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Foreword

The Linguistics Journal is a peer-reviewed journal that publishes articles in all areas of the language science. Each paper is evaluated in a double-blind fashion, which secures the high quality of articles that are shortlisted and, eventually, recommended for publication. This year's edition of the journal comprises twelve articles: five full Research Articles, six Research Notes, and a Book Review. Thanks are extended primarily to the authors who have contributed to this issue of *The Linguistics Journal*, the Associate Editors, reviewers, and the Production Team that took meticulous care of all the technical details. This past year has been unique for the journal in that that we acquired a new Associate Editor, William MacDonald, as well as Jennifer Rose Ament who stepped up as a new Head of Production of the journal. The number of submissions has been steadily increasing during the last several years, which improves the quality of *The Linguistics Journal* overall.

The first paper, written by Ming Wei, looks into the newspaper reports with regard to the appraisal of educational equity in Chinese and American discourse in two representative daily papers. The author found distinct differences in the way educational equity was framed in the two sources and the analysis uncovered some cognitive and social processes lying behind the relevant discourse practices in the two language communities studied. This cross-cultural study is instrumental in shedding some new light on the discourse features of two different languages.

The authors of the second research article, Danijela Ikonić and Thomas Hawes, attempt to examine the impact on the improvement of the listening comprehension skill that could be achieved by a popular relaxation technique known as autogenic training. The study shows that the weakest EFL students benefited from this teaching approach considerably, whereas better students have not profited much from autogenic training.

The perception of English stress as judged by Vietnamese learners of English is

analyzed in the next paper written by Anh-Thư T. Nguyễn. The study indicates that Vietnamese learners of English transfer tonal features into their perception of English stress systematically. This is somewhat dependent on the dialect of Vietnamese spoken, as well as a syllable-type.

The fourth contribution, by Philippe Fauquet-Alekhine, explores an interesting facet of communication that the author dubs operational communication, i.e. the communication of the workplace in a specific register that has its own features. This mode of communication is studied from a psycholinguistic perspective, also lingering on different language functions.

The concluding Research Article by Masako Hoye is a study that explores the linguistic structure of the Japanese language in the domain of the notorious particle *ga*. A comprehensive quantitative analysis of its occurrence sheds some new light on the important issue of *ga* as a subject marker. The study proves that in contemporary conversational Japanese the function of *ga* as a subject marker is only minor.

The first contribution in the Research Note section comes from Thuy Nga Nguyen, who examines the language contact between Vietnamese and English of young Vietnamese adults. The tokens for the analysis are extracted from teenage magazines in Vietnamese and the author finds that various types of worplay are evident in the use of bilinguals, predomnantly different types of calques.

Amir Nikmehr and Massood Yazdanimoghaddam present the results of the use of gambits in a corpus of several recent movies with the aim of introducing them in an EFL classroom setting. The study shows that being familiar with modern gambits is vital in improving the linguistic competence of L2.

The topic of the next Research Note written by Mufleh Alqahtani is the syllabic structure of the Somali language. The phonological components of the Somali syllable are studied in the Optimality Theory framework so as to illuminate some hot phonological issues that lie mainly in the area of the syllable onset and its importance in Somali.

The authors of the next paper, Zahra Abolhassani Chimeh and Musa Nushi, look into the syntactic structure of the Mazandarani language, attempting to classify it according to the common typological knowledge. The analysis shows that Mazandarani is a language of SOV type and that it fully follows universal patterns.

In his article on the syntactic features of American English Mustafa Yıldız gives an insight into the usage of the verbs *give* and *send* in American English with relation to dative constructions. This corpus-based investigation explores various dative alternations employed in written academic English so as to establish their characteristics and frequency of use.

The concluding article in the Research Note section by Biljana Čubrović brings the results of her research on a vowel merger that has taken place in American English. The phenomenon known as the low back merger is here studied in both native and nonnative speakers of American English. The analysis shows that both groups of particpants behave similarly when it comes to the loss of the vowel contrast in question.

