Vol. 16.1 2018

Research in Language

WYDAWNICTWO
UNIWERSYTETU
ŁÓDZKIEGO

RL Vol. 16.1 2018

Research in Language

WYDAWNICTWO
UNIWERSYTETU
ŁÓDZKIEGO

ŁÓDŹ 2018

EDITORS

Iwona Witczak-Plisiecka, Ewa Waniek-Klimczak, Jan Majer – University of Łódź
Faculty of Philology, Department of English Language and Applied Linguistics
90-236 Łódź, Pomorska 171/173

All papers published in "Research in Language" have been blind-reviewed by at least two independent readers

INITIATING EDITOR
Agnieszka Kałowska

EDITING AND TYPESETTING
Michał Kornacki

COVER DESIGN
Katarzyna Turkowska

Printed directly from camera-ready materials provided to the Łódź University Press

Published by Łódź University Press

First Edition. W.09029.18.0.C

Printing sheets 8.625

ISSN 1731-7533
e-ISSN 2083-4616

Łódź University Press
90-131 Łódź, Lindleya 8
www.wydawnictwo.uni.lodz.pl
e-mail: ksiegarnia@uni.lodz.pl
phone (42) 665 58 63

CONTENTS

EXPLORING INTO GRADUATE RESEARCH TERM PAPERS: A QUEST FOR GENERIC DISCIPLINARY TENDENCIES

PARVIZ AHMADI DARANI
University of Sheikhbahaee
pahmadi05@gmail.com

MOHAMAD HASSAN TAHRIRIAN
University of Sheikhbahaee
tahririan@shbu.ac.ir

AKBAR AFGHARY
University of Sheikhbahaee
Afghary@yahoo.com

Abstract
The purpose of this exploratory analysis was to capture students' generic tendencies in the organization of original research term papers written by graduate within the same linguistic, cultural, and disciplinary territory. A model proposed by Sheldon (2011) was benchmarked against a corpus of 60 English research term paper introductions to identify the saliency of move schemes along with step and sub-step realizations. At step-level analysis, the proportion of the various steps within Move 2 (indicating a gap, adding to what is known, and presenting positive justification) exhibited a pervasive lack of rhetorical tendency that contradicted the previous genre-based findings. Such an exploration, offers implications for English for research publication purposes instruction and academic literacies based on academic conventions and norms.

Keywords: academic literacies, generic tendencies, research term paper

1. Introduction

Graduate students typically grapple with the challenging and demanding task of writing academic papers, such as term papers, research articles, theses, and dissertations. Unfortunately, they are not commonly aware of academic writing conventions in their disciplinary spheres, especially the rhetorical moves, steps, and strategies that are crucial to advance a systematic academic genre (Jalilifar 2010).

The discrepancy between the writing of native and non-native speakers might appear greater when it comes to the writing of research term papers (henceforth RTPs) that are not frequently published and usually not widely available (Samraj 2004). This situation becomes much worse for non-native writers, as Swales

(2004) asserts that papers with a trace of non-standard English are more subject to rejection than papers ostensibly written by native English speakers. Similarly, Iranian graduate students, like other non-native English language learners, are often found to have problems in providing a well-organized piece of RTP for publication in accredited journals (Khany and Abol-Nejadian 2010).

Samraj (2008: 55) classified the writing of graduate student inquiries into two broad categories: one category deals with the socialization of graduate students into different disciplinary communities through the acculturation process, and the second category includes the discourse analysis of texts produced by students. Theoretically, RTP can be subsumed under the second category since as contended by Hyland (2009: 74), "the discourse perspective views writing as an independent entity that can pinpoint the intentions of the writer through an examination of surface structures".

In the context of genre analysis, special attention has been focused on the generic organizational patterns of the introduction section of English RAs and Ph.D theses (Bunton 2002). As put by Swales (1990), the introduction sections of research articles are the most difficult part because numerous options and decisions are imposed on writers: 'the amount of background knowledge, the authoritative versus sincere tone, the winsomeness of the appeal to readers, and directness of the approach writers should incorporate into their writing'. The Swalesian framework of analysis has also been used as a reference in the rhetorical studies of RAs from different disciplinary perspective (Kanoksilapatham 2005; Lim 2012; Loi 2010; Ozturk 2007; Samraj 2002a, 2002b, 2004, 2005, 2008; Shehzad 2007a). As regards comparative cross-cultural investigations concerning Iranian and English writers: Fallahi Moghimi and Mobasher (2007); Keshavarz, Atai and Barzegar (2007); Mahzari and Maftoon (2007); Atai and Habibie (2009); Jalilifar (2010); Jalilifar and Soleimani (2011) have investigated research article (RA) introductions, whereas the rhetorical analysis of English RTPIs written by Iranian writers havenot received the same scrutiny. Simply stated, unlike the research article (RA), RTP genre has not yet reached its deserved status, most notably in the Iranian academic context since there has been, to date, no systematic generic study of the range of texts that can be referred to by this label.

2. Literature review

2.1. The status of RTP genre

The RTP genre commonly crops up in graduate programs and typifies the discursive practices across various disciplines and sub-disciplines; however, a number of criticisms leveled against the RTP have persisted in the academic genre studies scholarship. Simply put, there is still little agreement on the exact margins of this genre to the extent that Brent (2013) called it the 'orphaned child' of writing

studies and Samraj (2004:11) mentioned it as a 'heterogeneous genre' characterized by 'multiply layered communicative purposes' that 'use secondary sources and involve library research where students discuss previous research on certain area.' As contended by Johns (2011: 61), 'there is no distinct, absolute form that can be termed as an 'academic essay' or a 'research paper' that is applicable to every academic classroom'. Similarly, Larson (1982: 812) claimed that it has 'no conceptual or substantive identity', and Pillai (2012:21) has called for a distinction between the terms 'academic essay' and 'research paper'. Whereas the former is 'discursive' in nature and entails the 'writer's evaluation of an issue', the latter rests upon a combination of the 'writer's previous knowledge and expert judgment' that involves exploring 'a domain of knowledge in a logical and integrated manner'. Therefore, what we mean when we say 'research paper' in this study is a paper that depends largely on secondary sources incorporated into the students' texts based on a varied but relatively constant set of conventions.

On the other hand, despite hesitancy over its identity, homogeneity and resemblance to published RAs in quite noteworthy ways as claimed by Samraj and Swales (2000: 54), RTP embodies several distinct characteristics including: length, field knowledge, research expertise, citations, and macro-organizational structure which compare to those RAs being published in the relevant journals. More importantly, academic RA has been shown to have the Introduction, Method, Results, and Discussion (IMRAD) structure. Therefore, as far as RTP organization is concerned, its conventional structure or IMRAD can be mapped onto the corresponding RAs being written in the same disciplinary field. Moreover, the rationale for this assumed structural resemblance that graduate students are often urged to publish their RTPs in the most prestigious and internationally discipline-specific journals by their prospective professors.

There have been studies to date that explored various specific aspects of research papers including comparison of various kinds of genres, argumentative essay and scientific report (Walvoord and McCarthy 1990), the sorts of writing experiences encountered by students in writing assignment tasks (Moore and Morton 1999), mismatches of scale (Samraj and Swales 2000), the types of claims made in student texts (Samraj 2004) and the impact of tasks on text (Pillai 2012). Meanwhile, some of the studies on student writing adopted survey methodologies (Cooper and Bikowski 2007) that focused on course syllabuses or instructors' handouts to analyze and classify the types of different writing tasks being assigned to students in the university settings. However, conducting such survey-oriented studies on 'writing assignments' or 'paper assignment instructions' would not provide the solid insights into textual tendencies being favored or disfavored by graduate students.

2.2. The research question

Focus on this academic genre was initially spurred by the difficulties being encountered by student writers and the perpetual dissatisfaction being voiced by

their professors as well as the functional characteristics required in meeting the demands of the kind of academic writing required of them at graduate level. Thus, considering the scarcity of rhetorical analyses done on this genre, the current study can inform us on this campus-wide, student-produced genre that possesses an indispensable position somewhere preceding published RA in the taxonomy of academic writing genres. In light of the stated concerns, the current study seeks to address the following research question:

- What rhetorical structure tendencies characterize English research term paper introductions (RTPIs) written by Iranian graduate students in Applied Linguistics?

3. Method

3.1. The corpus

The corpus comprised 60 Introduction sections of English RTPs in Applied Linguistics submitted by Iranian graduate students to their professors. The graduate students whose RTPs were examined in this study were from three universities in Iran: The State University of Isfahan, the Islamic Azad University of Khorasgan Branch, and the Sheikhbahaee Non-Profit University, with each being represented by 20 RTPs. Academically, these students pass 18 obligatory and optional academic modules (e.g., psycholinguistics, seminar, linguistic issues, ESP, article writing, contrastive linguistics, material development, and testing) during the graduate program and are required to write and submit a publishable RTP corresponding to each module as partial fulfilment of their academic curricular requirements, expectations, and conventions.

The impetus for the choice of the RTPs was two-fold. First, perhaps more importantly, the papers' originality was of prime importance for our analysis as stressed by Skelton (1994). Second, such original research papers that have not gone through the meticulous reviewing and editing processes exerted by the editorial boards of journals could better reveal students' genuine rhetorical tendencies. For determining the sample size, Cochran's equation output (cited in Bartlett et al. 2001) was deployed to include 60 RTPs from a pool of 100 compiled papers. Finally, the principal criteria proposed by Sinclair (2005) were considered for building the intended corpus, namely: following the established IMRAD structure, reporting papers entirely on empirical research, submitted to their professors recent to the date of selection (2014-2015), and solely written by graduate students (only M. A) in the Applied Linguistics discipline. Also, publishability in relevant Applied Linguistic journals was set as a criterion for inclusion or exclusion of the RTPs in the corpus. Moreover, to control variations in the organizational structure, caution was taken to include those papers that had an Introduction section under a discrete heading in their formats directly

succeeding the Abstract and preceding the Method section. For more convenience, each text/ Introduction was allocated a single code protocol (RTP: 1, RTP: 2, RTP: 3…. RTP: 60). Meanwhile, the corpus compilation was assisted by the second and third researcher who re-evaluated all the texts for structural move analysis, identification, and annotation.

3.2. Design

This descriptive study adopted both quantitative and qualitative approaches to analyzing the English RTPIs. Following quantitative methodology, the types, the frequency of moves, the corresponding steps and the sub-steps were identified, calculated and tallied. This rthorical exploration was also triangulated by a qualitative analysis of textual data. Since no causality was assumed to exist between the independent variable (students' knowledge of the rthorical structure) and dependent variables (moves, steps, and sub-steps), an *ex post facto* design was selected for this study. Such a type of design is particularly fitting in contexts where the variables stand outside the researchers' control and can be used for text analysis (Cohen et al. 2011). In this case, we examine text features (e.g., use of moves) and see how they vary across rhetorical sections (e.g., introduction section). Owing to the specific nature of the study and assuming that the other intervening variables might have a bearing on the textual organization of the RTPs, the students' introductions length, age, gender, and language proficiency were not determining factors in forming the corpus.

3.3. Procedure

The instrument used for analyzing the RTPIs corpus was Sheldon's (2011) model, a modified version of Swales's (2004) CARS model. Sheldon (2011: 248) suggested that *topic generalization of increasing specificity* (M1-S1) might be seen to have eight steps that set the ground for gap creation. Move 2 comprises three options: two steps, *indicating a gap* (M2-S1A) and *presenting positive justification* (M2-S2) and a sub-step, *adding to what is known* (M2-SS1B). Move 3, *presenting the present work* embraces seven steps with one obligatory, three optional and three 'PSIF' (probable in some fields, as proposed by Swales 2004) steps. Taken together, this model can be schematically described in terms of 3 moves, 10 steps, and 9 sub-steps as illuminated in Table 1. What makes this model distinct from the previous models is that, based on a pilot annotation of the RTPIs concerning the tentative moves, steps, and sub-steps schemas, it more readily accommodates the rhetorical tendencies of graduate students in the current study.

Table 1. Sheldon's (2011) model

Move		**Step/Sub-Step**
1. Establishing a territory	1	Topic generalization of increasing specificity
	A.	Reporting conclusion of studies
	B.	Narrowing the field
	C.	Writer's evaluation of existing research
	D.	Time-frame of relevance
	E.	Research objective previous studies
	F.	Terminology/definitions
	G.	Generalizing
	H.	Furthering or advancing knowledge
2. Establishing the niche	1	A: Indicating a gap
	B:	Adding to what is known
	2	Presenting positive justification (optional)
3. Presenting the present work	1	Announcing present work descriptively or by purpose (obligatory)
	2	Presenting Research Questions (optional)
	3	Definitional clarifications (optional)
	4	Summarizing methods (optional)
	5	Announcing principal outcomes (PISF)
	6	Stating the value of the research (PISF)
	7	Outlining the structure of the paper (PISF)

Concerning the unit of analysis, a functional-semantic approach was exploited to emphasize the importance of cognitive decision adopted in the identification of the global and local purposes achieved through the functional meanings of steps and sub-steps (Kwan 2006). In the following excerpt, although the first clause gives rise to *topic generalization of increasing specificity* (M1-S1), it assumes the function of Move 2 since step 1 is distinguished by the identification of the gap, where the student underscores the limitation of the study:

(1) Example 1
Although many scholars investigated the specific needs of students in tourism management, few studies have put graduate students' needs under the spotlight. (RTPI: 55)

Concerning the identification process, the rhetorical analysis and manual coding of the RTP Introductions were initially conducted by the first researcher. To ensure inter-rater reliability, the other two researchers independently classified the 60 introductions in terms of move, step and sub-step structure. Given that the

applying of rhetorical analysis may be skewed by subjective identification of communicative functions, the annotation process was supported by Cohen's *Kappa* (k) estimates of consistency between coders running between 0.68 and 0.92. Among the three coders, reliability was calculated by Intraclass Correlation Coefficient (ICC) estimates, indicating an agreement for moves (ICC = 0.91), steps (ICC = 0.84), and sub-steps (ICC =0. 78) (Cotos 2015).

In cases of discrepancy among the coders, the problem was resolved through substantiation of move/step/sub-step realizations mutually to improve the annotation consistency. To be on the safe side, the corpus was reanalyzed for the third time by the first researcher after a one-month interval and the *Phi* coefficient of correlation was calculated (0.87) to indicate the consistency between the two times of analysis.

4. Results

4. 1. Move characteristics

The following subsections report the frequency and sequencing of the three moves in the Introduction section and the steps along with sub-steps realizing each move. As shown in Table 2, the analysis of the introductions is informative for two reasons. First, RTPIs display the same paradigm (M1-M2-M3). Second, the findings reveal that 'deviations in rhetorical structures can easily be captured and traced at the step level' (Basturkmen: 140).

Table 2. Distribution of generic organization of RTPIs

Move/step/sub-step	**RTP Introductions**	
	Frequency	**Percentage**
Move 1: Establishing a territory	60/60	100.00
Step 1: Topic generalization	58/58	96.67
A. Reporting of previous studies	55/58	91.67
B. Narrowing the field	47/58	78.33
C. Writer's evaluation of research	17/58	28.33
D. Time-frame of relevance	40/58	66.67
E. Previous research studies	49/58	81.67
F. Terminology/definitions	44/58	73.33
G. Generalizing	6/58	10.00
H. Advancing knowledge	3/58	5.00
Move 2: Establishing a niche	23/60	38.33
Step 1 A: Indicating gaps	12/23	20.00
Step 1 B: Adding to what is known	2/23	3.33
Step 2: Presenting positive justification	9/23	5.60
Move 3: Presenting the study	56/60	93.33
Step 1: Announcing work purposively	49/56	83.05
Step 2: Presenting Research Questions	47/56	78.33
Step 3: Definitional clarifications	6/56	10.00

Step 4: Summarizing methods	40/56	66.67
Step 5: Announcing principal outcomes	3/56	5.00
Step 6: Stating the value of research	16/56	27.12
Step 7: Outlining the structure of paper	0/56	none

Inherently, frequencies might not exhibit much about the magnitude of difference between the move types under the study. Therefore, a chi-square analysis was utilized ($P<.05$) in order to see if the existing discrepancy was statistically meaningful or not. The results specified a slight discrepancy between Move 1 and Move 3 and a significant discrepancy in the distribution of Move 2 across the introductions corpus as revealed in Table 3.

Table 3. Chi-square test for the Moves

Move	***χ2***	***P-Value***
Establishing a territory	1.10	.59
Establishing a niche	0.00	.24
Presenting the present study	0.48	.57
P<.05	*Critical Value:* 2.304	

4.2. Steps and sub-steps characteristics

4.2.1. Sub-steps in Move 1

As shown in Table 2, the *reporting conclusions of previous studies* (M1-SS1A) was found in almost all the texts, having 58/60 (96.67 %) of occurrences. For example, the student exemplifies the previous items of research in relation to what has been found by other researchers:

(2) Example 2
Although Rothfarb (1970) points to the merits of observation for teachers in their professional growth, the uses of observation described up to now…. (RPTI: 11)

Narrowing the field (M1-SS1B) is prominent in the texts where it achieved 47/58 (78.33 %) occurrences. Narrowing the focus of the research area can highlight the inadequacies of the previous works, paving the ground for niche establishment.

(3) Example 3
One of the important issues or even problems in ESP courses is the matter of vocabulary learning. (RTPI: 16)

In the same vein, the *writer's evaluation of the current state of research area* (M1-SS1C), is not widely employed by the graduate students, with only 17/58 (28.33%) instances. The epistemic markers "may encounter," has supported the student to claim knowledge with an uncertain degree of confidence.

(4) Example 4
Moreover, in every field of study the students may encounter some technical and general words in their field of study. (RTPI: 41)

Through the *time-frame of relevance* (M1-SS1D), the students constituted a disciplinary community with a long convention, using such phrases as 'In the earliest days'. In doing so, the research territory of Move 1was strengthened by explanations of the historical background of prior research, where an assortment of citations was rendered throughout the text. The relatively high incidence observed, 40/58 (66.67%) is indicative of this tendency.

(5) Example 5
In the earliest days of the field of applied linguistics, the main preoccupation was with devising attitude tests. (RTPI: 32)

Other incidences of increasing specificity were mainly realized through the *research objective/ process of previous studies* (M1-SS1E) of which there were 49/58 (81.67%) occurrences. This excerpt specifies the research aims of previous studies, verifying the disciplinary sphere and enhancing the writer's ownership of knowledge. For instance:

(6) Example 6
The present study that is of an exploratory nature makes an attempt to find out if unseen observation can be beneficial for English teachers or not. (RTPI: 23)

Increasing specificity was realized through *terminology/definitions* (M1-SS1F) where the graduate students further substantiated their research via incorporating 44/58 **(**73.33%) occurrences as explained below. The lexical choice of the sentences and the present tense mode specify that they are extrapolations aimed at locating the excerpt within a well-established domain.

(7) Example 7
Dewey (1933) defines reflection as 'turning a subject over in the mind and giving it serious and consecutive consideration', thereby enabling us 'to act in a deliberate and intentional fashion' (as cited in Freese 1999). (RTPI: 31)

Generalizing (M1-SS1G) had a lower number of occurrences, only 6/58 (10%) incidences. Since 'Generalizing' is one of the eight rhetorical features in this model, it appears that the students are less inclined to generalize the field by incorporating this step.

(8) Example 8
There are a number of issues EGP teachers and/or ESP practitioners face when they take the responsibility of a comparatively more diverse job of ESP teaching. (RTPI: 58)

The last step, *advancing knowledge* (M1-SS1H) occurred sporadically. Thus, the instances of this step are not numerically large, merely 3/58 (5%) for all the students.

4.2.2. Steps in Move 2

The analysis of the RTPIs corpus has confirmed that research niches are established via two rhetorical steps, 'indicating a gap' and 'presenting positive justification', but their frequencies differ vastly. While *indicating a gap* (M2-S1A) was found in 12/23 (20%) and *presenting positive justification* (M2-S2) in 9/23(15.60%) of the RTPIs, *adding to what is known* (M2-S1B) was incorporated in merely 2/23 (2.33%). Table 2 displays the frequencies of niche establishment in Move 2. The graduate students intriguingly exhibit weaker versions of Move 2, but not to the extent that the three discrete moves are compressed into two.

In the same vein, Lim (2012: 240) identified four sub-steps in which writers indicate a gap in previous research: (i) highlighting the complete absence of research, (ii) stressing insufficient research, (iii) revealing a limitation, and (iv) contrasting conflicting findings. As shown in Table 4, the low incidence of gap indications, and 14/60 (27.12%) may be ascribed to low occurrences of the sub-steps 1A, 1B, 1C, and 1D. In other words, graduate students are more inclined to indicate a gap only if it is expedient to reveal the limitations of past research in this discipline.

Table 4. Lim's (2012) niche-related sub-steps of Move 2

Sub-steps	Description	Occurrence	Percentage
SS1A	Highlighting the absence	2/12	16.66
SS1B	Stressing insufficiency	6/12	50.00
SS1C	Revealing limitation	11/12	91.66
SS1D	Contrasting conflicts	4/12	33.33
Total number of RTPIs		14/60	27.12

Additionally, based on elaborations of such gap statements made in the introductions of Computer Science (CS) research articles, Shehzad (2008: 44) proposed a gap taxonomy that offers choices for the realization of Move 2. Table 5 delineates the meaning, occurrences, and percentages of the gap-statement taxonomy in Move 2. As can be seen, they preferred 'short' gaps over the rest of the gaps. Next in rank was 'embedded' followed by 'gap reports', 'research questions', and 'extension'. That is, while the 'short' gaps were more apparently prevalent, all the RTPIs were void of 'multiple act', 'lengthy', 'reported' and 'contrastive'. The sound results gained attest to the graduate students' unawareness of the rhetorical function of these gaps as their employments was rethorically insignificant.

Table 5. Shehzad's (2008) taxonomy of gap statements

Taxonomy	Description	Occurrence	Percentage
Short	brief, easy to identify	12/23	52.17
Gap reports	mentioning gaps	4/23	17.39
Lengthy	extended to sentences	0/23	none
Embedded	intertwined with other moves	5/23	21.73
Multiple act	acts realizing a sub-purpose	0/23	none
Reported	identified by target community	0/23	none
Question	rationale of the present research	1/23	4.34
Extension	continuation of past research	1/23	4.34
Contrastive	rendering of opposing ideas	0/23	none

4.2.3. Steps in Move 3

Announcing present work descriptively and/or purposively (M3-S1) occurred 49/56 (83.05%). The excerpt below displays that an approach to knowledge claim is made by the student via placing the deictic, 'This paper…' in initial locus, followed by a verb in the present tense such as 'investigate'. This points to a thorough account of the research purpose, providing detachment, especially through the verb 'investigate', conveys a robust sense. The following instance shows this rhetorically salient feature:

(9) Example 9
This study investigates the target needs of students of tourism and hotel management at Isfahan University and to evaluate retrospectively …. (RTPI: 44)

Concerning *presenting research questions or hypotheses* (M3-S2), the graduate students prefer to present the research question rather than offer hypotheses, although they seem resistant to outlining the research question. There were 47/56 (78.33%) instances in the corpus. By placing 'what' and 'how' in their initial questions, the student gives a specific account of what his or her study is attempting to discover. An instance of this step specified as follows:

(10) Example 10
So this study investigates the needs of physics students of Payame Noor University. It is attempt to answer the following two questions:
1. What are the needs of physics students of Payame Noor University?
2. How do the materials of this course help them get the goal of the course? (RTPI: 23)

Definitional clarifications (M3-S3) have 6/56 (10%) of occurrences. The graduate student informs readers of how a particular concept is understood, with the aim of incorporating the study in a specific domain via explicit assertions clarifying conceptual definitions and terminologies. For instance:

(11) Example 11
The popular concept today is that 'one's background knowledge plays a more important Role than new words and new structures in reading comprehension' (Rumelhart 1985). **(**RTPI: 39)

Summarizing methods (M3-S4) is rendered in the corpus by 40/56(66.67%) instances. The excerpt below indicates that confirmatory textual effects elaborated the research methodology. For example:

(12) Example 12
This was an explanatory study with an intact class. Variables were age and idiom acquisition as dependent variables. (RTPI: 47)

The low incidence of *announcing principal outcomes* (M3-S5), 3/56(5%), may be ascribed to the likelihood that Iranian graduate students are very cautious and reserved in making claims.

(13) Example 13
The findings are expected to contribute to the way feedback is employed in TEFL classes; specifically, to the improvement of L2 learners' speaking performance. (RTPI: 5)

The less frequent occurrence of *Stating the value of the present research* (M3-S6), 16/56 (27.12%), is indicative of the tendency that they do not see any necessity to state the value of their research, maybe due to having presented their work purposefully in step 1, where they make strong claims for the rationality of their research. In regard to *outlining the structure of the paper* (M3-S7), the students may have felt no pressure to announce the structure of their papers. This step seems absent in the RTPIs corpus.

5. Discussion

Given the number, types, and frequency of moves, steps and sub-steps of RTPIs, we can capture some rhetorical structure tendencies by examining Tables 2, 3, 4, and 5. Overall, the most salient features lie in the pervasive absence of Move 2 (roughly 60%) and textual preference for the Move 1–Move 3 type. Such a rhetorical tendency has also been identified in studies conducted by Samraj (2002b) and Ozturk (2007), among others.

5.1. Establishing a territory (Move 1)

Taken together, it seems that the graduate students are not more prone to deploy the all eight sub-steps to substantiate the importance of their discipline, promote the significance of their study, and establish their research territory through knowledge claims or contributions. They showed more inclinations towards the *reporting conclusion of previous studies* (M1-S1A), *narrowing the field* (M1-S1B), *research objective or process previous studies* (M1-S1E), and *terminology or definitions* (M1-S1F). Consequently, the results of this part comply with Shehzad (2007a) who asserted that the writers employed a wide array of sub-steps within Moveb1 to position their scholarships in the research territory, making their texts more stimulating and suitable to the discipline. Based on Table 2, the total of all the occurrences of sub-steps of Move 1 was more than Move 2 and Move 3 indicating the critical significance of this constituent move, which contradicts Keshavarz et al. (2007) study of Applied Linguistics research article (RA) introductions concerning Move 1. Further, this tendency is in compliance with Atai and Habibi (2009) who claimed that the writer resorts to various combinations of sub-steps to impress and convince the academic community of the merit of his study.

5.2. Establishing a niche (Move 2)

Regarding Move 2, the instances cited clearly illustrate that the students have not built an explicit critical stance to highlight the shortcomings, insufficiencies, absences, and conflicts of previous studies. Swales and Feak (2004) argue, 'The introduction remains flat' when the writer does not create a space through explicit specification of the gap, an observation that can be extended to the majority of students in this study. A note-worthy group of studies within the area of the genre analysis reported the perceived failure to establish niche in articles: in Chinese (Taylor and Chen 1991), Swedish (Fredrickson and Swales 1994), Malaysian (Ahmad 1997), Spanish (Burgess 2002; Moreno 2010), Thai (Jogthong 2001), Arabic (Fakhri 2004), Hungarian (Arvay and Tanko 2004), Brazilian and Portuguese (Hirano 2009) and English (Shehzad 2008; Lim 2012). Moreno (2010: 69) noted that gap indication is not a 'must' and its exclusion is characteristic of the Spanish academic written culture. Burgess (2002) discovered that nearly 50% of RAs written in Spanish eliminated Move 2, while in the present study only 38.30% did so. Jogthong (2001) reported an obvious absence of Move 2 in 45% of the Thai papers analyzed while in Ahmad's (1997) corpus of Malay RAIs 35% lacked Move 2.

Some tentative explanations have been proposed to account for this noticeable lack of niche establishment in the research article genre. One of them is the 'emerging status of research areas in developing countries in sharp contrast to established fields' by Samraj (2002). Another explanation, put forward by Swales and Najjar (1987), is that in smaller discourse communities, authors feel less

competitive pressure for a research space. One explanation is the proposal by Burgess (2002) that 'the writers from the Spanish-language background resist criticizing previous studies because they belong to a small community'. One more possibility that sounds more plausible for the current study regards students' rhetorical propensities, as discussed in Jalilifar (2010: 54) who compared international and local research articles introductions (RAIs). He believes that 'lack of awareness of rhetorical specification of introduction' and 'insufficient attention to wider discipline' plus 'little knowledge on the patterns employed in a particular subdiscipline' on the part of the writers are the main causes. In addition, the findings in this study challenge those of Keshavarz et al. (2007) in that they claimed no variation in RAs by Iranian writers concerning Move 2.

5.3. Presenting the study (Move 3)

With respect to Move 3, although the RTPIs do not incorporate all the seven steps by the same token, they display tendencies towards *announcing work purposively* (M3-S1), *presenting research questions* (M3-S2), and *summarizing methods* (M3-S4). In particular, the students are more inclined to downplay *definitional clarifications* (M3-S3), *announcing principal outcomes* (M3-S5), *stating the value of the present research* (M3-S6), and *outlining the structure of the paper* (M3-S7) in the course of shaping the RTPIs. All things considered, the broad discussion of previous works was so prevalent in different parts of RTPIs that this step was no longer restricted to Move 1 but was manifested in Move 2 and Move 3 implying that students might be aware of the obligatory function of this particular step. This is in line with Jalilifar (2010: 53) who claimed that Iranian scholars seem to reveal the purposes of their work in the research article introductions. Also, it is not in consonance with the findings of Keshavarz et al. (2007: 30) that claimed 24% of Iranian writers failed to defend and present their study. Additionally, Fallahi Moghimi and Mobasher (2007: 71) noted that the step, *outlining purposes,* the obligatory element of Move 3, was exploited in English articles more than Iranian counterparts. Similarly, there was also a greater tendency by graduate students towards explicitly *presenting the research questions* (M3-S2). The subsequent step, *definitional clarifications* (M3-S3), was infrequently exploited making allusion indirectly to the optional nature of this step that might not characterize Applied Linguistic introductions. *Summarizing the methods* (M3-S4) was found to a much greater extent as Swales (2004, cited in Jalilifar and Soleimani 2011) notes that this step is utilized 'especially in papers whose principal outcome can be deemed to reside in their methodological innovations, extended definitional of key terms, detailing the research questions or hypotheses, and announcing the principal outcomes.'

The last three steps, M3-S5, M3-S6, and M3-S7 that have the lowest frequency may be attributed to disciplinary conventions as emphasized by Swales (2004: 232) that are 'probable in some fields (PSIF), but are unlikely in others'. For

instance, *outlining the structure of the paper* (M3-S7) as a 'roadmap' that appears as an ultimate option in Move 3 configuration 'seems to inversely function whether the disciplinary field has an established IMRAD structure or not' (Swales: 232). On the other hand, we argue that the students constitute Move 3 along the lines of the expectations of their discipline's practice and readership (their professors). Besides, acknowledging that observed rhetorical structure tendencies in the RTPIs may not be solely owing to different disciplinary values, but other contextual factors such as the kind of task assigned and professors' expectations can also impact the types of texts shaped. On the whole, occupying a niche can be taken, as suggested by Lyda and Warchal (2014: 2), 'as a frame of reference for discussion of what is culture-bound, culture-sensitive, and culture-free in the academic community and its practices'.

6. Conclusions

The current analysis of RTPIs brings us to the conclusion that the noticeable rhetorical structure tendencies can be traced in terms of move combinations along with marked step and sub-step realizations that might be elaborated by a number of intervening factors. The overall findings are compatible with Samraj (2002a:175) who asserted 'contextual layers' surrounding student-produced texts should be taken into account not solely disciplinary values and also Jalilifar (2010: 54) who claimed that rhetorical tendencies should be analyzed in terms of 'discoursal, cultural, and lack of rhetorical awareness' factors.

Analysis concerning move theory indicates that graduate students do not display a close adherence to the generic schemas of this rthorical section, showing hybrid patterns as a sign of the saliency of move combinations along with the marked step and sub-step realizations. At step-level analysis, the proportion of the various steps within Move 2 exhibited a lack of rhetorical tendency for indicating a gap, adding to what is known, and presenting positive justification in introduction sections. Also, regarding the niche-related sub-steps proposed by Lim (2012) as a means of gap indication for challenging previous studies, these strategies appeared not to be favored by graduate students at large. By means of becoming aware of the rhetorical organization most widely utilized in English RTPIs, graduate students might be in a better position to make informed rhetorical adoptions based on Sheldon's (2011) model as a potential template. Such an analysis, therefore, maybe beneficial to English for research publication purposes (ERPP) instruction, material, and curriculum development, and provide implications for academic literacies (ALs) through shedding light on textual and academic norms.

References

Ahmad, Ummul. 1997. Research Articles in Malay: Rhetoric in an Emerging Research Community. In Anna Duszak (ed.), *Culture and Styles of Academic Discourse*, 275–303. Austin: De Gruyter.

Arvay, Anett and Gyula Tanko. 2004. Contrastive Analysis of English and Hungarian Theoretical Research Article Introductions. *IRAL* 42. 71–100.

Atai, Mohammadreza and Pyman Habibie. 2009. Exploring Subdisciplinary Variations and Generic Structure of Applied Linguistics Research Article Introductions Using CARS Model. *The Journal of Applied Linguistics* 2(2). 26–51.

Bartlett, James, Kotrlik, Joe, and Chadwick Higgins. 2001. Determining Appropriate Sample Size in Survey Research. *Information Technology, Learning, and Performance Journal* 19 (1). 43–50.

Basturkmen, Helen. 2012. Genre-Based Investigation of Discussion Sections of Research Articles in Dentistry and Disciplinary Variation. *English for Academic Purposes* 11(2). 134–144.

Brent, Douglass. 2013. The Research Paper: Why We Should Still Care! *Journal of the Council of WPA: Writing Program Administration* 37(1).1–24.

Bunton, David. 2002. Generic Moves in Ph.D. Thesis Introductions. In John Flowerdew (ed.), *Academic Discourse*, 57–75. London: Pearson Education.

Burgess, Sally. 2002. Packed Houses and Intimate Gatherings: Audience and Rhetorical Structure. In John Flowerdew (ed.), *Academic Discourse*, 196–215. London: Longman.

Cohen, Louis, Manion, Lawrence and Keith Morrison. 2011. *Research Methods in Education*. London: Routledge.

Cooper, Amy and Dawn Bikowski. 2007. Writing at the Graduate Level: What Tasks do Professors Actually Require? *Journal of English for Academic Purposes* 6(3). 206–221.

Cotos, Elena, Huffman, Sarah and Stephanie Link. 2015. Furthering and Applying Move/ Step Constructs Technology-Driven Marshalling of Swalesian Genre Theory for EAP Pedagogy. *Journal of English for Academic Purposes* 19. 52–72.

Fallahi, Mohammad and Ali Mobasher. 2007. Genre Analysis of Introduction Section of English and Persian Articles in Mechanics. *Journal of Teaching English Language and Literature* 1(2). 59–74.

Fakhri, Ahmed. 2004. Rhetorical Properties of Arabic Research Article Introductions. *Journal of Pragmatics* 36. 1119–1138.

Fredrickson, Kirstin and John Swales. 1994. Competition and Discourse Community: Introductions from Nysvenska Studies. In Britt-Louise Gunnarsson, Per Linell and Bengt Nordberg. (eds.), *Text and Talk in Professional Context*, 9–22. Uppsala: ASLA.

Hirano, Eliana. 2009. Research Article Introductions in English for Specific Purposes: A Comparison between Brazilian, Portuguese and English. *English for Specific Purposes* 28. 240–250.

Hyland, Ken. 2009. *Teaching and Researching Writing*. UK: Pearson Education Limited.

Jalilifar, Alireza. 2010. Research Article Introductions: Subdisciplinary Variations in Applied Linguistics. *Journal of Teaching Language Skills* 2(2). 29–55.

Jalilifar, Alireza and Nader Soleimani. 2011. Communicative Move in Research Article Introductions: Variations in Applied Linguistics. In Alireza Jalilifar and Esmaeel. Abdollahzadeh (eds.), *Academic Research Genres in Asian Context*, 447– 477. Ahvaz: Shahid Chamran University of Ahvaz.

Jogthong, Chalermsri. 2001. Research Article Introduction in Thai: Genre Analysis of Academic Writing. University of West Virginia, Ph. D Dissertation.

Johns, Ann. 2011. The Future of Genre in L2 Writing: Fundamental, but Contested, Instructional Decisions. *Journal of Second Language Writing* 20(1). 56–68.

Kanoksilapatham, Budsaba. 2005. Rhetorical Structure of Biochemistry Research Articles. *English for Specific Purposes* 24(3). 269–292.

Keshavarz, Mohammad Hossein, Atai, Mohmmadreza and Vahid Barzegar. 2007. A Contrastive Study of Generic Organization of Research Article Introductions, Written by Iranian and Non-Iranian Writers in Applied Linguistics. *Teaching English Language and Literature* 1(2). 13–34.

Khany, Reza and Reza Abol-Nejadian. 2010. Iranian Post-Graduate Students' Problems in Writing Academic Research Articles. *TELL* 4(2). 1–26.

Kwan, Becky. 2006. The Schematic Structure of Literature Reviews in Doctoral Theses of Applied Linguistics. *English for Specific Purposes* 25. 30–55.

Larson, Richard. 1982. The Research Paper in the Writing Course: A Non-Form of Writing. *College English* 44. 811–816.

Lim, Jason Miin Hwa. 2012. How do Writers Establish Research Niches? A Genre-Based Investigation into Management Researchers' Rhetorical Steps and Linguistic Mechanisms. *Journal of English for Academic Purposes* 11(3). 229–245.

Loi, Chek Kim. 2010. Research Article Introductions in Chinese and English: A Comparative Genre-Based Study. *Journal of English for Academic Purposes* 9(4). 267–279.

Lyda, Andrzej and Krystyna Warchal. 2014. *Occupying Niches: Interculturality, Cross-Culturality and Culturality in Academic Research*. Switzerland: Springer.

Mahzari, Avishan and Parviz Maftoon. 2007. A Contrastive Study of the Introduction Section of English and Persian Medical Research Articles. *Iranian Journal of Language Studies* 3. 201–214.

Moore, Tim and Janne Morton. 1999. Authenticity in the IELTS Academic Module Writing Text. In Rod Tulloch (ed.) *IELTS Research Reports Canberra*, Vol. 2. Australia.

Moreno, Ana. 2010. Researching into English for Research Publication Purposes from an Applied Intercultural Perspective. In Miguel Ruiz-Garrido, Silveira Palmer and Ina Fortanet-Gómez (eds.), *English for Professional and Academic Purposes*, 59–73. Amsterdam: Editions Rodopi.

Ozturk, Ismet. 2007. The Textual Organization of Research Article Introductions in Applied Linguistics: Variability within a Single Discipline. *English for Specific Purposes* 26(1). 25–38.

