contexts, whereas learners’ preferences on such construction will not differentiate with regard to different contexts, because they do not notice the extra existential interpretation implied.

The context-based interpretation task aims to look at participants’ sensitivity to the SOV structure, and most importantly the dual interpretations (non-existential reading and existential presuppositions) with constructions involving neg-whQs.

### 4.1. Participants

Two groups of speakers in Hong Kong participate in this study. They included 16 Cantonese native speakers and 10 English speaking adult learners of Cantonese. The learner group included 5 beginners and 5 advanced learners. The age of the native group range from 20 to 60. Except two native being an undergraduate student, the rest obtain the education at degree graduate level. All Cantonese natives speak English as a second language, 9 out of 16 speak Mandarin Chinese and one each on Spanish, French and Chiu Chow dialect as well. However, one native’s result was eliminated because the participant failed all distractors in task 2. All learners attend two-hour Cantonese classes on a one-to-one basis once a week. Their proficiency level was classified according to their years of learning experience. Learners at their beginner level general have less
than a year learning experience; their age ranges from 31 to 51 and their years of living in Hong Kong ranges from one and a half year to 24 years. The advanced leaners are those who have been learning Cantonese for more than two years and master daily conversation in Cantonese; their age ranges from 53 to 62 and their years of living in Hong Kong ranges from 2 to 29 years.

4.2. Materials
A context-based interpretation task was designed. The test was an individual self-paced test. Participants were asked to take the test in front of a portable PC with the PowerPoint presentation and were given answer sheets to fill in along side. Before each task began, instructions were presented aurally as well as written in English on the answer sheets under each section. All test items were presented visually on the screen, written in Cantonese Chinese and in participants’ familiar phonetic transcriptions (Jyutping$^1$), and aurally along each slide. Each slide includes one test item each time and participants were asked to move on to next according to their own pace. The audio files were automatically played along each test items and participants were allowed to repeat them more than once if necessary.

This particular task attempts to look at learners’ responses to the additional existential presupposition interpretation derived from the neg-whQ constructions. It contains 9 questions, in which 3 are distractors and 6 are the test items. Among the six test items, half of them include contexts implying an underlying existential reading and the other half include contexts with definite non-existential reading. Distractors were set to check participants’ familiarity to the test format, given five options (including an option of ‘none of the above’) to choose from with the given contexts. For the test items, the five options include four interrogatives echoing existential or non-existential interpretations and the ‘none of the above’ option. Different interrogatives were included intentionally to test whether learners could judge neg-whQs as quantifiers than wh-phrases. The four interrogative constructions differ to the extent of non-existential and existential interpretations they can refer to according to their structure types:

$^1$ Jyutping is a romanization system for Cantonese developed by the Linguistic Society of Hong Kong (LSHK) in 1993. It has been the standardized phonetic transcriptions used in Cantonese learning nowadays.
Table 1) Structure types:

<table>
<thead>
<tr>
<th>Type</th>
<th>Structure</th>
<th>Underlying interpretation</th>
<th>Example</th>
</tr>
</thead>
</table>
| 1    | S neg-whQ V? | Existential/non-existential | Mary mou-bingo soeng gin me?  
Mary no-who want meet Q  
“Mary wants to meet nobody?”  
“Mary wants to meet only a few people?” |
| 2    | S neg V whP?  | Non-existential | Mary mou soeng gin bingo aa?  
Mary no want meet who Q  
“Mary wants to meet nobody?/”  
“Mary doesn’t want to meet anybody?” |
| 3    | S neg-Q V?    | Non-existential | Mary moujan soeng gin me?  
Mary nobody want meet Q  
“Mary wants to meet nobody?” |
| 4    | S neg V NPI?  | Strong non-existential | Mary m soeng gin jamhojan aa?  
Mary not want meet anyone Q  
“Mary doesn’t want to meet anyone?” |