The Book Review section presents two recent titles written by J. C. Wells as reviewed by Ružica Ivanović.

Biljana Čubrović, Ph.D.
Chief Editor
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A Comparative Study of Appraisal in News Discourse in China and the United States: The Case of Reports on Educational Equity

Ming Wei[1]

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Abstract
This study is an appraisal analysis of the reports on equal opportunities for higher education in Chinese and American media, to obtain an ideological understanding of how educational equity is shaped and reflected by appraisal resources in news discourse. Reports from China Daily and the New York Times were compared from the perspective of the deployment of judgment and engagement tactics. Distinct differences were found in the way educational equity was framed in the two media. The findings lend further proof that cross-contextual comparisons can help uncover the cognitive and social processes underlying in the internalization of meanings constructed in the discourse on educational equity.

Keywords
educational equity, appraisal, social ideology, media discourse, China, the US

Introduction

Educational equity has been widely acknowledged as a vital foundation for the promotion of social justice and fairness as well as sustainable economic and social advancement. The past decades have witnessed increasing importance attached to the proper management of access to higher education as a tool of government policy. China and the United States have been highly concerned about the role of college admission exams in achieving fairness in education and social equality in general. Although significant progress has been achieved in the two countries to make higher education more accessible to socially disadvantaged groups; discussion has been going on as to how newly-emerging issues can be detected and addressed

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in educational reform.

News discourse, where values are formed, reflected and disseminated, observations and interpretations of social events are distributed, and meanings are produced and inherited, represents an important social force at play for social dynamics. This paper is an attempt to make an in-depth comparison of the reports of Chinese and American media concerning the fairness of college admission tests under the Appraisal Theory, which deals with the stance conveyed by the writer/speaker towards what is expressed in the discourse and its intended audience, and examines how social relations are negotiated through the way attitude is made known. The purpose is to catch a glimpse of how news media approach social realities of educational equity through the deployment of appraisal tactics in two different social contexts in order to further understand how appraisal sources can be of value to imprint ideological orientations and shape interpretations of readers in serial presentation of social events.

Literature Review

Educational equity: China and the United States

Educational equity is generally believed to be about equal access to educational opportunities, equal access to educational resources and fair treatment for all members of a society (Zhou, 2010). An essential characterization of the term is fairness which basically means ensuring that personal and social circumstances (e.g. gender or socio-economic status) should not be an obstacle to achieving educational potential (Organisation for Economic Co-operation and Development (OECD), 2008).

The most noticeable expansion of higher education systems are found in the less developed but rapidly rising nations (Eggins, 2010). In the socioeconomic context of marketization since the late 1980s, China has gone through a transition from elite to mass higher education boosted by a radical expansion policy in 1999 (Li 2009; Li & Lin, 2008; Li, Whalley & Xing, 2014). The admission rate rose from 3.5% in 1991 to 34.5% in 2013 (Ministry of Education, 2014). Strenuous efforts have been made to reduce regional differences and urban-rural gap. Nevertheless, there still exist contemporary social forces aggravating social inequalities (Liu, 2006; Zhang, 2006). Students from groups with more

cultural, social and economic capital have been found to have greater access to enrollment opportunities (Li, 2007; Yang, 2006; Zhang, 2013). As claimed by Wang (2011, p.277), the current mechanism is “fundamentally flawed” which excludes certain social groups from fair competition in terms of access.

In the United States, a strong conviction is that the concept of justice must be applied to all citizens in the country (Castellia, Ragazzia & Crescentini, 2012). Evaluation of equity in admission criteria has been carried out in terms of the correlation with factors such as the role of intergenerational transmission of education, race, legacy status (Ermisch & DelBono, 2010; Hurwitz, 2011; Machin & Murphy, 2010; Nurnberg, Schapiro & Zimmerman, 2010). Family income, race, gender have been identified to be factors that most likely foresees Scholastic Assessment Test (SAT) scores (Freedle, 2003; Kahlenberg 2010; Rosser, 1989; Veronica & Wilson, 2010; Young, 2003). To address the criticism of the SAT making it increasingly difficult for social groups to receive higher education, a project was launched by the College Board to improve the construct validity of the test to reduce ethnic gaps (Sternberg, 2006). As stated by Clancy and Goastellec (2007, p.136), the general trend is a transition from the priority given to “inherited merit” in the admission process through a “commitment to formal equality”, towards the adoption of certain types of affirmative action in the interest of under-represented groups.