Pillai, Anitha Devi. 2012. Discourse Analysis of Research Papers and the Acculturation Experiences of Novice Writers in a University Foundation Program. University of Singapore, Ph. D Dissertation.

Samraj, Betty and John Swales. 2000. Writing in Conservation Biology: Searching for an Inter-disciplinary Rhetoric? *Language and Learning Across the Disciplines* 3. 36–56.

Samraj, Betty. 2002a. Texts and Contextual Layers: Academic Writing in Content Courses. In Ann John (ed.), *Genre in the Classroom: Multiple Perspectives*, 163–176. Mawah: Lawrence Erlbaum.

Samraj, Betty. 2002b. Introductions in Research Articles: Variations across Disciplines. *English for Specific Purposes* 21(1). 1–17.

Samraj, Betty. 2004. Discourse Features of the Student-Produced Academic Research Paper: Variations across Disciplinary Courses. *English for Specific Purposes* 3. 5–22.

Samraj, Betty. 2005. An Explanation of Genre Set: Research Article Abstracts and Introductions in two Disciplines. *English for Specific Purposes* 24. 141–156.

Samraj, Betty. 2008. A Discourse Analysis of Master's Theses across Disciplines with a Focus on Introductions. *Journal of English for Academic Purposes* 7(1). 55–67.

Shehzad, Wasima. 2007a. How to End an Introduction in a Computer Science Article? A Corpus-Based Approach. In Eileen Fitzpatrick (ed.), *Corpus Linguistics beyond the Word: Research from Phrase to Discourse*, 243–255. Amsterdam: Rodopi.

Shehzad, Wasima. 2008. Move Two: Establishing a Niche. *Iberica* 15. 25–50.

Sheldon, Elena. 2011. Rhetorical Differences in RA Introductions Written by English L1 and L2 and Castilian Spanish L1 Writers. *Journal of English for Academic Purposes* 10. 238–251.

Sinclair, John. 2005. Corpus and Text: Basic Principles. In Martin Wynne (ed.), *Developing Linguistic Corpora: A Guide to Good Practice*, 1–16. Oxford: Oxbow Books.

Skelton, John. 1994. Analysis of the Structure of Original Research Papers: An Aid to Writing Original Papers for Publication. *British Journal of General Practice* 44. 455–459.

Swales, John and Hazem Najjar. 1987. The Writing of Research Article Introductions. *Written Communication* 4. 175–192.

Swales, John. 1990. *Genre Analysis*. Cambridge: Cambridge University Press.

Swales, John and Christine Feak. 2004. *Academic Writing for Graduate Students*. Ann Arbor: University of Michigan Press.

Swales, John. 2004. *Research Genres: Explorations and Applications.* Cambridge: Cambridge University Press.

Taylor, Gordon and Tingguang Chen. 1991. Linguistic, Cultural, and Subcultural Issues in Contrastive Discourse Analysis: Anglo-American and Chinese Scientific Texts. *Applied Linguistics* 12(3). 319–336.

Walvoord, Barbara and Lucille McCarthy. 1990. *Thinking and Writing in College: A Naturalistic Study of Students in four Disciplines*. Urbana: National Council of Teachers.

FROM COORDINATION TO VERBAL SERIALIZATION – THE *PÓJŚĆ* (SERIAL VERB) CONSTRUCTION IN POLISH

ALEXANDER ANDRASON
University of Stellenbosch
andrason@sun.ac.za

Abstract
The present paper studies the PÓJŚĆ gram in Polish – a construction composed of the verb *pójść* 'walk' and another inflected verb. The author demonstrates that the PÓJŚĆ can be represented as a set of stages on the path linking bi-clausality/bi-verbiness and mono-clausal/mono-verbiness. Specifically, it spans the section ranging from a non-canonical, less cohesive instantiation of a serial verb construction (SVC) (in which it overlaps with asyndetic coordination) to a canonical instantiation of SVC (in which it complies with the SVC prototype to a large extent). Accordingly, the study corroborates the view that SVCs may derive from asyndetic coordination and, by accumulating properties associated with different parts of the clausality/verbiness continuum, gradually develop towards SVC. This gradualness is not only diachronic, but may also be observed synchronically.

Keywords: Serial verb construction, Polish, semantic maps, grammaticalization, cognitive linguistics

1. Introduction

By exhibiting similarities to both bi-clausal/bi-verbal and mono-clausal/mono-verbal structures, Serial Verb Constructions (SVCs) constitute a stage – or rather a set of stages – on the grammaticalization path linking these two opposite construction types (Aikhenvald 2006: 56). This understanding of SVCs presupposes that the development from bi-clausal/bi-verbal structures to SVC and, subsequently, to mono-clausal/mono-verbal structures, is gradual and passes through a gamut of transition phases (Aikhenvald 2011: 19-22). The present paper deals with an initial stage of this process, i.e. with the development from a bi-clausal/bi-verbal structure (specifically, asyndetic coordination) to SVC, taking as an example the PÓJŚĆ gram in Polish.

The PÓJŚĆ gram is a bi-verbal construction built around the motion verb *pójść* 'walk, go' – which is lexically perfective in Polish – and another verb. Both verbs exhibit finite forms and are not connected by a coordinator:

(1) **Poszedł** się **umył**
he.walked[1] REFL he.washed
'He washed himself'

According to the linguistic norm, the PÓJŚĆ gram is limited to the imperative (cf. Gębka-Wolak 2012) – its use in other TAM categories is regarded as ungrammatical. Nevertheless, as will be demonstrated in this paper, in informal colloquial situations, the gram appears in a variety of tenses and moods available in Polish grammar. Such "non-imperative" uses will constitute the focal point of this article.[2]

In order to study the initial phase(s) in the grammatical life of SVCs and their transition from multi-clause/multi-verbal structures to (more) canonical SVCs, I will follow a dynamic, radial-network approach to categorization (Haspelmath 2003; Croft 2003; Janda 2015) and a multi-feature prototype-based approach to verbal serialization (Aikhenvald 2006, 2011; Dixon 2006; Aikhenvald and Dixon 2006). In particular, I will determine to what extent the PÓJŚĆ gram complies with the SVC prototype and to what extent it exhibits features linking it to its origin – the category of asyndetic coordination. The study will be developed within the overarching frame of construction grammar (Croft 2001, 2013; Goldberg 2003, 2006, 2013; Hoffmann and Trousdale 2013; Fried and Östman 2004; Bybee 2013; Östman and Trousdale 2013).

The article will be organized in the following manner. In Section 2, I will present the details of the framework(s) underlying the research. In Section 3, I will introduce the evidence related to the PÓJŚĆ gram. In Section 4, I will evaluate this evidence within the adopted framework, and show additionally its contribution to the general theory of SVCs and their categorization. Lastly, in Section 5, I will draw main conclusions and propose possible lines of future studies.

[1] In all the examples, the verb *pójść* will be glossed as 'walk' irrespective of its function. In general, I will use the word-for-word glossing format. Due to the complex morphology of Polish, particularly with respect to the verbal system, the glosses are only approximate. This is especially evident with discontinuous variants of the conditional (*tryb warunkowy*) and subjunctive (*tryb łączący*), e.g. *by(m) zrobił* and *żeby(m) zrobił* (see examples 16.c-e in Section 3).

[2] The PÓJŚĆ gram is part of a set of bi-verbal imperative constructions built around motion verbs such as *iść* 'walk', *chodzić* 'walk habitually', *wejść* 'enter' *wyjść* 'go out, leave', *przyjść* 'come' and *wrócić* 'return' (compare Gębka-Wolak 2012, Gębka-Wolak and Moroz 2017).

2. Framework[3]

In this study, I will follow a cognitive understanding of categorization, of which the central concept is the prototype. The prototype is an inductively derived ideal that exemplifies the category to the fullest extent. It encompasses the most common features associated with the crosslinguistic representatives of that category, and distinguishes it from other categories most effectively. Thus, the prototype is posited given attested regularities and their saliency (Taylor 2003).[4] A typologically driven approach to SVCs (Aikhenvald 2006, 2011; Dixon 2006) argues that the SVC prototype exhibits the following nine features:[5]

List 1. Properties of the SVC prototype

1)	bi-verbiness[6]	- SVC consists of (at least) two finite verbs;
2)	mono-eventhood	- SVC constitutes "one assertion" communicating a single event (Aikhenvald 2006: 10);
3)	mono-predicativity	- SVC fills "one […] functional slot in a clause", precluding any type of syntactic dependency (e.g. subordination, embedding, nominalization; ibid. 5);
4)	mono-clausality	- SVC functions as a single clause, distinguishing itself from coordination, consecutivization and complement clauses (ibid. 6-7);
5)	mono-clausal intonation	- SVC exhibits intonation typical of a single clause rather than a complex of clauses, i.e. with no pause or contouring (ibid. 7);[7]
6)	shared TAM	- SVC exhibits a single TAM value and its components cannot be marked by different, especially incompatible, TAM categories (ibid. 8). Moreover, SVC is not restricted to a particular TAM category but appears in various TAM categories available in a language (ibid. 56).

[3] I used the same framework in two papers dedicated to serial verb constructions in Polish (Andrason 2018) and Biblical Hebrew (Andrason forthcoming), Without being reproduced literally, the present section exhibits similarity with the introductory section of those studies.

[4] In linguistics, the ideas of prototype and family resemblance became particularly popular in the late 20th century and in the 21st century. Both concepts can be traced back to psychological research conducted by Eleanor Rosch (1973, 1975). The work on family resemblance and categorization was also influenced by philosophical writings of Ludwig Wittgenstein (1953).

[5] For a critique of Aikhenvald and Dixon's approach see Haspelmath (2016). For a further discussion on the typology of verbal serialization consult Schiller (1990), Zwicky (1990), Joseph and Zwicky (1990), Lefebvre (1991) Rosen (1997), and Bisang (2009).

[6] The term 'bi-verbiness' has been coined for the purpose of this paper. It implies that that a construction consists of two verbs that are finite. An alternative label could be 'bi-finiteness'.

[7] In more integrated SVCs, this intonation may even be mono-verbal.

7) shared polarity - SVC exhibits a unitary polarity value (ibid. 8-9); Inversely, the components of SVC cannot communicate negative and positive polarity, separately (ibid. 8-9);
8) shared (subject) arguments – the core and peripheral arguments of SVC – in particular the subject – belong to the entire construction. The components do not govern separate arguments and do not allow for duplicate roles (ibid. 12-14, 56);
9) ability to act independently - the components of SVC can occur on their own, exhibiting, in such cases, their lexical (source) meaning (ibid. 1).

The prototype is crucial as it enables a category to be structured in a meaningful manner. However, the prototype cannot be equaled with the category. The category extends far beyond its prototype. The category constitutes a complex radial network containing instantiations that range from more canonical to less canonical. The former approximate the prototype to a large extent, complying with all or most of its features. The latter, in contrast, comply only with a certain number of properties specified for the prototype, thus approximating it to a limited extent (Taylor 2003). Nevertheless, both the canonical and the non-canonical members belong to the category – all being connected via family resemblance. That is, although each member is closely related to its immediate neighbor(s), exhibiting with it a considerable degree of similarity, the similarity between distant members may be minimal or nearly null.[8] In general, the construct's belonging to the category is a question of degree instead of constituting a binary function of compliance [+ or 1] or non-compliance [- or 0] (Janda 2015).

When applied to SVCs, the cognitive approach to categorization entails the following: the category of SVC comprehends a great variation of SVCs attested to in specific languages, of which some are canonical while others are non-canonical. That is, in specific languages, SVCs need not exhibit all the properties postulated for the prototype, although they may still belong to the crosslinguistic taxon of SVC (Aikhenvald 2006: 4). Crucially, there may not be a single essential and/or sufficient trait – and thus a sole, definitive diagnostic – for a gram to be classified as a SVC. A construct's fitting into the SVC taxon can only be conceived in extent to which a language-specific form complies with the (nine) traits posited for the prototype (*contra* Bisang 2009).

Furthermore, in cognitive linguistics, the radial structure of a category and the presence of members that exhibit different degrees of compliance with the prototype is not accidental. It results from a diachronic grammaticalization process that underlies that category. That is, any category c_x – with its prototype p_x – constitutes a stage on a grammaticalization path running from a more original, diachronically earlier, category c_{x-1} (and its prototype p_{x-1}) to a more advanced, and thus historically posterior, category c_{x+1} (and its prototype p_{x+1}). In fact, some

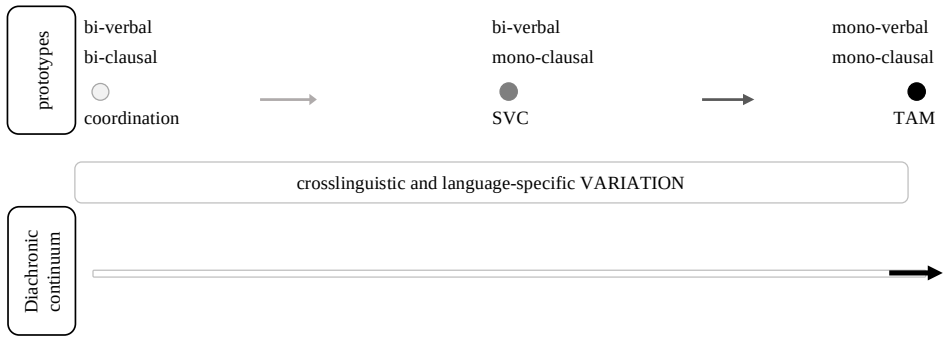
[8] The idea of family resemblance draws from studies developed by Wittgenstein (1953 [2001]), Rosch (1973, 1975, 1978), and Rosch and Mervis (1975).

instantiations of a language-specific form may synchronically attest to such pre-category / pre-prototype stages (c_{x-1} / p_{x-1}) and/or post-category / post-prototype stages (c_{x+1} / p_{x+1}). In the former case, certain properties of a gram locate it on the path towards the category c_x and the prototype p_x. In the latter case, certain properties place the gram in a section of the path that leads from the category c_x and the prototype p_x to other categories and their prototypes. Accordingly, the variations of members of a category – both crosslinguistic and language-specific – can be viewed as a dynamic semantic map of that category. This map links the category to other categories, both conceptually and diachronically. Crucially, this type of map can be used to represent the polyfunctionality and the polysemy of a gram as a network of related components, in which different functions and roles exhibited synchronically by that gram attest to different stages on the grammaticalization path (Croft 2013, 2003; Haspelmath 2003; Narrog and van der Auwera 2001). The cohesion of a gram lies in the grammaticalization path that underlies it and the family resemblance that links that gram's various facets – not in an abstract invariant property (Janda 2015; Andrason 2016; Andrason and Locatell 2016).

The dynamic approach to categorization presented above has been used in the realm of SVCs (Aikhenvald 2006, 2011; Andrason 2018, forthcoming). Within this approach, instantiations of the SVC category that exhibit different degrees of canonicity form a continuum confined between two extremes: multi-clausal/multi-verbal constructions (e.g. syndetic and asyndetic coordination) and mono-clausal/mono-verbal constructions (first, more complex structures like converb constructions and, subsequently, single-verb TAM grams; see Figure 1 below). This continuum of clausality/verbiness has both a diachronic and a synchronic interpretation. Diachronically, SVCs originate in bi-clausal and bi-verbal structures, and develop towards mono-clausality by gradually increasing their semantic, syntactic, morphological and phonological cohesion (Aikhenvald 2006: 56, 2011: 22). Synchronically, the continuum explains the similarities between SVC and bi-clausal structures, on the one hand, and mono-verbal structures, on the other hand. With the former, SVC shares its bi-verbiness, while with the latter, it shares mono-clausality (Aikhenvald 2011). Crucially, even though the prototypes of bi-clausal/bi-verbal constructions (e.g. coordination), bi-verbal/mono-clausal (SVC), and mono-verbal constructions (e.g. synthetic TAM grams) can be viewed as the most salient sign posts on the continuum, the continuum is gradient and passes from one category to another in an uninterrupted manner. Any categorial line that aims to divide that continuum into separate entities is arbitrary – what exists is the crosslinguistic and language-specific variation and a fuzzy progression along the cline.[9]

[9] Given its dependence on nine features postulated for the prototype (of which most are scalar themselves), the continuum linking SVC with bi- and mono-clausality/verbiness could be imagined as, at least, nine-dimensional (Aikhenvald 2006: 56). For the sake of simplicity, in Figure 1, the continuum is depicted as one-dimensional (compare with Aikhenvald 2011: 22).

Figure 1. A dynamic representation of SVC



The study is developed within the frame of Construction Grammar. That is, the PÓJŚĆ gram is treated as a construction – a holistic and conventional entanglement of form and meaning, characterized by varying degrees of schemacity, abstraction, compositionality, idiosyncrasy, and complexity (Croft 2001, 2013; Goldberg 2003, 2006, 2013; Schönefeld 2006; Hoffmann and Trousdale 2013; Fried and Östman 2004; Bybee 2013; Östman and Trousdale 2013).

Construction Grammar is not uniform. It encompasses a variety of distinct constructionist frameworks, of which most exhibit, nevertheless, the following crucial similarities: (a) all linguistic elements and objects – whether synthetic (morphological) or analytical (phrasal and clausal), and whether central or peripheral – are constructions; (b) grammar is a dynamic "collection" or a network of (related and overlapping) constructions (Hoffmann and Trousdale 2013; Goldberg 2006, 2013); (c) syntax and lexicon are not separated and clear-cut but are connected by a continuum of more schematic or more substantive constructions (ibid.); (d) grammar is monostratal and the analysis avoids making use of transformations and/or derivations (Goldberg 2013); (e) constructions and grammar have cognitive and usage-based foundations (Goldberg 2013; Bybee 2013; Boas 2013); (f) frequency and usage play a fundamental role in the formation of constructions and their synchronic grammatical status (Bybee 2010, 2013; Croft 2001, 2013; Jackendoff 2013); (g) the diachronic development of a construction (either at a language-specific or a crosslinguistic level) is manifest in that construction's synchronic variation in a language, in its dialects, or across languages (Östman and Trousdale 2013).

3. Evidence

The evidence provided in this section draws from a database compiled by the author. The source of this database is twofold. Most examples have been collected through on-line searches of blogs, forums, chats, and social networks.[10] A small sub-set of examples draw from actual conversations.[11] Crucially, all the examples have been spontaneously produced by Polish native speakers, even though from the perspective of a linguistic norm (and, probably the majority of users of the language) they may be regarded as incorrect and/or ungrammatical. All of them, however, empirically exist. Their considerable number, written format and absence of corrective attempts demonstrate that one is not dealing with the phenomenon of "slip of the tongue".

The PÓJŚĆ gram is a sequence of two finite verbal forms. The first verb (V_1) is the perfective verb *pójść* 'walk' which constitutes the constant element in the construction. The second verb (V_2) is a variable or fluctuating element in the construction. Both verbs are inflected in person, number and, if possible, gender. For example, in (2.a), V_1 and V_2 appear in the 3rd person singular masculine, while in (2.b) the two verbal components are inflected in the 1st person singular masculine.

[10] The main criteria for inclusion in the database were: (a) the presence of a constructional pattern composed of an inflected verb *pójść* 'go' and another verb that is also inflected; (b) the inflection of the verb *pójść* in tenses other than the imperative; (c) the absence of explicit markers of bi-clausality, e.g. an overt comma or the conjunction *i* 'and'; (d) the overall grammaticality (acceptability) of the sentence (i.e. the sentence is not an evident case of a grammatical error). Given the relatively low degree of grammaticalization of the PÓJŚĆ gram as a holistic construction applicable to all tenses and aspects, and its association with colloquial registers and spoken non-normative language, a corpus that would closely reflect the colloquial spoken variety of Polish was chosen instead of the Polish National Corpus. My corpus includes fragments of blogs, chats, forums, WhatsApp messages, and posts on social networks, which may be viewed as constituting "oral texts" or at least, texts where the informal colloquial language is typical. In contrast, the great bulk of the Polish National Corpus is extracted from books, articles, newspapers, officially printed and published sources which reflect more closely the standard Polish norm, including its formal literary variety. Such an approach gave me a possibility to reveal a richer profile of the analyzed construction. Of course, the PÓJŚĆ gram appears in the Polish National Corpus. However, according to my searches, in most examples, the verb *pójść* appear in the imperative.

[11] Oral data were collected by interviewing five native speakers. The interviews ranged from an hour to two hours and took the format of conversations. All the informants were adults and, at the time of the interviews, had received a university education. Their age ranged from mid-twenties to mid-forties. A few examples were produced spontaneously by the informants. In other, more frequent, cases, a particular use was elicited by the linguist, either by a question making use of a particular construction or asking the informant to complete a given expression or a sentence.

(2) a. **Poszedł** się **powiesił**
he.walked REFL he.hanged
'He hanged himself'

b. **Poszłem**[12] się **walnąłem** na łóżko
I.walked REFL I.hit on bed
'I threw myself on the bed'

The PÓJŚĆ gram may often be interpreted in terms of mono-eventhood. Indeed, the native speakers interviewed for the purpose of this research viewed the event communicated by the PÓJŚĆ gram as relatively unitary, and conceptualized it as a 'single-scene' action or activity (cf. Aikhenvald 2006: 56). In all such cases, the event expressed by the PÓJŚĆ gram can be paraphrased by using a mono-verbal construction built around the verb V_2 – which specifies the exact type of the action – and an adverbial specifying its mode. Crucially, the semantic component related to the idea of motion – encoded in the lexical value of V_1 – is not particularly relevant even though it is often present (see further below in this section). The absence of an allative sense is evident in (3.a) where V_1 cannot be interpreted as an independent event of motion. Similarly, in (3.b), the PÓJŚĆ gram does not entail two sequential events: that of walking and that of hitting oneself on the head – the motion component is almost entirely irrelevant for the scene. In (3.c), the referent performs the action specified by V_2 (i.e. to urinate) in the place where he was originally located (i.e. in a room). This means that he didn't need to go to another place to urinate. Again, the allative semantic component is irrelevant for the action expressed by V_2 to occur.

(3) a. Dziękuję Chrystusowi za to że
I.thank Christ for this that
poszedł **wziął** na siebie nasze winy
he.walked he.took on himself our sins
'I thank Christ that he took our sins on himself'

b. To bym powiedział, żeby **poszedł** się
then I.would I.said that he.should.walk REFL
walnął w głowę
he.should.hit in head
'Then I would tell him to hit himself in his head'

c. Pochlani w trupa, jeden **poszedł** się
drunk in dead.body one he.walked REFL
wylał na dywan
he.pissed on carpet
'[When they were] totally wasted (lit. drunk like a dead corpse), one [of them] pissed on the carpet'

[12] The standard form is *poszedłem*. See also (19.b).

Example (4) illustrates the property of mono-eventhood even more effectively. First, the general context suggests that the scene contains three events: eating, lying (expressed by mono-verbal structures) and defecating (expressed by the PÓJŚĆ gram). Since the animal need not go anywhere else to defecate, but rather does it in the very box where it lives, the literal allative semantic component is absent. Second, the mono-eventhood of the expression *pójdzie się zesra* can be demonstrated by certain formal properties, specifically the presence of an overt coordinator. In Polish, if three or more coordinands are connected, the first and the second tend to be juxtaposed, while the third is introduced by means of a coordinator, typically *i* 'and'. That is, only the last pair of coordinands is usually coordinated overtly and syndetically. Example (4) attests to such a situation. Two first events (*zje* 'it eats' and *leży* 'it lies') are connected asyndetically, while the last coordinand (the sequence *pójdzie się zesra*) is headed by an overt coordinator. This demonstrates that the PÓJŚĆ gram is treated as a unitary member in a coordination chain – not as an asyndetic coordination of two events. Inversely, if the PÓJŚĆ gram was a coordinating construction, the clauses of examples (4) would deliver the following sequence: [*x, y* C *z, w*], where C stands for the conjunctive coordinator *i* 'and', and *x, y, z, w* for the coordinated verbal clauses. Such a sequence is ungrammatical in Polish – the correct one being [*x, y, z* C *w*].

(4) Mam aktualnie warana stepowego ale ten
I.have nowadays monitorsavannah but this
tylko zje, leży i jedynie
only will.eat lies and exclusively
pójdzie się **zesra**
he.will.walk REFL he.will.shit
'Now, I have a savannah monitor, but it only eats, lies and shits'

Example (5) further illustrates the mono-eventhood of the PÓJŚĆ gram. In this example, two events involving urination are contrasted; namely, urinating into a chamber-pot and urinating into a bed. The presence of V_1 *poszedł* 'he walked' does not imply a new, third event in the scene, which would be separated from V_2 *wysikał się* 'he urinated'.

(5) Wczoraj zamiast nasikać na nocnik
yesterday instead to.pee on chamber-pot
poszedł się **wysikał** do najstarszego
he.walked REFL he.peed to the.eldest
brata do łóżka i zakrył to
brother to bed and he.covered it
'Yesterday, instead of peeing in the chamber-pot, he peed in his eldest brother's bed, and covered it'

The most evident examples of mono-eventhood are probably cases where the subject is inanimate and, thus, unable to perform an allative action of walking encoded lexically in the verb *pójść* (6.a-b). In such instances, it is impossible to understand the scene as composed of two events: one allative expressed by V_1 and the other, related to the semantics of V_2. Crucially, such examples can never be paraphrased by two independent clauses.

(6) a. Przyczyna jest taka że laser **poszedł** się **zepsuł**
cause is such that laser it.walked REFL it.broke
'The cause is (such) that the laser got broken'

b. Kompresor **poszedł** się **popsuł**
compressor it.walked REFL it.broke
'The compressor got broken'

The mono-eventhood of the PÓJŚĆ gram can also be demonstrated through the presence of shared temporal and spatial operators (e.g. adverbs, adverbial locutions, prepositional phrases, and clauses) that operate over the entire construction, rather than over V_1 or V_2 separately (cf. Aikhenvald 2006: 12, Bisang 2009: 803-804, 810).

As illustrated by examples (7.a-c), expressions of time may operate over the entire PÓJŚĆ gram. In (7.a), the adverb *po czym* 'then, later, afterwards' indicates that V_1 and V_2 are conceptualized as one event in a chain of events. In (7.b), the adverb *wczoraj* 'yesterday' locates the event expressed by V_1 and V_2 in a specific moment in past time. Similarly, the scope of the adjacent temporal phrase *od razu po rzuceniu srebrników* 'immediately after throwing silver coins' in (6.c) extends over the entire PÓJŚĆ gram, including both V_1 and V_2.[13] Crucially, V_1 and V_2 cannot host different temporal operators separately.[14]

(7) a. Po czym **poszedł** **usiadł** na ławeczce
then he.walked he.sat.down on bench
'Then, he sat down on the bench'

b. A wczoraj **poszedł** **wziął** czystą pieluchę
and yesterday he.walked he.took clean diaper
'And yesterday he took a clean diaper'

[13] Observe that TAM markers are regularly identical, which also indicates the temporal cohesion of the PÓJŚĆ gram and thus its mono-eventhood (see further below in this section).

[14] If they host such separate operators, the construction is interpreted as coordinated.

c. **Poszedł** się **powiesił** od razu po
he.walked REFL he.hanged immediately after
rzuceniu srebrników
throwing sliver.coins
'He hanged himself immediately after the silver coins were thrown'

In a similar vein, locative expressions – e.g. locative adverbs – operate over the entire PÓJŚĆ gram such that the event expressed jointly by V_1 and V_2 occurs in the same place. For instance, in (8.a), the prepositional phrase *do kuwety* 'to (the) littering-box' applies to the two verbal components, not only to one of them. Example (8.b) is even more significant. Although occurring before V_1, the locative phrase *na łóżku* 'on the bed' cannot be interpreted as an adjunct operating exclusively over V_1 because the expression *na łóżku pójdzie* – with the noun *łóżko* 'bed' in the locative case – is ungrammatical.[15] To be grammatical, the locative must be interpreted as operating over the entire PÓJŚĆ gram, V_2 included.[16]

(8) a. Dlatego kupiłam kota. **Pójdzie**
therefore I.bought cat. He.will.walk
nasra do kuwety i jak nie
he.will.shit to litter.box and if not
posprzątam to będzie tak cały dzień cuchnąć
I.will.clean then it.will so whole day stink
'Therefore I bought a cat. It shits in the litter box, and if I don't clean it, it stinks the whole day'

b. Na łóżku **pójdzie** się **walnie**
on bed he.will.walk REFL he.will.hit
'He will throw himself on the bed'

Other types of adverbials and/or adjunct phrases exhibit similar behavior. For instance, (9.a) contains a forward causal connective (an adverb of result) *więc* 'then, so' that operates over the entire PÓJŚĆ gram rather than over V_1 or V_2 separately. In (9.b), the scope of the prepositional phrase *ze zdziwienia* 'due to astonishment' extends over the whole PÓJŚĆ gram. One should note that in this example, the event expressed by the PÓJŚĆ gram constitutes the second event in the sequence, being connected to the first event by the coordinator *i* 'and'. If V_2 communicated an independent event, separate from V_1, it would require to be headed by the coordinator *i*. That is, in Polish, the last coordinator in a series of

[15] The correct form should be *na łóżko* with the noun in accusative which implies the motion towards.

[16] As was the case with temporal expressions, if locative operators accompany V_1 and V_2 separately, the construction is reinterpreted as coordination, and not as the PÓJŚĆ gram.

coordinated phrases or clauses cannot usually be omitted, if the first coordinator is present (cf. example 4 discussed previously).[17]

(9) a. Więc **poszedł** **rzucił** granatem i
thus he.walked he.threw with.grenade and
mówi, że przegrałem
says that I.lost
'Thus, he threw a grenade and said (lit. says) that I'd lost'

b. Wreszcie zamknął ryj i ze
finally he.closed mouth and due.to
zdziwienia **poszedł** **usiadł** koło matki
astonishment he.walked he.sat.down close.to mother
'Finally, he shut his mouth and, astonished, sat down close to his mother'

Adverbs of manner such as *szybko* 'quickly' constitute clear examples of shared adverbials in the PÓJŚĆ gram. Irrespective of their position in the construction, these types of adverbs regularly operate over V_1 and V_2 simultaneously. That is, adverbs of manner may occupy any position in the PÓJŚĆ gram without a change in meaning given that their scope extends over the entire construction, not one of its components. For instance, examples (10.a), (10.b), and (10.c) convey practically the same true conditional information, namely that of adopting certain position quickly:

(10) a. **Poszedł** szybko tam **stanął**
he.walked quickly there he.stood

b. Szybko **poszedł** tam **stanął**
quickly he.walked there he.stood

c. **Poszedł** tam **stanał** szybko
he.walked there he.stood quickly
'He quickly positioned himself (over) there'[18]

Lastly, the mono-eventhood of the PÓJŚĆ gram is evident in negative examples. As will be discussed in detail further below, the negator *nie* 'not' is only used once per PÓJŚĆ gram, thus operating over V_1 and V_2 simultaneously (see examples 15.a-b). This behavior of the PÓJŚĆ gram contrasts with structures that typically express the idea of bi-eventhood (e.g. syndetic and asyndetic coordination, subordination, or even auxiliarization) where two negators may be used. On the other hand, it harmonizes with the behavior exhibited by the most prototypical

[17] Similarly, in example (4) introduced previously, the adverb *jedynie* 'only, exclusively' refers to the entire PÓJŚĆ gram and, thus, to both of its components.

[18] This translation applies to the three Polish examples, i.e. (10.a), (10.b), and (10.c).

SVC in Polish – the WZIĄĆ gram – which regularly employs only one negator (Andrason 2018).

The above discussion demonstrates that in various cases the mono-eventhood of the PÓJŚĆ gram is relatively evident. Nevertheless, the gram also exhibits properties indicating that its mono-eventhood is not absolute.

First, the PÓJŚĆ gram is not compatible with V_2 verbs that are semantically opposite to the lexical sense of V_1 (e.g. venitive verbs such as *przyjść* 'come walking' and *przyjechać* 'arrive') or that constitute close synonyms (e.g. *chodzić* 'go habitually, walk', *jechać* 'ride, go').

Second, the PÓJŚĆ gram is typically used with animate and human subjects. In contrast, non-animate subjects – especially those that normally do not perform the allative action of walking – are found rarely (see, however, examples 6.a-b introduced previously). Both types of constraints (i.e. on roots and subjects) indicate that V_1 preserves a part of its lexical semantics – the allative action of walking typical of animate beings. Therefore, it is plausible to assume that, at least in some instances, V_1 constitutes a micro-event partially independent from the event expressed by V_2.[19]

Indeed, third, native speakers insist that in several examples containing animate subjects, the presence of a semantic component involving motion encoded by V_1 may be "sensed". That is, V_1 arguably constitutes a type of a micro-event that precedes the principal event expressed by V_2. For instance, in example (11), the macro-event expressed by the PÓJŚĆ gram contains two consecutive micro-events: the first one involving motion and the second one related to changing of clothes. Inversely, the event of putting on new clothes might have been preceded by walking to a different place.

(11)	**Poszedł**	się	**przebrał**,	wciągnął	brzuch	
	he.walked	REFL	he.changed	he.pull.in	belly	
	i	zrobił	zdjęcie			
	and	he.made	picture			

'He (went and) changed [his clothes], pull in his belly, and took a picture'

Nevertheless, even in cases like that discussed in the previous paragraph, the micro-events expressed by V_1 and V_2 are relatively cohesive and tightly-knit. Crucially, from a semantic and syntactic perspective, V_2 is related more closely to V_1 than to any other verb and/or event included in the scene (e.g. pulling in the belly and taking a picture in example 11). This greater degree of semantic cohesion – intuitively perceived by native speakers – is overtly indicated by the following formal properties: (a) the absence of a pause separating V_1 and V_2 (see below in this section); (b) the intonation phrasing of the sentence in three parts, each expressing a different event of the scene: changing of clothes (*poszedł się*

[19] Inversely, the instances in which inanimate subjects are used demonstrate mono-eventhood explicitly.

przebrał), pulling in the belly (*wciągnął brzuch*), and taking a picture (*i zrobił zdjęcie*); and (c) the phonetic agglutination of the reflexive pronoun *się* to V_1, although it syntactically belongs to V_2. Overall, on the continuum of packaging of events in SVC, such cases of the PÓJŚĆ gram seem to occupy an intermediate status – they are less unitary than examples that do not involve motion (e.g. 2.a-c, 3, 4, and especially 5.a-b), but certainly more cohesive than genuine coordinated (syndetic or asyndetic) or other bi-clausal constructions.

As is evident from the examples provided thus far, the PÓJŚĆ gram does not exhibit any type of syntactic dependency markers, be they subordinators (e.g. *kiedy* 'when' or *gdzie* 'where'), complementizers (e.g. *że* 'that') or relativizers (*który* 'that, which, who'). If one of the components is embedded, the other must also be embedded (see example 12). Furthermore, V_2 is not a non-finite form (e.g. infinitive) or a nominal form (e.g. verbal noun or participle). Rather, as mentioned at the beginning of this section, it is invariably inflected and finite.

(12)	Nie	znam	faceta	co	się	**poszedł**	**powiesił**
	not	I.know	guy	that	REFL	he.walked	he.hanged
	'I don't know the guy that hanged himself'						

In Polish, there is a similar construction to the PÓJŚĆ gram in which V_2 appears in the infinitive, e.g. *poszedł się powiesić* 'he went to hang himself'. This construction has a purposive meaning evident in the English translation. In contrast, the nuance of aim or goal is absent in the PÓJŚĆ gram. Moreover, when the PÓJŚĆ gram is located in a past time frame, the event expressed by V_2 must have occurred. In the infinitival construction, the accomplishment of the event expressed by V_2 is unspecified. Furthermore, in examples of the PÓJŚĆ gram involving inanimate subjects (6.a-b), the finite form of V_2 cannot be replaced by an infinitive. That is, infinitival equivalents of this type of the PÓJŚĆ gram yield ungrammatical, nonsensical structures.

The PÓJŚĆ gram may be understood as a mono-clausal construction. First, as is obvious from the examples introduced thus far, V_2 is never a complement clause, nor is it necessary for V_1 and V_2 to be connected by an overt coordinator.[20] In fact, in various examples the presence of the coordinator *i* – the most typical coordinator found in Polish – is perceived as semantically odd. This is manifest in the unambiguous cases of mono-eventhood. Indeed, if the subject of the PÓJŚĆ gram is inanimate (e.g. 6.a-b), the use of the coordinator *i* is ungrammatical.

Moreover, the PÓJŚĆ gram cannot be understood as an archetypal case of asyndetic coordination, with which it exhibits formal similarity. Contrary to coordinated constructions, the PÓJŚĆ gram allows the extraction of an object of V_2 and its placement before V_1. Most often, the extracted object is the reflexive pronoun *się*, typically pronounced without final nasalization (see 13.a; see also 16.c). However, other types of pronouns may also be extracted, e.g. personal

[20] There are no consecutivizers or consecutive grams in Polish.

pronouns (13.b). Similarly, adverbial expressions and prepositional phrases (temporal, locative, manner or instrument) can be extracted and placed before V_1 even though they are (at least originally) governed by V_2 (see example 8.b discussed previously).[21]

(13) a. I on się **poszedł** **powiesił**
and he REFL he.walked he.hanged
'And he hanged himself'

b. Komputer mu się **poszedł** **zjebał**
computer him REFL it.walked it.got.broken
'His computer broke down (vulg.)'

In some cases, the PÓJŚĆ gram cannot be analyzed as a clear case of asyndetic coordination due to another property. In Polish, the omission of the last coordinator in a sequence of coordinated items is ungrammatical, or at least perceived as odd (**Tomek i Olek, Marek* 'Tomek, and Olek, Marek'). Rather, in such sequences, two situations are preferred: (a) it is only the last coordinand that is headed by a coordinator (*Tomek, Olek i Marek* 'Tomek, Olek and Marek') or (b) all the members are connected by coordinators (*Tomek i Olek, i Marek* 'Tomek, and Olek, and Marek'). The same applies to clauses, where the most typical structure is: *x, y* and *z*. If the PÓJŚĆ gram were a true case of asyndetic coordination, examples (14.a) and (14.b) would violate the above-mentioned principle:[22]

(14) a. Murzyn[23] ubrał garnitur […] i **poszedł**
black.guy put.on suit and he.walked
usiadł w ławce
he.sat in school.desk
'The black guy put on a/the suit and sat down at his (school) desk'

b. Potem się zmęczył i **poszedł** **usiadł**
then REFL he.got.tired and he.walked he.sat
na laweczce pod oknem
on bench under window
'Then, he got tired and sat down on the bench under the window'

[21] If these were coordinated clauses, the pronouns *się* and *mu* could not appear before the verb *pójść*.