As illustrated in table 1, only type 1 allows both the non-existential and existential presupposition (i.e. a few people) to be questioned. Types 2-4 allow only a non-existential reading to be questioned. Type 1 is the key investigation type with the item neg-whQ. Type 2 with the wh-phrase licensed as NPI is a control type for contrasting with type 1, to test learners’ sensitivities to wh-phrases being licensed as indefinites. To compare with wh-phrases as indefinites, the standard indefinites in type 3 and 4 are included as comparisons to type 1 and 2. Type 4 involves the standard negative polarity item (NPI), which is licensed by the preceding negation m. It questions the two strong non-existential readings, such as ‘There is not a single person that Mary wants to meet’ or ‘Mary does not want to meet anyone’. Type 3 involves the standard non-existential quantifier moujan and refers only to the non-existential reading. Morpho-syntactically, only type 1 and 2 involve the wh-phrase. Only type one allows both the existential and non-existential readings to be questioned and native speakers use only type one among the four to question existential reading in colloquial contexts.
14) Test item example allowing implied existential reading:
Mary is a very busy person. She works long hours a day. In her spare time, she enjoys being on her own very much except with her very close friends or family. Therefore she is very picky in choosing whom to meet with during weekends. Today is Saturday, I wonder:

☐ A) Mary mou-bingo soeng gin me? (Mary no-who wants to meet Q)
☒ B) Mary mou soeng gin bingo aa? (Mary no want to meet what Q)
☒ C) Mary moujan soeng gin me? (Mary nobody wants to meet Q)
☒ D) Mary m soeng gin jamhojan aa? (Mary does not want to meet anyone Q)
☐ E) None of the above.

In contexts allowing implied existential reading, options A, B, C and D were the presumed preferences. Contexts were set such that questioning both existential and non-existential interpretations makes sense. In this example, the context hints that Mary actually meets her close friends or family in her spare time but it is not specific that she would meet someone every weekend. The context clearly allows rooms to question the fact that Mary would meet nobody or Mary would only meet someone on the particular Saturday.

15) Test item example allowing only non-existential reading:
Mike is a very selfish and self-centered person. He minds his own business only and finds it waste of time to care about others’ business, not even his closest family or friends.
I wonder:

☐ A) Mike mou-bingo guansam me? (Mike no-what care Q)
☒ B) Mike mou guansam bingo aa? (Mike no care who Q)
☒ C) Mike moujan guansam me? (Mike nobody care Q)
☒ D) Mike mou guansam jamhojan a? (Mike did not care anyone Q)
☐ E) None of the above

In contexts allowing only non-existential reading, options B, C and D were the presumed preferences. Contexts were set such that questioning only non-existential interpretations makes sense. In this example, the context explicitly states that Mike cares nobody. Questioning the non-existential interpretation acts as the speaker’s request affirmation to the claim, whereas questioning to confirm whether Mike cares someone does not make sense when the speaker has just been told the non-existential information.

By comparing the participant’s preferences of the range of constructions between existential and non-existential contexts, their acceptability to the different structures with their corresponding
readings is postulated. Learners are postulated to show a higher preference with Neg...wh/NPI in option B and D than SOV structure in A and C, if they do not accept the SOV structure with strong quantifiers, and also a low preference with option A in existential contexts or a high preference with option A in non-existential contexts if they are not aware of the additional existential presupposition reading of neg-whQs.

Figure 1) Which sentence(s) best match(s) the given context?

<table>
<thead>
<tr>
<th></th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ex. 1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ex. 2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ex. 3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Again, all test items including the distractors were randomized. Participants were asked to choose their preferences by ticking corresponding box(es) under A, B, C, D or E as in figure 1. They were instructed clearly that they can choose more than one option when they find it appropriate, so they should not have the pressure of putting more than one ticks for each question.

4.3. Procedure

In this study, verbal and written instructions were given at the beginning as the test proceeds. Instructions include information on what the participants should do with the displayed test item on the screen for the particular task. One example was displayed before task two begins.

16) Example 1:
Peter is a very lazy boy. He wakes up at noon everyday and does nothing. He never paid attention in class, so he always fails his subjects. Apart from going to school all he does is playing soccer with his friends. When he gets home he just spend the whole night watching TV. His social circle is therefore only limited to his classmates and soccer teammates.
I wonder:

☑ A) Peter jiuzou m saai soengtong me? (Peter morning doesn’t have to go to class Q)
You are supposed to tick this box. Because the given context mentions about Peter going to school to attend classes, but he wakes up at noon everyday. So questioning whether he has to attend classes in the morning is directly relevant to the context.