Although extensive work on this issue has been conducted in recent years from perspectives including economics, policy, law, culture, education and ethics, research continues to be essential as the issue of educational equity intersects with complex and multidimensional social variables. It would be interesting to juxtapose the two nations to probe how social realities of educational equity are reflected and constructed in public discourse. Comparative data can inform the evolvement, changing levels and measures in attainment of equal access to higher education, helping the system identify the targets of opportunity, evaluate policy initiatives and borrow policies to reduce social inequalities (Clancy & Goastellec, 2006). In this regard, news discourse can provide a unique perspective on the continuously changing social environment and approach to social issues.

News Discourse

In the dynamic discoursal system of news which disseminates information in specific social,

political and cultural context, objectivity is generally considered a basic journalistic principle, meaning the reporter tries to transmit the news untrained by conscious bias and without personal judgments or coloration (Wimmer & Dominick, 2010). Nevertheless, in reality, news is not neutral ideologically. As stated by Bird and Dardenne (1988, p. 70), "as narrative, news is orienting, communal and ritualistic. The orderings and creations in narrative are cultural, not natural; news...endows events with artificial boundaries constructing meaningful totalities out of scattered events". Hence, any transformation into news texts reflects personal as well as general experiences, opinions and attitudes, and is consonant with the ideological consensus of a given society or culture through the conscious selection of the situational context (Halliday, 2001; van Dijk, 1988). Therefore, the reading and understanding of news are based on presuppositions of norms, values, goals, and interests that are socially shared (Fairclough, 1995; van Dijk, 1988). That is, the perspective provided by news discourse and presence of implicit evaluation is constructed in a manner congruent with the underlying ideologies of the newspapers and their intended audience.

Since mass media often promulgate views consistent with prevailing beliefs, they are contributive to maintaining social order and system by performing functions typically including surveillance, interpretation, linkage, transmission of values and entertainment (Bonvillain, 1993; Dominick, 1994). The ideological analysis of news is based on advances in not only the contextual but also the textual dimensions of news and communication processes (van Dijk, 1988). Textual structures, cognitive representations and strategies, lexical and semantic implications are all related to the manipulation of the interpretation of news events. Vertommen, Vandendaele and Praet (2012) reveal through a systematic cross-comparison of appraisal sources in Belgian news articles the manifestations of journalistic stance across multiple levels of discourse and the effect of discourse choice-making on coverage of news events. As also noted by Bednarek and Caple (2012), adopting a discursive perspective on news values makes it possible to examine systematically how values are constructed and emphasized at various levels in news. In this case, what is of particular relevance to the study of news as socially and ideologically-loaded discourse is the Appraisal Theory.

News Discourse and Appraisal

The Appraisal System concerns the linguistic resources by which texts/speakers express

negotiate and naturalize particular inter-subjective and ultimately ideological positions (Martin & White, 2005). It, by providing a systematic account of evaluative language resources, has been used as a robust tool in language research. It conveys the stance towards what is expressed in the discourse and its intended audience, to negotiate social relations through making known the attitude, to establish the tone of mood of a passage of discourse, as choices resonate with one another from one moment to another as a text unfolds (Martin & Rose, 2003). Its evaluation resources include systems of attitude, engagement and graduation (Hood & Martin, 2007; Martin & Rose, 2003; Martin & White, 2005). Although, modifications have been done as a result of contextualized studies (e.g. Bednarek, 2008; Hood, 2010; Ngo & Unsworth, 2015), they mostly conform to the theoretical framework set by Martin. Briefly, attitude relates to feelings and opinions while graduation refers to the strength with which they are expressed; engagement concerns the sourcing of attitude and acknowledgement of alternative voices which align or distance authors from their audience. Among the three sub-systems, graduation is a general property of both the attitude and engagement systems; attitude and engagement are domains of graduation which differ according to the nature of the meanings being scaled (Martin & White 2005). Hence, this report focuses on the role of the subsystems of attitude and engagement in news discourse.