[22] This phenomenon was mentioned previously during the discussion of mono-eventhood (see examples 4 and 9.b).

[23] The word *murzyn* is derogatory.

The PÓJŚĆ gram also differs from coordinated clauses in its intonation pattern. To be exact, the intonation typical of bi-clausal structures (including syndetic and asyndetic coordination), where two clauses are separated by a pause, is absent. The PÓJŚĆ gram rather exhibits intonation and countering characteristic of mono-clausal structures.[24] In fact, in the PÓJŚĆ gram, pronouns that appear between V_1 and V_2, and that originally belong(ed) to the scope of V_2 are phonologically agglutinated to V_1. That is, the example *poszedł się powiesił* 'he hanged himself' (literal gloss: he.walked himself he.hanged) is pronounced [pɔs̪ɛdɕɛ pɔvʲɛɕiw], i.e. with the reflexive pronoun *się* (from the verb *powiesić się* 'to hang oneself') agglutinated to V_1 *poszedł*.

Lastly, the PÓJŚĆ gram and coordinated clauses differ in their use of the negator *nie*. In cases of coordination, each clause hosts its own negator; moreover, each can exhibit a different polarity value. This contrasts with the behavior exhibited by the PÓJŚĆ gram. To begin with, the PÓJŚĆ gram always exhibits a single polarity value. Accordingly, its components cannot communicate opposite polarity values such that one would be negative while the other would be positive. Indeed, in all the examples introduced thus far, V_1 and V_2 are marked for the same polarity – most often affirmative. The use of the PÓJŚĆ gram with a negative value is much less common, although examples of this kind can be found (15.a-b). In such cases, the negator is expressed once per construction and operates over the two verbs simultaneously. This distinguishes the PÓJŚĆ gram from coordinated structures where, as explained above, the negator is expressed in each clause separately.

(15) a. Lecz Luke nie **poszedł** **usiadł** na
but Luke not he.walked he.sat.down on
przeciwko Miley
front.of Miley
'But Luke didn't sit down in front of Miley'

b. Nie no, nie **poszedł** **usiadł** na łóżku?
No well, not he.walked he.sat.down on bed
'No, he didn't sit down on the bed (did he?)'

The PÓJŚĆ gram typically exhibits a single TAM value. Even though this value is restricted to the perfective aspect, the gram may be used in all tenses and modal categories that tolerate perfectivity in Polish. This includes: perfective past (16.a), perfective future (16.b), perfective conditional (*tryb warunkowy*) – referring to the present (16.c) or the past (16.d), and used independently (16.c) or as part of conditional periods, e.g. in apodoses (16.d) – and perfective subjunctive (*tryb łączący*; 16.e).

[24] Compare Gębka-Wolak and Moroz (2017) who correctly notice the influence of pause on the interpretation of bi-verbal imperative constructions as either coordinated (with a "comma" pronunciation) or non-coordinated (with no "comma" pronunciation).

(16) a. Głośnik **poszedł** się **popsuł**
speaker it.walked REFL it.broke
'The speaker broke down'

b. Gada …, że **pójdzie** się **powiesi**
he.says that he.will.walk REFL he.will.hang
'He says […] that he will hang himself'

c. Bym się **poszedł** **zabił**
I.would REFL walked killed
'I would kill myself'

d. A gdybym cię nie zdradzał i
and if.I.would you not betrayed and
poszedł się **wyspowiadał** czy byś
walked REFL confessed whether you.would
się ucieszyła
REFL rejoiced
'If I hadn't betrayed you and confessed, would you have been happy?'

e. Żeby on **poszedł** się **upił**
that.he.may he he.walked REFL he.got.drunk
'May he get drunk'

The PÓJŚĆ gram may also be used in the imperative (17.a) including the forms directed to the 1st person (a type of hortative; 17.b) and those directed to the 3rd person (a type of jussive typically used with particles *niech(aj)*; 17.c). As in the other cases, V_2 tends to appear in its perfective form given the perfective sense of the lexical verb *pójść*.

(17) a. **Pójdź** **zrób** jakieś studia
walk do some studies
'Study something!'

b. **Pójdźmy** **napiszmy** o tym
let's.walk let's.write about this
'Let's write about this'

c. Niech się **pójdzie** **zapyta**
PART REFL he.will.walk he.will.ask
'Let him ask! / May he ask!'

Overall, the gram is not restricted to a particular TAM category but appears in various TAM categories that are available in the Polish language. As has been mentioned above, the only constraint on verbal categories acceptable in the PÓJŚĆ gram is their perfectivity, given the perfective aspect encoded lexically by the verb *pójść*. Crucially, as illustrated by examples (16.a-e) and (17.a-c), the

components of the PÓJŚĆ gram cannot be marked by different, incompatible, TAM categories. The TAM categories of V_1 and V_2 must always coincide.[25]

The two verbs that form the PÓJŚĆ gram invariably share their subject argument. That is, V_1 and V_2 cannot be governed by different subject referents. This applies to intransitive (18.a), transitive (18.b) and reflexive (18.c) constructions.

(18) a. Jake nie **poszedł** **usiadł** na krześle
Jake not he.walked he.sat.down on chair
'Jake didn't sit (down) on the chair'

b. To nie znaczy że ktoś **pojdzie**
this not means that someone will.walk
go **kupi**
it will.buy
'This doesn't mean that someone will buy it'

c. On **pojdzie** się **wysika**
he will.walk REFL will.pee
'He will pee'

In TAM categories other than the imperative where the 1st and the 2nd persons are highly frequent, the most common cases of the PÓJŚĆ gram involve the 3rd person masculine and feminine, singular and plural. However, the use of the 1st and the 2nd persons in the past tense and the future tense is also attested, especially if the person marker is detached from the verb as in (19.a).[26] In fact, even if the person is encoded on the verb itself, the PÓJŚĆ gram can be inflected in persons other than the 3rd person (19.b).

(19) a. Żem se **poszedł** to **wypił**
that.I REFL.DAT walked it drank
'I drank it'

b. **Poszłem** se **kupiłem** piwo
I.walked REFL.DAT I.bought beer
'I bought a beer (for myself)'

The total valency pattern of the PÓJŚĆ gram depends on the argument structure of V_2. If V_2 is intransitive the construction is intransitive (see 18.a introduced previously); if V_2 is transitive, the construction is transitive (18.b); and if V_2 is reflexive, the construction is reflexive as well (18.c).

Since core arguments (e.g. direct objects, indirect objects, or reflexive objects) and peripheral arguments belong to the entire construction, they can occur in the

[25] This further differentiates the PÓJŚĆ gram from coordination and bi-causal structures, whose components may exhibit different TAM categories.

[26] See also examples (15.c-d).

initial position before V_1 even though it is V_2 that determines the valency of the gram (see example 13.a-b). Overall, the components of the PÓJŚĆ gram never govern separate arguments nor do they allow for duplicate roles.

Although, as already mentioned, V_1 is intransitive, it can be used with an anaphoric "ethical dative" pronominal object *pójść sobie/se* 'walk away'. Many verbs used as V_2 can also occur with such anaphoric, ethical dative objects, e.g. *kupić* 'buy', *wziąć* 'take', *wypić* 'drink', *zjeść* 'eat', or *pogadać* 'chat'. As both V_1 and V_2 may contain these types of objects, in cases where the ethical dative is used in the PÓJŚĆ gram, it necessarily refers to the two verbs simultaneously. This means, in turn, that both verbs share their ethical dative object. As the dative object is a property of the entire construction rather than of one verb, it can appear in the initial position, heading V_1.[27]

(20)	Mój	kot	sobie	**poszedł**	**usiadł**
	my	cat	REFL.DAT	it.walked	it.sat.down
	tyłem		do mnie		
	backwards		to me		
	'My cat sat down with his back against me'				

As far as the last criterion is concerned, the components of the PÓJŚĆ gram – i.e. V_1 and V_2 – can be used on their own, thus exhibiting their respective, individual lexical meanings. In such cases, V_1 conveys the allative sense of walking (21.a) or its various metaphorical meaning extensions (21.b).[28] It should be noted that native speakers instinctively relate V_1 found in the PÓJŚĆ gram with the lexical verb *pójść*, even though the two verbs exhibit various structural and semantic differences.

(21)	a.	Poszedł	na	stację	
		he.walked	to	station	
		'He walked to the station'			
	b.	Samochód	poszedł	do	naprawy
		car	it.walked	to	repairs
		'The car was taken for repairs'			

To conclude the review of the properties of the PÓJŚĆ gram, a set of further characteristics will be analyzed. Although these traits are not definitional for the SVC prototype, they are commonly associated with SVCs or their subtypes. These properties involve the type of TAM and person marking, the parameter of

[27] Such anaphoric, ethical-dative pronominal objects may occupy various positions in the sentence without causing any substantial change in that sentence's true conditional meaning. For instance, the three following variants – *sobie/se poszedł usiadł* (as in example 20); *poszedł sobie/se usiadł*; or *poszedł usiadł sobie/se* – are practically synonymous.

[28] Some metaphorical uses tolerate inanimate subjects (see example 21.b).

contiguity and word order, the grammaticalization of V_1 in asymmetrical constructions, the grammaticalization of the entire SVC, especially its spread to certain genres and registers, and its compatibility with other SVCs available in the language.

The PÓJŚĆ gram usually exhibits a concordant type of marking. That is, both V_1 and V_2 are marked for TAM, person, number, and gender (see examples 18.a-b, 19.b and 20). Concordant marking is typical of less cohesive and less tightly-knit SVCs (Aikhenvald 2006).

As far as contiguity is concerned, in most cases of the PÓJŚĆ gram, V_1 and V_2 are immediately adjacent. The typical exceptions involve the use of a reflexive pronoun *się*, an anaphoric (reflexive / ethical) dative *se* or *sobie*, and atonic personal pronouns e.g. *go* 'him [ACC]' and *mu* 'him [DAT]'.

The order of the components of the PÓJŚĆ gram is invariant – the verb *pójść* always appears in the first position, i.e. as V_1. This order reflects the original bi-clausal source that, in an iconic manner, indicates the sequence of two verbs – the first verb refers to walking somewhere, while the second verb indicates the action that was (or will be) performed once the destination is reached. Given that Polish is characterized by free word order (although pragmatically driven) and tolerates movement of the constituents to almost all positions, this invariant structure of the PÓJŚĆ gram suggests its conceptual and grammatical proximity to asyndetic coordination. That is, the constant arrangement of the two verbs in the PÓJŚĆ gram reflects the original iconic sequence in which the word order of the two clauses could not be inverted given the consecutiveness of the actions they expressed.

As one element (i.e. V_1 *pójść*) of the PÓJŚĆ gram is fixed while the other (i.e. V_2) is a fluctuating variable, the construction can be understood as asymmetrical. Accordingly, the verb *pójść* is a minor verb, while any V_2 is a major verb. As is typical of asymmetrical constructions, V_1 undergoes the process of grammaticalization into a TAM marker. In the most exemplary cases, *pójść* seems to express a modal nuance of urgency and insistence (especially in the imperative; 22.a) or emphasizes the telicity, completeness, and perfectivity of the event expressed by V_2 (especially in the past tense; 22.b). With inanimate subjects, the use of the verb *pójść* in front of V_2 may produce the impression that the action was performed willingly, on purpose, or against the interest of the speaker or the addressee (i.e. to upset or irritate him or her; 22.c). However, the grammaticalization of V_1 as a TAM marker is far from being accomplished, and the verb sometimes preserves its original allative nuance (see the possible interpretation of V_1 and an allative micro-event discussed above). The prevalence of animate and human subjects, as well as certain restrictions on the types of verbs that can be used as V_2 also suggest the lesser extent of the grammaticalization of V_1 *pójść* and of the entire PÓJŚĆ gram.

(22) a. **Pójdź** wreszcie się **umyj**!
walk finally REFL wash
'Wash yourself finally (i.e. do it right now)!'

b. Na koniec **poszedł** się **zabił**
in end he.walked REFL he.killed
'In the end, he killed himself (i.e. it happed definitely)'

c. Układ scalony **poszedł** się **zepsuł**
circuit integrated it.walked REFL broke
'The integrated circuit broke down (i.e. as if on purpose)'

The PÓJŚĆ gram is an informal, colloquial phenomenon. Except for its use in the imperative, according to the norm, it constitutes a stylistic and grammatical error. Even in the informal, colloquial language, its use in forms other than the imperative is regarded as ungrammatical by many speakers.

Most examples in my database are extracted from written registers that are informal (e.g. blogs, comments on forums, chats, social networks) and oral registers that are colloquial. Apart from the imperative uses, the PÓJŚĆ gram is never used in formal registers (both written and oral) and literature, unless literary dialogues aim to imitate the colloquial language. As already mentioned, the imperative sub-type of the PÓJŚĆ gram differs from all the other forms in this respect. It is grammatical and can be found in formal or literary texts, as demonstrated by the following example extracted from a translation of Balzac's *Ojciec Goriot* (*Père Goriot* 'Father Goriot' translated by Amelia Bortnowska):

(23) Słuchaj […] **pójdź** **przynieś** ode mnie butelkę
listen walk bring from me bottle
Bordeaux
Bordeaux
'Listen, fetch a bottle of Bordeaux from me'

Even though it contravenes the norms of the standard language, the PÓJŚĆ gram often appears in all its tenses and sub-types in situations that are highly expressive and/or marked for emotions. These emotions are evident through a common use of vulgarisms (e.g. *jebać* 'fuck'; a similar fact was observed by Góralczyk 2010 with respect to the canonical serial verb construction in Polish, the WZIĄĆ gram; see also Gębka-Wolak and Moroz 2017) and the presence of major verbs V_2 that express pejorative actions (e.g. urinating, defecating, throwing up) or extreme events (e.g. killing, committing suicide, breaking, beating, hitting, raping, etc.). However, activities involving positive feelings and "emotionally neutral" actions can also be expressed by the PÓJŚĆ gram (see examples 11 and 14.b).

Lastly, it should be noted that the PÓJŚĆ gram may co-occur with a canonical SVC in Polish, the WZIĄĆ gram (Andrason 2018). In (24a.) the PÓJŚĆ gram is a component that occupies the slot of V_2 in the WZIĄĆ gram. In (24.b), it is the WZIĄĆ gram that occupies the V_2 slot in the PÓJŚĆ gram.

(24) a. [Wziął] [**poszedł** się **zabił]**
he.took he.walked REFL he.killed
'He killed himself'

b. [**Poszedł]** [**wziął** się **zabił]**
he.walked he.took REFL he.killed
'He killed himself'

4. Discussion

The evidence provided in the previous section demonstrates that, in many aspects, the PÓJŚĆ gram complies – or may comply – with the prototype of SVC. The PÓJŚĆ gram is a bi-verbal construction whose components are finite; neither of these verbal components is syntactically dependent on the other; the formative verbs are not connected by a coordinator but rather form a single clause; the PÓJŚĆ gram exhibits a mono-clausal intonation with no pause separating V_1 and V_2; it also exhibits a single TAM value and a single polarity value; the components of the PÓJŚĆ gram are not marked by incompatible TAM categories; the gram is not restricted to a particular temporal or modal category, but appears in various TAM categories available in Polish; V_1 and V_2 share their subject argument and duplicate roles are disallowed; lastly, both verbs may occur on their own, thus exhibiting their respective lexical meanings.

However, the response of the PÓJŚĆ gram to three of the above-mentioned properties (i.e. mono-clausality, compatibility with TAM, and use in negative contexts) is less ideally matched with the prototype. First, even though it is found in various TAM categories, the PÓJŚĆ gram is limited to those that are perfective. Second, even though the PÓJŚĆ gram can be found in negative contexts, such uses are highly uncommon, the immense majority of cases involve a positive polarity value. Third, although the PÓJŚĆ gram does not contain an overt coordinator and, often, its interpretation in terms of asyndetic coordination is impossible, in some examples, the gram does exhibit similarity to asyndetic coordination. In such cases, the two structures are distinguishable only by their intonational patterns.[29]

The analysis of the remaining property – i.e. mono-eventhood – is even more complex. The property of mono-eventhood attests to two possible interpretations. In various cases, the PÓJŚĆ gram constitutes one assertion and communicates a single event. This situation is typically found if the subject is inanimate; if negation is used; if the gram exhibits shared temporal, locative or other adverbial operators; and if the allative sense of V_1 is either implausible or impossible. However, in several instances, the PÓJŚĆ gram may be interpreted as a macro-

[29] That is, the intonation of the PÓJŚĆ gram tends to be mono-clausal, while that of asyndetic coordination is typical of bi-clausal structures, i.e. with a clear pause and contouring between the coordinated clauses.

event composed of two micro-events. In such cases, V_1 expresses an allative event while V_2 specifies the type of the main action. The interpretation of V_1 as an allative micro-event appears if an animate/human subject is used and, at the same time, the context is sufficiently unspecified to allow for that subject to be associated with motion. Nevertheless, even in the cases where allative, micro-event interpretation is possible, the overall eventhood of the PÓJŚĆ gram is more unitary than the bi-eventhood of coordination. That is, V_1 and V_2 form a more cohesive event between themselves than with any other event(s) in the sentence.

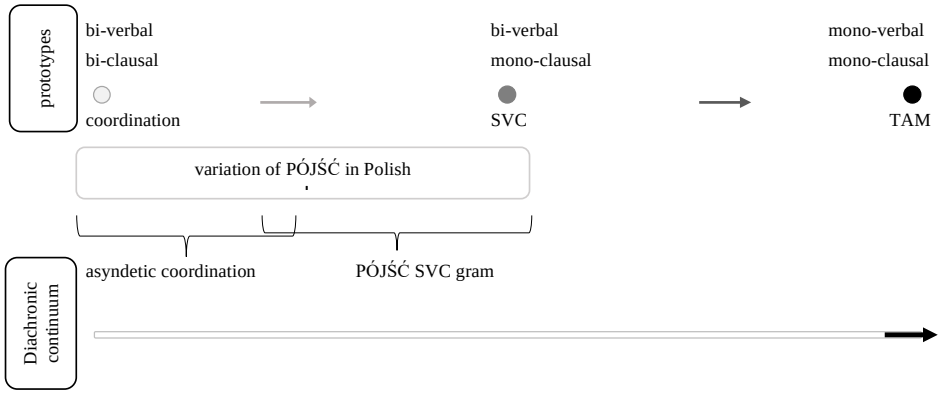
Overall, the results of the research indicate that the PÓJŚĆ gram synchronically attests to more than one developmental stage on the continuum from bi-clausality/bi-verbiness to mono-clausality/mono-verbiness. Some uses of the gram correspond to a stage where asyndetic coordination transmutes into a slightly more cohesive structure on its path to the SVC prototype. Such uses of the PÓJŚĆ can be viewed as non-canonical instantiations of a SVC category. In some other cases, the gram exhibits a profile that approximates the SVC prototype to a great extent. These uses of the gram can be viewed as canonical instantiations of the SVC category. All the other uses of the PÓJŚĆ gram are confined between these two "extremes". Therefore, rather than being mapped as a point on the continuum of clausality/verbiness, the PÓJŚĆ gram spans a fragment of that developmental path (see Figure 2 below).[30]

Moreover, even though the PÓJŚĆ gram can be identified as *a separate construction*, which is confined within the above-mentioned boundaries, it is clearly related to its constructional "mother" – the asyndetic coordination. In fact, in cases where the PÓJŚĆ gram acts as a non-canonical instantiation of SVC, it overlaps with less canonical instantiations of asyndetic coordination, in which the cohesion of the coordinands increases and properties typically associated with coordination gradually cede place to those characteristic of SVC. In such uses, it may be difficult to clearly distinguish the PÓJŚĆ gram from asyndetic coordination. Rather, two interpretations are possible: as a less-canonical SVC or as a less canonical asyndetic coordination (see again Figure 2 where this overlap is represented graphically). Crucially, even though we divide the path into zones associated with two different construction types (i.e. asyndetic coordination and the PÓJŚĆ gram) and see the two constructions as independent "entities", what realistically exists in the language is the variation of uses of the verb *pójść* in the

[30] As is common in cognitive studies where grammaticalization-based maps are used, the synchronic potential of a form can be mapped onto a fragment of a diachronic template without making use of direct historical data. That is, the soundness of a given evolutionary scenario (a grammaticalization path inferred from typological studies) and the synchronic evidence (variation of uses and functions) warrant the structure of the map proposed for a given construction, in this case, the PÓJŚĆ gram. Diachronic data should, nevertheless, be consistent with the proposed mapping (Haspelmath 2003; Janda 2015; Andrason 2016; Andrason and Locatell 2016; Andrason and Dlali 2017).

company of another verb.[31] Such uses range from canonical asyndetic coordination to a canonical SVC.

Figure 2. A dynamic model of the PÓJŚĆ gram



The semi-advancement of the PÓJŚĆ gram along the path towards SVC and, subsequently, mono-verbiness is, to a degree, correlated with various grammaticalization phenomena.

Most properties suggest a limited degree of the grammaticalization of the PÓJŚĆ gram. First, even though attested to, the use of the PÓJŚĆ gram in categories other than the imperative is controversial. From the perspective of the linguistic norm, such examples constitute grammatical errors and are *de facto* viewed by many speakers as ungrammatical. This indicates that the acceptability of the gram has not been stabilized. Second, the use of the PÓJŚĆ gram is also limited to determined registers. The majority of the attested examples of the PÓJŚĆ gram appears in colloquial and informal situations, typical of early stages of grammatical lives of constructions. The only forms found in literary genres are imperatives. Third, the PÓJŚĆ gram is particularly common in expressive contexts related to extreme events and subjective feelings. Expressiveness and subjectivity are characteristic of incipient phases of grammaticalization rather than of its end point, where "objectivity" is more typical. Fourth, the concordant TAM and person marking suggest a less cohesive – and thus less grammaticalized – gram structure. Fifth, the invariant order of the verbal components of the PÓJŚĆ gram directly reflects the iconic bi-clausal sequence found in asyndetic coordination from which it (i.e. the PÓJŚĆ gram) has emerged. If the gram was more grammaticalized it would arguably tolerate the placement of the minor verb *pójść* after the major verb as is possible with all auxiliary, TAM and SVC

[31] It is us – observers – who fraction this variation into two areas or two "independent" categories: coordination and the PÓJŚĆ gram.

constructions in Polish. Sixth, the constraints on the types of subjects and the types of verbs acceptable in the PÓJŚĆ gram also echo the properties of the original asyndetic coordination, and in particular the properties exhibited by its first member – the verb *pójść*. In more grammaticalized structures (e.g. a canonical SVC such as the WZIĄĆ gram) those constraints are absent. Seventh, V_1 exhibits a low degree of grammaticalization as a TAM marker. Even though it can communicate urgency or telicity/perfectivity, the verb often preserves some type of an allative nuance.

However, the PÓJŚĆ gram also exhibits certain properties that suggest a moderate increase in its grammaticalization as a holistic construction. Even though sporadically, inanimate subjects are admissible. The negation appears once per construction. The PÓJŚĆ gram occupies a single slot in the most canonical SVC in Polish – the WZIĄĆ construction. And, if inflected in the imperative, the PÓJŚĆ gram is accepted by all speakers and viewed by the prescriptive grammar as fully grammatical.[32]

The study generally corroborates the dynamic trans-categorial and prototype-driven model of SVCs formulated by Aikhenvald (2006, 2011). The analysis demonstrates that, by exhibiting, in some cases, properties associated with asyndetic coordination, the PÓJŚĆ gram most likely originates from a coordinated structure. By increasing its internal cohesion, in particular the degree of mono-clausality and mono-predicativity, this original structure has advanced along the cline of grammaticalization, gradually approximating the prototype of SVC more closely.

However, the present research also advances Aikhenvald's (2006, 2011) model. First, the different uses and properties exhibited by the PÓJŚĆ gram in modern Polish correspond to different points of the cline of SVC introduced in Section 2. Therefore, when analyzed holistically (i.e. as the sum of its uses), the PÓJŚĆ gram is represented not as a single point on the evolutionary continuum, but rather as a fragment of it. Second – and as a consequence of the previous remark – the actual progression along the cline does not consists of moving from one point to another point. It rather consists of modifying the set of points that cover a fragment of that continuum, such that the set appears as gradually travelling in the direction predicted by the grammaticalization path, i.e. from bi-clausality/bi-verbiness to mono-clausality/mono-verbiness. That is, the PÓJŚĆ gram – and arguably other SVCs – do not "jump" from one stage to another, but rather accumulate (and/or lose) properties associated with different parts of the continuum and, thus, with different constructional categories and their prototypes. This accumulation and loss give, in turn, the impression of a unidirectional movement along the path.

[32] Given the more advanced status of the PÓJŚĆ gram in the imperative, it is likely that the evolution of the asyndetic coordination with *pójść* into more cohesive structures and its grammaticalization have started in that context.

5. Conclusion

The present paper has demonstrated that the PÓJŚĆ gram often complies with the features postulated for the prototype of a SVC construction. However, the gram also exhibits properties that link it to multi-clausal, less cohesive structures, specifically asyndetic coordination. Consequently, in its totality, the PÓJŚĆ gram is defined as a set of stages on the path linking bi-clausality/bi-verbiness and mono-clausal/mono-verbiness. Specifically, it spans the section of that developmental path that ranges from a non-canonical, less cohesive instantiation of SVC to its canonical, more cohesive instantiation. The former is less advanced on the path, while the latter occupies a more advanced position on it. In its uses as a non-canonical SVC, the PÓJŚĆ gram categorially overlaps with a more cohesive variant of asyndetic coordination. This overlap is related to the fact that the PÓJŚĆ gram emerged from asyndetic coordination which is still accessible to the verb *pójść* in Polish. In that manner, various uses of the verb *pójść* attest to the entire first part of the clausality/verbiness continuum, i.e. from coordination to SVC. While observers partition this variation into two, partially overlapping, entities – i.e. asyndetic coordination and the PÓJŚĆ SVC – it is only the variation that realistically exists in the language.

Overall, the results of this paper both corroborate and expand the model of SVCs proposed by Aikhenvald (2006, 2011). That is, at least some SVCs derive from asyndetic coordination and, by modifying their span on the grammaticalization cline linking bi-clausality/bi-verbiness and mono-clausality/mono-verbiness, develop gradually towards the SVC prototype. Overall, gradience in grammar has both a synchronic and diachronic dimension.

Abbreviations

PART – optative particle *niech*; REFL – reflexive pronoun *się*; REFL.DAT – reflexive dative pronoun (anaphoric or “ethical dative”).

References

Aikhenvald, Alexandra. 2006. Serial verb constructions in typological perspective. In Alexandra Aikhenvald and Robert M. W. Dixon (eds.), *Serial Verb Constructions: A Crosslinguistic Typology*, 1-68. Oxford: Oxford University Press.

Aikhenvald, Alexandra. 2011. Multi-verb Constructions: Setting the Scene. In Alexandra Aikhenvald and Pieter Muysken (eds.), *Multi-verb Constructions: A View from the Americas*, 1-26. Leiden: Brill.

Aikhenvald, Alexandra and Robert M. W. Dixon. (eds.) 2006. *Serial Verb Constructions: A Cross-linguistic Typology*. Oxford: Oxford University Press.

Andrason, Alexander. 2016. *A Complex System of Complex Predicates: Tense, Taxis, Aspect and Mood in Basse Mandinka from a Grammaticalization and Cognitive Perspective*. PhD. Thesis. Stellenbosch: Stellenbosch University.

Andrason, Alexander. 2018. The WZIĄĆ gram in Polish – a serial verb construction, or not? *STUF – Language Typology and Universals* 71. 1-53.

Andrason, Alexander. Forthcoming. Categorial gradience and fuzziness – The QWM (serial verb construction) in Biblical Hebrew. In Gideon R. Kotzé, Christian S. Locatell and Jack Messarra (eds.), *The Ancient Text and Modern Reader*. Leiden: Brill.

Andrason, Alexander and Locatell, Christian. 2016. The perfect wave. *Biblical and Ancient Greek Linguistics* 5. 7-121.

Andrason, Alexander and Mawande Dlali. 2018. The EK construction in Xhosa: A cognitive account. *Jezikoslovlje* 18 (3). 383-421.

Balzac, Honoré. 2015. *Ojciec Goriot*. Translated by Amelia Bortnowska. Białobrzegi: Masterlab.

Bisang, Walter. 2009. Serial verb constructions. *Language and Linguistics Compass* 3 (3). 792-814.

Boas, Hand. 2013. Cognitive Construction Grammar. In Thomas Hoffmann and Graeme Trousdale (eds.), *The Oxford Handbook of Construction Grammar*, 233-254. Oxford: Oxford University Press.

Bybee, Joan. 2010. *Language, Usage and Cognition*. Cambridge: Cambridge University Press.

Bybee, Joan. 2013. Usage-based theory and exemplar representations of constructions. In Thomas Hoffmann and Graeme Trousdale (eds.), *The Oxford Handbook of Construction Grammar*, 49-69. Oxford: Oxford University Press.

Croft, William. 2001. *Radical Construction Grammar*. Oxford: Oxford University Press.

Croft, William. 2003. *Typology and Universals*. Cambridge: Cambridge University Press.

Croft, William. 2013. Radical Construction Grammar. In Thomas Hoffmann and Graeme Trousdale (eds.), *The Oxford Handbook of Construction Grammar*, 211-232. Oxford: Oxford University Press.

Dixon, Robert M. W. 2006. Serial verb constructions: Conspectus and coda. In Alexandra Aikhenvald and Robert M. W. Dixon (eds.), *Serial Verb Constructions: A Crosslinguistic Typology*, 338-350. Oxford: Oxford University Press.

Fried, Mirjam and Jan-Ola Östman. 2004. Construction Grammar: A Thumbnail Sketch. In Mirjam Fried and Jan-Ola Östman (eds.), *Construction Grammar in a Cross-Language Perspective*, 11-86. Amsterdam: John Benjamins.

Gębka-Wolak, Małgorzata. 2012; *Weź się zastanów!* Problem status gramatycznego przyimperatywnego *weź*. *Poradnik Językowy* 4. 49-63.

Gębka-Wolak, Małgorzata and Andrzej Moroz. 2017. *Idź zadzwoń, chodź zobacz* – dwurozkaźnikowe struktury we współczesnej polszczyźnie potocznej. Talk at the 5th Conference *Kultura Komunikacji Językowej*. 9 May 2017.

Goldberg, Adele. 2003. Constructions: a new theoretical approach to language. *Trends in Cognitive Science* 7(5). 219-224.

Goldberg, Adele. 2006. *Constructions at Work: The Nature of Generalization in Language*. Oxford: Oxford University Press.

Goldberg, Adele. 2013. Constructionist approaches. In Thomas Hoffmann and Graeme Trousdale (eds.), *The Oxford Handbook of Construction Grammar*, 15-31. Oxford: Oxford University Press.

Góralczyk, Iwona. 2010. "Weź, pokochaj smoka." The *wziąć* construction in Polish: A Construction Grammar analysis. *Prace Językoznawcze* 12. 89-104.

Haspelmath, Martin. 2003. The geometry of grammatical meaning semantic maps and cross-linguistic comparison. In Michael Tomasello (ed.), *The New Psychology of Language*, 211-242. Mahwah: Lawrence Erlbaum Associates.

Haspelmath, Martin. 2016. The serial verb construction: Comparative concept and cross-linguistic generalizations. *Language and Linguistics* 17 (3). 291-319.

Hoffmann, Thomas and Graeme Trousdale. 2013. Construction Grammar: Introduction. In Thomas Hoffmann and Graeme Trousdale (eds.), *The Oxford Handbook of Construction Grammar*, 1-12. Oxford: Oxford University Press.

Hopper, Paul and Elizabeth C. Traugott. 2003. *Grammaticalization*. Cambridge: Cambridge University Press.

Jackendoff, Ray. 2013. Constructions in the Parallel Architecture. In Thomas Hoffmann and Graeme Trousdale (eds.), *The Oxford Handbook of Construction Grammar*, 70-92. Oxford: Oxford University Press.

Janda, Laura. 2015. Cognitive linguistics in the Year 2015. *Cognitive Semantics* 1. 131-154.

Joseph, Brian D. and Arnold M. Zwicky. (eds.) 1990. *When Verbs Collide: Papers from the (1990) Ohio State Mini-Conference on Serial verb constructions*. *Working Papers in Linguistics* 39. The Ohio State University.

Lefebvre, Claire. (ed.) 1991. *Serial Verb Constructions: Grammatical, Comparative and Cognitive Approaches*. Amsterdam: John Benjamins.

Narrog, Heiko and Johan van der Auwera. 2011. Grammaticalization and semantic maps. In Heiko Narrog and Bernd Heine (eds.), *The Oxford Handbook of Grammaticalization*, 318-327. Oxford: Oxford University Press.

Östman, Jan-Ola and Graeme Trousdale. 2013. Dialects, discourse, and Construction Grammar. In Thomas Hoffmann and Graeme Trousdale (eds.), *The Oxford Handbook of Construction Grammar*, 476-490. Oxford: Oxford University Press.

Rosch, Eleanor. 1973. Natural categories. *Cognitive Psychology* 4. 328-350.

Rosch, Eleanor. 1975. Cognitive representations of semantic categories. *Journal of Experimental Psychology: General* 104. 192-233.

Rosch, Eleanor. 1978. Principles of categorization. In Eleanor Rosch and Barbara B. Lloyd (eds.), *Cognition and Categorization*, 27-48. Hillsdale: Lawrence Erlbaum.

Rosch, Eleanor and Carolyn B. Mervis. 1975. Family resemblances: Studies in the internal structure of categories. *Cognitive Psychology* 7. 573-605.

Rosen, Carol. 1997. Auxiliation and serialisation: on discerning the difference. In Alex Alsina, Joan Bresnan, and Peter Sells (eds.), *Complex Predicates*, 175-202. Stanford: CSLI.

Schiller, Eric. 1990. The typology of serial verb constructions. *Chicago Linguistic Society* 26. 393-406.

Schönefeld, Doris. 2006. Constructions. *Constructions* 1. 1-39.

Taylor, John R. 2003. *Linguistic Categorization*. Oxford: Oxford University Press.

Wittgenstein, Ludwig. 1953 [2001]. *Philosophical Investigations*. London: Blackwell Publishing.

Zwicky, Arnold M. 1990. What are we talking about when we talk about serial verb constructions? In Joseph, Brian D. and Arnold M. Zwicky. (eds.), *When Verbs Collide: Papers from the (1990) Ohio State Mini-Conference on Serial verb constructions*, 1-13. The Ohio State University.

COMPARATIVE GENRE ANALYSIS OF RESEARCH ARTICLE ABSTRACTS IN MORE AND LESS PRESTIGIOUS JOURNALS: LINGUISTICS JOURNALS IN FOCUS

DINA ABDEL SALAM EL-DAKHS
Prince Sultan University, Saudi Arabia
ddakhs@psu.edu.sa

Abstract
The current study compares the rhetorical structure and metadiscourse of research article abstracts in more and less prestigious journals in Linguistics. To this end, 200 abstracts from peer-reviewed Linguistics journals that are indexed in the Web of Science and Scopus were compared with 200 abstracts extracted from peer-reviewed Linguistics journals that are not indexed in either of these two highly ranked databases. Using Hyland's (2000) model of move analysis and Hyland's (2005) taxonomy of metadiscourse, the study reveals that abstracts in less prestigious journals typically include longer moves for introduction, purpose and method while abstracts in more prestigious journals include significantly lengthier findings. As for metadiscourse, abstracts in less prestigious journals employ significantly more transitions, frame markers and evidentials whereas the abstracts in more prestigious journals exhibit a higher use of code glosses, hedges, boosters and self-mentions. The results are interpreted with reference to the types of journals, and pedagogical implications and new research directions are proposed.

Keywords: genre analysis, moves, metadiscourse, research article abstract, rhetorical structure

1. Introduction

Researchers worldwide are increasingly required to publish at highly ranked journals with reputable indexes (e.g., Web of Science and Scopus) as reflected in diverse university-level practices including the promotion criteria of faculty members, recognition of research excellence, the assignment of research grants/funding (e.g., Ain Shams University in Egypt; King Saud University in Saudi Arabia; Universiti Tecnologi Malaysia in Malaysia) and world and regional university rankings (e.g., Times Higher Education World University Ranking, QS World University Ranking and Shanghai World University Ranking). It is generally assumed that research articles in top-tier journals exhibit more scientific value and novelty, but what about the writing style? Are there significant differences between the writing style of research articles at top-tier journals versus other peer-reviewed journals that are not included in reputable databases? The present paper tries to address this question through analyzing the rhetorical structure and metadiscourse of research article (RA) abstracts of more and less

prestigious journals in the field of Linguistics. The more prestigious journals in this article are journals that are indexed in the Web of Science and Scopus while less prestigious journals are not included in either of the two databases.

The focus on RA abstracts in the current paper reflects the significant fact that "the abstract is generally the readers' first encounter with a text, and is often the point at which they decide whether to continue and give the accompanying article further attention or to ignore it," (Hyland 2002: 63). In fact, it is generally believed that many articles do not receive the attention they rightly deserve due to poorly written abstracts (e.g., Hartley and Betts 2009; Piqué-Noguera 2012) and that novice writers need to acquire the skills of writing appropriate abstracts to their disciplines to be accepted and recognized by their discourse community (Pho 2008). Besides, RA abstracts, irrespective of their subject discipline, reflect "a well-defined and mutually understood communicative purpose," (Bhatia 1993: 77) and thus represent an independent genre worthy of analysis. This is clearly evident in the varied existing models for RA abstract analysis (e.g., Bhatia 1993; Hyland 2000; Santos 1996) and numerous relevant studies (see the literature review section).

Genre analysis, defined as "the study of situated linguistic behavior in institutionalized academic or professional settings," (Bhatia 1997: 181) is a significant approach to text level analysis. The analysis of different genre (= "a type of text or discourse designed to achieve a set of communicative purposes," Swales and Feak 2009: 1) has been particularly popular in Applied Linguistics due to its rich pedagogic implications for English for Academic Purposes (EAP) and English for Specific Purposes (ESP) classrooms (e.g., Brett 1994). The examination of the distinctive patterns and features of each genre has proved extremely useful to prepare language learners to integrate within their target discourse communities. Learning the particular rhetorical structures and metadiscourse of RA abstracts, for example, enables novice researchers to conform to the conventions of academic writing and thus be more easily accommodated by the scientific community.