☐ B) Peter zungji sik me aa? (Peter likes to eat what Q)
You are not supposed to tick this box. Because the given context mentions nothing about what Peter likes to eat. So it is not directly relevant to the context.

☑ C) Peter ge mama m lao kui me? (Peter’s mother not scold him Q)
You are supposed to tick this box. Because the given context mentions that Peter is a lazy boy. So
questioning whether his mother would criticize him being lazy is directly relevant to the context.

☐ D) Peter zungji me aangsik aa? (Peter like which colour Q)
You are not supposed to tick this box. Because the give context mentions nothing about Peter’s favourite colour, so it is not directly relevant to the context.

☐ E) None of the above.
You are not supposed to tick this box if you have ticked some boxes above.

The above example in (16) was displayed at the beginning of task two. The given context was revealed along with the given options following. Audio files of the context and options provided were played with the option A audio immediately following the context, then the option B audio and so on. The audio files for each option include the aural presentation of the Cantonese question and the English instruction on whether or not it should be chosen. The italic paragraphs under each option were not revealed on the screen but presented aurally along each option only. Participants were generally guided to pick options, which question only on information having been mentioned, and not when the questions relate to something not being mentioned in the given context. They were reminded not to pick option E if they have chosen one or more from the other options. When all audios for the particular test item had been presented, participants could choose to repeat audio sounds for any particular options if they want to. The next test context and given options were displayed only when the participants press the button to proceed.

Both native and learner groups were given the same PowerPoint presentation but used different set of answer sheets. Their answer sheets only differ in the attached consent form. Cantonese natives were asked information regarding their age, gender, second language background, occupation/education background, years of living in Hong Kong and experience of living in other countries. English speaking Cantonese learners were asked information regarding their age, gender, native language(s), second language background, years of learning Cantonese and years of living in Hong Kong or other Cantonese-speaking countries. The total time taken for the test differs individually according to different participants.

4.4. Scoring
To analyze the results, mean numbers of selection of each response type (A-E) were calculated for each group and for each test type (existential v. nonexistential). The distractors check the reliabilities of participants’ performances. Participants were instructed to choose any possible options only relating to the given context. Since task two is a preference test, 100% accuracy for the distractor items is not expected from the natives. If natives gave at least one of the possible options relating to the given context for each distractor and did so for at least 2 out of 3 of the distractors, this is taken to indicate that their responses reflects individual behavior reliability of this task and their genuine understanding of the test format. For the purpose to check reliability of participants’ behaviours, the rate of selection (RoS) in percentage is calculated by counting the proportion of participants in choosing at least one of the possible options relating to the given context for each
test item and at least 2 out of 3 of the test items.

4.5. Results
Recall that, as illustrated in Section 5.1., there were no right or wrong answers in the task, but only preferred options according to the contexts. Overall, all native responses, except one individual response, are as expected and this task is valid. Participant Can06 performed differently from the general pattern and gave options that are not related to the given context for all distractor items. Thus, responses from Can06 are excluded for this task. Table (2) shows the group results of Cantonese natives, beginners and advanced learners on their percentage of selection of each option in test items with existential contexts and non-existential contexts. The rate of selection ranges from 80% to 100%, thus the data reflects faithful responses from all participants.

Table 2) Percentage of selection of each option of each response type in task two, by group and by context (existential vs. non-existential)