News and Attitude

The system of attitude constitutes the main resource for evaluating, adopting stances, constructing textual personas and managing interpersonal positions and relationships (Martin & White 2005). It, comprising three constructs (i.e. affect, judgment and appreciation), deals with the values by which the speaker/writer expresses his judgment toward human behavior and associate emotional/affective response with participants and processes. In Chen (2014), the appraisal theory is used to examine the media attitudinal variations expressed in content in the context of air pollution incidents in China. In Hu and Huang (2014), an attitude comparison was conducted between newspapers in China and the United States, indicating that attitudinal resources can be used to instill ideological values implicitly under the look of 'objectivity' of news discourse. In analyzing the attitudinal meanings of English political column texts, Li (2005) found a strong preference for attitudes implicitly expressed as

appreciating and judgment, and unwillingness to evaluate explicitly. Similar results were obtained in other studies on media discourse, such as Wang and Wang (2012). Among the three subsystems, judgment serves to assess human behavior, either positively or negatively, socially acceptable or unacceptable, by reference to a set of institutionalized norms (Martin, 2000; Martin & White, 2005; White, 1998).

Judgment can be realized through a variety of lexical or grammatical forms. For example, the linguistic encapsulating process of nominalization not only helps to constitute the succinct and condensed features of news features of news discourse genre; more importantly, it performs ideological functions through manipulating the source of modality (van Dijk, 1988). Through the nominalization of the theme or subject, the concealment of journalists' attitudes, power-relations and detachment can presuppose something uncertain as certain or established to facilitate the establishment of the image of neutrality and make the message more natural and acceptable (Fowler, 1991). Realization of presuppositions is in conformity with the stylistic characteristics of news discourse, such as objectivity, justice and independence (Eggins & Slade, 1997). The impersonalization of the information and obscuring of the agent responsible for the reported event enables the reporter's personal judgment to be taken for as a fact by the public (Thompson, 1996). The linguistic choice of nominalization, therefore, not only helps to achieve the objective, impersonal, non-negotiable effect of the report but also shapes the reader's thinking in an implicit way.

News and engagement

Engagement resources can make adjustments to the commitment to what is said or written. Based on the source of voice, they can be divided into monogloss and heterogloss (White, 2003). The former (e.g. direct statement of the proposition), entails elided dialogism without mentioning the source of information or other possible viewpoints; the latter is characterized with reference dialogism, which is put into practice primarily through introducing various possible viewpoints into the discourse in various manners.

For the purpose of objectivity, news discourse tends to avoid explicit expression of attitude (Bonvillain, 1993; Dominick, 1994); hence, the engagement system, specifically,

projection and quoting, plays a major role in the embodiment of implicit evaluation, through the manipulation of the manner and degree of engagement of the appraiser into the discourse. The potential power of news discourse lies in its ability to employ "quotation" as a means of involvement to activate assessment, affect, reinforce or challenge existing assumptions, perceptions, emotions or attitudes (van Dijk, 1988). A quoting pattern in news discourse is a mediated system loaded with ideological bias (Davis, 1985). Direct quote, as a marked means of engagement in news discourse, has become an effective rhetoric tactic in reporting truths and accomplishing legalization, which plays an important role of implicit evaluation (Caldas-Coulthard, 1994; Tannen, 1986; Thompson, 1994). An appraisal analysis of such intertextuality in terms of its functionality in reinforcing or mitigating certain voices can help uncover the implicit stance or bias entailed in the news discourse (Lai & Xin, 2012). For example, Jullian (2011) explored the inclusion of external voices in online news reports and found that quotations help imprint personal views on the events and ultimately engage in ideological-evaluative activities. In brief, heterogloss, created by a mosaic of direct quotes which are bound to be associated with the underlying intention and construction of modality, constructs social realities to the advantage of speakers or the social group the speaker belongs to. Therefore, examining in-depth the manner of quoting can serve as a basis for the implicit appraisal system of news discourse.