The rhetorical structure of a genre is often analyzed using its constituent "moves". A popular definition for a "move" is "a discoursal or rhetorical unit that performs a communicative function in a written or spoken discourse," (Swales 2004: 228-229). While having its own communicative function, each move contributes to the overall purpose of the genre and can be realized by a number of smaller constituents, known as steps. Moves vary in their frequency and combinatory patterns, and may be optional or obligatory. Table (1) presents three popular models for move analysis of RA abstracts. The first model (Bhatia 1993) consists of 4 basic moves highlighting the action the author takes, the way the action is achieved, the findings and conclusions. The model is referred to as IMRD (=Introduction, Method, Results and Discussion). Another model is Santos's (1996) who presented a five-move framework for the analysis of abstracts. The five moves include (1) situating the research, (2) presenting the research, (3) describing the methodology, (4) summarizing the findings and (5) discussing the

findings. A similar model is Hyland's (2000) who established a unique place for the "purpose" of the study, and, thus, specified five moves for the RA abstract; namely, introduction, purpose, method, product and conclusion. Please, note that the "product" move is referred to as "findings" in the remainder of the article to clarify its function.

Table 1. Move models of RA abstracts

Bhatia (1993)	**Santos (1996)**	**Hyland (2000)**
Move 1: Introducing the purpose	Move 1: Situating the research	Move 1: Introduction
Move 2: Describing methodology	Move 2: Presenting the research	Move 2: Purpose
Move 3: Summarizing the results	Move 3: Describing methodology	Move 3: Method
Move 4: Presenting the conclusion	Move 4: Summarizing the findings	Move 4: Product
	Move 5: Discussing the findings	Move 5: Conclusion

In addition to the rhetorical structure, genre analysis also examines the linguistic features specific to a genre. A popular model for the analysis of linguistic features is Hyland's (2005) taxonomy of metadiscourse. The model classifies linguistic features in a text into textual and interpersonal features. The textual features, which help to guide readers through the text, include logical connectives, frame markers, endophoric markers, evidentials and code glosses. As for the interpersonal features, they mainly aim to involve the reader in the text. This type includes the categories of hedges, boosters, attitude markers, self-mentions and engagement markers. Table (2) shows the varied categories of the model along with their functions and relevant examples.

Table 2. Hyland's (2005) taxonomy of metadiscourse

Category	**Function**	**Examples**
Textual	**Help to guide reader through the text**	**Resources**
Logical connectives (Transitions)	Express relations between main clauses	and, but, in addition, however, thus
Frame markers	Refer to discourse acts, sequences or stages	My purpose is…, first, second, the findings are…, In conclusion
Endophoric markers	Refer to information in other parts of the text	mentioned above, as follows
Evidentials	Refer to information from other texts	according to…., X states that…
Code glosses	Elaborate propositional meanings	in other words, it means that…, such as…, e.g., for example
Interpersonal	**Involve the reader in the text**	**Resources**
Hedges	Withhold writer's full commitment to statements	may, might, could, would, perhaps, some, possible
Boosters	Emphasize force or writer's certainty	in fact, definitely
Attitude markers	Express writer's attitude including significance, obligation to proposition	should, have to, agree, surprisingly
Self-mentions	Refer to author(s) explicitly	I, my, exclusive we, our
Engagement markers	Build relationship with reader explicitly	imperatives (e.g., Please note that…), You can see that…, inclusive We

A number of genre analysis studies have analyzed RA abstracts (see the literature review section), but analysis of abstracts with reference to the prestige of their journals is extremely rare. The current study thus aims to fill a gap in the genre analysis literature through comparing RA abstracts in more and less prestigious journals from a genre perspective. The popular idea is that the difference between these types of journals has to do with content and scientific value. The current paper, however, addresses the assumption that differences may surpass content to the writing style in terms of rhetorical patterns and metadiscourse. This study may thus prove enlightening for academic writing research and instruction. The results may also support a large pool of researchers who either aim to or are required to publish in highly ranked journals in their disciplines.

2. Literature Review

The literature on abstract analysis mainly addresses two types of abstracts; (1) thesis abstracts and (2) RA abstracts. Despite the high number of studies on thesis abstracts (e.g., Al-Ali and Sahawneh 2011; Geçíklí 2013; Ghasemi and Alavi

2014; Jin and Shang 2016; Kondowe 2014; Nasseri and Nematoliahi 2014; Ren and Li 2011), the present literature review will focus on RA abstracts to maintain relevance to the scope of the current study.

A major trend in the study of RA abstracts is cross-disciplinary. A number of authors have compared the rhetorical structure, metadiscourse and various linguistic features across different disciplines to explore potential disciplinary variation. Sample studies include comparisons between Applied Linguistics and English as a Second Language (Al-Shujairi, Ya'u and Buba 2016), Applied Linguistics, Applied Mathematics and Applied Chemistry (Darabad 2016), five sub-disciplines of Engineering (Maswana, Kanamaru and Tajino 2015), Linguistics and Literature (Doró 2013), Applied Linguistics, Applied Economics and Mechanical Engineering (Saboori and Hashemi 2013) and Linguistics and Applied Linguistics (Suntara and Usaha 2013). The comparisons highlighted major similarities and differences across the target disciplines, which have led to important implications to the teaching of writing in English for Specific Purposes (ESP).

Another trend is cross-linguistic in nature as other comparisons of RA abstracts were conducted across languages. Examples abound in the literature, including comparisons between English and Arabic (Alotaibi 2015), English and Turkish (Çandarh 2012), English and Russian (Zanina 2017) and English and Persian (Farzannia and Farnia 2017; Marefat and Mohammadzadeh 2013; Talebzadeh, Samar, Kiary and Akbari 2013). With the growing need to communicate efficiently with the international discourse community, such cross-linguistic comparisons including the English language are increasing and leading to interesting results. The studies have thus far revealed intriguing similarities and differences with respect to rhetorical structure, the use of metadiscourse and the production of certain linguistic features. These results, which may be partially interpreted in terms of varying cultural norms, reveal important pedagogical implications for the learning of the English language.

Equally important to English language teaching and learning are comparisons between the RA abstracts of native and non-native speakers of English. Such comparisons provide useful implications for language instructors and the learners themselves about how the abstracts of English language learners are similar and/or different than native speakers of English, thus allowing learners to improve their writing based on the findings of these comparisons. Sample studies have targeted learners of English with varied first languages, such as Chinese (e.g., Liu and Huang 2017), Persian (e.g., Abarghooeinze and Simin 2015; Ebrahimi and Motlagh 2015) and Taiwanse and Turkish (e.g., Kafes 2012).

Another approach to examine RA abstracts with reference to authors compares the abstracts of expert and novice writers with the latter often represented by graduate students (e.g., Byun 2015; Menezes 2013; San and Tan 2012). For example, Byun (2015) aimed to identify the features of RA abstracts produced by EFL (=English as a Foreign Language) graduate students. The study investigated the variation in rhetorical structure and metadiscourse of English abstracts

between Korean novice academic writers compared with native-speaking experienced writers. The study analyzed 91 abstracts by Korean graduate students of English language major drawn from a university annual periodical versus 91 abstracts by native-speaking experienced writers drawn from 7 international and well-recognized journals. The analysis relied on Hyland's (2000) five-move model and Swales's (2004) three-move model for the analysis of rhetorical structure and Hyland's (2005) metadiscourse taxonomy for the metadiscourse examination. The results revealed that the novice writers' abstracts tend to follow Swales's (2004) model and show preference for the use of evidentials, boosters and engagement markers. Novice writers' abstracts also revealed more cross-disciplinary variation and a significantly different use of metadiscourse.

While the earlier cross-disciplinary, cross-linguistic and author-dependent approaches to the study of RA abstracts dominate the scene, it is relatively rare to find studies focusing on how the abstracts of highly ranked and indexed journals in specific are written despite the increasing need for this direction. A sample study focusing on highly-ranked journals is Oneplee (2008) who examined the organization of journal article abstracts in two prestigious journals; *Science* and *Nature*. To this end, 100 abstracts published between 2006 and 2008 were analyzed using Santos's (1996) abstract move patterns theory with the help of 5 experts in Linguistics and Science. The results showed that the abstracts generally comprised the 5 moves of background, purpose, methodology, results and conclusion. The analysis also revealed that the results move constituted the largest part of the abstracts (i.e., 25.8%) followed by the background information (21.8%) and conclusion (15.8%). The two journals, however, assigned less space to the methodology move (11%), a finding that was interpreted as reflecting a general pattern in the scientific field.

With the aim of filling a real gap in the literature and supporting researchers' efforts to publish in prestigious journals, the current study aims to compare the similarities/ differences between the abstracts in more and less prestigious journals in the field of Linguistics. The point of reference for the current comparison, as has been mentioned earlier, is indexing or lack of indexing in the two well-known databases of Web of Science and Scopus. In this regard, the question arises: Are prestigious journals distinguished only in terms of scientific value and novelty? Or is it that they display a different writing style than less prestigious journals? The question is extremely intriguing from a genre perspective, but is also highly valuable in practical terms for researchers who always aim to publish in prestigious journals and would appreciate learning how to enhance their acceptance rates.

Research Questions

The current study addresses the two following questions:

1. Are there significant differences between the abstracts of more and less prestigious journals with respect to move analysis?
2. Are there significant differences between the abstracts of more and less prestigious journals with respect to metadiscourse?

3. Methodology

3.1. Data Collection

A total of 400 abstracts were drawn from Linguistics journals for the purpose of the current study. Half the abstracts were extracted from 4 journals indexed at the Web of Science and Scopus; namely, *Applied Linguistics*, *International Journal of Applied Linguistics*, *Journal of English Linguistics* and *Language Sciences.* The abstracts were published between 2008 and 2016. The other 200 abstracts were extracted from 4 journals that are not listed in the Web of Science or Scopus. The abstracts of the less prestigious journals (i.e., *International Journal of Linguistics*, *Journal of Language and Linguistic Studies*, *Open Journal of Modern Linguistics* and *The Modern Journal of Applied Linguistics*) ranged in the year of publication between 2009 and 2016. All the abstracts were written in English and were part of empirical research articles. The exclusion of other types of articles, such as literature surveys and position papers, helped establish a valid criterion of comparison through ensuring similarity across the target abstracts.

3.2. Data Coding and Analysis

The current study adopted Hyland's (2000) 5-move model for the analysis of the rhetorical structure. The 5-move model, explained in detail in Table (3), seemed easy to implement and allowed comparison with a number of earlier studies that adopted the same framework for analysis. As for the analysis of metadiscourse, Hyland's (2005) model was selected as it seemed comprehensive and well-tested in previous research. Further subcategories were, however, added to the model to allow more accurate comparisons. For example, logical connectors were subcategorized into contrast, reason and cause, purpose, consequence, addition and sequence. Similarly, hedges were classified into adjectives, adverbs, modals, verbs and phrases, and boosters into emphatic *do*, adjectives, adverbs and phrases. A detailed description of the subcategories and illustrative examples are shown in Table (4). Another measure was also taken to allow accurate comparisons. The moves in which the linguistic features under examination were noted. The analysis did not only show that a specific abstract included 3 contrast and 4 addition

connectives, for example, but also marked the move (i.e., introduction, purpose, method, findings or conclusion) where these connectives were found.

Table 3. Hyland's (2000) model for the rhetorical structure of RA abstracts

Introduction	Establishes context of the paper and motivates the research
Purpose	Indicates purpose, outlines the aim behind the paper
Method	Provides information on design, procedures, data analysis, etc.
Finding	Indicates results
Conclusion	Points to application, or wider implications and interpretation

Adapted from Behnam and Golpour (2014: 175).

Table 4. Adaptation of Hyland's (2005) taxonomy of metadiscourse

Category	**Subcategory**	**Examples**
Textual	**Help to guide reader through the text**	**Resources**
Logical connectives (Transitions)	Contrast	However; in contrast
	Reason & cause	Because, due to
	Purpose	So that, in order to
	Consequence	Thus, therefore
	Addition	Besides, Moreover
	Sequence	Then, next
Frame markers	Listing	First, second
	Phrases	In conclusion, To sum up
	Sentences	The findings show, The article concludes
Endophoric markers	No subcategories	No subcategories
Evidentials	Perspective	Theory, model
	Work	Earlier study
	Instrument	Survey, test, task
Code glosses	Punctuation	Colon, semi-colon
	Phrases	A case in point, A good example is
	Exemplification Markers	Such as, for example
Interpersonal	**Involve the reader in the text**	**Resources**
Hedges	Adjective	Relative, modest
	Phrase	Mostly but not exclusively,
	Adverb	Perhaps, generally
	Modal	Could, may
	Verb	Seem, assume
Boosters	Emphatic do	Do believe, does exist
	Adjective	Striking, considerable
	Adverb	Strongly, clearly
	Phrase	In fact
Attitude markers	Impersonal	Against expectation, It is suggested that
	Verb	Argue, need
	Adverb	Surprisingly, interestingly
Self-mentions	No subcategories	No subcategories
Engagement markers	No subcategories	No subcategories

4. Results

The first part of the results is related to the rhetorical structure of RA abstracts. Using Hyland's (2000) model, Table (5) shows that the moves of method and findings occupy the largest parts of abstracts in both more and less prestigious journals as measured through word count. However, while the method and findings occupy almost equal parts in the abstracts of less prestigious journals, the findings occupy a larger part than the method in the abstracts of more prestigious journals. Regarding the remaining moves, purpose came in the third position with almost equal length in both more and less prestigious journals. This was followed by introduction, which was slightly longer in the abstracts of less than more prestigious journals. The final position went for the conclusion which constituted almost a tenth of the abstracts in the two types of journals.

Table 5. Percentages of moves across RA abstracts

Journal	Introduction	Purpose	Method	Findings	Conclusion	Total
Less prestigious	14.62%	19.90%	28.41%	28.10%	8.97%	100%
More prestigious	10.43%	18.73%	23.45%	37.24%	10.14%	100%

Using a 2-tailed T-test, significant differences were observed between the length of the moves in terms of word count in the abstracts of more and less prestigious journals. Table (6) shows that the abstracts in less prestigious journals include significantly longer introduction, purpose and method. However, the findings move is much longer in the abstracts of more prestigious than less prestigious journals. No significant difference is noted for the move of conclusion.

Table 6. T-test comparisons of the rhetorical structure of RA abstracts

Move	Journal	Mean	St. Dev.	t	Sig (2-tailed)
Introduction	Less prestigious More prestigious	25.8650 17.0850	37.32832 23.97377	2.799	.005
Purpose	Less prestigious More prestigious	35.2000 30.6700	21.98469 19.36092	2.187	.029
Method	Less prestigious More prestigious	50.2500 38.3900	42.63126 26.82004	3.330	.001
Findings	Less prestigious More prestigious	50.2121 60.9800	31.93546 34.63521	-3.224	.001
Conclusion	Less prestigious More prestigious	15.8700 16.6050	19.65182 19.40805	-.376	.707

Further comparison was conducted regarding the combination patterns of moves. A similar number of patterns was found in the abstracts of more and less prestigious journals with 38 patterns for the less prestigious and 35 patterns for

the more prestigious. Table (7) shows the most frequent combinations that represented 10% or higher of the total number of combinations. Great similarity is noted across the two types of abstracts with the top combination of Purpose-Method-Findings-Conclusion, followed by Purpose-Method-Findings in second place, Introduction-Purpose-Method-Findings in third place and Introduction-Purpose-Method-Findings-Conclusion at the fourth place.

Table 7. Percentages of move combinations in RA abstracts

Combination Pattern	**Less Prestigious**	**More Prestigious**
Purpose, Method, Findings, Conclusion	28%	24%
Purpose, Method, Findings	19%	18%
Introduction, Purpose, Method, Findings	15%	15%
Introduction, Purpose, Method, Findings, Conclusion	10%	12.5%

The second part of the results is concerned with the metadiscourse of the RA abstracts. Regarding the textual markers, Table (8) shows that transitions were the highest in use in both types of abstracts. For the abstracts in less prestigious journals, frame markers came second followed by code glosses. The opposite pattern was noted for the abstracts in more prestigious journals with code glosses coming second followed by frame markers. The fourth position was occupied by evidentials in both types of abstracts with a higher representation in the abstracts of less prestigious journals. Endophoric markers were rarely used in both types of abstracts.

Table 8. Number of textual metadiscourse in RA abstracts

Subcategory	**Less Prestigious**	**More Prestigious**
Transitions	558	484
Frame markers	300	170
Endophorics	2	1
Evidentials	124	76
Code glosses	200	341

Comparing the textual markers across the two types of abstracts statistically reveals significant differences for the use of transitions, frame markers, endophorics and code glosses as shown in Table (9). Overall, transitions were more frequent in the abstracts of less prestigious journals. This was due to a higher use of purpose transitions in the method move and of addition transitions in the method and findings moves. Contrast transitions were, however, more recurrent in the abstracts of more prestigious journals, particularly in the moves of findings and conclusion. Frame markers were also more frequent in the abstracts of less prestigious journals. This was particularly due to the high occurrence of sentence markers in the purpose and findings moves. Likewise, evidentials were more common in the abstracts of less prestigious journals due to the recurrent use of

instrument evidentials in the method move. Code glosses, however, behaved differently as they were used more frequently in the abstracts of more prestigious journals, particularly at the method and findings moves.

Table 9.T-test results for textual metadiscourse in RA abstracts

Subcategory	Journal	Mean	SD	t	Sig (2-tailed)
Transitions	Less prestigious More prestigious	1.000 1.7050	1.24004 1.65884	-4.814	.000
Frame markers	Less prestigious More prestigious	1.5000 .8500	1.05144 .87253	6.728	.000
Endophorics	Less prestigious More prestigious	2.7900 2.4200	1.77529 1.66959	2.147	.032
Evidentials	Less prestigious More prestigious	.0100 .0050	.09975 .07071	.578	.563
Code glosses	Less prestigious More prestigious	.6200 .3800	1.10075 1.00030	2.282	.023

As for the interpersonal markers, higher numbers were generally noted in the abstracts of more prestigious journals. Table (10) shows 163 hedges, 99 self-mentions, 55 boosters, 47 attitude markers and 3 engagement markers in the more prestigious abstracts. The numbers of interpersonal markers in the abstracts of less prestigious journals, however, reflected a general trend for less frequent use.

Table 10. Number of interpersonal metadiscourse in RA abstracts

Subcategory	Less Prestigious	More Prestigious
Hedges	86	163
Boosters	26	55
Attitude Markers	35	47
Self-Mention	13	99
Engagement Markers	1	3

The T-test results for interpersonal markers in Table (11) show three cases of statistical significance, all in favor of the abstracts in more prestigious journals. Hedges were more frequently used, particularly in the findings and conclusion. Boosters were also more recurrent, especially in the findings move. Lastly, more self-mentions were found in the method, findings and conclusion. The same interpersonal markers were used significantly less frequently in the abstracts of less prestigious journals.

Table 11. T-test results for interpersonal metadiscourse in RA abstracts

Subcategory	Journal	Mean	SD	t	Sig (2-tailed)
Hedges	Less prestigious	.4300	.79262	-3.903	.000
	More prestigious	.8150	1.14776		
Boosters	Less prestigious	.1300	.36574	-3.352	.001
	More prestigious	.2750	.49049		
Attitude Markers	Less prestigious	.1750	.41863	-1.366	.173
	More prestigious	.2350	.45916		
Self-Mentions	Less prestigious	.0650	.33366	-5.162	.000
	More prestigious	.4950	1.12976		
Engagement Markers	Less prestigious	.0050	.07071	-1.004	.316
	More prestigious	.0150	.12186		

5. Discussion

The results of the current study with respect to combination patterns of moves seem to match the finding of earlier studies (e.g., Darabad 2016; Li 2011; Suntara and Usaha 2013; Tseng 2011) that Linguistics abstracts generally conform to the conventional structure of RA abstracts including "Purpose-Method-Findings-Conclusion." The current study demonstrates general conformity to Hyland's (2000) 5-move model, and the most frequent move pattern was the "Purpose-Method-Findings-Conclusion" which represented almost a quarter of the move patterns in the abstracts of both more and less prestigious journals. Also similar to earlier studies, the move patterns displayed great variety with 38 patterns in the abstracts of less prestigious journals and 35 in the abstracts of more prestigious journals.

A closer analysis of moves revealed that the moves of method and findings constitute the largest chunks of the Linguistics abstracts. It seems that Linguists pay great attention to explain the method and findings of their study, perhaps to explain and support their contributions. Another important finding with moves is that while the abstracts of less prestigious journals showed significantly longer moves of introduction, purpose and method, the abstracts of more prestigious journals included significantly longer findings. This is an extremely interesting result since it shows that the abstracts of more prestigious journals tend to highlight the findings of the study more than other moves. The findings of the study represent the novel contributions to scientific knowledge. Authors of more prestigious journals seem clearly aware of the importance of findings as the main selling point for their studies. They are also confidently capable of highlighting the scientific value of their research.

The current study also showed significant differences between the abstracts of more and less prestigious journals with respect to textual metadiscourse markers. Transitions were more significantly recurrent in the abstracts of less prestigious journals. Further analysis revealed that purpose and addition connectives were more common in the abstracts of less prestigious journals in the method and

findings moves. Authors of less prestigious journals showed stronger tendency to explain motives and add new findings. The case was different with the abstracts of more prestigious journals which showed a significantly higher use of contrast connectives in the moves of findings and conclusion. In the abstracts of more prestigious journals, authors did not only introduce additional findings but they seemed to also compare their findings with earlier studies, popular models or influential theories. Such a comparative perspective seems more sophisticated than simple additions. Comparisons of textual metadiscouse also revealed a significantly higher use of evidentials in the abstracts of less prestigious journals. The main cause was the frequent use of other authors' instruments in the method section. This again shows a main distinction between the abstracts of more and less prestigious journals. It seems that authors of less prestigious journals rely more on instruments that were devised and used in earlier studies while this practice is much less observed in more prestigious journals which seem to demonstrate more novel instruments.

The comparison of textual markers also revealed three important observations. First, frame markers are significantly more recurrent in the abstracts of less prestigious journals particularly in the purpose and findings moves. This is mainly represented with the use of sentence frames such as "The purpose of the study is" and "The findings of the study show". The use of these conventional sentence frames may reflect an adherence to recurrent chunks of the language. The authors in less prestigious journals may find it easier to structure their abstracts along fixed phrases while the authors in more prestigious journals prefer to express their flow of thoughts in a more varied and lucid manner. Second, code glosses were found much more in use in more prestigious abstracts, particularly punctuation markers in the findings move. This may again reflect more sophisticated writing. The use of colons, semi-colons, etc. is not easily mastered in English. The authors in less prestigious journals may feel more comfortable using exemplification markers. Third, endophorics were rarely used in both types of abstracts. They do not seem recurrent in Linguistics abstracts.

The comparisons regarding interpersonal markers also revealed significant differences. The abstracts of more prestigious journals exhibited a higher use of hedges, particularly in the findings and conclusions, and boosters, especially in the findings. It seems that authors of more prestigious journals demonstrate better command of using hedges and boosters as appropriate. This is again particularly important for them when it comes to the findings of their studies, the main selling point of their research as explained earlier. At this particular move, authors in more prestigious journals are careful when to hedge and when to boost their scientific contributions. Authors in more prestigious journals also seem quite conscious of their novel contributions as reflected in their more frequent use of self-mentions in the moves of method, findings and conclusion. Finally, it is worth noting that engagement markers are rarely used in both types of abstracts, which may reflect a general tendency for Linguistics as a discipline.

6. Pedagogical Implications

The results of the current study highlight the importance of providing special training on the writing of abstracts to those researchers aspiring to publish in prestigious journals. The following implications can be proposed for RA abstract writing instruction in the field of Linguistics as they reflect the main characteristics of abstracts in more prestigious journals:

a) Researchers need to learn how to highlight the findings of their studies, which represent their main contributions to the field of knowledge.
b) Researchers must be trained on comparing and contrasting findings with relevant studies, models or theories.
c) Researchers need to highlight the novelty of their research, such as the use of novel instruments.
d) Researchers need to practice effective ways of using punctuation markers, hedges, boosters and self-mentions.
e) Researchers should be encouraged to write with variety and lucidity.

7. Conclusion

The current study addresses a significant question; "Is the writing style of abstracts in more and less prestigious journals different?" The question gains its significance from the strong international trend to publish in highly ranked journals. To answer the question, a genre analysis was conducted among 400 abstracts from 8 more and less prestigious Linguistic journals. The analysis involved both the rhetorical structure of the abstracts based on Hyland's (2000) 5-move model and the linguistic features of the abstracts using Hyland's (2005) taxonomy of metadiscourse. The results showed that moves combine in a variety of patterns in Linguistics abstracts with the pattern "Purpose-Method-Findings-Conclusion" occupying the most frequent position. Other less common combination patterns are "Purpose-Method-Findings", "Introduction-Purpose-Method-Findings" and "Introduction-Purpose-Method-Findings-Conclusion." The move analysis also showed that abstracts in less prestigious journals exhibit longer moves for introduction, purpose and method while abstracts in more prestigious journals assign longer parts for findings. This reflects the awareness of authors in more prestigious journals of the significance of their findings, which represent the major contributions for their studies and hence the main selling point to attract attention to published articles.

The metadiscourse analysis also revealed significant differences between the abstracts of more and less prestigious journals. While purpose and addition connectives were more common in the method and findings of the abstracts of less prestigious journals, contrast connectives were more recurrent in the findings of the abstracts of more prestigious journals. This may reveal a comparative approach to findings in more prestigious journals instead of mere addition of

findings. The abstracts in less prestigious journals also included more frame markers and instrument evidentials, which indicate the higher level of novelty and writing variety and lucidity in the abstracts of more prestigious journals. The abstracts in more prestigious journals exhibited a more frequent use of punctuation markers, such as code glosses, as well as hedges, boosters and self-mentions in the findings and conclusions. These results further support the conclusion that authors of more prestigious journals exhibit stronger command of the writing style as they seem better able to handle the assertion and ownership of their findings and use relatively implicit code glosses to this end rather than direct ones.

The findings of the current study present interesting implications for academic writing instruction and research. Pedagogically, abstract writers need to learn how to highlight the novelty and contributions of their studies, effectively employ the linguistic features of punctuation markers, hedges, boosters and self mentions and practice writing variety and lucidity. At the research front, the current study calls for further genre analysis of research articles in more and less prestigious journals. The future direction should be to examine other sections of research articles, including introduction, methodology, results, discussion and conclusion. It is also important to extend this research direction to other disciplines in addition to Linguistics.

Acknowledgements

The researcher thanks Prince Sultan University for funding this research project through the research group [Language Learning and Teaching Research Group RG-CH-2016/11/11].

The researcher is gratefully indebted to two anonymous reviewers for their many insightful comments on an earlier version of this paper.

References

Abarghooeinezhad, Mahjoobeh and Shahla Simin. 2015. A structural move analysis of abstracts in electronic engineering articles. *International Journal of Research Studies in Language Learning* 4 (4). 69-80.

Al-Ali, Mohammed N. and Yara B. Sahawneh. 2011. Rhetorical and textual organization of English and Arabic PhD dissertation abstracts in Linguistics. *Sky Journal of Linguistics* 24. 7-39.

Alotaibi, Hmoud. 2015. Metadiscourse in Arabic and English research article abstracts. *World Journal of English Language* 5(2). 1-8.

Al-Shujairi, Yasir B.J., Ya'u, Mohammed S. and Jamila A. Buba. 2016. Role of moves, tenses, and metadiscourse in the abstract of an acceptable research article. *Mediterranean Journal of Social Sciences* 7(2). 379-386.

Behnam, Biook and Farhad Golpour. 2014. A genre analysis of English and Iranian research article abstracts in Applied Linguistics and Mathematics. *International Journal of Applied Linguistics and English Literature* 3(5). 173-179.

Bhatia, Vijay K. 1993. *Analyzing genre: Language use in professional settings*. Harlow, Essex: Longman.

Bhatia, Vijay K. 1997. Introduction: Genre analysis and world Englishes. *World Englishes* 16 (3). 313-319.

Brett, Paul. 1994. A genre analysis of the results section of sociology articles. *English for Specific Purposes* 13(1). 47-59.

Byun, Junghee. 2015. A new look to research article abstracts of novice academic writers: Their communicative strategic use of rhetorical structure and metadiscourse. *English Studies* 35. 99-127.

Çandarh, Duygu. 2012. A cross-cultural investigation of English and Turkish research article abstracts in educational sciences. *Studies about Languages* 20. 12-17.

Darabad, Ali M. 2016. Move analysis of research article abstracts: A cross-disciplinary study. *International Journal of Linguistics* 8(2). 125-140.

Doró, Katalin. 2013. The rhetoric structure of research article abstracts in English studies journals. *Prague Journal of English Studies* 2(1). 119-139.

Ebrahimi, Seyed F. and Hossein S. Motlagh. 2015. A cross disciplinary study of textual devices in research article abstracts written by native and non-native writers of English. *Journal of Applied Linguistics & Language Learning* 1(1). 24-29.

Farzannia, Sara and Maryam Farnia. 2017. Genre-based analysis of English and Persian research article abstracts in mining Engineering journals. *Beyond Words* 5(1). 1-13.

Geçíklí, Merve. 2013. A genre-analysis study on the rhetorical organization of English and Turkish PhD theses in the field of English language teaching. *International Journal of Business, Humanities and Technology* 3(6). 50-58.

Ghasemi, Tahereh and Seyyed M. Alavi. 2014. A comparative move analysis study of theses abstracts written by Iranian MA students of TEFL and English literature. *Online International Journal of Arts and Humanities* 3(1). 5-15.

Hartley, James and Lucy Betts. 2009. Common weaknesses in traditional abstracts in the social sciences. *Journal of the American Society for Information Science and Technology* 60. 2010-2018.

Hyland, Ken. 2000. *Disciplinary discourses: Social interactions in academic writing*. Harlow, UK: Pearson Education Limited, Longman

Hyland, Ken. 2002. *Teaching and researching writing*. Harlow, England: Pearson Education.

Hyland, Ken. 2005. *Metadiscourse; Exploring Interaction in Writing*. New York: Continuum.

Jin, Xin and Yan Shang. 2016. Analyzing metadiscourse in the English abstracts of BA theses. *Journal of Language Teaching and Research* 7(1). 210-215.

Kafes, Hüseyin. 2012. Cultural traces on the rhetorical organization of research article abstracts. *International Journal on New Trends in Education & their Implications.* 207-220.

Kondowe, Wellman. 2014. Hedging and boosting as interactional metadiscourse in literature doctoral dissertation abstracts. *International Journal of Language Learning and Applied Linguistics World* 5(3). 214-221.

Li, Yun. 2011. *A genre analysis of English and Chinese research article abstracts in Linguistics and Chemistry*. Master's thesis at San Diego State University, USA.
Available at:
http://scholarworks.calstate.edu/bitstream/handle/10211.10/1128/Li_Yun.pdf?sequence=1
[Accessed: 15 May, 2016]

Liu, Ping and Xu Huang. 2017. A study of interactional metadiscourse in English abstracts and Chinese economics research articles. *Higher Education Studies* 7(3). 25-41.

Marefat, Hamideh and Shirin Mohammadzadeh. 2013. Genre analysis of literature research article abstracts: A cross-linguistic, cross-cultural study. *Applied Research on English Language* 2(2). 37-50.

Maswana, Sayako, Kanamaru, Toshiyuki and Akira Tajino. 2015. Move analysis of research articles across five Engineering fields: What they share and what they do no. *Ampersand* 2. 1-11.

Menezes, Ciléia A. 2013. A comparative study of textual and rhetorical features of abstracts written by expert and novice writers. *A Palavrada* 3. 10-18.

Nasseri, Davood and Babak Nematoliahi. 2014. A contrastive genre analysis of the abstracts of Master of Arts (MA) theses in Applied Linguistics written by native and non-native speakers of English with respect to moves and move markers. *Indian Journal of Scientific Research* 7(1). 1353-1366.

Oneplee, Jiraporn. 2008. *Genre analysis of scientific abstracts: A comparative study of Science and Nature journals*. Master's thesis at Mahhidol University, Thailand
Available at: http://mulinet11.li.mahidol.ac.th/thesis/2551/cd420/4936532.pdf
[Accessed: 15 May, 2016]

Pho, Phuong D. 2008. Research article abstracts in applied linguistics and educational technology: A study of linguistic realizations of rhetorical structure and authorial stance. *Discourse Studies* 10(2). 231-250.

Piqué-Noguera, Carmen. 2012. Writing business research article abstracts: A genre approach. *Ibérica* 24. 211-232.

Ren, Hongwei and Yuying Li. 2011. A comparison study on the rhetorical moves of abstracts in published research articles and Masters foreign language theses. *English Language Teaching* 4(1). 162-166.

Saboori, Fahimeh and Mohammad R. Hashemi. 2013. A cross-disciplinary move analysis of research article abstracts. *International Journal of Language Learning & Applied Linguistics World* 4(4). 483-496.

San, Lam Y. and Helen Tan. 2012. A comparative study of the rhetorical moves in abstracts of published research articles and students' term papers in the field of computer and communication systems engineering. *International Journal of Applied Linguistics and English Literature* 1(7). 40-50.

Santos, Mauro B.D. 1996. The textual organization of research paper abstracts in Applied Linguistics. *Text* 16(4). 481-499.

Suntara, Watinee and Siriluck Usaha. 2013. Research article abstracts in two related disciplines: Rhetorical variation between Linguistics and Applied Linguistics. *English Language Teaching* 6(2). 84-99.

Swales, John M. (2004). *Research Genres: Exploration and Applications*. Cambridge: Cambridge University Press.

Swales, John M. and Christine B. Feak. 2009. *Abstracts and the writing of abstracts*. Ann Arbor, MI: University of Michigan Press.

Talebzadeh, Hossein et al. 2013. Steps to a successful abstract: A comparative genre analysis. *International Journal of Humanities* 20(3). 1-25.

Tseng, Fan-ping. (2011). Analyses of move structure and verb tense of research article abstracts in Applied Linguistics journals. *International Journal of English Linguistics* 1(2). 27-39.

Zanina, Elena. 2017. Move structure of research article abstracts on Management: Contrastive study (the case of English and Russian). *Journal of Language and Education* 3(2). 63-72.

A MORE EXPLICIT FRAMEWORK FOR EVALUATING OBJECTIVITY AND (INTER)SUBJECTIVITY IN MODALITY DOMAIN[1]

GHOLAMREZA MEDADIAN
University of Isfahan
gh_medadian@fgn.ac.ir

DARIUSH NEJADANSARI MAHABADI
University of Isfahan
ansari@fgn.ui.ac.ir

Abstract
In this paper we propose a more explicit framework for definition and evaluation of objectivity and (inter)subjectivity in the modality domain. In the proposed operational framework, we make a basic distinction between the modality notions that serve an ideational function (i.e., dynamic modal notions) and those with an interpersonal function (i.e., deontic and epistemic evaluations). The modality notions with ideational and interpersonal functions are content and person-oriented, respectively. While all dynamic modal notions are characterized by objectivity, deontic and epistemic modal notions may display a degree of (inter)subjectivity depending on their embedding context. Our main claim is that (inter)subjectivity can hardly be argued to be the inherent property of certain modality forms and types, but rather it is essentially a contextual effect. We functionally-operationally define (inter)subjectivity as the degree of sharedness an evaluator attributes to an epistemic/deontic evaluation and its related evidence/deontic source. (Inter)subjectivity is realized by (at least) one or a combination of three contextual factors, viz. the embedding syntactic pattern, the linguistic context and the extralinguistic context of a modality marker. Since both descriptive and performative modal evaluations involve a degree of (inter)subjectivity, performativity, which refers to speaker's current commitment to his evaluation, is viewed as an independent dimension within modal evaluations and plays no part in the expression of (inter)subjectivity.

Keywords: modality, objectivity, **(**inter)subjectivity, performativity

[1] We would like to gratefully acknowledge the help of two anonymous reviewers whose suggestions helped us improve the previous draft of the paper. Any possible shortcomings are due to us, though.

1. Introduction

The semantic category of subjectivity is one of the most elusive categories for linguists to account for. The difficulty of its investigation is to the extent that it has led Narrog (2012: 2) to admit that "[t]he very concept of subjectivity seems to contradict the idea of linguistics as a scientific enterprise, and to elude objective study." The expression and investigation of subjectivity is not something new. Bréal, (1897) views "subjective element" of language as its "most ancient part." According to Bally (1965: 36), a sentence is necessarily composed of a "representative" (i.e., propositional) part and encoding of a "thinking subject." Similarly, to Benveniste (1971: 225) "language is marked so deeply by the expression of subjectivity that one might ask if it could still function and be called language if it were constructed otherwise."

Subjectivity is more often than not linked to speaker-relatedness or speaker's presence in the use of language. To Lyons (1977: 739) subjectivity is realized in language when a language user "comments upon [an] utterance and expresses his attitude to what he is saying". More precisely, he (1995: 337) states that subjectivity "denotes the property […] of being either a subject of consciousness […] or a subject of action (an agent)". To De Smet and Verstraete "subjectivity has to do with idea that a certain "linguistic element or construction requires reference to the speaker in its interpretation" (2006: 365). For example, they explain that in (1a) *won't* encodes a subject-internal property (i.e., *Mum's* unwillingness) and that there is no need for reference to the speaker for its interpretation. Conversely, in (1b) *won't* encodes a speaker-related epistemic evaluation of the state of affairs (SoAs).

(1)

a. Mum won't let us go out tonight. I asked her but she said we had partied more than enough this week.
b. Judith won't be late. She never is. (2006: 367).

In the same vein, Traugott (2010: 32) views subjectivity as "the prime semantic or pragmatic meaning which is to index speaker attitude or viewpoint". Finally, House (2012: 140) views subjectivity as part of speaker's act of projecting his attitude into discourse.

There are two approaches to subjectivity which we will put aside in this paper, viz. the *conceptualist notions of subjectivity* and *subjectification*. These views are incompatible with the other views, since, for one thing, they were developed within totally different theoretical frameworks, as Nuyts (2012: 54-55) argues.[2] Subjectification refers to the process through which some linguistic elements, especially the grammaticalizing ones (e.g., the modal auxiliary verbs) develop new speaker-related senses (Traugott and Dasher, 2002). The development of

[2] See Narrog (2012) for a comprehensive overview of these approaches.

epistemic meaning in some (originally non-epistemic) English modal auxiliaries is a concrete example of subjectification (see Traugott 1995 and Traugott and Konig 1991). The conceptualist approach to subjectivity has mainly been developed by Langacker (1991 and 2002) within Cognitive Grammar framework. There is a little overlap between this view of subjectivity and what is generally and intuitively thought of the term. According to Nuyts (2012) the fact that the same terminology has been employed to refer to the different phenomena that these approaches discuss seems to be a coincidence only.