<table>
<thead>
<tr>
<th>Group</th>
<th>Option</th>
<th>Existential</th>
<th>Non-Existential</th>
</tr>
</thead>
<tbody>
<tr>
<td>Natives (n=15)</td>
<td>A</td>
<td>44.44%</td>
<td>31.11%</td>
</tr>
<tr>
<td></td>
<td>B</td>
<td>24.44%</td>
<td>33.33%</td>
</tr>
<tr>
<td></td>
<td>C</td>
<td>55.56%</td>
<td>35.56%</td>
</tr>
<tr>
<td></td>
<td>D</td>
<td>28.89%</td>
<td>51.11%</td>
</tr>
<tr>
<td></td>
<td>E</td>
<td>15.56%</td>
<td>20%</td>
</tr>
<tr>
<td>RoS</td>
<td></td>
<td>100%</td>
<td>86.67%</td>
</tr>
<tr>
<td>Beginners (n=5)</td>
<td>A</td>
<td>53.33%</td>
<td>40%</td>
</tr>
<tr>
<td></td>
<td>B</td>
<td>13.33%</td>
<td>46.67%</td>
</tr>
<tr>
<td></td>
<td>C</td>
<td>46.67%</td>
<td>53.33%</td>
</tr>
<tr>
<td></td>
<td>D</td>
<td>66.67%</td>
<td>66.67%</td>
</tr>
<tr>
<td></td>
<td>E</td>
<td>26.67%</td>
<td>0</td>
</tr>
<tr>
<td>RoS</td>
<td></td>
<td>100%</td>
<td>100%</td>
</tr>
<tr>
<td>Advanced Learners (n=5)</td>
<td>A</td>
<td>60%</td>
<td>86.67%</td>
</tr>
<tr>
<td></td>
<td>B</td>
<td>33.33%</td>
<td>60%</td>
</tr>
<tr>
<td></td>
<td>C</td>
<td>46.67%</td>
<td>73.33%</td>
</tr>
<tr>
<td></td>
<td>D</td>
<td>46.67%</td>
<td>73.33%</td>
</tr>
<tr>
<td></td>
<td>E</td>
<td>13.33%</td>
<td>6.67%</td>
</tr>
<tr>
<td>RoS</td>
<td></td>
<td>100%</td>
<td>80%</td>
</tr>
</tbody>
</table>

Except the advanced learners choosing neg-whQ question construction the most in non-existential contexts, both Cantonese natives and beginners preferred option A in existential context than non-existential context. A repeated measures ANOVA using the Greenhouse-Geisser correction on the data shows significant three-way interaction of Ex vs. NonEx, option type and group ($F_{5,679,62.47} = 2.400$, $p < .05$, partial eta-squared = .179, power = .763). In both contexts, beginners always
prefer option D whereas advanced learners and advanced learners always prefer option A the most. I go on to look at the data on existential contexts and non-existential contexts separately. The following figure displays the percentage of selection of each option in existential context by group:

Figure 2) Percentage of selection of each option in existential context in task two, by group

The expected preferable options to test items referring to existential contexts were A, B, C and D. From figure 2, the native speakers in general preferred the S – O – V question structure with neg-whQs of option A (44.44%) and standard non-existential quantifiers of option C (55.56%) when the contexts implied the existential presupposition interpretations. However, the learner groups in general prefer option A (the neg-whQ SOV construction), option C (the negative quantifiers SOV construction) and option D (the negation and NPI construction). Beginners show 53.33% of selection on option A, 46.67% on C and 66.67% on D while the advanced learners show 60% on option A and 46.67% on both C and D. Post hoc Games Howell tests only reveal that, on option D, the beginners’ preference ratings differ significantly from the native Cantonese (p < .05). Both native and advanced learner groups gave the lowest selection of option E among the others, 15.56% that is 7 out of 45 tokens from native Cantonese and 13.33% that is 2 out of 15 tokens and they were from one particular advanced learner only, whereas the beginners gave 26.67% of selection that is 5 out of 15 tokens.
The following figure displays the percentage of selection of each option in non-existentia context by group:

Figure 3) Percentage of selection of each option in non-existential context in task two, by group

<table>
<thead>
<tr>
<th>Option</th>
<th>Cantonese Natives</th>
<th>Beginners</th>
<th>Advanced Learners</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>31.11%</td>
<td>40%</td>
<td>86.67%</td>
</tr>
<tr>
<td>B</td>
<td>33.33%</td>
<td>46.67%</td>
<td>73.33%</td>
</tr>
<tr>
<td>C</td>
<td>35.56%</td>
<td>53.33%</td>
<td>73.33%</td>
</tr>
<tr>
<td>D</td>
<td>51.11%</td>
<td>66.67%</td>
<td>73.33%</td>
</tr>
<tr>
<td>E</td>
<td>0%</td>
<td>20%</td>
<td>6.67%</td>
</tr>
</tbody>
</table>