Overall, news reporting has been seen as an important mechanism of information dissemination in the establishment and maintaining of meaningful public discourse. Although there have been several studies (e.g. Hu & Huang, 2014) comparing Chinese and American media to draw implications about ideological differences, little literature has systematically investigated appraisal resources in terms of lexical and structural mechanisms or the manner of quoting. This paper aims to find out, by comparing the news reports on educational equity of China and the United States, whether and how mainstream media in the two countries differ in reflecting and shaping social ideology through resources of appraisal. It will analyze the use of judgment resources on the lexical and grammatical level in news reports and how references are made to other voices, namely, the extent and diversity of heteroglossic voices in the form of direct quotes and the manner heteroglossic voices are presented.

Methodology

Data Collection

The news media compared in this study were the New York Times and China Daily. The New York Times, founded by the New York Times Company, has the largest circulation among the metropolitan newspapers in the United States, and has been regarded within the industry as a national "newspaper of record" (Encyclopedia Britannica, 2011). It has had a presence on the Web since 1996, and has been ranked one of the top websites and the most visited newspaper site with more than twice the number of unique visitors as the next most popular site. China Daily, a state-run paper, has the widest print circulation of any English-language newspaper in China. The online edition of China Daily was established in December 1995, becoming one of the first major online Chinese newspapers.

This study collected all reports dated from 2001-2013 from the two newspapers on the College Entrance Examination (CET) and SAT respectively that revolved around “fairness”, “equality” and “equity” in opportunities for higher education. Various lexical forms of these terms were taken into account in the search. Then the corpus was carefully screened by removing reports that centered on topics other than educational equity. The resulting data set consists of 70 reports in China Daily and 39 in the New York Times.

The length of reports and the distribution across years were compared between the two newspapers to catch a glimpse of the general social context in which these reports were produced. It can be seen in Figure 1 that the number of such reports in New York Times did not fluctuate as drastically as that in China Daily across the past 13 years. In particular, China Daily showed a sharp rise since the year 2009, including 47 reports which accounted for 70% of the total of the 11 years. This suggests that there has been a growing attention in China to the fairness of higher education opportunities and the public’s awareness of equality in education has risen substantially.