A considerable amount of investigation has already been conducted on the subjectivity dimension but an explicit framework for its operational definition and evaluation is still missing, especially in the modality domain which has often been associated with the expression of subjectivity. The lack of such a framework has very recently been noticed by Depraetere (2016). She bemoans that most accounts of subjectivity in modality are "basically introspective intuitions" and that "clear definitions or indications as to how to operationalize the parameter of subjectivity are often lacking" (2016: 380). Thus, the main concern of this paper is to propose an operational framework for the definition and more 'objective' evaluation of this ever-elusive category in the modality sphere.

The organization of the paper is as follows. In section 2, after going over Lyons's (1977, 1995) traditional conception of sub/objectivity in modality, we will critically review those subjectivity accounts that have linked subjectivity in the modality domain to certain modal *types* and those that have associated it with certain modal *forms*. Section 3 will deal with those proposals that view subjectivity as a contextual effect. In section 4, we propose our system for the functional definition and operational evaluation of (inter)subjectivity and objectivity dimensions and apply it to some forms and types of English modality domain. Section 5 provides a short summary of the paper.

2. Subjectivity in the modality domain

Linguists have paid a lot of attention to subjectivity in modality sphere, in general, and in modal auxiliary verbs, in particular. In addition, modality (especially, epistemic modality) and subjectivity have often been associated with each other. For example, to Narrog (2012: 2) they share two things: (a) both are difficult to define and capture and (b) they are associated with one another. Depraetere (2016: 378) states that subjectivity "plays a major role in the characterization of modal meaning". As it was Lyons (1977) who introduced the terminological distinction between subjective and its notional counterpart objective modality, every discussion of the matter owes a debt to his conception of the matter. Lyons portrays his view of the subjective/objective distinction via the double interpretation of epistemic use of may in the often quoted (2).

(2)

Alfred may be unmarried (Lyons 1977: 797).

According to Lyons, in its subjective construal *may* in (2) encodes the speaker's pure epistemic uncertainty (or guess) regarding the truth of the underlying proposition, while under an objective construal, it expresses "a quantifiable possibility" that *Alfred is unmarried* (1977: 797). For example, *may* is construed as objective when the speaker literally knows that *Alfred* is a member of a circle of people half of whom are single. Thus, in this situation there is at least a 50% chance that *Alfred is unmarried*. In other words, to Lyons objective epistemic modality does not indicate that the speaker merely *believes* in the possibility/necessity of a proposition, but rather signals that he mathematically *knows* about its possibility/necessity (1977: 798). Lyons' conception of subjectivity includes two main parameters which have been repeatedly discussed in the later accounts of subjectivity (e.g., Verstraete, 2001; Nuyts 2001a and b, 2012; Narrog, 2012, to name just a few): (a) subjective modal notions are *performative*, that is, they encode speaker's *current* commitment to what he says and (b) they involve an indication of *quality of evidence* for making a modal judgement, that is, the evidentiality dimension (see Nuyts 2001b). To Lyons subjectivity is more basic than objectivity in natural language (1977: 805; 1995: 330) and objective modality lies somewhere between subjective and alethic modality (1977: 798).[3] In addition, the distinction between objective epistemic modality and alethic (or logical) modality is blurred, because both have to do with encoding the notion of "logical probability" (1977: 797).

As Lyons' double interpretation of *may* in (2) suggests, he is certainly of the opinion that sub/objectivity is not the inherent property of modality markers (at least modal auxiliaries), but rather it is an extra meaning component which the speaker pragmatically adds to the modal evaluation in the context (1995: 340). Although Lyons' approach to sub/objectivity in the modal auxiliaries domain appears to be fairly pragmatic, he associates some modal forms with expression of sub/objectivity. For instance, apparently, to him epistemic modal adverbs are inherently subjective since he paraphrases the subjective construal of *may* in (2) through (3).

(3)

Perhaps Alfred is unmarried. (1977: 798).

2.1. sub/objectivity as an inherent property of certain modality types

Some works associate sub/objectivity with certain modality types, that is, they view certain types of modality (e.g., deontic, dynamic or epistemic) as

[3] Alethic modality is employed in logic. For example, m*ust* in *five plus five must be ten* expresses alethic modality (rather than epistemic modality).

intrinsically subjective or objective. In this section we critically review some of the works which have gone down this path.

Halliday (1970) is the first scholar who explicitly links speaker-relatedness and content-relatedness to certain modality types. To him English modal auxiliaries can serve two functions: interpersonal (speaker-related) and ideational (content-related). In his view, epistemic modal notions contribute to the interpersonal component of language in that they expresses "a form of participation by the speaker in the speech event" and thus they are subjective (1977: 335). Some of the deontic uses of the modals are, also, speaker-related and belong to the interpersonal functional component of language. In contrast, dynamic modal notions (which to him are ability and volition) and some deontic uses of the modal auxiliaries serve an ideational function since they do not encode "speaker's comments, but form part of the content of the clause" (1970: 338). [4]

Coates (1983) associates subjectivity with performativity in modality domain. In her corpus-based investigation of English modal auxiliaries, Coates identifies both objectively and subjectively used epistemic and non-epistemic (root) modals. To Coates (1983: 20) subjectivity (or speaker-relatedness) is the defining feature of epistemic senses of modal auxiliaries. However, she admits that there are some 'peripheral' objective uses, too. She explains that in the epistemic realm subjective uses of epistemic modal auxiliaries encode speaker's current commitment to the truth of what he says (i.e., they are performative), while objective epistemic modals merely encode a logical statement in which the speaker is not involved (i.e., they are non- performative). Her view of objectivity bears a close similarity to of alethic modality. It should be noted that Coates does not view subjectivity and objectivity as two opposite notions, but rather sees a as a cline between the two. It means that, to her, modal auxiliaries express more or less subjective/objective modal notions (1983: 34). As an illustration of the cline between objectivity and subjectivity, she distinguishes between subjective and objective use of epistemic *must* in the following terms:

> The cline associated with logical necessity extends from a subjective core, meaning 'I confidently infer that X', to an objective periphery meaning 'In the light of what is known, it is necessarily the case that x. (Coates 1983: 42)

To Foley and Van Valin (1984) both deontic and dynamic use of modal auxiliaries are objective (content-related or ideational), while epistemic sense of modals encode the speaker's subjective evaluation of the SoAs, that is, they are speaker-related. In contrast, Hengeveld (1987, 1988, and 1989) believes that the epistemic use of modal auxiliaries can be either subjective or objective, while, similar to Foley and Van Valin (1984), he regards both deontic and dynamic uses of the modals as objective (content-related).

---

[4] We will later argue that those deontic uses that perform an ideational function are, in fact, dynamic in nature (cf. Verstraete 2001).

Palmer, rather cautiously, claims that "epistemic modality in language is *usually*, perhaps *always*, subjective" (1990: 7, italics mine), since "the epistemic judgment rests with the speaker", that is, it is speaker-related (1990: 51). From a more cross-linguistic and typological perspective, Palmer (2001: 33) holds that all "inferences or conclusions are essentially subjective". To Palmer deontic modals are, also, *usually* subjective (1990: 7). Nevertheless, similar to Coates (1983), he does not deny that there are, still, some objectively used deontic and epistemic modal auxiliaries in English.

Verstraete (2001) takes (modal) performativity, which to her is "taking [current] positions of commitment with respect to the propositional content of the utterance", as the defining component of subjectivity (2001: 1517). In his opinion subjective uses of modal auxiliaries serve an interpersonal function because of their inherent performativity, whereas objective uses have an ideational function due to their non-performative nature. In accord with this line of reasoning, he classifies epistemically and dynamically used modal auxiliaries as subjective and objective, respectively. Following Halliday (1970) and, to some extent, Palmer (1990), he speaks of ability and volition as the only dynamic modal notions. Deontic modality, in his view, can be either subjective (speaker-related) or objective (content-related).[5]

To Huddlestone and Pullum et al. (2002: 173) epistemic and deontic use of English modal auxiliary verbs are "most often" subjective in that they encodes speaker's position towards the factuality or actualization of a proposition. It means that they associate subjectivity with speaker-relatedness. However, they admit that both modality types can "occasionally" receive objective interpretation. To them the 'objectively used' epistemic *must* in (4b) encodes a "strict semantic necessity",[6] while in (4a) subjective *must* expresses the speaker's "confident inference" (2002: 181).

(4)

a. What has happened to Ed? B. He *must* have overslept.
b. If I am older than Ed and Ed is older than Jo, I *must* be older than Jo.

They paraphrase *must* in (4a) as "this is the only explanation *I* can think of", while in (4b) it means "this is the only possibility *there is*" (2002: 181, italics mine).

The distinction they make between subjective and objective *may* is, even, more fine-grained than that of *must*. To them epistemic *may* is "most often" employed subjectively and gets the interpretation "*I* don't know that the proposition is false and put it forward as a possibility", whereas it receives an objective interpretation where the evaluation it encodes "is a matter of public knowledge" (2002: 181,

[5] We will later argue that the cases he views as 'objective deontic modality' (e.g., ex. 18) are in fact dynamic modal notions.

[6] Notice, similar to Coates (1983), what they view as 'objective' epistemic modality is, actually, alethic modality.

italics mine) rather the speaker's personal evaluation of SoAs. In their conception of the matter, deontic evaluations expressed by *may* and *must* are, also, "prototypically" subjective because it is typically the speaker who is the "deontic source" for granting a permission or laying an obligation. However, they observe that 'objective' deontic readings are also possible, especially where the deontic source is something as general as "rules and regulations".[7] They hold that, like *may* and *must*, deontic and epistemic readings of *should* are "usually" subjective because it is the speaker who is the source of deontic and epistemic expectation (2002: 186).

To Collins (2007, 2009) subjectivity means speaker-relatedness. For example, he observes that epistemic *may* "usually" encodes subjectivity in that it signals "the speaker's lack of knowledge as to whether or not the proposition is true, and assessment of it as merely a possibility". However, he admits that there are, also, some "occasional" objective uses in the contexts where "the judgement is one that is entertained more generally and not limited to the speaker" (2007: 478; also, 2009: 92).[8] To him deontic reading of the modal auxiliaries are "prototypically" subjective (2007: 486). Similarly, deontic *should* can be either subjective or objective, while its epistemic *should* is most often subjective and only occasionally objective (2009: 45). Epistemic *will* is also "predominantly" subjective, but he speaks of some "occasional" objective uses, too (2009: 127).

Similar to Coates (1983) and Verstraete (2001), Salkie (2009) primarily associates subjectivity with performativity. However, in order to tackle the criticism raised by Narrog (2005) against the usefulness of subjectivity as the defining feature of all central members of modality domain, he introduces two further components to make subjectivity a more exact category. Thus, to Salkie subjectivity is composed of three components: (a) performativity, (b) involvement with primary pragmatic processes (more specifically, pragmatic saturation which refers to the process of identifying the speaker as the source of a modal evaluation) and (c) existence of a clear division between the modality notion and propositional content in an utterance. For example, to him the ability sense of *can* (a notion almost universally accepted as dynamic) lacks all three components of subjectivity: it is neither performative (it does not encode the speaker's here-and-now commitment) nor does it require the contextual identification of the speaker for its interpretation. In addition, no clear boundary can be established between the notion of ability and the rest of the proposition (2009: 85), since they both contribute to the ideational functional component of language rather than the interpersonal component of language in Halliday's sense. To Salkie epistemic

[7] There is some similarity between their conception of objective epistemic and deontic modality expressed by *may*, *must*, and *should* as a "matter of public knowledge" or "rules and regulations" and Nuyts' (2001a and b) view of (inter)subjectivity (see section 3.1).

[8] Again, one can see some similarity between his view of objective modality as a more general (rather than speaker's personal) evaluation and Nuyts' (2001a and b) view of intersubjectivity (see section 3.1).

uses of English modal auxiliaries are all subjective because they enjoy all three elements of subjectivity.

Table 1. Four relatively different views on the link between modality type and sub/objectivity

		Modality type	**subjectivity**	**objectivity**
1	Foley and Van Valin (1984)	epistemic	√	×
		deontic	×	√
		dynamic	×	√
2	Hengeveld (1987, 1988, 1989)	epistemic	√ (interpersonal)	√ (ideational)
		deontic	×	√
		dynamic	×	√
3	Coates (1983); Palmer (1990); Huddlestone and Pullum et al. (2002); Collins (2007, 2009)	epistemic	√	√
		deontic	√	√
		dynamic	×	√
4	Halliday (1970); Verstraete (2001); Salkie (2009)	epistemic	√	×
		deontic	√	√
		dynamic	×	√

The views of various researchers on the link between the type of modality and expression of sub/objectivity can be roughly divided into four categories (Table 1). The existence of four relatively different views regarding a single category already undermines the validity of establishing such an association in the first place. One obvious limitation of these views is that they have largely focused on the expression of sub/objectivity by modal auxiliary verbs at the expense of the other verbal and non-verbal modal forms such as modal verbs, modal adjective, modal adverbs and mental state predicates. Nonetheless, there are some remarkable commonalities among these views which must be heeded when one is seeking to propose an alternative operational framework for the definition and evaluation of sub/objectivity. To begin with, all these works describe dynamic modality as objective or content-related. Although most works only speak of ability and volition as the dynamic modal notions, care must be taken that circumstantial or neutral possibility/necessity (see Palmer 1987: 102-3) and participant-internal necessity or need, which "refers to a kind of […] necessity internal to a participant engaged in the [SoAs]" (Van der Auwera and Plungian 1998: 80), are dynamic notions. Similar to ability and volition, these three modal notions neither fit into epistemic nor deontic modality categories because they are not person-related. Secondly, all the researchers of group 3 in Table 1 whose views on the matter are largely based on empirical corpus-based investigations agree (more or less) that deontic and epistemic evaluations can be either subjective or objective. In contrast, the views of the researchers in the other three groups (1, 2 and 4) are mostly based on theoretical arguments, assumptions. Finally, the bi-partite distinction that Halliday (1970) makes between the interpersonal and

ideational function of modal notions has more often than not been associated with the expression of sub/objectivity.

2.2. Sub/objectivity as an inherent property of certain modal forms

Unlike those researchers who have (more or less) associated sub/objectivity with the intrinsic morphosyntactic properties of certain modal *types*, there are, admittedly, much fewer works that view sub/objectivity as an inherent property of certain modal *forms* (especially, but not exclusively, modal auxiliaries).

To Timotijevic (2009: 114) subjectivity is a pragmatic feature that exists in certain English modal auxiliaries, but not the others. She argues that 'subjective modal auxiliaries' "crucially involve the speaker and thus involve more pragmatics" than 'objective modal auxiliaries.' More specifically, she claims that interpretation of subjective modal auxiliaries involves *pragmatic saturation*, which is a "primary pragmatic process" in Recanati's (2004) sense. Recanati, also, speaks of "secondary pragmatic processes" such as *free enrichment*. Saturation is a process by which the gap in the semantic profile of semantically incomplete indexical elements such pronouns and modal auxiliary verbs is filled up by contextual information.[9] Free enrichment, in contrast, is a pragmatic process through which the intended meaning of semantically complete items is specified (or enriched) in the context of use. By way of illustration, consider (5). In (5a) pragmatic saturation is required to pragmatically assign a referent to the indexical element *He* in order for the latter to have a complete meaning. In contrast, in (5b) *everybody* is a semantically complete and the sentence is a "(minimally) truth valuable" one (Depraetere 2014: 166) if it is construed as *every single person on the earth is present in the class*. However, this is certainly not what the speaker intended to convey by uttering (5b). (5b), most probably, means *all class members are present*. The pragmatic process that helps the reader arrive at this interpretation is called *free enrichment.*

(5)

a. He is a businessman. (Who?)
b. Everybody is present in the class. (Every living person?)

It was Papafragou (2000) who, for the first time, applied the distinction between primary and secondary pragmatic processes to the modality domain. To her *may* and *must* whose semantic domains are "unspecified" require pragmatic saturation in the context of use, while *can* and *should* whose domains are "factual" and "normative", respectively, are freely enriched (2000: 43). Papafragou holds that each of these four central English modals have a single semantic core and, thus, their different or senses in different contexts is due to pragmatics rather than their semantics. Timotijevic subscribes to Papafragou's view of *may* and *must* but

[9] See Depraetere (2014) for a fruitful discussion of the matter in the modality domain.

views the domain of *can* and *should* as "potential" and "the normal course of events", respectively (2009: 115-116). She further claims that, unlike *can* and *should*, which are 'objective modals' in that their interpretation requires free enrichment, *may* and *must* are 'subjective modals' since their interpretation requires pragmatic saturation to identify the speaker as the source of the modal judgement.

The association Timotijevic establishes between certain modal auxiliaries and sub/objectivity is essentially similar to that of Larreya and Rivière (1999) in that both works claim that certain modal forms are objective whereas others are subjective. However, unlike Timotijevic, they characterize *should* as inherently subjective. Table 2 presents their classification of English modals.

Table 2. Classification of modal auxiliaries in terms of sub/objectivity

	Modal auxiliaries	**sub/objectivity**
Larreya and Rivière (1999)	may, must, shall, should	subjective
	can, will, have to, ought to	neutral
Timotijevic (2009)	may, must	subjective
	can, should	objective

The idea of associating certain modal forms with either subjectivity or objectivity appears to be even more problematic than linking them with certain modal types. Such an association seems, even, counter-intuitive given the way modals are used in natural language. For instance, seen from Timotijevic's perspective, the necessity expressed by *must* in (6) would be classified as subjective since its interpretation requires pragmatic saturation to attribute the necessity to the speaker (as a source). However, it is obvious that the necessity expressed by *must* in (6) arises from the circumstances (i.e., rules of physics). In fact, we have a case of neutral/circumstantial necessity here. Now the obvious question is: how can we attribute the source of a circumstantial necessity to the speaker? Or how can a circumstantial necessity expressed by *must* be speaker-related or subjective (as Timotijevic claims)? As a matter of fact, Timotijevic's claim regarding the subjectivity of some modals and objectivity of the others faces a serious challenge.

(6)

> But to reach orbit an object *must* accelerate to a speed of about 17,500 miles per hour (28,000 kilometers per hour, […]. (Verstraete 2001: 1508)

Establishing a direct link between certain modal forms and sub/objectivity is not limited to the realm of modal auxiliaries. For example, within the domain of non-verbal modality markers, Lyons (1977), Hengeveld (1989), Verstraete (2001) associate subjectivity and objectivity with modal adjectives and adverbs, respectively. However, such an association was based on the mistaken link they

established between performativity and non-performativity and modal adverbs and adjectives, respectively (see Nuyts 1992).

The works reviewed in sections 2.1 and 2.2 either associate sub/objectivity with certain modal types, or modal forms. The main problem with all these works is the lack of a clear operational definition for the category, on the one hand, and absence of reliable criteria for the distinction, on the other. It is because of these shortcomings that the associations established cannot be applied and used consistently. Furthermore, there is a growing body of evidence that indicates that expression of sub/objectivity has nothing to do with the inherent properties of certain modality forms or types, but rather is a contextual effect (e.g., Lyons, 1995, Traugott and Dasher 2002; Nuyts 2001a and b, 2006, 2012, 2014; Narrog 2012). For example, Traugott and dasher (2002: 98) hold that "[m]ost frequently, an expression is neither subjective nor objective in itself; rather the whole utterance and its context determine the degree of subjectivity". In the same vein, Narrog (2012: 18) holds that it is not possible to determine the subjectivity in an expression based on its morphosyntactic properties alone. He observes that "the categorical identification of specific form classes with specific degrees of subjectivity overall does not seem well supported. […] the same holds for the presumptive categorical association of specific semantic types of modality with subjectivity" (2012: 40). Narrog characterizes such associations as "theoretical preconception[s]" on the part of the researchers (2012: 40).

3. Sub/objectivity as a contextual effect

In the following section we will discuss those major works which do not associate sub/objectivity with certain types or forms of modality, but, instead, speak of multiple contextual factors which realize it in modality sphere and seem to offer more realistic definitions for the category.

3.1. (Inter)subjectivity as an evidential-like dimension in modal expressions: Nuyts' view

Nuyts (1993, 2001a and b, 2006, 2012, 2014) finds the traditional conception of sub/objectivity in the modality domain "intuitive" and "inadequate". He primarily focuses on studying sub/objectivity in epistemic modality domain where it is claimed to inhere (see section 2.1), but later applies his views to the deontic modality, too. Furthermore, unlike most accounts, he does not limit his investigation of sub/objectivity to the modal auxiliaries and studies the former across four cross-linguistically common modal forms, viz. *modal auxiliary verbs, mental state predicates, predicative adjectives* and *modal adverbs*. Nuyts offers two distinct accounts of subjectivity (as a cover term): subjectivity vs. objectivity and subjectivity vs. intersubjectivity.

3.1.1. Subjectivity vs. objectivity: a quality (of evidence)-based view

In contrast with Lyons (1977) who maintains that subjective epistemic modality is the expression of speaker's pure guess, Nuyts (1993, 2001 a and b) argues, rather convincingly, that no epistemic evaluation can ever be totally ungrounded, that is, some evidence is always required to make an epistemic evaluation. Furthermore, he argues that one cannot simply judge the chances of a SoAs being the case or not without having any evidence. In Nuyts view, the only evaluation in a situation where one has no evidence for the truth or falsity of a proposition would be a categorical statement *I don't know p* (Nuyts 1993: 945-46; 2001a: 34; 2001b: 386). Thus, he redefines Lyons' traditional conception of sub/objectivity in the epistemic sphere in terms of the quality of evidence available to the evaluator, that is, sub/objectivity is an evidential-like dimension defined as follows:

> an epistemic evaluation based on better (more reliable) evidence would probably be experienced as being 'objective', while one based on shaky evidence would rather be considered more 'subjective'. (Nuyts 2001b: 386)

3.1.2 Subjectivity vs. intersubjectivity: a (co)responsibility-based view

From a totally functional perspective, Nuyts (2001a and b, 2012, 2014) proposes another alternative view for sub/objectivity, this time, in terms of what a speaker does when he expresses his evaluation of SoAs. This newer conception of sub/objectivity does not have anything to do with the of quality of evidence accessible to the speaker for making a modal evaluation, but rather the matter is "who is 'responsible' for the modal evaluation, as seen from the perspective of the 'subject' or 'source' of that evaluation" (Nuyts 2012: 57). Nuyts employs the terms *subjectivity* and *intersubjectivity* (or *(inter)subjectivity*) rather than *sub/objectivity* for this (co)responsibility-based view. The source of evaluation or what Nuyts (2012) calls *assessor* is, by default, always responsible for making the modal evaluation but the question is whether he considers other people as coresponsible as well (2012: 57). Intersubjectivity, thus, always has the notion of subjectivity embedded within itself, both formally and conceptually. In this (co)responsibility-based view, an epistemic evaluation is viewed as subjective whenever the assessor signals that "he alone knows (or has access to) the evidence and draws conclusions from it", while an intersubjective judgement concerns assessor's "indication that the evidence is known to (or accessible by) a larger group of people who share the same conclusion based on it" (Nuyts 2014: 16).

Nuyts maintains that both quality (of evidence) and (co)responsibility-based views of subjectivity dimension in the modality domain are compatible with each other and can account for the extra evidential-like dimension interacting with modal evaluations. Nevertheless, he prefers his (co)responsibility-based view over quality-based view on some convincing grounds. Firstly, he finds the (co)responsibility-based view more in line with his corpus observations and the way modal evaluation is realized in real use of language (2001b: 394-395).

Secondly, this view seems to offer a more realistic account of the category under investigation (2012: 58). Thirdly, the (co)responsibility-based view is capable of accounting for (inter)subjectivity in both epistemic and deontic modality domain: having weak or strong evidence for a deontic (or moral) evaluation (i.e., a quality-based account) does not make sense, whereas a deontic evaluation may be related to the assessor or a larger community of morally responsible people. For example, permission can be issued by the assessor alone as the only deontic source, or can be granted by a larger group of people including the assessor. Finally, Nuyts argues that languages offer specific evidentiality devices to expresses the quality evidence related to the evaluations. For instance, in English, the evidential adverbs *seemingly*, *apparently*, and *clearly* encode various types of quality of evidence available for making an modal evaluation (2012: 60-61)

Unlike some researchers (e.g., Verstraete 2001; Narrog: 2012), to Nuyts performativity is not the defining feature of subjectivity, but rather is an independent category along with it notional counterpart *descriptivity*. According to Nuyts, in the epistemic realm, descriptive evaluations "report an epistemic qualification of a [SoAs] without involving speaker commitment to it at the moment of speaking", whereas those performative evaluations signal his/her commitment to what he says at the speaking time (2001a: 39). Nuyts rightly states that "[b]oth subjective [...] and intersubjective [...] modal expressions can be either performative or descriptive, and vice versa. (2012: 58)". By way of illustration, consider (7) in which the matrix clause contains a performative epistemic evaluation encoded by *sure* to which the speaker (and the assessor (*I*)) is fully committed at the moment of speaking, while the embedded clause holds a descriptive epistemic evaluation that belongs to the addressee (*you*) but reported by the speaker/assessor. Both modal evaluations, however, are subjective as it is indicated that they belong only to their respective assessors (*I* and *you*).

(7)

I am pretty sure that *you* are entirely sure that I am solely responsible for this vicious plot.

There is some similarity between Nuyts' (co)responsibility-based view of (inter)subjectivity and Papafragou's (2006) conception of the distinction. To the latter, an epistemic qualification is subjective if the speaker is the only member of the group of knowers and the epistemic evaluation is based on his "private beliefs", while it is objective if there is a larger community of knowers (2006: 1694). In addition, to Papafragou the major difference between subjective and objective epistemic qualifications is that the former "is *indexical* in a sense that the possible worlds in the conversational background are restricted to what the *current* speaker knows *as of the time of utterance*", while in objective uses "the conversational background includes what is generally known to some community, or, in other words, what the publicly available evidence is" (2006: 1695). In Papafragou's view, subjective epistemic modality is tied to moment of speaking,

whereas objective epistemic modality can *also* be employed to encode past and future evaluations (2006: 1695). For instance, she regards the modal evaluations expressed by epistemic modal adjectives (*certain* and *possible*) in (8) as objective because they encode past evaluations of SoAs.

(8)

a. Until Copernicus, it *was certain* that the Earth was the center of the universe.
b. Yesterday it *was possible* that the stock market would go up today. (2006:1965, emphasis added)

However, Nuyts would describe the evaluations in (8a) and (8b) as intersubjective regardless of their past time reference because the epistemic evaluations expressed were shared among a large community of people. The shared status of the past epistemic evaluation is more obvious in (8a) than (8b).

To Nuyts (inter)subjectivity stemming from other contextual factors such as syntactic patterns embedding the modality markers, linguistic elements present in the current or preceding discourse and general world knowledge (e.g., 2001a: 65-66). Regarding the role of the embedding syntactic patterns in the expression of (inter)subjectivity, Nuyts explains that (inter) it can only be indirectly due to the intrinsic properties of a modality marker, since it is the modal element which "triggers these syntactic conditions", after all (2012: 59). Seemingly, it is the active role modal forms play in selecting their own embedding syntactic pattern(s) that has led some researchers (see section 2.2) to associate specific modal forms with either subjectivity or objectivity.

3.2. Portner's view of subjectivity

Portner (2009) basically endorses both Nuyts' quality (of evidence) and responsibility-based views, but, unlike him, he does not prefer the latter view over the former. He observes that Nuyts has neglected the sensitivity of modal evaluations to two contextual information sources (i.e., the modal base and ordering source), which were introduced by Kratzer (1977, 1991, 2012). To Portner one does not have to choose between the two views as both can account for the actual use of modality markers. He explains that modal base, which is the matter of access to knowledge, can be either the speaker's personal knowledge or shared knowledge of a larger group of knowers encompassing the speaker. This argument leads Portner to make a distinction between subjectivity^{MB} and intersubjectivity^{MB} (^{MB} standing for *modal base*), that is, modal base subjectivity vs. modal base intersubjectivity. The ordering source of epistemic expressions, in turn, "brings in other considerations besides what is firmly known, including the speaker's beliefs and stereotypical expectations" (2009: 165). Naturally, such beliefs can be evaluated in terms of how reliable they are. This roughly parallels

Nuyts' quality-based view and leads to the distinction Portner makes between subjectivity^{OS} vs. objectivity^{OS} (^{OS} standing for ordering source).

Portner claims that subjectivity^{MB} is "a categorical concept", that is, a modal evaluation is intersubjective^{MB} "if it is based on shared knowledge within a relevant group; otherwise, it is subjective $^{[MB]}$". Conversely, sub/objectivity^{OS} is a "scalar" notion, that is, a modal evaluation can be more or less subjective^{OS} depending on the quality of evidence accessible to the speaker (2009: 165). For example, to Portner the epistemic evaluation expressed by *must* in (9) would be intersubjective^{MB}, because the evidence for it does certainly not stem from the speaker's private knowledge, but from some generally shared/accessible knowledge (*in the view of what is publically known, he must be in the UN General Assembly today*). In addition, as far as the sub/objectivity^{OS} is concerned, the evaluation expressed by *must* is objective^{OS} in that the quality of evidence is, probably, very high. Thus, the epistemic evaluation expressed by *must* in (9) is intersubjective^{MB} and objective^{OS}.

(9)

The president *must* be in the UN General Assembly today.

Portner's view seems to have some limitations. Firstly, (inter)subjectivity^{MB} is not a totally categorical concept because an (epistemic or deontic) evaluation can, for example, be that of the evaluator alone, or be shared between the evaluator and his friends, evaluator and the people living in his city or, even, evaluator and the people of the world. Thus, (inter)subjectivity^{MB} is better seen as a cline. Furthermore, as Nuyts (2012: 61) explains languages have certain evidentiality markers to express the type and quality of evidence evaluable for making modal evaluations.

3.3. Narrog's view of sub/objectivity

Narrog (2012) employs *performativity* and *evidentiality* to account for subjectivity dimension. Like some other researchers (most notably, Verstraete 2001), to him performativity is the central component of subjectivity. According to Narrog, to the extent that "a linguistic form qualifies a proposition with respect to the current speech situation (including speaker and hearer), it is used performatively," otherwise it is employed descriptively (2012: 42). He defines evidentiality or "interpersonal accessibility" as "the degree to which the evaluation expressed in the modal form (in a specific context) is the speaker's personal evaluation as opposed to communal evaluation or communally accessible knowledge" and

views it as the secondarily important component of subjectivity (2012: 42).[10] Drawing on evidentiality dimension Narrog defines subjectivity as follows:

> If a linguistic form in a specific context expresses a judgment which is based on evidence and/or values that are only accessible to the speaker it is used more subjectively. If [it] is based on [those] that are accessible or shared by a community of speakers it is used less subjectively. (2012: 43)

Both Narrog and Nuyts would regard deontic evaluation expressed by *must* in (10a) as subjective because it encodes a deontic necessity imposed by the speaker (as the only deontic source) on the addressee, while (10b) would be viewed by Narrog and Nuyts as *less subjective* and *intersubjective*, respectively.

(10)

a. You *must* polish my shoes twice a day.
b. In this boarding school, you *must* polish your shoes twice a day.

While Narrog's conception of subjectivity (as a scalar dimension) bears a close resemblance to Nuyts' (co)responsibility-based view of (inter)subjectivity, his conception of intersubjectivity is by no means compatible with Nuyts' understanding of the dimension. Regarding intersubjectivity, Narrog (2012) subscribes to Traugott's (2003, 2010) view of intersubjectivity as "hearer orientation" and defines it as encoding the "attention towards the hearer's/addressee's self" (2012: 45). In Narrog's view the intersubjective use of *could*, for example, can be seen in (11) where the speaker's attention to (and respect for) the negative face of the addressee has been signaled via the preterite form of the modal *can*.

(11)

Could you pass the pepper, please?

According to Narrog (2012: 43), performativity and interpersonal accessibility are realized by three factors. As it can be seen in Table 3, the morphosyntactic properties of a modal form only contribute to its performativity while the other two (contextual) factors are related to the expression of performativity as well as interpersonal accessibility (2012: 43).

[10] Narrog claims that Nuyts' (co)-responsibility-based view is "too specific" in that it is limited to the epistemic domain and "may be difficult to apply to deontic and other modalities" (2012: 41), but Nuyts (2012) has unproblematically applied his view to deontic modality.

Table 3. Factors realizing performativity and evidentiality in modal evaluations (Narrog 2012: 44)

factors	contributes to
Inherent morphosyntactic properties of a modal	Performativity only
The actual use of a modal form in a specific syntactic construction	Performativity and interpersonal accessibility
Discourse and extra-linguistic context	Performativity and interpersonal accessibility

4. A more explicit framework for evaluation of objectivity and (inter)subjectivity in modality domain

Two basic questions must be answered in every functional account of the general category of modal subjectivity (employed as a cover term to include both objectivity and (inter)subjectivity) if it aspires to be adequate: what is the (functional) definition of subjectivity? And what factors realize it? The next two sections will address these questions.

4.1. The functional definition of objectivity and (inter)subjectivity in the modality domain

It seems very reasonable to divide the modality domain into two broad categories in accordance with the two main metafunctions of language (i.e., ideational vs. interpersonal in Halliday's (1970, 2004) sense). More specifically, we propose separating dynamic from non-dynamic (i.e., deontic and epistemic) modality and treating them independently when evaluating the subjectivity of the modal notions since, crucially, these two modal categories contribute to different functions of language and are, thus, in need of different characterization. The division we are proposing between these three traditional types of modality (i.e., dynamic, epistemic and deontic) has some support in the literature. Most notably, Nuyts (2005: 13) argues that epistemic and deontic modality are closer to each other than deontic and dynamic modality despite the unfortunate fact that they are often linked together under various labels such as *agent-oriented* (e.g., Bybee et al. 1994), *event* (Palmer 2001), or *root* (e.g., Coates, 1983) modality. To Nuyts (2005: 13), like epistemic modality, deontic modality is totally speaker-oriented as it has to do with the expression of speaker's deontic (mainly moral) assessment of SoAs, while dynamic modality is, in contrast, "first-argument-participant-oriented". Thus, from Halliday's systemic functional perspective, dynamic modal notions, which will be further specified and subcategorized below, are content-oriented and contribute to the ideational functional component of language, whereas epistemic and deontic modal evaluations are speaker (or rather person-

oriented) and serve an interpersonal function.[11] Furthermore, we propose making a three-partite distinction within the general category of subjectivity (similar to Narrog 2012; Nuyts 2001a and b, 2012, 2014), [12] viz. *subjectivity*, *intersubjectivity*, and *objectivity*. We, also, assume a continuum between subjectivity and intersubjectivity, but take objectivity as a discrete notion (i.e., dynamic modal notions are not 'more or less objective').

In our framework, objectivity characterizes the dynamic modality domain, while (inter)subjectivity is the feature of deontic and epistemic modality. Objectivity can be defined as follows:

> Any modal notion which contributes to the ideational functional component of language via adding something to the propositional content of its embedding utterance is construed objectively.

All dynamic modal notions fall within the scope of this functional definition and would be categorized as objective. However, dynamic modality is not limited to *ability* (or *participant-internal possibility*) and *volition*, which are typically recognized as dynamic modality categories (e.g., Halliday 1970; Palmer 1990; Verstraete 2001; Salkie 2009). *Circumstantial/neutral possibility*, [13] that is, possibility arising from external enabling/disabling circumstances (e.g., *These dirty spots can be removed from the surface by applying a suitable material.*), *circumstantial/neutral necessity* (e.g., ex. 6 above) and *participant-internal necessity* or *need*, that is, necessity having to do with the internal properties of the subject referent (e.g., *These plants must get enough water to survive*.) are also dynamic notions.[14]

There are some fairly strong arguments that lend support to our claim that dynamic modal notions (enumerated above) are inherently objective, content-related and ideational in function. Most importantly, it may be argued that dynamic modal notions encode something which is internal to the SoAs in an utterance, that is, they form *a part of* the propositional content, rather than being *about* it, signaling evaluator's (external) epistemic evaluation of its truth or his moral attitude towards it. Secondly, dynamically modalized utterances are truth-evaluable, that is, they are either true or false given the enabling and disabling circumstances. Epistemically and deontically modalized utterances are, in a stark contrast, not truth-evaluable as such. For example, the circumstantial/neutral possibility expressed by *can* in *It can sometimes rain in this desert* is a possibility

---

[11] The term 'person-oriented' is preferable over 'speaker-oriented' because in the descriptive evaluations the evaluator of a deontic or epistemic evaluation is not the speaker. It is only in performative evaluations that the speaker and evaluator are one and the same persons.

[12] However, our conception of the categories does not completely overlap with theirs.

[13] We employ the term 'neutral' (borrowed from Palmer 1987: 102-3) as an alternative to 'circumstantial' to signal that the notion is not speaker/person-related and, thus, serves an ideational function.

[14] The terms participant-internal possibility and participant-internal necessity are the terms used by Van der Auwera and Plungian (1998: 82).

due to the climatic circumstances of the desert in question regardless of the speaker or other person's evaluation. It is due to the truth-evaluable nature of dynamically modalized utterances that some scholars hesitate to classify dynamic modal notions (especially ability or capacity) as modality at all (e.g., Palmer 1986, 1990). Finally, as robustly argued by Salkie (2009), dynamic (or content-related) modal notions lack all three features of subjectivity (or speaker-relatedness), viz. no clear boundary can be established between a dynamic modal notion and the propositional content of a modalized utterance, dynamic modal notions do not require reference to the speaker (or another person) for their interpretation,[15] and they are obviously far from being performative since they have nothing to do with expressing speaker's current commitment to what he says.[16] In addition, almost all **the researchers have characterized dynamic modality with objectivity (see Table 1).**

Based on our view of objectivity dimension, alethic modality would, also, be categorized as objective because it expresses a logical evaluation which forms a part of the truth-evaluable propositional content of a modalized utterance rather than being speaker/person-related. As a matter of fact, there is no obvious difference discernible between *two plus two is four* and (its alethically modalized version) *two plus two must be four*. Furthermore, similar to dynamically modalized utterances, an utterance involving alethic modality is either true or false (i.e., it is truth evaluable).

Epistemic and deontic modality encode the participation of the people in the (speech) events through the reflection of their opinion, comments and attitudes in discourse. Thus, in a marked contrast to dynamic (and alethic) modality, epistemic and deontic evaluations serve an interpersonal (or person-related) function and can be more or less (inter)subjective depending on the number of people involved in making the evaluations. It may further be argued that both deontic and epistemic evaluations have persons (not necessarily the speaker) as their epistemic or deontic source. Even in those cases where the deontic source is a set of rules and regulations, one may argue that a person or a group of persons(s) are behind passing or imposing those rules and regulations. Deontic and epistemic notions can, also, be said to be person-related in that their interpretation in the context requires reference to person(s) as the epistemic or deontic source, that is, the primary pragmatic process of saturation in Recanati's (2004) sense (see Timotijevic 2009).The association of epistemic and deontic modality with objectivity is also something which has already been challenged. For example, Traugott (1989: 36) finds the existence of truly objective epistemic modality questionable and uses the terms 'more or less' or 'weakly or strongly' subjective epistemic modality instead.