On the other hand, the expected preferable options to test items referring to non-existentia contexts were B, C and D. In table 2, the Cantonese natives’ responses accord with the tendency of usage to question non-existentia reading in section 4.1.2., and showed a descending tendency of selection from option D to option A. The natives gave a 51.11% selection on option D, 35.56% of C, 33.33% of B and the least 31.11% of A; the beginners displayed a similar pattern giving a 66.67% selection on option D, 53.33 on C, 46.67%on B and 40% on A. However, the advanced learners gave a similar pattern to their responses to test items referring to implied existential contexts, the highest selection at 86.67% on option A, 60% on option B and 73.33% on option C and D. Post hoc Games Howell tests reveal that, on option A, the advanced learners’ preference ratings differ significantly from the native Cantonese (p < .05) and also from the beginners (p < .05). For option E, there was a 20% selection from natives that is 9 out of 45 of the responses; 0 from beginners and 6.67% from advanced learner that is only 1 out of 15 of the responses.

Comparing the selection of option A in test items on existential contexts and non-existentia contexts, the native and beginner groups show decreases of selections whereas the advanced learners show an increase of selections from existential to non-existentia contexts. Comparing between the beginners and advanced learners, a follow-up repeated measures ANOVA showed a significant effect of interaction between context type (Ex vs. NonEx) and group (F_{1,8} = 8.500, p
< .05, partial eta-squared = .525, power = .724). Regarding the effect of interaction between context type (Ex vs. NonEx) and option type, the statistic showed that it was significant between beginner and native speakers (F\textsubscript{2.576, 46.367} = 3.045, p < .05, partial eta-squared = .145, power = .633) whereas it was not significant between advanced learners and native speakers (F\textsubscript{2.652, 47.733} = 2.352, p > .05, partial eta-squared = .116, power = .522).

4.6. Discussion
The results of this study appeared to suggest that L2 acquisition of Cantonese neg-whQ constructions at syntax-semantic interface is not too successful. If it was successful, we would expect the advanced learners responding parallel to the Cantonese natives. The advanced learners’ responses did not obey the prediction of the degree of tendency to be used to question non-existential reading in section 4.1. Although the statistic does not show a significant difference between advanced learners and Cantonese natives, they did not show a descending tendency of selection from option D to option A. The advanced learners gave the highest 86.67% selection to the neg-whQ constructions (option A) in contexts referring to non-existential readings. The beginners’ responses pattern with the natives in selecting option D (where definite non-existential interpretation is implied) and selecting the least on option A. However, beginners’ selections appeared to display a fair distribution among the four options and they gave a fairly high 40% selection on option A. This tends to accord with my former hypothesis that the advanced learners showed an increase in selection of neg-whQ construction from existential to absolute non-existential contexts whereas there was a drop in selection from the natives. It is not the case that learners reject the neg-whQ constructions with a fair selection among the different contexts, but simply they were not aware of the existential interpretation of neg-whQs. This provides initial support for the proposal that learners even at their advanced proficiency level fail to acquire Cantonese neg-whQs at the syntax-semantics interface.

5 Conclusion
The results of this study suggest that English speaking Cantonese learners cannot fully acquire the interpretations but only the syntax of neg-whQs. Although learners are sensitive to the unique SOV structure where neg-whQs are involved, they did not seem to be aware of the additional implied existential reading of neg-whQ constructions. The limitation of this pilot study is the small sample of participants in learner groups and small number of test items in each context type, a larger number of participants are needed for the main study for ANOVA tests to be reliable. This paper postulates that Cantonese neg-whQ at syntax-semantics interface is the bottleneck to L2 learners, because there is a failure in acquiring its additional implied existential reading besides non-existential reading. There is even a slow down in acquisition to learners at their advanced proficiency level with a poor performance comparing to the beginners. However, this can only be concluded with further investigation with the expanded numbers of test items in each task and the expanded numbers of participants in the main study.
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