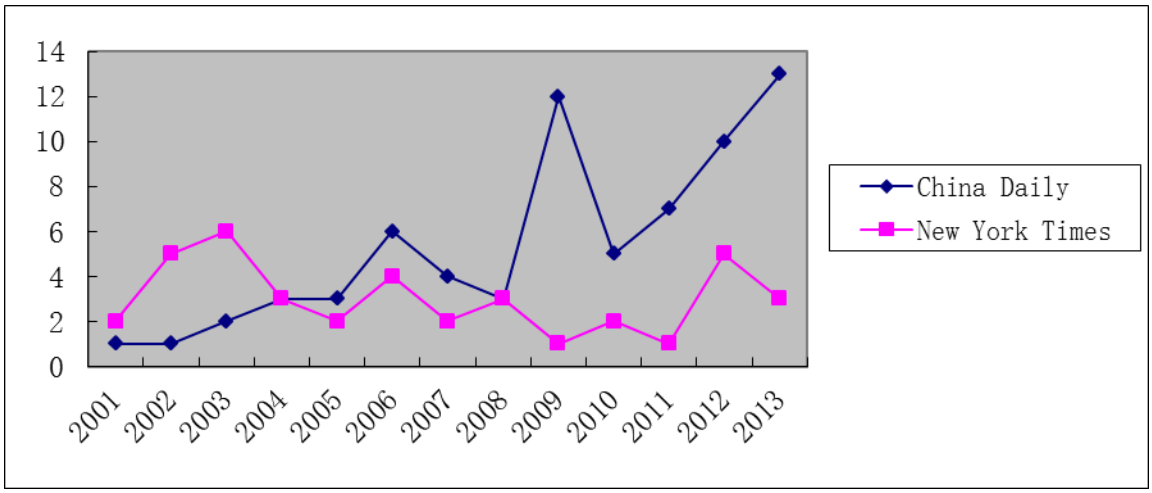

Figure 1 Frequency of reports from 2001-2013

Analytical framework

This investigation focused on judgment and engagement as appraisal resources in the news articles of the two media. Specifically, it looked into the lexical and grammatical dimensions in judgment making and the deployment of heteroglossic voices. The examination of judgment was based on the analysis of the three sets of evaluative words searched. The use of key words was summed up to get an idea of the overall attitude of the report. The words were counted only when used in their evaluative sense in association with the college entrance examination (CEE) or SAT. Specific use of these terms was also analyzed in terms of their lexical and semantic structure to assess the attitude the media conveyed. In addition, nominalization of the key words was computed and investigated from the perspective of the way it helped construct implicit subjectivity of meanings. The investigation of the engagement system was carried out from the angle of the pattern of direct quotes.

Results

Judgment

Overall attitude: A semantic perspective

China Daily surpassed the New York Times noticeably in the frequency of the three sets of words (154 vs. 77); especially in the case of “fairness” and “equality”, the former more than doubled the New York Times (Figure 2).

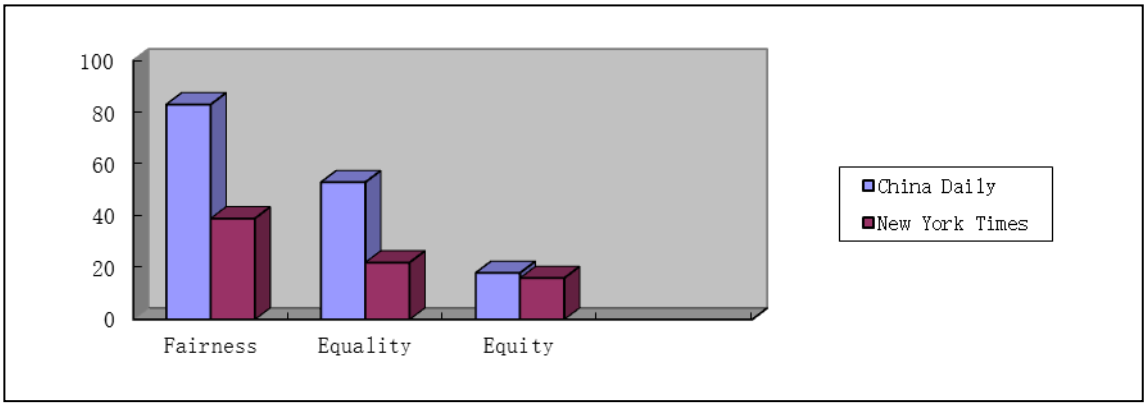

Figure 2 Frequency of key words

Apart from the density of the terms, strikingly different attitudes towards the CEE and SAT were displayed through the specific use of them. China Daily had fifteen reports recognizing CEE as the best way of selection for the time being. Eighty-seven of the 98 instances occurred in the positive sense. Take "fair" as an example. It can be found in collocations such as "a comparatively fairer one for all concerned" "the most objective way", "the most fair way" "a fair chance" "the fairest system" "a fair and necessary selection method" "fairest way". For example, in excerpt (1), the CEE was considered a necessary method in current Chinese society. Except for the empty praise of the opportunity it provided for socially disadvantaged groups, there was no solid argument or evidence to validate the supportive stance on the CEE and the rationality of the system.