---

[15] Timotijevic (2009) takes this as the defining feature of 'objective modal auxiliaries' (e.g., can).

[16] However, in our opinion (and in line with Nuyts 2001a) performativity is an independent dimension and should not be confused with (inter)subjectivity.

Therefore, regarding the functional definition of (inter)subjectivity, we subscribe to the views of those who, more or less, associate (inter)subjectivity with the *degree of sharedness* assigned to epistemic/deontic evaluations in modalized utterances (especially, Nuyts 2001a and b, 2012; Narrog 2012; Portner 2009; Papafragou 2006; but, to some extent, also Collins 2007, 2009; Huddlestone and Pullum et al. 2002).[17] In other words, the degree of (inter)subjectivity of epistemic/deontic evaluations depends directly on the number of people sharing it. The terms *subjectivity* and *intersubjectivity* appear to be very appropriate and, more in accord with what is commonly (and philosophically) thought of the notions involved: subjective means an evaluation having to do with only one thinking mind, while intersubjective means an evaluation shared among a group of thinking people. Thus, we define (inter)subjectivity dimension in modal evaluations as follows:

> An epistemic/deontic evaluation is construed as subjective if it is indicated that the evaluation and its evidence/deontic source belong to its evaluator alone (a single-evaluator evaluation). Otherwise, it is construed more or less intersubjectively.

It should be noted that in performative evaluations it is the speaker who is the evaluator, but evaluator is typically (but not necessarily) someone else in descriptive evaluations. In addition, even, the most intersubjective evaluations (i.e., those shared among a very large number of people) cannot be regarded as objective because they are still person-related. Figure 1 schematically presents our conception of objectivity and (inter)subjectivity dimensions in the modality domain.

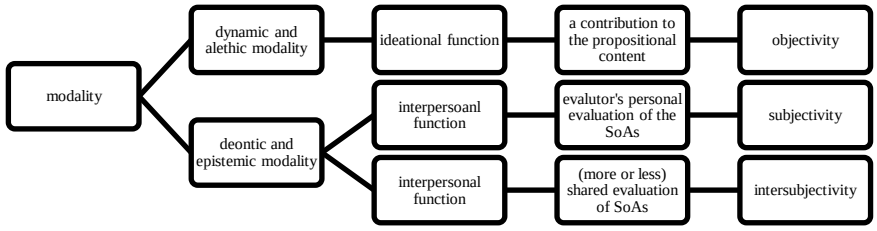


Figure 1. Objectivity and (inter)subjectivity in the modality domain

Performativity has no place in our conception of (inter)subjectivity dimension and the way it is evaluated in the deontic and epistemic modality domains (cf. Coates 1983; Palmer 1990; Verstraete 2001; Salkie 2009; Narrog 2012), because not only performative evaluations but also descriptive ones involve (inter)subjectivity dimension. The crucial difference between performative and descriptive modal evaluations is that in the latter the speaker basically reports another evaluator's

[17] There are fundamental differences among the views of these researchers (see section 2 and 3), but they all share a common core: shared vs. non-shared evaluation.

(and sometimes his own) epistemic or deontic evaluation of the SoAs rather than performatively doing the evaluation at the moment of speaking. As a matter of fact, reporting or describing one's own or someone else's subjective or intersubjective evaluation can by no means influence the degree of its (inter)subjectivity from its evaluator's perspective. However, we are by no means suggesting that performativity is not an important dimension in epistemic and deontic modal evaluations (see Lyons 1977; Verstraete 2001). Performativity is simply independent from (inter)subjectivity. By way of illustration, compare *I think you may be mistaken* (involving the speaker's subjective here-and-now evaluation of a certain SoAs, which is performative) with *I thought you might be mistaken* (expressing, again, the speaker's subjective but, this time, descriptive epistemic evaluation of SoAs). The epistemic evaluations expressed by *think* and *thought* in these sentences are both construed subjectively regardless of their performativity status. In these sentences the presence of the first person subject (*I*) in the immediate linguistic context lends an undeniable subjectivity to epistemic evaluations expressed by the modality markers. We will speak of the factors realizing (inter)subjectivity in the epistemic and deontic domains in the next section. It appears that it is taking performativity as the defining feature of subjectivity that has led some scholars to regard descriptive epistemic and deontic evaluations as 'objective' (e.g., Papafragou 2006: 1965, example (8) above).

4.2. How is inter(subjectivity) realized in deontic and epistemic domains?

As we argued in the previous section, dynamic modal notions are inherently objective, but realization of (inter)subjectivity in deontic and dynamic domains is a far more complex issue. Four factors have been proposed in the modality literature to realize subjectivity within the sphere of the deontic and epistemic modality, at least in written language, (most notably, Nuyts 2001a and b, 2012; Narrog 2012): the inherent properties of modality markers, syntactic patterns embedding modality markers, and the linguistic and extralinguistic context within which modality markers are employed.

Inherent morphosyntactic properties of epistemic and deontic modality markers are only related to the expression of performativity dimension (see Narrog 2012: 44; Verstraete 2001) and have, thus, nothing to do with signaling the degree of (inter)subjectivity of modal evaluations. In a sharp contrast, embedding syntactic patterns of certain (but not all) epistemic and deontic modal forms do actively signal (inter)subjectivity status of the modal evaluations expressed. For instance, in (12) the passive and impersonal structures signal that the (descriptive) epistemic evaluations expressed by *think* and *possible* are both intersubjective, that is, they are shared by a larger community of the people than the evaluator alone (see Nuyts (2001a) for an extensive discussion).

(12)

It was *thought/possible* that the current president would be reelected in the next term.

In the same vein, linguistic and extralinguistic contexts both bear a remarkable potential for indicating the degree of sharedness or (inter)subjectivity of (deontic and epistemic) modal evaluations. As far as the linguistic context is concerned, the presence of (inter)subjectivity-expressing elements in the immediate or wider linguistic context can directly signal the (inter)subjectivity status of a modal evaluation. For example, the presence of the first person pronouns (e.g., *I, us, we, our, my*, etc.) in the linguistic context of a modality marker is one of the main explicit indicators of subjectivity of the modal evaluations. By extralinguistic context we mean the general world knowledge accessible to the language users (or linguists for that matter) concerning the SoAs which can help determine the degree of (inter)subjectivity of a modal evaluation. The three contextual factors involved in the expression of (inter)subjectivity in deontic and epistemic domains are schematically presented in Figure 2**.**

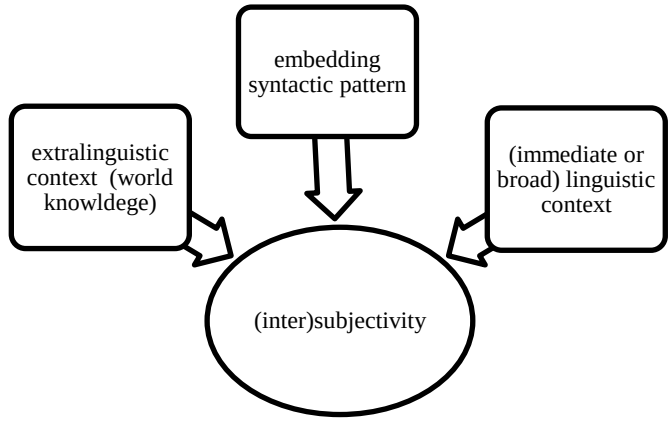


Figure 2. Contextual factors involved in the expression of (inter)subjectivity in the non-dynamic sphere

It must be noted that the three contextual factors in Figure 2 can either work in isolation or chorus to express the degree of (inter)subjectivity of modal evaluations. In fact, the more information one can obtain from these three factors, the more reliable would be the evaluation of degree of (inter)subjectivity he makes. However, care must be taken that, unlike objectivity, (inter)subjectivity is not a categorical concept with two extreme poles (i.e., subjectivity and intersubjectivity), but rather it is as a scalar concept. In fact, the larger the group of the people or knowers indicated as sharing a certain epistemic or deontic evaluation via these three contextual factors, the higher would be the degree of

intersubjectivity of an epistemic or deontic modal evaluation. To sum up, we can operationally define (inter)subjectivity as follows:

> an epistemic or deontic evaluation expressed by a modal form is construed as subjective if it is signaled, through either its embedding syntactic pattern, (immediate or broad) linguistic context, its extralinguistic context or a combination of these contextual factors, that the evaluation and its evidence/deontic source belong to its evaluator alone, otherwise it receives a more or less intersubjective interpretation depending on the number of people indicated as sharing the evaluation.

In the everyday use of language, almost always, at least, one of the three contextual factors in Figure 2 signals the (inter)subjectivity status of a modal evaluation. In other words, one of these contextual factors is both necessary and sufficient for signaling the degree of (inter)subjectivity of a deontic or epistemic modal evaluation. However, presence of more than one contextual factors can considerably reinforce the expression of (inter)subjectivity and lead to a more reliable evaluation on the part of a linguist. Thus, when one sets out to evaluate the degree of (inter)subjectivity of a modal evaluation, the first (and probably the easiest) step is to find clues for its realization in the syntactic pattern embedding it (or rather the pattern it has chosen to appear in). If no clues are found in its syntactic pattern, then one needs to move on to investigate the (immediate and wider) linguistic context of a modal form to find (inter)subjectivity-encoding elements. Finally, if no (inter)subjectivity-expressing elements could be identified in the linguistic context, one has to resort to the extralinguistic context (or general world knowledge) to determine the degree of (inter)subjectivity. Admittedly, finding extralinguistic clues for the degree of (inter)subjectivity of an evaluation is not an easy task, especially if one is not among the target addressees of a modalized utterance and/or does not have the relevant extralinguistic information. However, we did not come across any modal evaluations whose relative degree of (inter)subjectivity could not be determined via, at least, one of the three contextual factors. To sum up, it may be tentatively claimed that the most reliable factor for evaluating the degree of (inter)subjectivity of a modal evaluation is the embedding syntactic pattern of the modal form that encodes it. This is followed by (immediate or broad) linguistic context and (finally) the extralinguistic context of a modal form (Figure 3). However, further substantiation of this claim (or hypothesis) is in need of a separate qualitative study involving interviews with language users to ask them about the ways they evaluate the degree of (inter)subjectivity of modal evaluations they read or hear.

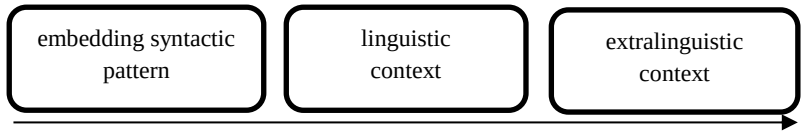


Figure 3. Relative reliability of the factors involved in the evaluation of (inter)subjectivity

Despite its supposedly lower reliability for evaluating the degree of (inter)subjectivity of deontic and epistemic evaluations, extralinguistic context can, at times, be a very reliable contextual factor for evaluating the exact degree of (inter)subjectivity if one happens to have enough world knowledge about the SoAs being evaluated. In such a situation one may, even, be able to say exactly how (inter)subjective a modal evaluation is. For instance, it is certainly much easier for a Translation Studies scholar to determine the degree of (inter)subjectivity of the epistemic evaluation made in (13) than a biologist or chemist. A Translation Studies scholar would interpret the epistemic evaluation expressed by the harmonic combination *must certainly* as intersubjective in (13) since he is well aware that there is a group of researchers who subscribe to this view and the evidence for it is shared among them.

(13)

> Cultural filtering *must certainly* have an impact on the outcome of a translation done from a socio-politically dominant language into a much weaker one.

Although extralinguistic context is, probably, the least reliable factor in evaluating the degree of (inter)subjectivity of modal evaluations, it can at times be the only contextual factor available for an analyst or language user for such an evaluation. In addition, it can always collaborate in indicating the (inter)subjectivity status of a modal evaluation, that is, one can hardly argue that extralinguistic context does not contribute to the indication of (inter)subjectivity where the other more tangible contextual factors are already present. [18]

[18] One of the reviewers commented that the operational system proposed for evaluation of (inter)subjectivity in the paper "appears to be subject to uncertainty just like the proposals reviewed above". We believe that our proposal can be subject to a comparatively lower degree of uncertainty due to the more explicit and operational definitions we have offered for the dimensions involved, the presence of three (rather one) contextual factors, discarding performativity as the defining component of subjectivity and the distinction we made between dynamic and non-dynamic modality. As far as the contextual factors are concerned, the embedding syntactic pattern and linguistic context of modality markers are fairly reliable contextual factors for the realization (and for that matter evaluation) of degree of (inter)subjectivity. Extralinguistic context may not be as reliable as the other two in evaluating the degree of (inter)subjectivity assigned to the modal evaluations, but it is, fortunately, only one of the three contextual factors involved. Nevertheless, it is not advisable to discard

Our proposed operational framework has some merits over the other contextual proposals for the definition and evaluation of general category of subjectivity. Most importantly, it offers a comparatively more explicit framework for the evaluation of subjectivity based on the clear functional-operational definitions of all three notions involved. Especially, objectivity has not received a proper operational definition of its own in the existing accounts and has always been relegated to position of the 'opposite notional counterpart of subjectivity.' In our view, objectivity is seen as an independent dimension characterizing only dynamic modality domain. Thus, we propose doing away with notions such as 'objective deontic' or 'objective epistemic' evaluations for good. Secondly, the framework is not meant to be used for the evaluation of only certain modal forms (e.g., modal auxiliary verbs) and types (deontic and epistemic) but rather seeks to account for subjectivity across a wider range of modal forms and types. Unlike most of the existing accounts, we do not limit dynamic modality to ability and volition and regard the three other dynamic notions (i.e., circumstantial/neutral possibility/necessity and participant-external necessity or need) as objective, too. Dynamic modality, in general, and these three subcategories, in particular, have often been neglected in the other contextual proposals (e.g., Nuyts 2001a and b, 2012, 2014; Salkie 2009; Narrog 2012) Thirdly, we established a conceptual link between dynamic modality, objectivity, content-relatedness, and ideational function of language, on the one hand, and epistemic/deontic modality, (inter)subjectivity, person-relatedness, and involvement with pragmatic saturation and interpersonal function of language, on the other. This is a significant link which has been missing in the contextualist approaches such as those of Nuyts (2001a and b, 2012, 2014) and Narrog (2012). Fourthly, we did away with performativity as the defining feature of (inter)subjectivity. In addition, we determined the status of alethic modality and argued that it is an objective modal category. Nevertheless, we consider our proposal as only one small step ahead in the way of more reliable evaluation of the elusive category of subjectivity.

4.3. Applying the framework

In this section we will analyze a few examples (14 to 23) containing typical modal forms (i.e., modal auxiliaries, modal adverbs, modal predicative adjectives and mental state predicates) and expressing dynamic, epistemic and deontic modal notions in the light of the proposed framework. Our goal is to observe its efficiency in evaluating the objectivity and degree of (inter)subjectivity of the

extralinguistic context from the proposed operational system due to the fact that it is simply a less reliable factor than the other two. If a language user has the relevant background knowledge, which is usually the case in real life use of language, this factor can play a crucial role in evaluating the degree of (inter)subjectivity of a modal evaluation. From an analyst's point of view, extralinguistic context may be a less helpful factor in comparison with the other two, though.

modal notions these forms and types express. The purpose is not to analyze all the possible modal forms as it is beyond the scope and space of this paper and requires a separate large scale corpus-based investigation.

The epistemic evaluation encoded by *may* in (14) is a descriptive one in that the writer is reporting other researchers' evaluation of a certain SoAs rather than expressing his own hear-and-now (performative) evaluation.[19] The typical syntactic pattern embedding English modal auxiliaries and modal adverbs (i.e., the pattern of the type *X may/might/must p*) does not indicate the degree of (inter)subjectivity of the evaluations these markers express (see Nuyts (2001a) for an extensive treatment of the issue). However, the linguistic context of *may* explicitly shows that the evaluation it encodes is highly intersubjective (i.e., it is an evaluation shared among a (probably) large number of researchers who have access to its relevant evidence): the evaluation is (part of) a *widely held assumption*.

(14)

> In a letter to Nature they report that rivers the size of the Thames have been discovered which are moving water hundreds of miles under the ice. The finding challenges the widely held assumption that the lakes evolved in isolated conditions for several millions years and thus may support microbial life that has evolved 'independently.'
> (From www.sciencedaily.com/releases/2006/04/060430003843.htm, accessed on 2017/20/2).

Example (15) contains an epistemic evaluation encoded, again, by *may* to which the writer (who is, also, the evaluator) is performatively committed. As usual, the embedding syntactic pattern of *may* neither indicates subjectivity nor intersubjectivity. Unfortunately, the broader linguistic context, does not contain any (inter)subjectivity-expressing elements, either. Then, one (as an analyst or a language user) has to resort to the extralinguistic context (or his general world knowledge) to evaluate the degree of (inter)subjectivity of the epistemic evaluation. In fact, (15) is a researcher's direct quotation regarding the findings of his study conducted within the framework of the show *Who Wants to be Millionaire?*. Thus, the epistemic evaluation and its evidence, most probably, belong to the researcher as the evaluator. The evaluation is based on his observations and personal reasoning. Thus, according to the extralinguistic context we can regard the epistemic evaluation expressed by *may* as subjective or nearer to subjectivity than intersubjectivity pole on the (inter)subjectivity continuum.

[19] Recall that the descriptivity (or performativity) of the modal evaluations does not affect the degree of their (inter)subjectivity and is simply an independent dimension.

(15)

> "Knowing a precise value for this coefficient will allow economists to understand individual behaviour better. In particular in relation to the take of individual insurance, pensions plans or explaining saving and investment behaviour in general. Furthermore, it may be useful to the government when it decides whether or not to undertake large public projects with uncertain consequences such as the construction of new hospitals, the funding of the education system, or even the decision to go to war." (From http://www.ucl.ac.uk/media/library/millionaire, accessed on 2017/20/2).

In (16) we have two cases of medium strength (performative) epistemic evaluation encoded by *probably* to which the speaker as the evaluator is committed at the moment of speaking. Like modal auxiliary verbs, the typical embedding syntactic pattern that epistemic modal adverbs appear in (i.e., the pattern of the type *x probably/possibly/certainly p*) is neutral in terms of (inter)subjectivity. Fortunately, the linguistic context contains two first person pronouns (*our* and *I*) which explicitly mark the evaluations as subjective, that is, the (performative) epistemic evaluations are indicated to belong to the evaluator (and speaker) alone.

(16)

> Our childhood was probably just like everybody else's. You know, we each got on each other's nerves. And I probably made it a goal to get on her nerves, being a little irritating brother. (From Corpus of Contemporary American English or COCA) [20]

Example (17) contains a (performative) epistemic evaluation expressed by the predicative adjective *certain.* According to Nuyts (2001a: 66-67) an impersonal pattern of the type *It is/is not certain that P* indicates that the evaluation is intersubjective since the copula *be* "categorically asserts" the evaluation (Perkins 1983, 67). In the same vein, the extralinguistic context points to the fact that the evaluation does not belong to the writer alone, but rather it is shared along with its evidence among the relevant community of archeologists. Thus, in (17) the syntactic pattern embedding *certain* and the extralinguistic context work in concord to reinforce each other and signal that the epistemic evaluation is highly intersubjective.

[20] Data from this 520-millions-word corpus is available at http://corpus.byu.edu/coca/.

(17)

> First Napatan king to rule over Egypt: the campaign in which he defeated his enemies in Egypt is vividly described in the Egyptian hieroglyphic inscription on a great stela set up at the Amun temple in Gebel Barkal. It is not certain to what extent he controlled all regions of Egypt following this conquest.
> (From http://www.ucl.ac.uk/museums-static/digitalegypt/chronology/piy.html, accessed at 2017/20/2)

To Verstraete (2001) example (18) includes two 'objective deontic' evaluations because "[t]he necessity expressed by […] *must* […] cannot be assigned to the speaker" (2001: 1508), i.e., it is non-performative. According to our framework, however, the necessity encoded by *must* is regarded as *dynamic objective* (rather than 'deontic objective') because it encodes a circumstantial necessity arising from the external enabling/disabling (physical) conditions not a person-related evaluation. Interestingly enough, Verstraete himself admits that this use of *must* "might perhaps more appropriately be called 'dynamic'" (2001:1508). In fact, the notion expressed by *must* in (18) adds something to the truth-evaluable propositional content of the utterance rather than its interpersonal component. It should be kept in mind that, unlike epistemic or deontic necessity, circumstantial/neutral necessity (as a dynamic notion) can only characterized as objective, not 'more or less objective.'

(18)

> But to reach orbit an object must accelerate to a speed of about 17,500 miles per hour (28,000 kilometers per hour, called satellite speed or orbital velocity) in a horizontal direction; and it must reach an altitude of more than 100 miles (160 kilometers), in order to be clear of the atmosphere. (Verstraete 2001: 1508)

In (19) *could* and *would* express the dynamic and, thus, objective modal notions of ability and volition, respectively. In contrast, the (descriptive) deontic necessity encoded by *must* appears to be highly intersubjective. The deontic necessity expressed by *must* is a descriptive one since the writer, who is the first person narrator of the story, is not involved in the necessity imposed (as a deontic source) at all, but rather is the reporter of the events. As it is typically the case with modal auxiliaries, the syntactic pattern embedding *must* does not signal the degree of (inter)subjectivity of the evaluation it encodes. The linguistic context does not contain any (inter)subjectivity-expressing elements, either. Nevertheless, by resorting to general world knowledge one can figure out that the source for the deontic necessity expressed by *must* is a "social or ethical norm" (as Salkie (2009: 84) puts it) or a rather general safety norm. In fact, many people would share the deontic evaluation as almost everyone is well aware that when *dogs are too fierce*, one should know better than leaving his safety for danger. Thus, the deontic

necessity expressed by *must* is shared between the evaluator (i.e., the driver) and a larger community of people. Certainly, the evaluator/the driver is not imposing a deontic necessity by *must*, but rather he is reminding the passengers of a generally safety norm.

(19)

> Sometimes the hills were so steep that, despite our driver's haste, the horses could only go slowly. I wished to get down and walk up them, as we do at home, but the driver would not hear of it. "No, no," he said. "You must not walk here. The dogs are too fierce." (Bram Stoker, Dracula, cited in Salkie 2009: 83)

In (20), like (19), the syntactic pattern and linguistic context leave us clueless as to the degree of (inter)subjectivity of the deontic evaluation expressed by *must*. However, when we resort to the extralinguistic context, the (performative) deontic obligation is readily marked as subjective since this text is part of the *Macmillan English Dictionary for Advanced Learner's* User Guide and it is almost common world knowledge that the producer of a dictionary is the source of the deontic necessities mentioned in the User Guide. In fact, there seems to be neither a motivation nor a necessity to indicate that the dictionary developer shares the deontic evaluation expressed by *must in* (20) with a larger community of people.[21]

(20)

> If you are using Windows® 2000 or Windows® XP, only users in particular groups can install programs. For Windows® 2000, you must be a member of the Administrators group or the Power User group to install the CD. For Windows® XP, you must be a member of the Computer Administrators group to install the CD. (Salkie 2009: 83).

In (21) the passivized mental state predicate (*was thought*) expresses a (descriptive) epistemic evaluation. As far as the expression of (inter)subjectivity is concerned, the passive syntactic structure marks the epistemic judgement as intersubjective, that is, the evaluation (and its supporting evidence) is signaled to belong to a larger number of people than a single epistemic evaluator.

[21] One of the reviewers commented that "to me, if anything, (20) appears to be more objective than (19)". But, as we have argued, the notion of objectivity exclusively belongs to the realm of dynamic modality as dynamic modal notions contribute to the propositional content of modalized utterances. In contrast, in both (19) and (20) we are dealing with a person-related deontic necessity, which must be analyzed in terms of degree of (inter)subjectivity. Besides, in our framework, objectivity is a discrete (rather than scalar) notion, and we should not speak of 'more or less objective' notions in the dynamic modality sphere.

(21)

> Originally, it was thought that Bok globules would only have a single star and that was it, but multiple star formation may be fairly common. Even so, none of this appears to happen overnight Even the densest Bok globules may take a few million years before they start to contract and form stars. (COCA)

Example (22) is a very illustrative example of collaborative work of the embedding syntax and linguistic context of a modal expression in the evaluation of degree of intersubjectivity. Similar to (21), in (22) the passive structure embedding *think* indicates that the epistemic evaluation is intersubjective. In the same vein, the linguistic context containing the plural first person possessive pronoun (*our*) shows that the judgement expressed by *think* and its relevant evidence has been indicated to belong exclusively to the four authors of the study. Of course, it is clear that the epistemic evaluation expressed in (21) sits higher on the degree of intersubjectivity than the one in (22) on the (inter)subjectivity scale since the latter is shared between only four people, not a large community of knowers.

(22)

> In our study, it was thought that the presence of a large timing device might produce similar effects to those of the speeded directions condition. (COCA)

Unlike (21) and (22), *think* in (23) encodes a totally subjective (performative) epistemic evaluation. (23) has to do with the speaker's (and evaluator's) personal teaching experiences. The subjectivity of the evaluation expressed by *think* is undoubtedly, and more than anything else, due to the presence of multiple first person pronouns (*I, me, my* and *myself*) in the surrounding linguistic context.

(23)

> Making myself more aware of kids' needs and coming up with strategies in the classroom is important. I think I offer many chances for students to succeed; my job as a teacher is to make sure that they have gotten the knowledge. RTI encouraged me to assist student learning in small groups and individually. (COCA)

As the analyses of the examples 14 to 23 must have demonstrated, our proposed operational system works well in evaluating the objectivity and degree of (inter)subjectivity of the modal notions expressed by various modal forms and types. In Table 4 we have summarized the results of the analyses. It must be, once again, noted that in all the examples involving deontic and epistemic evaluations extralinguistic context can play a significant role in signaling their degree of (inter)subjectivity if one happens to be among the potential addressees of the

modalized utterances and has the relevant world knowledge. As may be seen in Table 4, almost always, at least, one of the three contextual factors proposed in the framework indicates the relative degree of (inter)subjectivity of the modal evaluations.

Table 4. Summary of the analyzed examples

No	modality marker	form	type	objectivity or (inter)subjectivity?	contextual factor(s) involved
14	may	modal auxiliary	epistemic	intersubjective	linguistic context
15	may	modal auxiliary	epistemic	subjective	extralinguistic context
16	Probably (2)	modal adverb	epistemic	subjective	linguistic context
17	certain	modal adjective	epistemic	intersubjective	syntactic pattern (and extralinguistic context)
18	Must (2)	modal auxiliary	dynamic	objectivity	NA
19	could	modal auxiliary	dynamic	objectivity	NA
	would	modal auxiliary	dynamic	objectivity	NA
	must	modal auxiliary	deontic	intersubjectivity	extralinguistic context
20	Must (2)	modal auxiliary	deontic	subjective	extralinguistic context
21	think	Mental state predicate	epistemic	intersubjective	syntactic pattern
22	think	Mental state predicate	epistemic	intersubjective	syntactic pattern and linguistic context
23	think	Mental state predicate	epistemic	subjective	linguistic context

5. Summary

Having critically reviewed the various (traditional and recent) approaches to the definition and evaluation of subjectivity, we proposed a more explicit and operational framework for its definition and evaluation. Modality domain was divided into two broad categories in terms of the main functions of language in Halliday's sense. It was argued that all dynamic modal notions are content-oriented and serve an ideational function by adding something to the propositional content of modalized utterances, whereas deontic and epistemic modal notions

have an interpersonal or person-related function. Accordingly, we argued that all dynamic modal notions are inherently objective, whereas deontic and epistemic evaluations can be more or less (inter)subjective depending on three contextual factors. We explicitly defined both objectivity and (inter)subjectivity in functional-operational terms. When a modal notion adds something to the propositional content of an utterance it is regarded as objective in our proposed framework. In a marked contrast, (inter)subjectivity is the indication of degree of sharedness of an evaluation and its related evidence or deontic source from the perspective of an evaluator. The dimension of (inter)subjectivity as contextual effect is realized by (at least) one or a combination of three contextual factors: the embedding syntactic pattern, the (inter)subjectivity-encoding item(s) in (immediate or broad) linguistic context and (information retrievable from) extralinguistic context of a modal expression. Performativity is independent from (inter)subjectivity and cannot be taken as the defining component of the latter since not only performative, but also descriptive evaluations can be evaluated in terms of degree of (inter)subjectivity.

The next step in this line of research would be to apply this operational framework to a larger number of English modal evaluations and, also, to evaluations in other languages to observe its validity and cross-linguistic applicability. Furthermore, some qualitative research is needed to shed light on the way language users evaluate objectivity and the degree of (inter)subjectivity of modal evaluations they read or hear in real life situations. Such research can show the extent to which our proposed framework is in line with the way language users evaluate subjectivity. The future research will, also, need to focus on the more fine-grained delineation of the three contextual factors (co)responsible for the realization of (inter)subjectivity, especially the 'extralinguistic context' factor. For one thing, future investigations can focus of identification and categorization of (inter)subjectivity-expressing linguistic elements which (intersubjectivity) in the linguistic context. We believe that further research on the definition and evaluation of subjectivity dimension in modality, in particular, and other linguistic domains, in general, can feed into the ultimate development of speech/writing recognition applications or AI systems which would be capable of recognizing and interpreting the degree of subjectivity of human utterances. However, there appears to be a very long way to go in that direction.

References

Bally, Charles. 1965. *Linguistique generale et linguistique francaise*. 4e éd, revue et corrigee. Berne.

Benveniste, Emile. 1971. *Problems in General Linguistics*. Coral Gables, Florida: University of Miami Press.

Bréal, Michel. 1897. *Essai de sémantique*. Paris: Hachette.

Bybee, Joan L., Revere Dale Perkins, and William Pagliuca. 1994. *The evolution of grammar: Tense, aspect, and modality in the languages of the world*. University of Chicago Press.

Coates, Jennifer. 1983. *The semantics of the modal auxiliaries*. London: Groom Helm.

Collins, Peter. 2007. Can/could and may/might in British, American and Australian English: a corpus-based account. *World Englishes* 26(4). 474-491.

Collins, Peter. 2009. *Modals and Quasi-modals in English*. Amsterdam and New York: Rodopi.

Cornillie, Bert. 2009. Evidentiality and epistemic modality: on the close relationship between the two. *Functions of language* 16(1). 44-62.

De Smet, Hendrik, and Jean-Christophe Verstraete. 2006. Coming to terms with subjectivity. *Cognitive Linguistics* 17(3). 365-92.

Depraetere, Isle. 2014. Modals and lexically saturated saturation. *Journal of Pragmatics* 71. 160-177.

Depraetere, Isle. 2016. Modality. In Nick Riemer (ed.), *The Routledge Handbook of Semantics*, 370-386. Routledge.

Foley, William A., and Robert D. Van Valin. 1984. *Functional syntax and universal grammar*. Cambridge: CUP.

Halliday, Michael. 1970. Functional diversity in language as seen from a consideration of modality and mood in English. *Foundations of language* 6. 322-361.

Halliday, Michael. 2004. *An Introduction to Functional Grammar*. 3rd edn. London: Arnold.

Hengeveld, Kees. 1987. Clause structure and modality in Functional Grammar. In Johan van der Auwera and Louis Goossens (eds.), *Ins and outs of the predication*, 53-66. Dordrecht: Foris.

Hengeveld, Kees. 1988. Illocution, mood and modality in a functional grammar of Spanish. *Journal of Semantics* 6. 227-69.

Hengeveld, Kees. 1989. Layers and operators in Functional Grammar. *Journal of linguistics* 25(1). 127-157.

House, Juliane. 2012. Subjectivity in English Lingua Franca Interactions. In Nicole Baumgarten, Inke Du Bois and Juliane House (eds.), *Subjectivity in language and in discourse*, 139-155. Emerald.

Huddleston, Rodney, and Geoffrey K. Pullum. et al. 2002. *The Cambridge grammar of English Language*. Cambridge: CUP.

Kratzer, Angelika. 1977. What 'must' and 'can' must and can mean. *Linguistics and philosophy* 1(3). 337-355.

Kratzer, Angelika. 2012. *Modals and conditionals: New and revised perspectives*. vol. 36. Oxford: OUP.

Langacker, Ronald W. 1991. *Foundations of Cognitive Grammar: Descriptive Application.* vol. 2. Stanford, California: Stanford University Press.

Langacker, Ronald W. 2002. Deixis and subjectivity. In Frank Brisard (ed.), *Grounding: The Epistemic Footing of Deixis and Reference*, 1-28. Berlin: Mouton de Gruyter.

Larreya, Paul, and Claude Rivière. 1999. *Grammaire explicative de l'anglais.* Nouvelle édn. London: Longman.

Lyons, John. 1977. *Semantics*. Cambridge: CUP.

Lyons, John. 1995. *Linguistic Semantics: An Introduction*. Cambridge: CUP.

Narrog, Heiko. 2005. On defining modality again. *Language Sciences* 27. 165-192.

Narrog, Heiko. 2012. *Modality, subjectivity, and semantic change: a cross-linguistic perspective*. OUP.

Nuyts, Jan. 1992. *Aspects of a Cognitive-Pragmatic Theory of Language*. Amsterdam: Benjamins.

Nuyts, Jan. 1993. Epistemic modal adverbs and adjectives and the layered representation of conceptual and linguistic structure. *Linguistics* 31. 933-969.

Nuyts, Jan. 2001a. *Epistemic modality, language, and conceptualization: A cognitive-pragmatic perspective*. vol. 5. Amsterdam and Philadelphia: John Benjamins Publishing.

Nuyts, Jan. 2001b. Subjectivity as an evidential dimension in epistemic modal expressions. *Journal of pragmatics* 33(3). 383-400.

Nuyts, Jan. 2005. The modal confusion: On terminology and the concepts behind it. In Klinge, Alex, and Henrik Høeg Müller (eds.), *Modality: Studies in form and function*, 5-38. London: Equinox.

Nuyts, Jan. 2006. Modality: Overview and linguistic issues. In William Frawley (ed.), *The expression of modality*, 1-26. Walter de Gruyter.

Nuyts, Jan. 2012. Notions of (inter) subjectivity. *English Text Construction* 5(1). 53-76.

Nuyts, Jan. 2014. Subjectivity in modality, and beyond. In Andrzej Zuczkowski, Ramona Bongelli, Ilaria Riccioni and Carla Canestrari (eds.), *Communicating Certainty and Uncertainty in Medical, Supportive and Scientific Contexts*, 13-30. Amsterdam: Benjamins.

Palmer, Frank R. 1986. *Mood and modality*. Cambridge CUP.

Palmer, Frank R. 2001. *Mood and modality*, 2nd edn. Cambridge: CUP.

Palmer, Frank R. 1990. *Modality and the English modals.* 2nd edn. London: Longman.

Papafragou, Anna. 2000. Modality: Issues in the semantics-pragmatics interface. Elsevier.

Papafragou, Anna. 2006. Epistemic modality and truth conditions. *Lingua* 116. 1688-1702.

Perkins, Michael R. 1983. *Modal Expressions in English*. London: Frances Pinter.

Portner, Paul. 2009. *Modality*. Oxford: OUP.

Recanati, François. 2004. *Literal meaning*. CUP.

Salkie, Raphael. 2009. Degrees of modality. In Salkie, Raphael, Pierre Busuttil, and Johan van der Auwera (eds.), *Modality in English: Theory and description*, vol. 58, 79-103. Walter de Gruyter.

Timotijevic, Jelena. 2009. Another look at modals and subjectivity. In Salkie, Raphael, Pierre Busuttil, and Johan van der Auwera (eds.), *Modality in English: Theory and description*, vol. 58, 105-22. Walter de Gruyter.

Traugott, Elizabeth Closs. 1989. On the rise of epistemic meaning: An example of subjectification in semantic change. *Language* 65. 31-55.

Traugott, Elizabeth Closs, and Ekkehard König. 1991. The semantics pragmatics of grammaticalization revisited. In Traugott, Elizabeth Closs, and Bernd Heine (eds.), *Approaches to Grammaticalization*, vol. 2, 189-218. John Benjamins Publishing.

Traugott, Elizabeth Closs. 1995. Subjectification in grammaticalisation. In Stein, Dieter, and Susan Wright (eds.), *Subjectivity and Subjectivisation: Linguistic Perspectives*, 31-54. Cambridge: CUP.

Traugott, Elizabeth Closs, and Richard B. Dasher. 2002. *Regularity in semantic change*. Cambridge: CUP.

Traugott, Elizabeth Closs. 2010. (Inter)subjectivity and (inter)subjectification: a reassessment. In avidse, Kristin, Lieven Vandelanotte, and Hubert Cuyckens (eds.), *Subjectification, Intersubjectification and Grammaticalization*, 29-71. Berlin: Mouton de Gruyter.

Van der Auwera, Johan, and Vladimir A. Plungian. 1998. Modality's semantic map. *Linguistic Typology* 2. 79-124.

Verstraete, Jean-Christophe. 2001. Subjective and objective modality: interpersonal and ideational functions in the English modal auxiliary system. *Journal of Pragmatics* 33. 1505-28.

ACQUIRING EPISTEMIC MODAL AUXILIARIES: THE ROLE OF THEORY OF MIND*

HANNAH N. M. DE MULDER
Leiden University Centre for Linguistics (LUCL)
h.n.m.de.mulder@hum.leidenuniv.nl

ANNETTE GAUTERO-WATZEMA
Independent researcher
awatzema@gmail.com

Abstract
This study considers the acquisition of epistemic modal auxiliaries (EMA) in typically developing (TD) and autistic children and the role that Theory of Mind (ToM) plays in this development. Nineteen Dutch-speaking TD children and ten autistic children received tasks assessing ToM, general linguistic ability and EMA comprehension. Results suggest that both groups have some understanding of the Dutch EMA system, but no significant differences were found between groups. However, once participants were divided into ToM passers and ToM failers irrespective of clinical diagnosis, results showed that passers performed significantly better than failers on EMA understanding. Having a good understanding of others' mental states, as evidenced by full marks on ToM tasks, thus seems important in the acquisition of EMA.

Keywords: epistemic modality, Theory of Mind, word learning, autism

1. Introduction

If we assume that an average English-speaking adult knows around 60,000 words and that children start to learn words around their first birthday, this means that the child has to learn an average of around 10 new words a day every day until she reaches adulthood (Bloom 2000, 2002). Exactly how children are capable of this stunning accomplishment is not entirely clear, but many researchers agree that children's understanding of other people's intentions is a fundamental part of the word learning process (Baldwin 1993; Baldwin & Moses 2001; de Villiers 2007; Happé & Loth 2002). The aim of this paper is to investigate to what extent the

* We would like to thank the children and staff of the primary schools that participated for their help in making this study possible: Prinses Beatrix in Rotterdam, de Tender in Schagen, Bommelstein in Heerhugowaard and de Schoter Duijn and de Dijk in Den Helder, in The Netherlands. We are very grateful to Peter Coopmans and Frank Wijnen for their help and support in all aspects of this study. Thanks also go to Floor Landa, for her assistance in testing the children. Finally, we wish to thank Utrecht University for its financial support of this study.

development of Theory of Mind (ToM), the ability to explicitly reason about others' (potentially false) beliefs (Perner, Leekam & Wimmer 1987), is related to the child's understanding of epistemic modal auxiliaries (e.g. must, might, may) that refer to an understanding of the speaker's belief for their interpretation.

1.1. Theory of Mind and the acquisition of epistemic modal auxiliaries

Epistemic modal auxiliaries such as the italicised words in 1) and 2) relate to how strongly the speaker is committed to the truth of a proposition. In other words: what degree of belief the speaker has in her utterance (Papafragou 1998).

(1) The keys *must* be in the drawer
(2) It *may* be raining

In Example 1), use of the modal auxiliary 'must' indicates that the speaker is very certain of the location of the keys and hence strongly believes they are in the drawer; use of 'may', on the other hand, indicates a considerably less strong belief in the truth of the statement.

Various studies have looked at young children's understanding of modal auxiliaries. Hirst and Weil (1982), for instance, considered three- to six-year-old children's understanding of the modals 'must', 'may' and 'should' and found that only the oldest children (starting at 5;6) could make strength distinctions between the modals, a result that was replicated in a more recent study by Noveck, Ho and Sera (1996). Similarly, in Moore, Pure and Furrow (1990)'s study of the epistemic modal auxiliaries 'must', 'might' and 'could', even the oldest children (six-year-olds) did not demonstrate ceiling performance, although this study did find significant improvement in the understanding of these terms between the ages of three and four. Studies assessing comprehension of epistemic modal auxiliaries in English-speaking children thus generally find basic comprehension of these terms when children are around five years old. The few studies that have been conducted with children acquiring languages other than English point to a similar age of acquisition range. For instance, De Mulder (2015) demonstrates that Dutch-speaking four- and five-year-olds have some understanding of the contrasts between the Dutch modal auxiliaries *moeten* 'must be' and *kunnen* 'may be', although the five-year-olds did not yet demonstrate ceiling performance. However, Bascelli and Barbieri's (2002) study on the Italian modal auxiliaries *dovere* 'must' and *potere* 'may' found a somewhat later age of acquisition as basic comprehension was only present in six-year-olds, with development still continuing in eight-year-olds.

These studies thus suggest that a dawning understanding of epistemic modals begins at around four years old with development continuing for at least a number of years more. Given how understanding of these terms would seem to rely on the child's capacity to understand 'the mind behind the speech', one factor that might be important in the acquisition of these vocabulary items is the child's ToM

development. A number of previous studies have considered whether there is a relationship between the acquisition of 'mental' areas of language and the development of ToM. Moore et al. (1990), for example, looked at four-year-olds' understanding of both mental state verbs ('know' and 'think') and modal auxiliaries ('must' and 'might') and demonstrated that the children's understanding of the mental terms was related to their understanding of beliefs. Similarly, De Mulder (2015) found an association between the understanding of mental state verbs, modal auxiliaries and modal adjuncts and ToM development in typically developing Dutch-speaking four- and five-year-olds. Furthermore, Papafragou (2001), Papafragou and Li (2001) and Ifantidou (2005) have all argued that children's acquisition of evidential markers (the linguistic encoding of information source), is constrained by the development of ToM, in particular the understanding of the source of beliefs and speaker certainty.

1.2. Acquiring mental state terms when ToM development is impaired

Although previous research thus suggests that there is a relationship between the development of mental areas of language and the child's ToM development in typically developing children, the existence of this relationship would be more robustly supported by demonstrating that impairment in ToM development is associated with an impairment in mental language development. In this sense then, it is insightful to consider to what extent the development of mental language in autistic children is comparable to that of typically developing children. It is generally assumed that many autistic children are specifically impaired in their ability to appreciate the mental states of others (Baron-Cohen, Leslie & Frith 1985; Frith 2003; Leslie & Thaiss 1992; Yirmiya, Erel, Shaked & Solomonica-Levi 1998). They typically fail to take into account the speaker's focus of attention when she utters a novel word, leading to problems in lexical acquisition (Baron-Cohen, Baldwin & Crowson 1997) and, when they are older, they also tend to fail standard ToM tasks that typically developing children start to pass at around four years old. If autistic children thus show a delay or impairment in their understanding of mental language as compared to typically developing children, this would support the suggestion that children rely on their understanding of beliefs in order to fully understand vocabulary items that relate to mental states. Following this line of reasoning, various studies have investigated the development of mental language in individuals with autism. Ziatas, Durkin and Pratt (1998), for instance, considered the development of the mental state verbs 'know', 'think' and 'guess' in relation to false belief understanding and found autistic children to perform significantly worse than typically developing children. This finding is consistent with various other studies. For instance, Tager-Flusberg (1992) demonstrates that autistic children use significantly less cognitive mental state language in comparison to language-matched children with Down syndrome, Baron-Cohen et al. (1994) suggest that autistic children are impaired in their recognition of mental state terms as compared to mentally handicapped children

and Kazak, Collis and Lewis' (1997) found that autistic children were impaired in their ability to understand the mental state terms 'know' and 'guess'.

It should be noted, however, that not all studies that have investigated mental language use in autistic populations have found deficits. The four high-functioning Dutch-speaking autistic adults assessed in De Roeck and Nuyts (1994, cited in Papafragou 2002), for instance, displayed typical use of three markers of epistemic modality in their spontaneous speech (the adjective/adverb *waarschijnlijk* 'probable' or 'probably', the mental state verb *denken* 'think' and the modal auxiliary *kunnen* 'can/may'). This finding suggests that at least certain autistic individuals may be able to acquire various domains of mental language. However, De Roeck and Nuyts' study does not mention performance on standard ToM tasks for these participants. Given the finding that high-functioning autistic individuals do tend to be able to pass standard ToM tasks at some point (Frith & Happé 1994; Happé 1993), it is possible that these adults actually have attained an understanding of others' beliefs that is sufficient for proficient mental state language use (see also Papafragou 2002).

Although previous studies thus suggest that there is a relationship between ToM development and the comprehension of mental state language, additional studies that assess both ToM ability and mental state language understanding in autistic and typically developing children would be useful to determine what role ToM has to play in the development of mental language. The current study adds to previous studies in that the sample of autistic children is relatively young (six-year-olds) as compared to similar studies and their understanding of Dutch epistemic modal auxiliaries is investigated, whereas many other studies in this domain focus on English and mental state verbs. If, despite these differences, the current study also demonstrates that children with a ToM deficit show an impairment in their understanding of mental language, this would serve to underscore the importance of ToM development in the acquisition of mental state language.

2. Method

2.1. Participants

Nineteen Dutch-speaking typically developing children (11 girls and 8 boys) between ages 6;0 and 7;0 (M = 6;5 years) and ten Dutch-speaking autistic children (2 girls and 8 boys) between ages 5;1 and 8;4 (M = 6;11 years) participated in this study. The two groups did not differ significantly in age ($t(27) = -1.88$; $p = .18$). According to school records, all the children in the autistic group had been clinically diagnosed with a disorder in the autistic spectrum as assessed by medical specialists in the Netherlands using DSM-IV criteria (three children were diagnosed with PDD-NOS, seven with autistic disorder). The children in this group were all attending either special schools or special programmes within

regular schools catered to autistic children. Children in the autistic group were included in the study if they were aged between five and eight years old and if they were willing to participate. The autistic sample was recruited from four different schools; the typically developing children all came from one regular primary school. The teachers of the typically developing group reported that none of them had any identified disorders or impairments, nor was there any suspicion of possible disorders.

In order to be able to pinpoint a specific difference in mental language ability, it was important to ensure that the autistic and the typically developing children had comparable linguistic ability outside of the mental domain. To this end, two language tasks, testing receptive vocabulary and language comprehension at the sentential level, were incorporated in the assessment. Receptive vocabulary was assessed using the Dutch version of the Peabody Picture Vocabulary Test III (PPVT, Schlichting 2005) and an abbreviated version of the Reynell test for language comprehension (van Eldik, Schlichting, lutje Spelberg, van der Meulen & van der Meulen 1995) was employed to measure sentential language comprehension. Independent t-tests demonstrated that the autistic children were comparable to the typically developing children regarding language ability outside of the mental domain (vocabulary: $t(27) = -1.19$; $p = .25$; sentential language comprehension: $t(27) = -1.21$; $p = .24$).

2.2. Procedure

Children were tested individually in a separate room in their school building. For the typically developing children, two adults were present throughout the session. The data from the typically developing children was a subset of a larger dataset, approximately 30 minutes of which relates to the data presented in this paper. The autistic children received one session of approximately 30 minutes in which the data reported on here were gathered (some additional tasks were also included in this session, but are not reported on further). Children in the typically developing group received various different testing orders; children in the autistic group received a set order (ToM, vocabulary, understanding of modal terms and sentential language comprehension). For practical reasons, it was not possible to have two adults present for the autistic group, so only one experimenter conducted the testing for the autistic children. All children received stickers in return for their participation.

2.3. Materials

2.3.1. Epistemic modal auxiliaries

This task employed a test design very similar to the one used in Ziatas et al. (1998). Children were shown two boxes (one red, one blue) in which a sticker could be hidden. Two puppets gave the child information on the location of the sticker by using the Dutch epistemic modal auxiliaries *moeten* ‘must be’, *zullen* ‘shall be’

and *kunnen* 'may be' contrastively (see Example 3). To find the sticker, children had to prefer the box referred to by *moeten* ('must be') over the one referred to by *zullen* ('shall be') or *kunnen* ('may be') and the box referred to with *zullen* ('shall be') over the one with *kunnen* ('may be')[1].

(3) *De sticker moet/zal/kan wel*[2] *in de rode doos liggen*
The sticker must/shall/may [interjection] in the red box lie
'The sticker must/shall/may be in the red box'

In six trials each contrastive pair was used twice. Children were not allowed to look inside the boxes in between trials. Prior to the test trials, two practice trials were included in which one puppet stated simply where the sticker was (de sticker ligt in de rode doos, 'the sticker is in the red box') and the other puppet stated where the sticker was not (de sticker ligt niet in de blauwe doos, 'the sticker is not in the blue box'). The child received a sticker for each of the practice trials and was promised more stickers if she played the game and paid attention.

2.3.2. Theory of Mind

Two different types of false belief tasks were conducted (separated by an additional task that is not reported on further): a location change task (Wimmer & Perner 1983) and an unexpected contents task (Perner et al. 1987). In the location change task, children were told a story in which a marble is initially placed in a blue box by a doll named Laura, but is later placed in a red box, unbeknownst to Laura. On Laura's return, the child is asked to predict and explain Laura's searching behaviour ('Where will Laura look for the marble?' and 'Why will she look there?'). A maximum of two points could be scored on this task. For the explanation question, answers were scored correct if they referred to the original location of the object or the character's belief regarding the location of the object. Two control questions pertaining to the first and the final location of the marble were also included to ensure that the child had understood the story and remembered the key events.

For the unexpected contents task, children were introduced to a new doll and told that he would like to play a game with them, but that he was too tired at the moment. The child was then shown a familiar container (an egg box) and asked what was in it. Once the expected answer had been given, the true contents of the box, a toy car, were shown. The box was then closed again and the child was asked three test questions: 'When you first saw the box, what did you say was in it?' (assessing the child's own false belief), 'What will the doll say is in this box when we ask him what's in it?' (assessing the doll's false belief) and 'Why will the doll

[1] 14 Dutch-speaking adults also completed this task and demonstrated that they performed at ceiling with a 96,8% accuracy rate. The difference in speaker certainty conveyed by the three modal terms used here is thus robust for adult speakers of Dutch.

[2] The interjection 'wel' doesn't add a specific meaning to the sentence, but it serves to make the whole sentence sound more natural.

say that?' (assessing their ability to explain the doll's false belief). It should be noted that none of the ToM questions contained mental state verbs, so that lack of understanding of these terms would not hinder performance. Three points could be scored for this task. Answers to the explanation question were scored correct if they referred to the box' misleading appearance or the doll's mistaken belief regarding the contents of the box. A control question pertaining to the actual contents of the box was included to ensure children had remembered this aspect of the story.

3. Results

Table 1 shows the descriptive statistics specified separately for the typically developing and the autistic children.

Table 1. Means, SD and ranges for TD (N = 19) and autistic (N = 10) groups

	Typically developing				Autistic		
	Mean	SD	Range		Mean	SD	Range
Age (months)	77	3.85	72 -84		83	11.63	61-100
ToM-LC	2	0	2		1.4	0.84	0-2
ToM-UC	2.58	0.77	1-3		1	1.16	0-3
ToM total	4.58	0.77	3-5		2.4	1.71	0-5
LC-Vocab	94.21	13.44	68-120		100.8	15.59	75-120
LC-Sent	24.47	2.67	19-28		26.3	5.54	14-33
Epistemic terms	4	1.41	2-6		3.7	0.68	3-5

Note. SD: Standard Deviation; TD: Typically Developing; ToM-LC: ToM location change; ToM-UC: ToM unexpected contents; LC-Vocab: Language Comprehension-Vocabulary; LC-Sent: Language Comprehension Sentential. Maximum scores: ToM location change = 2; ToM unexpected contents = 3; ToM total score = 5; no vocabulary maximum; Sentence comprehension = 34; Epistemic terms = 6

Children could receive a score of six for their understanding of epistemic modal auxiliaries, with a score of three indicating chance performance (children could choose between two boxes). Although, as expected, the autistic children scored significantly lower on the ToM tasks than the typically developing children ($t(27) = 4.76$; $p = .003$; $r = .68$)[3], unexpectedly, there was no significant difference between the two groups in their understanding of epistemic modal auxiliaries ($t(27) = 0.63$; $p = .45$). The typically developing children had a somewhat higher mean score than the autistic children (4 vs. 3.7 respectively), but this difference was not significant. Additional analyses demonstrated that both groups were performing better than would be expected on the basis of chance ($t(18) = 3.08$; p

[3] r indicates Pearson's correlation coefficient r as a measure of effect size. All reported effect sizes are larger than .50 indicating a large effect (see Field 2005).

= .006; r = .59 for the typically developing children and $t(9) = 3.28$; p = .01; r = .74 for the autistic children). These results thus suggest that both groups of children have at least some understanding of the contrasts between the three different epistemic modal auxiliaries employed in this task, although scores were not yet at ceiling level, indicating that development in this domain is still in progress at six years old. Furthermore, the lack of difference in performance between the two groups suggests that the autistic children are not impaired in this domain of mental language ability as compared to typically developing children of the same age and general verbal ability.

While this result is initially surprising, an explanation may lie in the ToM performance of the children in both groups. As the ranges for the ToM total score demonstrate, not all typically developing children passed all the ToM tasks and not all the autistic children failed them. In fact, five out of 19 typically developing children did not answer all ToM questions correctly and one out of the ten autistic children did give the right answer to all ToM questions. This thus entailed that the initial assumption underlying this study (i.e., that the six-year-old autistic children would all display a marked ToM deficit, whereas the typically developing six-year-old children were expected to perform well on the ToM tasks), was not borne out by the data. Potentially then, if the children are divided into groups dependent on their performance on the ToM tasks, regardless of clinical diagnosis, lesser performance on ToM tasks would turn out to be related to problems in understanding epistemic modal auxiliaries. In order to consider this possibility, an additional analysis was thus conducted. In this analysis the performance of ToM 'passers', that is, the 15 children, 14 typically developing and one autistic (seven girls, eight boys), who scored five out of five on the ToM total score was compared to that of the ToM 'failers', the 14 children, five typically developing and nine autistic (six girls, eight boys), who scored less than five on the ToM total score. The descriptive statistics of these two groups are presented in Table 2.

Table 2. Means, SD and ranges for ToM passers (N = 15) and failers (N = 14)

	ToM passers				ToM failers		
	Mean	SD	Range		Mean	SD	Range
Age (months)	79	4.24	73 -86		80	10.46	61-100
ToM-LC	2	0	2		1.57	0.76	0-2
ToM-UC	3	0	3		1	0.88	0-2
ToM total	5	0	5		2.57	1.4	0-4
LC-Vocab	96.47	12.13	73-120		96.5	16.79	68-120
LC-Sent	25.07	3.22	19-31		25.14	4.66	14-33
Epistemic terms	4.53	1.13	3-6		3.21	0.89	2-5

Note. SD: Standard Deviation; ToM-LC: ToM location change; ToM-UC: ToM unexpected contents; LC-Vocab: Language Comprehension-Vocabulary; LC-Sent: Language Comprehension Sentential. Maximum scores: ToM location change = 2; ToM unexpected contents = 3; ToM total score = 5; no vocabulary maximum; Sentence comprehension = 34; Epistemic terms = 6

The ToM pass-fail criterion employed here has been used previously in the literature (e.g. Ding, Wellman, Wang, Fu & Lee 2015) and was used in this study to clearly distinguish children with a well-developed and consistent ability to appreciate others' false beliefs from those with less advanced (although not necessarily absent) abilities in this domain. If those children with a more tenuous understanding of others' mental states are found to perform significantly worse on the epistemic modal auxiliary task than the ToM passers, provided they do not also perform worse on the measures of general linguistic ability, this would suggest that having a fully developed, explicit ToM might be an important component in coming to understand epistemic modal auxiliaries. In order to assess this possibility, the same analyses were conducted as reported for the comparison of the typically developing and autistic children. T-tests demonstrated that the ToM passers with their mean epistemic modal score of 4.53 were performing significantly above chance ($t(14) = 5.28$; $p < .000$; $r = .82$), whereas the ToM failers were not ($t(13) = .90$; $p = .39$). An independent t-test demonstrated that the difference in epistemic modal auxiliary understanding for these two groups was significant ($t(27) = -3.48$; $p = .002$; $r = .56$), suggesting that ToM passers had a better understanding of epistemic modals than ToM failers (see also Figure 1).

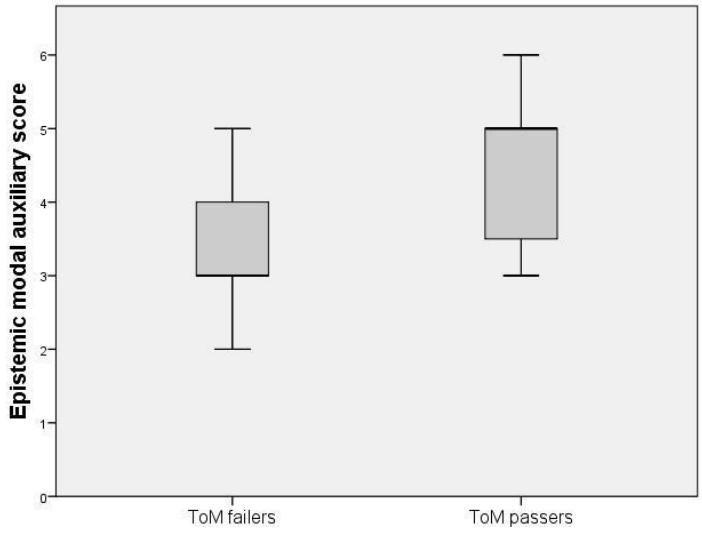


Figure 1. Distribution of epistemic modal auxiliary scores for ToM passers and failers

However, as the ToM passers and failers had not been matched on age and linguistic ability initially, the better performance on the epistemic modal auxiliary task of the ToM passers may simply be down to the ToM passers being older or generally more verbally able than the ToM failers. If the claim is to be made that it is specifically the child's ToM ability that plays an important role in understanding epistemic modal auxiliaries, it thus has to be demonstrated that the

ToM passers do not differ from the failers with regards to age or general linguistic ability. Independent t-tests demonstrated that this was indeed the case: there were no significant differences between the two groups regarding either age ($t(27) = 0.26$; $p = .80$) or general linguistic ability (vocabulary: $t(27) = 0.01$; $p = 1.00$; sentential language comprehension: $t(27) = 0.05$; $p = .96$). The ToM passers were thus not significantly older or more linguistically advanced in a general sense than the ToM failers.

4. Discussion

This study investigated the relationship between ToM and the understanding of epistemic modal auxiliaries in Dutch typically developing and autistic children. Given the finding from previous research that Dutch five-year-olds demonstrate a basic understanding of the Dutch epistemic modal auxiliary system (De Mulder 2015), it was expected that the typically developing six-year-olds would be capable of understanding the strength distinctions between the various epistemic modal auxiliaries. This expectation was indeed borne out by the data: the typically developing six-year-olds showed above chance performance in their understanding of the epistemic terms. Furthermore, in line with Bascelli and Barbieri's (2002) findings suggesting that Italian children have not yet fully understood epistemic modal auxiliaries even at eight years old, the performance of the Dutch six-year-olds was not yet at ceiling level, suggesting that their understanding of the epistemic modal auxiliary system is still developing at this age.

Not all prior expectations were upheld by the findings of this study, however. Given results of previous research (e.g. Ziatas et al. 1998), it was hypothesised that the autistic children's ToM deficit would hinder them in their ability to acquire epistemic modal auxiliaries, thereby placing them at a disadvantage as compared to typically developing children of the same age. However, the results of this study showed a somewhat different picture. Although the typically developing children did outperform the autistic children on the ToM tasks, there was no significant difference in epistemic modal auxiliary understanding between the groups. This finding thus seems to go against the idea that ToM plays an important role in the acquisition of mental language. However, on closer inspection, it became clear that one autistic child was capable of answering all ToM questions correctly whereas five typically developing children were not. The initial assumption, that the autistic children would fail the ToM tasks and the typically developing children would pass them, thus proved to be false. In order to consider whether an advanced understanding of others' mental states (as evidenced by a full score on the ToM tasks), irrespective of clinical diagnosis, might be related to epistemic modal auxiliary understanding, the data were further analysed by considering the performance of ToM passers as compared to ToM failers. Indeed, if the children were divided according to performance on the ToM

tasks, the results showed the expected pattern: the ToM passers outperformed the failers in their understanding of epistemic modal auxiliaries. That this difference between the two groups was not just down to ToM passers' enhanced general cognitive ability is supported by the finding that the ToM passers and failers did not differ significantly in age or linguistic ability outside of the mental domain. Although, of course, it may be the case that these two groups did differ on measures in the linguistic or general cognitive domain that were not assessed in this study (e.g. conversational ability, Capps, Kehres & Sigman 1998), the fact that these two groups did not differ significantly in their performance on either the receptive vocabulary or the sentence comprehension tasks suggests that the ToM passers are not just simply better at any demanding cognitive task than ToM failers. This finding thus suggests that the ability to demonstrate a consistent and explicit understanding of others' minds may be an important factor in developing an understanding of epistemic modal auxiliaries. After all, this is what distinguishes the ToM passers from the failers: those children who were capable of predicting and explaining another's false belief correctly and doing so consistently in more than one context (i.e. in both the change of location and unexpected contents scenarios) were the ones that demonstrated a higher level of epistemic modal auxiliary understanding. Although most of the ToM failers did display some understanding of others' beliefs (only two of the ToM failers, both autistic, received zero points for the ToM tasks, all other children had at least one false belief question correct), perhaps this more limited understanding of others' mental states does not help the child to the same extent in the acquisition of this domain of mental language. In this sense then, what might be relevant to the acquisition of vocabulary items that rely on an understanding of the mind is a relatively full appreciation of others' mental states, not just a dawning understanding.

In underscoring the importance of ToM development in the acquisition of mental language, these findings are thus in line with much of previous research (e.g. De Mulder 2015; Ifantidou 2005; Moore et al. 1990; Papafragou 2001; Papafragou & Li 2001). However, the fact that Ziatas et al. (1998), a study very comparable to the current study, obtained somewhat different results requires clarification. Whereas Ziatas et al. (1998) demonstrated that typically developing children outperformed autistic children in their understanding of mental state verbs, the current study did not find a significant difference in epistemic modal auxiliary understanding between the two groups. As both the sample size (12 autistic children in Ziatas et al. and 10 in the current study) and the number of autistic children passing ToM tasks (2 out of 12 in Ziatas et al. and 1 out of 10 in this study) were similar, these factors cannot explain the different outcomes. However, Ziatas et al. employed one ToM task in which the child only had to predict looking behaviour. In the current study, the children received two ToM tasks in which children had to predict and explain behaviour, thus providing a more stringent measure of ToM. The two autistic children that passed the ToM task in Ziatas et al. may thus not have counted as ToM passers had they been

assessed in this study. If this analysis is correct, the results of the current study and Ziatas et al. (1998) converge: children who have an advanced understanding of others' mental states outperform children with less developed ToM ability when it comes to the understanding of mental state language.

The results of this study thus point to the importance of explicit ToM development in the acquisition of mental language. This ability starts to develop from around four years old onwards, but, as this study demonstrates, even typically developing six-year-olds are not always capable of consistently articulating this understanding across different contexts (although all typically developing six-year-olds in this sample did display at least some understanding of false beliefs). However, this finding should not be taken to say that children under four have no understanding of false beliefs. Indeed, various studies have suggested that an implicit understanding of others' false beliefs may already be present in infants (e.g. Baillargeon, Scott & He 2010). However, this knowledge is not explicitly available until many years later: children younger than four years old cannot call upon this knowledge consciously in order to answer questions that require an explicit response (which cannot be due only to verbal limitations, given young children's failure on nonverbal analogues of standard false belief tasks, see Call and Tomasello 1999). The process by which understanding of others' mental states develops thus takes quite a number of years, with the development of explicit and consistent understanding extending until the child is at least around six years old. Potentially then, it is this advanced understanding that is important in helping the child on her way in solving the mental language part of the language acquisition puzzle.

Of course, it should be noted that this claim does not entail that the child's understanding of mental language may not also help her on her way in ToM development. Indeed, although previous research suggests that understanding other people's mental states affects the child's linguistic development, a number of studies have demonstrated that language development, particularly the acquisition of sentential complementation constructions involving mental state verbs like 'know' and 'think' (see de Villiers 2005, 2007), plays an important role in ToM development (see Astington & Baird 2005; Milligan, Astington & Dack 2007). However, given that differences in epistemic modal auxiliary understanding were found to be related to ToM ability in two groups that did not differ in general linguistic ability, the current study does underscore the importance of having a well-developed, explicit ToM for the child to be able to understand epistemic modal auxiliaries.

References

Astington, Janet Wilde and Baird, Jodie. A. 2005. *Why Language Matters for Theory of Mind*. Oxford: Oxford University Press.

Baillargeon, Renée. Scott, Rose M. and He, Zijing. 2010. False-belief understanding in infants. *Trends in Cognitive Sciences* 14. 110-118.

Baldwin, Dare A. 1993. Infants' ability to consult the speaker for clues to word reference. *Journal of Child Language* 20. 395-418.

Baldwin, Dare A. and Moses, Louis J. 2001. Links between social understanding and early word learning: Challenges to current accounts. *Social Development* 10. 309-329.

Baron-Cohen, Simon, Baldwin, Dare and Crowson, Mary. 1997. Do children with autism use the speaker's direction of gaze strategy to crack the code of language? *Child Development* 68. 48-57.

Baron-Cohen, Simon, Leslie, Alan M. and Frith, Uta. 1985. Does the autistic child have a 'theory of mind'? *Cognition* 21. 37-46.

Baron-Cohen, Simon, Ring, Howard, Moriarty, John, Schmitz, Bettina, Costa, Durval and Ell, Peter. 1994. Recognition of mental state terms. Clinical findings in children with autism and a functional neuroimaging study of normal adults. *British Journal of Psychiatry* 165. 640-649.

Bascelli, Elisabetta and Barbieri, Maria S. 2002. Italian children's understanding of the epistemic and deontic modal verbs dovere must and potere may. *Journal of Child Language* 29. 87-107.

Bloom, Paul. 2000. *How Children Learn the Meaning of Words.* Cambridge, MA: MIT Press.

Bloom, Paul. 2002. Mindreading, communication and the learning of names for things. *Mind & Language* 17. 37-54.

Capps, Lisa, Kehres, Jennifer and Sigman, Marian. 1998. Conversational abilities among children with autism and children with developmental delays. *Autism* 2. 325-344.

Call, Josep and Tomasello, Michael. 1999. A nonverbal false belief task: The performance of children and great apes. *Child Development* 70. 381-395.

De Mulder, Hannah. 2015. Developing communicative competence: A longitudinal study of the acquisition of mental state terms and indirect requests. *Journal of Child Language* 42. 969-1005.

de Villiers, Jill. G. 2005. Can language acquisition give children a point of view? In Janet Wilde Astington and Jodie A. Baird (eds.) *Why Language Matters for Theory of Mind*. Oxford: Oxford University Press: 186-219.

de Villiers, Jill. 2007. The interface of language and Theory of Mind. *Lingua* 117. 1858-1878.

Ding, Xiao. P., Wellman, Henry M., Wang, Yu, Fu, Genyue and Lee, Kang. 2015. Theory-of-Mind training causes honest young children to lie. *Psychological Science* 26. 1812-1821.

Field, Andy. 2005. *Discovering Statistics Using SPSS*. London: Sage publications.

Frith, Uta. 2003. *Autism: Explaining the Enigma*. Oxford: Blackwell publishing.

Frith, Uta and Happé, Francesca. 1994. Language and communication in autistic disorders. *Philosophical Transactions: Biological Sciences* 346. 97-104.

Happé, Francesca. 1993. Communicative competence and theory of mind in autism: A test of relevance theory. *Cognition* 48. 101-119.

Happé, Francesca and Loth, Eva. 2002. 'Theory of Mind' and tracking speakers' intentions. *Mind & Language* 17. 24-36.

Hirst, William and Weil, Joyce. 1982. Acquisition of epistemic and deontic meaning of modals. *Journal of Child Language* 9. 659-666.

Ifantidou, Elly. 2005. Evidential particles and mind-reading. *Pragmatics & Cognition* 13. 253-295.

Kazak, Sibel, Collis, Glyn M. and Lewis, Vicky. 1997. Can young people with autism refer to knowledge states? Evidence from their understanding of know and guess. *Journal of Child Psychology and Psychiatry* 38. 1001-1009.

Leslie, Alan. M. and Thaiss, Laila. 1992. Domain specificity in conceptual development: Neuropsychological evidence from autism. *Cognition* 43. 225-251.

Milligan, Karen, Astington, Janet Wilde and Dack, Lisa Ain. 2007. Language and Theory of Mind: Meta-analysis of the relation between language ability and false-belief understanding. *Child Development* 77. 622-646.

Moore, Chris, Pure, Kiran and Furrow, David. 1990. Children's understanding of the modal expressions of speaker certainty and uncertainty and its relation to the development of a representational theory of mind. *Child Development* 61. 722-730.

Noveck, Ira A., Ho, Simon and Sera, Maria. 1996. Children's understanding of epistemic modals. *Journal of Child Language* 23. 621-643.

Papafragou, Anna. 1998. The acquisition of modality: Implications for theories of semantic representation. *Mind & Language* 13. 370-399.

Papafragou, Anna. 2001. Linking early linguistic and conceptual capacities: The role of theory of mind. In Alan Cienki, Barbara Luka and Michael Smith (eds.) *Conceptual Structure, Discourse and Language IV*. Stanford: CSLI Publications: 169-184.

Papafragou, Anna. 2002. Modality and theory of mind: Perspectives from language development and autism. In Sjef Barbiers, Frits Beukema and Wim van der Wurff (eds.) *Modality and its Interaction with the Verbal System*. Amsterdam: Benjamins: 185-204.

Papafragou, Anna and Li, Peggy. 2001. Evidential morphology and theory of mind. In Barbora Skarabela, Sarah Fish and Anna H.-J. Do (eds.) *Proceedings from the 26th Annual Boston University Conference on Language Development*. Somerville, MA: Cascadilla Press: 510-520.

Perner, Josef, Leekam Susan. R. and Wimmer, Heinz. 1987. Three year olds' difficulty with false belief: the case for a conceptual deficit. *British Journal of Developmental Psychology* 5. 125-137.

Schlichting, Liesbeth. 2005. *Peabody Picture Vocabulary Test-III-NL*. Harcourt test Publishers: Amsterdam.

Tager-Flusberg, Helen. 1992. Autistic children's talk about psychological states: Deficits in the early acquisition of a theory of mind. *Child Development* 63. 161-172.

Van Eldik, Marcia C. M., Schlichting, Liesbeth E. P. T., lutje Spelberg, Henk C., van der Meulen, Bieuwe F. and van der Meulen, Sjoeke. 1995. *Reynell Test voor Taalbegrip*. Nijmegen: Berkhout.

Wimmer, Heinz and Perner, Josef. 1983. Beliefs about beliefs: Representation and constraining function of wrong beliefs in young children's understanding of deception. *Cognition* 13. 103-128.

Yirmiya, Nurit, Erel, Osnat, Shaked, Michal and Solomonica-Levi, Daphna. 1998. Meta-analyses comparing theory of mind abilities of individuals with autism, individuals with mental retardation and normally developing individuals. *Psychological Bulletin* 124. 283-307.

Ziatas, Kathryn, Durkin, Kevin and Pratt, Chris. 1998. Belief term development in children with autism, Asperger syndrome, specific language impairment, and normal development: Links to theory of mind development. *Journal of Child Psychology and Psychiatry* 39. 755-763.

THE PAST PERFECT IN CORPORA AND EFL/ESL MATERIALS

TIM VANDENHOEK
Asia University
timv@asia-u.ac.jp

Abstract
Corpora provide teachers and materials developers with the ability to ensure that the instructions they use in class and in teaching materials correctly reflect natural use. This paper examines the ways in which grammar reference books and two types of EFL/ESL materials present the past perfect aspect and whether they do so accurately. It will be argued that there are several issues concerning how these books present the grammar point. Many of the books surveyed provide incomplete explanations of when and how the form is used and several contain usage guidelines that are not supported by available corpus data. The paper ends with several recommendations to improve how the form is presented to teachers and learners.

Keywords: corpus, ESL, EFL, materials, past, perfect

1. Introduction

The period around the late 1990s and early 2000s saw a great deal of research published on the topic of corpus linguistics. One of the most notable was the Longman Grammar of Spoken and Written English, largely regarded as the first comprehensive corpus-based grammar. One of the co-authors of that work, in an article entitled 'Will Corpus Linguistics Revolutionize Grammar Teaching in the 21st Century?', argues that the use of corpus linguistics had the potential to have a transformative impact on the way grammar is taught in ESL/EFL situations, arguing that the effects would be felt in an increase of focus on analyzing the specific genre in which a form is used, an integration between grammar teaching and associated vocabulary and a "shift from accuracy to the appropriate conditions for use for alternative grammatical constructions" (Conrad 2000: 549). Biber and Conrad (2001) hold that teacher intuition is too unreliable to be used as a basis for creating materials. Liu and Jiang argue that corpus based-materials can give students a better sense of when and why a particular form is used (2009). Conrad (2001) is one of several researchers who argue that textbooks of the time had failed in making use of corpus data to improve teaching materials. Barbieri and Eckhardt (2007: 321) survey several studies and conclude that there is often a "great divide" between how language is presented in textbooks and what corpora data reveals about use in authentic situations. Other authors suggest that while materials

developers seek to include frequency information in textbooks, they often use intuition rather than actual data when making these decisions (Biber and Reppen 2002).

Over ten years have passed since the publication of many of those articles and in that time, accessing corpora has become far easier due to the spread of the internet. It thus seems an appropriate point at which to evaluate if and how corpus data has affected grammar teaching. This study seeks to assess how well grammar reference books and materials designed for EFL/ESL students present the use of the past perfect aspect. The first section will detail general information about the form and how it is represented in grammar reference books primarily used by instructors. The next section describes how the form is dealt with by EFL/ESL books. The following section describes corpora results from the Corpus of Contemporary American English (COCA) and the British National Corpus (BNC). These results are then compared and contrasted to the information from the previous two sections. The final section presents teaching implications and recommendations and suggestions for further research.

2. The Past Perfect Aspect in Grammar Reference Books

2.1. Form and Meaning

The past perfect is formed with the auxiliary verb 'had' and a past participle verb. It is used in three main ways. The base function is marking which of two past events occurred first (Swan 2005; Sinclair 2005; Cecle-Murcia and Larsen-Freeman 1999; Parrot 2000), in which case it is often used in compound sentences containing one clause with the past perfect and a second with the simple past. The past perfect identifies which event occurred first (furthest in the past), functioning as the past of the past, as in "The family had finished their supper when she got home" (Davies 2004). The speaker's arrival is marked by the simple past and the family finishing the meal with the past perfect, establishing that the meal ended before the speaker arrived. The use of the simple past in both clauses – 'The family finished their supper when she got home'– would imply that the actions were essentially concurrent. However, if rephrased as 'The family finished their supper before she got home,' the meaning is essentially the same as the original. This use can be described as optional, and various other forms and words can be used to achieve the same meaning.

The second use deals with past states and habits and mirrors the present perfect in that "the state/habit begins in the remote past and lasts up to the past point of orientation" (Jackson 1990: 93). The habits can be completed as in "It began to rain. It had not rained for months" (Davis 2004) or with the potential of continuation as in "The Cardinals had gone 47 consecutive games without losing when they scored at least four runs" (Davies 2008). In these cases, the use of the form is not required as use of time expressions and adverbials can clearly establish

the order of past events. When comparing "After we had lived there for a few years, we wanted to buy it" (Davis 2004) with 'After we lived there for a few years, we wanted to buy it,' both carry the same meaning and it is difficult to say which sentence is more natural.

In other cases, the use of the form could obscure the meaning stemming from the multiple meanings of the past perfect to show completed or ongoing actions. For the sake of clarity and comparison, the numbered examples below are those written by the author. In

(1) I had lived in northern Japan when the tsunami hit in 2011.

it is not absolutely clear whether 'had lived' refers to a completed or ongoing state. In spoken English, the contracted form of 'had' could be missed and further obscure the meaning. It would more likely, or at least more clearly, be stated as either:

(2) I lived in northern Japan before the tsunami hit in 2011. (completed)

(3) I had lived in northern Japan before the tsunami hit in 2011. (completed)

(4) I had been living in Japan when the tsunami hit in 2011. (ongoing)

(5) I was living in Japan when the tsunami hit in 2011. (ongoing)

The use of time adverbials here is more effective in establishing order than the grammatical form.