(1) Therefore, the college entrance exam is still a *fair* and necessary selection method, despite its many problems. (*China Daily*, July 12, 2005)

The predominant view is given in (2) and (3). Absolute equality was dismissed flatly, without any mitigation, as not attainable . The underlying position is that individual interest was secondary to collective interest which should not be sacrificed in pursuit of individual interest.

(2) It is not an absolute *equality* that is sought but rather, one contained within the multifaceted enrollment system. (*China Daily*, July 12, 2008)

(3) There'll never be absolute *equality* when it comes to a specific student. (*China Daily*, June 7, 2005)

The ongoing discussion was based on the recognition of the CEE as a widely accepted means of college admission. In a sense, this prevailing uncritical view and lenient attitude towards the status quo were logically contradictory with the increasing attention to the disadvantaged groups in the promotion of educational equity.

In stark contrast, in the New York Times, there was no explicit endorsement of the SAT; rather, substantial debate was carried out on specific issues. Almost half occurrences of "fair" (n = 20) and half (n = 8) of "equity" were used in negative sense, e.g.

(4) The flag has been an identifier, which *unfairly* labels young men and women as second-class students. (*New York Times*, June 15, 2002)

(5) The percentage has more than doubled since 1990, amid a troubling *inequity*: Affluent students are far more likely than poor ones to … receive accommodations. (*New York Times*, November 8, 2003)

These statements were unequivocal about the problems associated with either the SAT itself or the way it was implemented through the use of "unfairly" and "inequity". What specifically was considered "unfair" or "inequitable" was explicit, namely "young men … as second-language students" in (4), "affluent students are far more likely than poor ones to … receive accommodations" in (5). Keen criticism can be easily perceived. Negative evaluation was clearly presented on solid arguments.

In brief, semantically, these keywords endowed China Daily with a more positive attitude towards China's college admission system, while the New York Times challenged the SAT by specifying its inadequacies and problems, which can be attributed to the political stance of the two newspapers: China Daily is largely state-run and pro-government, while the New York Times has been known as taking much more liberal stance. Syntactic and lexical analyses will be presented in the following section.

Structural and lexical analyses

Fairness. The idea of "fairness" occurred 83 times in China Daily, among which 48 occurrences were used for the expression of abstract notions or policies; it was rarely used to indicate explicit stance.

(6) Reforming the current CEE system, in which a person's fate is decided by the result of one exam, will promote *fairness*. (*China Daily*, December 27, 2004)

In example (6), "fairness" was used as the passive recipient of "promote" , which largely obscured its evaluative meaning in the domain of social propriety, by making both the subject and object vague. In comparison, although it appeared only 39 times in the New York Times, the majority (n = 31) instances were adjectives or adverbs that were explicit expressions of attitude, e.g.

(7) The time pressure will make this a particularly *unfair* test for students who need to translate from their mother tongue to English. (*New York Times*, July 15, 2002)

In (7), the prefix "un-" marked the negative attitude towards the agent, namely, "the time pressure", and the reason for the claim was also exhibited in an clear-cut way ; also, the force of assessment was reinforced by "particularly".

Equality. It was used 53 times in China Daily, 17 instances of which was used statically in direct collocation with "educational" in nominal structures. In its 45 occurrences, it indicated abstract meanings and did not convey definite evaluative connotations in the context, e.g.

(8) We must ensure *equal* allocation of education resources, such as public investment, teachers and school facilities. (*China Daily*, November 20, 2010)

In (8), "equal allocation of educational resources" was the object of "ensure", which is not committed to any judgment as to whether "equality" has been achieved or not. Nor were specific problems clarified.

In the New York Times, the word was used in a distinct manner. Among the 22 instances, the overwhelming majority (n = 19) contributed primarily to specific and concrete judgment of the appropriateness of specific situations. For example, in (9), the prefix "in-" and the plural marker transformed the word into a concrete negative reality, the appraisal meaning of which was strengthened by "aggravated".