The final use is the past of the present perfect for previous experience without time reference as seen in the following example: "It was exciting when I walked into the court," Martez said. Martez said at first he was nervous because he'd never seen a judge before" (Davis 2008). This seems to be the only case in which the use of the past perfect is required, i.e. the key meaning of the sentence cannot be conveyed by changing to another verb tense or aspect or through the use of time expressions or adverbials.

The form is said to be used with a variety of time adverbials (after, as soon as, already, etc.) to "emphasize the sequence of events" (Alexander 1988: 175) as in "She didn't feel the same after her dog had died" and "When I had opened the windows, I sat down and had a cup of tea" (Swan 2005: 398-9). In a reference work based on corpus data, Biber et al. (1999: 470) state that the past perfect is used with a time adverbial in approximately 30% of all cases and several other reference works show connections, implicit or explicit, between time adverbials and the form (Swan 2005; Sinclair 2005; Cecle-Murcia and Larsen-Freeman 1999; Parrot 2000).

2.2. Functions and Use

As its structure is strongly tied to the ordering of events, the main function of the past perfect is to establish chronological order. Fiction is the area in which the past perfect is used most (see Section 4). Surprisingly, of all the grammar reference books surveyed, only Parrot (2000) and Downing and Locke (1992) make explicit the connection with written fiction and supply an example of the past perfect within a substantive narrative. None contain any examples of the non-standard uses described below.

Along with order, the form can be used for foregrounding and backgrounding information. The following examples show several different uses of the form, starting with the simplest, referring to a time within the narrative timeframe as in "Colonel Quirk had solved the car problem and money (four times the normal rate) had bought two rooms in a scumbox on the outskirts of town" (Thompson 1970). The preceding sentence describes events which take place in the timeframe of the story but are backgrounded, not reported in any detail or as main events. Examples of this type of usage (within one sentence) are common in grammar reference books, yet other authentic examples reveal that the use of the form in natural language is less straightforward such as the following:

> The briefcase was smaller than normal and reddish brown with brass hardware, sitting on the closet floor […] It was here because he'd brought it here. It wasn't his briefcase but he'd carried it out of the tower and had it with him when he showed up at the door (DeLillo 2008: 35).

The first use ('It was here because he'd brought it here') is quite clear, yet the second is much less so. It can be assumed that the third verb phrase is past perfect (elision of the auxiliary 'had' to prevent the awkwardness of writing 'had had') but from the description of the form from grammar reference books, the final verb phrase should be 'when he had shown up at the door.' This novel, which deals with the effects on several characters of the September 11 attacks on New York, is a particularly clear example of foregrounding and backgrounding. The attacks themselves are backgrounded and not described, while the emotional consequences are very much foregrounded.

A further example is less explicit and seems to rely more on the reader's ability to logically interpret the events.

> When they had arrived, on the first day, they had stood huddled with their belongings on the Terpsichoria's deck, surrounded by guards, and by women and men with checklists and paperwork. The faces of the pirates were hard, made cruel by weather. Through her fear, Bellis watched carefully, and could make no sense of them. They were disparate, a mixture of ethnicities and cultures. Their skins were all different colours (Mieville 2002).

The first sentence acts as something of an anchor, hinting that the subsequent information is also a part of the background even though, like the main narrative, it is expressed in the simple past tense. This usage appears to occur early in a new

paragraph. Without an easy method to determine the numerical frequency of this usage, it is difficult to determine how common it is. It does seem to be worthy of note as the pattern is present in the works of other authors:

> Arbeely's late father had come from a family of five brothers, and over the generations their land had been divided and redivided until each brother's parcel was so small it was hardly worth the effort of planting. Arbeely himself made barely a pittance as a tinsmith's apprentice […] In the general rush to America, Arbeely saw his chance. He bid his family farewell and boarded a steamship bound for New York (Wecker 2013: 14).

In each case, the bulk of the paragraph is background information and the only past perfect constructions occur within the first sentence.

Other uses of the form are even less standard or rule-based. The following example appears to show the past perfect as giving background to background events:

> Jack Glenn, her father, did not want to submit to the long course of senile dementia. He made a couple of phone calls from his cabin in northern New Hampshire and then used an old sporting rifle to kill himself. She did not know the details. She was twenty-two when this happened and did not ask the local police for details. What detail might there be that was not unbearable? But she had to wonder if it was the rifle she knew, the one he'd let her grip and aim, but not fire, the time she'd joined him in the woods (DeLillo 2008: 40-41).

Jack's death is a background event outside the scope of the narrative, yet it is still marked by the simple past tense. It is only when the focus turns to the events preceding his suicide that the past perfect is used which in this instance seems to function as the past of the past of the past.

Finally, an example from a different novel shows another non-standard employment of the past perfect. Though the main narrative is present simple tense, the past perfect is still used in a backgrounding function:

> She reaches a point where the Crusade flows around a stationary, drinking knot of Camden's resident, revenant alcoholics. They are why Damien had been able to afford to rent here, years before he'd made any money or bought his house. Somewhere nearby is a Victorian doss house, a vast red brick pile of a hostel for the homeless, purpose-built and hideous, and its inhabitants, however individually transitory, have congregated in the High Street since the day it first opened (Gibson 2003: 89-90).

To be clear, the above examples are those the author noticed (rather than actively sought) during the course of researching this paper and few conclusions should be drawn from them other than the suggestion that the past perfect is used in several different ways and its relation to the chronology of events is not quite as simple as grammar reference books indicate. They at least hint at the possibility that use of the form is not strictly bound or formalized. A proper examination of the use of the past perfect in novels would require a separate, more comprehensive analysis. The preceding examples also make the separate point that the observations and natural examples noticed by teachers can be relevant. While

corpora have the advantage of being large and easily searched, the examples found often lack context and are not easily examined in their role as a part of a larger text.

Moving away from novels, the function of chronological ordering is also found in media texts. As a major role of the media is reporting events that have taken place, the past perfect is used to give background information to recent developments.

> Thousands of people have donated money to pay a massive tax bill served on Chinese artist Ai Weiwei. By Monday, there had been donations totalling more than 5m yuan […] Many people believe he was served the bill because of his outspoken criticism of the government rather than because he had evaded taxes (BBC 2011).

The structure is also found in reported speech and functions in a similar past of the past manner: "Mr Berg said he had received a number of complaints from people who received both leaflets" (Davis 2004). In the above case, if the verb is not backshifted, the overall meaning would not be obscured and is another case in which use of the past perfect is not necessary.

Carter and McCarthy (2006) remark that verbs of perception often precede past perfect constructions to which Swan adds "verbs of saying and thinking" as in "I wondered who had left the door open" and "I thought I had sent the cheque a week before" (Swan 2005: 397).

Left open by most sources, however, is the issue of why and when the past perfect is used in optional cases. As noted above and by various sources (Alexander 1988; Quirk et al. 1991; Hughes and McCarthy 1998; Swan 2005), temporal sequencing can be established by careful use of the simple past and time expressions, making use of the past perfect unnecessary. Only Parrot (2000: 221) explains this tendency, stating that "we generally prefer to provide too much information rather than to risk misunderstanding."

If, as suggested, the form is not in many cases mandatory to explain the order of events, the choice to use the past perfect may be seen as

> stylistic and […] suggests a broad macrofunction for the tense form at a level beyond the sentence in terms of how clauses narrating events relate to one another, with some being backgrounded and others foregrounded as main events (Hughes and McCarthy 1998: 271).

Carter and McCarthy (2006: 624) add that it is "whether the information is considered background or foreground that determines the choice, not the fact that something happened before something else." The use of the form as part of reported speech constructions is described as "rarely obligatory" and "quite formal and prescriptive" (Cecle-Murcia 1998: 13). Parrot sums up the issue saying:

> Sometimes it is possible to choose more than one tense, and this choice make no perceptible difference to meaning. In the following examples, each author chooses a different tense. We can only speculate about whether the authors wanted to achieve particular effects of style or

> emphasis through their respective choice, or whether their choice was unconscious or arbitrary. What is clear is that either tense is possible in either context (Parrot 2000: 226).

As will be argued, despite not achieving absolute clarity, this guidance is nonetheless welcome in that it clearly allows for an open choice.

3. The Past Perfect in EFL/ESL Materials

Given the breadth of material available, it would be impossible for any survey of EFL/ESL materials to be comprehensive. The goal of this section, then, is to examine the ways in which the past perfect is presented in EFL/ESL books from major publishers. Two types of books will be examined. First, those designed for classroom use that mainly contain speaking tasks and activities (hereinafter 'textbooks'), and second, books primarily containing written grammar tasks ('grammar books').

3.1. The Past Perfect in Textbooks

To examine how the past perfect is presented in materials designed to classroom use, six textbooks were examined (Table 1 and 2). The newest editions of titles from major publishing companies were selected. Of the materials assessed, only *Touchstone 4* makes explicit reference to having been based on corpus data. In order to achieve a more in-depth understanding of how a series approaches the form, two levels (Pre-Intermediate and Intermediate) of both *Headway* and *Cutting Edge* were examined (Table 2).

Table 1. Initial presentation textbooks

Series	Series Level	CEFR level	Authors
Cutting Edge	Pre-Intermediate	A2/B1	Cunningham, Moor and Bygrave
New Headway	Pre-Intermediate	A2/B1	Soars and Soars
Four Corners	4	B1+	Richards and Bohlke
Touchstone	4	B1	McCarthy, McCarten and Sadiford

Table 2. Review presentation textbooks

Series	Series Level	CEFR level	Authors
Cutting Edge	Intermediate	B1/B1+	Cunningham, Moor and Crace
New Headway	Intermediate	B1	Soars and Soars

The past perfect is introduced to students at roughly the same level (A2/B1 of the CEFR) in all initial presentation books. There are several similarities in the way in which all books surveyed (initial and review) approach the form. First, as shown in Tables 3 and 4, all but one present the grammar as part of a written text (not a transcribed conversation). The texts themselves are almost exclusively non-fiction. The only book that initially presents the form in a fictional story is *Headway Pre-Intermediate*. There is also substantial overlap in the themes used to present the form across both initial and review presentations. Both *New Headway Intermediate* and *Four Corners 4* use biographies of famous people. *Cutting Edge Intermediate* and *Touchstone 4* both use the theme of coincidence and indeed the same story, that of two identical twins separated at birth.

Production tasks for students is another area where the books follow a similar format. The balance between fiction and non-fiction changes greatly from the presentation texts, with eight of the twelve tasks requiring fictional production. Only Four Corners 4 and Touchstone 4 rely on non-fiction production.

Two of these books (*Headway Pre-Intermediate* and *Cutting Edge Pre-Intermediate)* present the form alongside other past or narrative tenses with the former in particular doing a good job of asking students to explain how the meaning of compound sentences changes when one clause is either past perfect, past simple or past progressive. *Four Corners 4* presents the 3rd conditional (which uses the same 'had' + past participle form in one clause) in a subsequent lesson.

Moving to the way in which the form is explained in subsequent books (Table 4), neither book substantively expands the explanations given in the initial presentation. *Cutting Edge Intermediate* adds the use of past perfect in reported speech while *Headway Intermediate* again presents the form alongside other narrative tenses. *Cutting Edge Intermediate* notes the use of time adverbials with the form and shows an implicit connection between the form and 'because' (used in four of eight practice sentences in one activity).

What is generally missing from all six books is guidance on when the use of the past perfect is necessary or advisable. None of the books explicitly state cases in which the form is mandatory and some seem deliberately vague. *Touchstone 4* states that present simple or past perfect are acceptable answers for some questions but provides no guidance as to why or which is preferred. A great deal of the examples in the books contain time adverbials that are crucial to showing the order of events and thus appear to make the past perfect optional. For example, *Headway Pre-Intermediate* includes the following passage in the grammar explanation:

> If it is clear that one action was complete before, it isn't necessary to use the Past Perfect.
> I tidied up after everyone went home.
> I tidied up after everyone had gone home. (Soars and Soars 2012: 144)

Table 3. Initial past perfect presentation

Series	Unit theme	Presentation	Production tasks	Other grammar in unit
Cutting Edge Pre-Intermediate	Money	Jokes (audio)	1) Write a story from a supplied first sentence prompt, fiction 2) Tell a story from pictures, fiction	Narrative tenses
New Headway Pre-Intermediate	Time for a Story	Short story, fiction (fable)	1) Writing about a book or film, fiction 2) Retell a story from pictures, fiction	Narrative tenses
Four Corners	Awkward Situations	Lesson A- Two short texts about a mistake/regret, implied non-fiction Lesson D- Long text, non-fiction excerpt from an autobiography	Lesson A- Speaking about a mistake/ misjudgement you have made, implied non-fiction Lesson D- Writing about a memorable day, implied non-fiction	3rd conditional
Touchstone	Strange Events	Lesson A- Two short texts about coincidences, implied non-fiction Lesson D- Long text, non-fiction, human interest story	Lesson A- Speaking about coincidences, implied non-fiction Lesson D- Writing about interesting family story, implied non-fiction	

Table 4. Review past perfect presentation

Series	Unit theme	Presentation	Production task	Other Grammar in unit
Cutting Edge Intermediate	True Stories	Medium length text, non-fiction, human interest story	1) Retell a story from memory, fiction 2) Write a ghost story or rewrite provided story from another character's point of view, fiction	Reported Speech
New Headway Intermediate	Good Times, Bad Times	Long text, non-fiction biography, Long text, Romeo and Juliet in modern English	1) Write a folk or fairy tale, fiction 2) Retell a story from pictures, fiction	Past tenses

In this case, the use of 'after', rather than the verb phrase, contains the temporal meaning. *Cutting Edge Pre-Intermediate* has a similar explanation but with the example "A robber appeared and pointed the gun at him" (Cunningham, Moor and Crace 2013: 164). In this case 'and' functions as a quasi-time adverbial to show sequence. *Four Corners 4* is particularly prone to this. The grammar explanation states that 'yet' and 'already' are often used with the form and all five questions from the practice activity contain either time adverbials or actual times.

Another missing point is that of comprehension questions based on the sequence of events in a story. Only *Four Corners 4* and *Cutting Edge Intermediate* include these, but the sequencing tasks in both cases rely far more on general comprehension than an understanding of tense, time and aspect.

Cutting Edge Intermediate is the only book surveyed that describes the past perfect as having a relation to the present perfect, showing a past experience before a separate past event- "It wasn't my first visit to Australia; I'd been there twice before" (Cunningham, Moor and Bygrave 2013: 147).

Headway Intermediate is the only book examined which notes that the past perfect can have a stylistic or discoursive function. The grammar explanation states that "The Past Perfect can be used to tell a story in a different order" (Soars and Soars 2009: 136). This is an important difference from all other descriptions which define the form's function as purely that of establishing chronological order.

3.2. The Past Perfect in Grammar Books

The presentation of the past perfect was surveyed in four grammar books (Table 5). Both Collins Cobuild books are based in part on the Bank of English, a 5-million-word corpus. Perhaps unsurprisingly, all contain more in-depth discussions of how and when the form is used.

Table 5. Grammar Books

Title	Level	Authors
Grammar in Use	Intermediate	Murphy and Smalzer
Collins Cobuild English Grammar	Elementary	Willis and Wright
Collins Cobuild English Grammar	Intermediate	Willis
Understanding and Using English Grammar	-	Azar and Hagen

The most marked feature of grammar books is comparison, both explicit and implicit, between the past perfect and the present perfect. *English Grammar in Use Intermediate* does so directly, with clear examples of how the past perfect is used for stating previous experience in the unspecified past, a recent action which has an impact on the present and an ongoing situation that started in the past and continues up to the point of reference. *Collins Cobuild Elementary English Grammar* contains examples of the same usage. While it does not explicitly link these to the present perfect, the unit starts with the instruction to review previous units on the present perfect. Murphy and Smalzer (2009: 28) provide several examples of cases in which the past perfect has a definite link, presented explicitly, to the present perfect and in which the use of the past perfect conveys the intended meaning better than any other alternative:

> I didn't know who she was. I'd never seen her before.
> We weren't hungry. We'd just had lunch.
> The house was dirty. They hadn't cleaned it for weeks.

Understanding and Using English Grammar contains several key points not found in the other grammar books or textbooks. Like others, it provides several instances in which time adverbials make the past perfect unnecessary but specifically notes the use of time adverbials as being the reason why it is not utilized. The second notable point is the clear reference to the use of the form in writing and fiction. The explanation states that the form is "often found in more formal writing such as fiction" (Azar and Hagen 2009: 50). As will be seen, this is a very important point.

4. The Past Perfect in Corpora

Corpora results from the Corpus of Contemporary American English (COCA) and the British National Corpus (BNC) provide valuable data regarding the use and distribution of the past perfect. It should be stated that broad searches of this type can include examples of other forms. For instance, the key past perfect structure of 'had' preceding a past participle verb is the same as in the 3rd conditional and past perfect progressive, though the vast majority of these constructions are purely past perfect. Searching for 'if' within 4 spaces left of a had/'d + past participle combination suggests that 5.2% of the uses in the COCA and 6.2% in the BNC are part of a 3rd conditional structure. Past perfect progressive constructions form 6.6% and 2.7% of matches in the COCA and BNC respectively (Davies 2004; Davies 2008-). As this study is an attempt to understand the broad usage patterns of the form, the overall trends discovered can be considered sound.

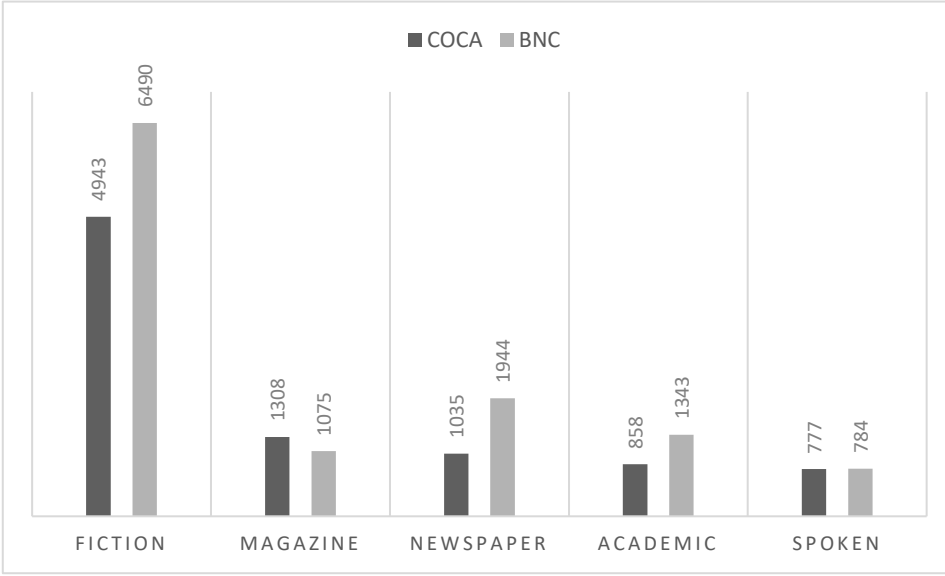


Figure 1. Frequency of [had/'d + past participle] per million words (Davies 2004; Davies 2008-)

Results reveal several interesting findings. The results clearly indicate that the past perfect is strongly related to written work, particularly fiction. Conrad (2001) argues that even with corpus data, there are few situations for which a strong link between purpose and grammatical form can be established, but the past perfect seems an exception to this notion as the link between it and written work is very strong indeed. Distribution by section (Figure 1) shows the structure is strongly linked to works of fiction and used over three times more often in that sub-corpora than any other section. The very clear implication is that the structure is tied to written fiction. The structure is found less frequently in the spoken sections of

both the BNC and the COCA than any other section. Within the fiction section of the COCA, detailed results show that while the structure occurs 4715 times per million words in books, the same frequency for movies is 110, further suggesting that learners are far less likely to encounter it aurally (Davies 2008). Overall use is higher in the BNC, particularly in the newspaper section in which the structure is found twice as often as in the COCA.

The distribution of the structure within the spoken sections of the corpora is another finding with interesting results. The structure is found less frequently in the spoken sections of both the BNC and the COCA than any other section. An analysis of the BNC spoken section (Figure 2) shows that its use varies greatly depending on context (the spoken component of the COCA is mainly television interviews and cannot be analysed in the same manner). Usage in sermons or oral interviews, for example, is between two and three times as high as in general conversation. This suggests that usage of the structure (in very broad terms) declines with formality.

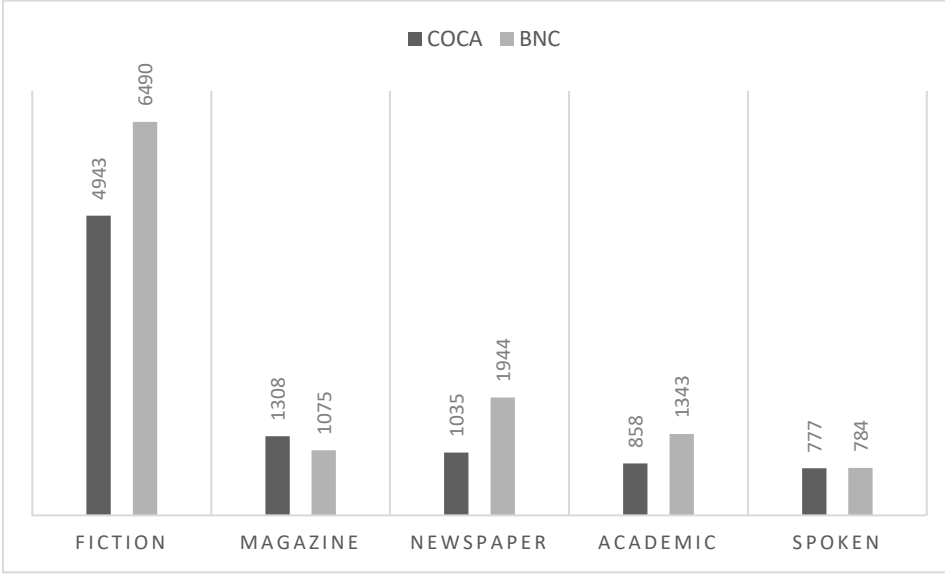


Figure 2. Frequency of [had/'d + past participle] in select spoken sections of the BNC (Davies 2004)

The final trend is lexical. As seen in Table 6, results from both the COCA and BNC show that 'had been' is by far the most common use of past perfect, occurring far more frequently than any other verb. These findings largely mirror those of Biber et al. (1999: 469), with seven of the eight most common verbs in that study appearing in the 10 most common verbs in the BNC and COCA.

Table 6. Most common verbs in past perfect constructions

COCA				BNC			
Rank	Verb	Amount	%	Rank	Verb	Amount	%
1	been	186 916	36.5	1	been	67 011	27.9
2	come	14 376	2.8	2	gone	4013	1.7
3	gone	11 168	2.2	3	come	3949	1.6
4	made	10 996	2.1	4	taken	3675	1.5
5	taken	10 847	2.1	5	made	3606	1.5
6	become	10 310	2.0	6	become	3266	1.4
7	done	9582	1.9	7	done	2844	1.2
8	seen	9444	1.8	8	had	2745	1.1
9	said	8311	1.6	9	seen	2723	1.1
10	left	7577	1.5	10	said	2441	1.0

Corpus results do not show a strong relation between the form and passive constructions. BNC results show three verbs among the 10 most common collocations with 'had been' which total 3.3% of all uses, while COCA results show only one (Davies 2004; Davies 2008).

5. Comparison and Discussion

5.1. Overall Comparisons

Several points concerning the use of the past perfect found in grammar reference books, textbooks and grammar books can be compared to corpora data to evaluate their accuracy. As noted, only two grammar references make the link between written fiction and the use of the past perfect. From the EFL/ESL materials, the link is only made clear in *Understanding and Using English Grammar*. This makes it the one of the least common claims in any of the books surveyed, but the most strongly linked to empirical data. The corpus data is unequivocal- the form appears with far greater frequency in written fiction than any other genre. Given that an intuitive connection can be made between the two, regardless of the availability of corpus data, it seems an obvious oversight. This also raises the issue of the choice of text in which the form is introduced and the types of task used for

student production. As noted, the presentation of the form appears most frequently in non-fiction texts and two of the textbooks surveyed (*Touchstone 4* and *Four Corners 4)* contain neither a fictional text nor a fictional production task, despite the former being based on corpus data.

One of the most common claims is the guidance regarding the use of time adverbials, a claim found in all types of books surveyed. Searching corpora for these words within five places of a past perfect construction reveal that a time adverbial is used in approximately 15% of cases (Table 7). This is notably lower than the roughly 30% stated by Biber et al. in their corpus-based grammar, though without knowing the exact search keys and terms, any direct comparison should be treated with some caution. That

Table 7. Time adverbials used with the past perfect +/- five places of [had/'d + past participle]

COCA			**BNC**		
Word/Phrase	**Matches**	**% of Total**	**Word/Phrase**	**Matches**	**% of Total**
when	23697	4.6	when	7764	4.8
before	18945	3.7	after	6757	4.2
after	18754	3.7	before	4986	3.1
just	8149	1.6	just	1789	1.1
already	2220	0.4	yet	614	0.4
yet	1902	0.4	already	446	0.3
recently	1219	0.2	recently	287	0.2

notwithstanding, this does not seem to be a particularly strong association and even at 30%, is still a clear minority of usage. This raises the question of why textbooks instruct students that these words are 'often used with the past perfect' (same quote in Cunningham, Moor and Bygrave 2013: 147; Richards and Bohlke 2012: 75). The link is made stronger by a majority of examples in other books containing time adverbials.

All three types of books note that the past perfect is commonly used in reported speech and two reference books associate it with verbs of perception. These claims seem to be supported by data from the corpora as evidenced in Table 8. The lexical verb which most frequently precedes a past perfect structure is 'said' in both corpora, occurring more than twice as regularly as the next item. Both corpora show a link to reporting verbs (told, said, asked, claimed) and verbs of perception (thought, wondered, knew).

Table 8. Past tense verbs within four spaces left of [had/'d + past participle]

COCA		BNC	
Verb	**Total Matches**	**Verb**	**Total Matches**
was/were	20928	was/were	5942
said	11983	said	3862
had	5271	had	1827
knew	4885	thought	1252
thought	4128	knew	1064
told	3419	told	785
felt	2574	felt	684
realized	2119	claimed	480
did	1537	did	405
found	1475	wondered	389

Several textbooks link the past perfect and 'because.' This is another case in which the corpus data does not seem to show any strong association. As seen in Table 9, 'because' is not regularly found with past perfect constructions.

Table 9. 'Because' within five spaces left/right of [had/'d + past participle]

COCA		BNC	
Matches	**% of Total**	**Matches**	**% of Total**
14538	2.43	3366	2.07

6. Recommendations and Suggestions for Further Research

6.1. Specific Recommendations

Recalling Conrad's (2000: 549) predictions concerning the effects of corpus data on grammar teaching- genre specificity, integrated vocabulary and 'appropriate conditions of use for alternative grammatical constructions'- it is difficult, given the data presented in this paper, to argue that instruction of the past perfect has benefited from corpus-derived data. Descriptions of the form largely fail to link it to the genre (written fiction) in which it is most often found, the links between the structure and vocabulary (time adverbials and 'because') is debatable at best and practical instructions on when and why the structure should or must be used are largely missing.

There seem to be several areas in which the books surveyed do not provide a fully adequate description of how or when the past perfect is used or present it in a way consistent with its occurrence in natural language. This is not to say that any one book is so flawed that it is inappropriate for use by instructors or learners. Few books, particularly those meant for students, can provide all the necessary information concerning an aspect as complex as the past perfect. Materials

developers and publishers surely face a litany of restraints such as space and brevity as well as the prior knowledge and capabilities of the instructors and learners who use commercial materials. In the same way that no single book should be singled out for its perceived shortcomings, none can be highlighted as comprehensively dealing with the form. If one were to pick and choose the guidance, presentation texts and production tasks from the surveyed books, a very strong lesson could be created, but as that information is spread across several books, if a student or teacher were to use only one book, their knowledge of the form may be incomplete.

No corpora can perfectly reflect actual use, particularly as they examine language in a limited context and, as has been seen, the past perfect is clearly related to longer pieces of text rather than sentence-level exchanges. That notwithstanding, several of the claims in the surveyed books concerning sentence-level usage (particularly time adverbials and 'because') appear flawed when examined in these corpora. The data presented above leads to several recommendations concerning how the past perfect is presented in grammar reference books and EFL/ESL materials.

(1) State a clear link between the past perfect and written fiction

The area in which almost all books can improve is in explicitly stating in which situations the structure is most often employed. Given that the corpora data presented shows that it is overwhelming associated with written fiction, it seems a very strange omission from grammar explanations. Explicitly noting the link between narratives, fiction and the past perfect as well as its relative frequency as a feature of written English would appear to be minor additions that better reflect its use in authentic contexts which could assist both learners and teachers. As grammar references for teachers seem to have less restrictions in terms of space or level of analysis, there is no obvious reason for this information to be excluded from descriptions of the form.

This knowledge should also be utilized to improve the ways in which the material is handled in textbooks and thus provide learners with the opportunity to notice and produce the form in more authentic situations as well as ensure they comprehend it in the texts in which it is most likely to be encountered. The books surveyed rely to a large degree on non-fiction texts to present the form and while there is nothing inherently problematic with that, using a fictional text could create a stronger link in the minds of the learners between the form and fictional narratives.

The production tasks in the textbooks surveyed do a better job of requiring fictional, written output and are generally worthy of praise. Retelling a story based on pictures is a common speaking task that could be easily improved by having students start the story at its midpoint but including all the key points of the story, thus making a clear necessity to use the past perfect to tell a story out of chronological order.

Suggestions for improving practice or production activities in grammar books are more limited. *English Grammar in Use* contains a good practice activity of writing events out of chronological order. The task only requires three sentences, but this seems like a good compromise given the restrictions of the medium and similar activities should be included in other titles.

(2) Make usage guidelines easier to understand and establish a clear link to the present perfect

Various books give examples of when the past perfect is not used but fail to explain why and few explicitly note the times when it is mandatory. Most teachers would want their students to show flexibility and adaptability in their use of language and a working knowledge of time adverbials is likely to be as effective as the past perfect in establishing the order in which events happened in many cases. Given the relative infrequency of the form in spoken English (and the possible link to formality) it seems at least possible that this is something native speakers may do as a matter of routine.

Many of the works reviewed give example sentences in which the context rather than the grammar provides the chronology then go on to somewhat unhelpfully explain that the form is not needed when the sequence of events is obvious. Others say that both the past perfect or the past simple can be used in practice activities but provide no guidance as to which is preferred or in which cases there is not an option. Because its use in many cases can be argued as being stylistic, the exact rules of when to employ the form are somewhat vague. This should be made clear to students and alternate ways of saying the same thing (using time adverbials rather than the past perfect) and the fact that the form is relatively infrequent in spoken English should be highlighted in subsequent editions of learner materials.

However, there is one case in which use is required, which is the past of the present perfect for experiences in the unspecified past. There is essentially no other way to state this information in a natural way and should thus be considered mandatory use and highlighted as such in all materials aimed at teachers and learners.

(3) Receptive grammar teaching and practice

Data from corpora suggests that learners are much more likely to read the form than hear it in conversation. As such there would seem to be methodological issues relating to how the topic is handled in textbooks, as many appear to focus more on accuracy than testing the learner's receptive understanding of the form. As the main function of the form is establishing chronological order, student ability to receptively understand how it is used within a text (rather than a single sentence) should be a main learning goal and also be evaluated. In the few examples in which students are asked to order events from the materials examined, the texts

themselves are largely in chronological order and knowledge of how the past perfect works in a longer piece of written work is not the focus of the practice or checked in a meaningful way.

A variety of simple activities such as ordering or mapping events on a timeline are relatively simple to design, but the texts they are based on must be chosen with this in mind, i.e. they need to have better examples of how the past perfect can be used to tell a story in a non-chronological order. More advanced books could possibly include some of the non-standard uses from novels found in Section 2.

(4) Check claims against corpora and remove those that cannot be supported by empirical data

Though no single corpus or group of corpora can be expected to perfectly reflect the use of the English language in all its contexts, the corpus data examined in this study call into question several claims made in various surveyed materials. In the absence of access to the proprietary data used to make some of these claims or the rationale behind them, it would appear that at a minimum, these claims should be re-examined and possibly removed from future editions of the books in which they appear. As argued, teacher intuition and noticing are valuable tools in grammar teaching, but instructions given in materials designed for students produced by major publishers should be supported on some kind of empirical basis. The examples of use provided in the textbooks do not appear unnatural per se, but if they are not based on strong empirical data, it is unclear why they should be included.

6.2. Suggestions for Further Research

There are several areas of further research which could benefit learners, instructors and materials designers. First, a thorough corpus examination of the functions of the past perfect is needed, particularly the cases in which its use is optional. The question of when or why writers or speakers use the form when it is optional remains open. Even if no clear answer is found (as suggested by some grammars surveyed), that finding in and of itself could be valuable as an open choice may be more meaningful than the current vague usage guidelines. Numerical data on the frequency of each type of use (past of past perfect, reported speech, etc.) would also be instructive. The use of the form in fiction appears to show several patterns of use which go undescribed in the books surveyed. This is another area requiring a more comprehensive examination. A cursory examination in the 155 billion word Google Book Corpus (Davis 2011-) shows that use of the form in fiction has steadily dropped from the 1860s to the most recent period for which data is present (2000s-) and other valuable findings can surely be discovered. A final area worthy of attention is the possible link between the form and more formal speech.

References

Alexander, Louis G. 1988. *Longman English Grammar*. Essex: Longman.

Azar, Betty and Stacey Hagen. 2009. *Understanding and Using English Grammar*. 4th edn. New York: Pearson.

BBC NEWS. 2011. *Ai Weiwei China tax bill paid by supporters*. [Online] Available from http://www.bbc.co.uk/news/world-asia-pacific-15616576. [Accessed November 2011].

Barbieri, Federica and Suzanne E. B. Eckhardt. 2007. Applying corpus-based findings to form-focused instruction: The case of reported speech. *Language Teaching Research* 11 (3). 319-346.

Biber, Douglas and Susan. Conrad. 2001. Quantitative corpus-based research: Much more than bean counting. *TESOL Quarterly* 35 (2). 331-336.

Biber, Douglas and Randi Reppen. 2002. What does frequency have to do with grammar teaching? *Studies in Second Language Acquisition* 24 (2). 199-208.

Biber, Douglas et al. 1999. *The Longman Grammar of Spoken and Written English*. London: Longman.

Carter, Ronald and Michael McCarthy. 2006. *Cambridge Grammar of English*. Cambridge: Cambridge University Press.

Cecle-Murcia, Marianne. 1998. How discourse helps us understand grammar more fully: The past perfect. *MEXTESOL Journal* 22 (2). 11-16.

Cecle-Murcia, Marianne and Diana Larsen-Freeman. 1999. *The Grammar Book*. 2nd edn. Heinle & Heinle.

Conrad, Susan. 2000. Will corpus linguistics revolutionize grammar teaching in the 21st century? *TESOL Quarterly* 34 (3). 548-560.

Cunningham, Sarah, Moor, Peter and Jonathan Bygrave. 2013. *Cutting Edge Intermediate*. 3rd edn. Harlow: Pearson.

Cunningham, Sarah, Moor, Peter and Araminta Crace. 2013. *Cutting Edge Pre-Intermediate* 3rd edn. Harlow: Pearson.

Davies, Mark. 2004. *BYU-BNC*. [Online] Available from http://corpus.byu.edu/bnc/. [Accessed February 2016].

Davies, Mark. 2008. *The Corpus of Contemporary American English*. [Online] Available from http://corpus.byu.edu/coca/. [Accessed February 2016].

Davies, Mark. 2011. *The Google Books (American English) Corpus*. [Online] Available from http://googlebooks.byu.edu/. [Accessed February 2016].

DeLillo, Don. 2008. *Falling Man*. London: Pan Macmillan Ltd.

Downing, Angela and Philip Locke 1992. *A University Course in English Grammar*. Hemel Hampstead: Prentice Hill International.

Gibson, William. 2003. *Pattern Recognition*. New York: Berkley.

Hughes, Rebecca and Michael McCarthy. 1998. From Sentence to Discourse: Discourse Grammar and English Language Teaching. *TESOL Quarterly* 32 (2).

Jackson, Howard. 1990. *Grammar and Meaning*. London: Longman.

Liu, Dilin and Ping Jiang. 2009. Using a Corpus-Based lexicogrammatical approach to grammar instruction in EFL and ESL contexts. *The Modern Language Journal* 93 (1). 61-78.

McCarthy, Michael, McCarten, Jeanne and Helen Sandiford. 2006. *Touchstone 4*. Cambridge: Cambridge, University Press.

Mieville, China. 2002. *The Scar*. [Online] New York: Tor. Available from www.amazon.co.jp. [Accessed 2nd January 2017].

Murphy, Raymond and William Smalzer. 2009. *English Grammar in Use Intermediate* (3rd ed.). Cambridge: Cambridge University Press.

Parrot, Martin. 2000. *Grammar for English Language Teachers*. Cambridge: Cambridge University Press.

Quirk, Randolph et al. *A Comprehensive Grammar of the English Language* (Revised). Essex: Longman Group UK Ltd.

Richards, Jack. C. and David Bohlke. 2012. *Four Corners 4 Student's Book*. Cambridge: Cambridge University Press.

Sinclair, John. (ed). 2005. *Collins Cobuild English Grammar*. 2nd edn. Glasgow: HarperCollins.

Soars, Liz and John Soars. 2009. *New Headway Intermediate.* 4th edn. Oxford: Oxford University Press.

Soars, Liz and John Soars. 2012. *New Headway Pre-Intermediate.* 4th edn. Oxford: Oxford University Press.

Swan, Michael. 2005. *Practical English Usage.* 3rd edn. Oxford: Oxford University Press.

Thompson, Hunter S. 1970. *The Kentucky Derby is Decadent and Depraved*. Available from http://www.kentuckyderby.info/kentuckyderby-party.php. [Accessed 7th November 2011].

Wecker, Helene. 2013. *The Golem and the Jinni* [Online] New York: HarperCollins. Available from www.play.google.com. [Accessed 2nd January 2017].

Willis, Dave. 2004. *Collins Cobuild Intermediate English Grammar*. Glasgow: HarperCollins.

Willis, Dave and Jon Wright. 2003. *Collins Cobuild Elementary English Grammar*. 2nd edn. Glasgow: HarperCollins.