(9) Hispanics generally score lower than whites, have also come under severe criticism by those who contend they reflect and aggravate racial *inequalities.* (New York

Times, February 17, 2001)

Equity. It occurred 18 times in China Daily, exclusively in collocations with "education",

(10) The biggest challenge in Chinese education reform and development now is how to achieve education *equity.* (*China Daily*, June 22, 2009)

The above excerpt simply used "equity" as a target to be reached; no explicit judgment was made. By comparison, the 16 occurrences in the New York Times were varied and flexible in usage, not only as positive abstract notion (e.g. "to create more equity", "philosophically equity reasons"), but also as adverb, negative noun, countable noun and adjective（e.g. "failure to equitably distribute educational resources", "worsened educational inequities", "the whole system … has become so … inequitable". For example, in (11) which addressed accommodations for test takers with disabilities, "inequitable" was used in stating the problem of the current system, the evaluation associated with which was intensified by "so", leaving it self-evident to the reader that the accommodation system was problematic.

(11) There is increasing buzz in the education world that the whole system of obtaining accommodations has become so expensive, cumbersome and *inequitable* that the College Board should scrap it, and either make all tests untimed or give students the choice of taking them in three hours, four hours or more. (*New York Times*, November 8, 2003)

Except for four instances when it was used neutrally, the majority instances grant the hosting sentences strong stance.

In brief, in terms of syntactic and lexical structures, the three sets of words were used in a rather rigid and vague fashion in China Daily; there was a tendency to use them to express abstract notions or objectives. Evaluative meanings were suppressed or left vague. In comparison, in New York Times, contextualized attitude and judgment were made clear through more flexible use of these words, which resulted in more concrete and substantial discussions around the issue of concern. The following section will take a closer look at the key words from the lexical perspective by focusing on nominalization within the judgment

framework.

Nominalization

As is shown in Table 1, China Daily used these words in their nominal forms far more frequently (46%) than New York Times (21%). That is, nominalization of such terms was found to be a prominent characteristic in China Daily. For example, in (2) (3) (6) and (10), "equity" "fairness" and "equality" were all used to convey abstract notions. The underlying evaluative notions were neutralized and mitigated considerably, presented either as a goal to be achieved, a desired state to be kept or a type of social existence. Critical issues were made obscure and static in time, and the text became more impersonal and detached. Nominalization seems to be adopted on purpose to avoid being committed to any straightforward judgment.

Table 1 Summary of key words

	Fairness	Equality	Equity	Sum of Nouns	Percentage of nouns
China Daily	83	53	18	71	46%
New York Times	39	22	16	16	21%

In comparison, nominalization occurred much less in the reports of New York Times, only less than one half of the percentage of occurrences of China Daily. This is especially true with "fairness", which was not nominalized at all. It was used either as an adverb or adjective, in either positive or negative sense, e.g. examples (4) and (7). In each of its host sentence, attitude was given in an unambiguous way; the reports tended to be direct in showing the position on concrete issues in the current system.

With regard to "equity", the only two instances of non-nominalization in the entire data set were found in the New York Times: one was in (11), the other in (12) where "failure" in collaboration with "equitably" articulated clear disappointment with the way educational resources were distributed.

(12) The differences in SAT scores are ultimately the result of a failure in our society to *equitably* distribute educational resources. (*New York Times*, October 12, 2003)

Even in the case of nominal forms, there were 5 instances where attitude was self-evident

because the word was used to refer to specific instances of existing "inequity", e.g. (5) and (13); in other words, judgment was already presupposed in these cases.

(13) While the inequities in the system are obvious, most experts in the field agree that the problem is not too many rich students being classified as disabled but far too few poor students getting the diagnosis or help they need. (*New York Times*, November 8, 2003)

In brief, the analysis of the lexical feature of the key words suggests that China Daily was far less critical than the New York Times. In China Daily, fairness was generally either a status quo or a static goal to be reached. It was not stated clearly what specific aspect was unfair and what/who specifically was to be blamed for it. The attitude was made ambiguous, mystified and objectified and did not allow much room for suspicion or challenge. As a result, a kind of "expert's language" was formulated and the text was made formal with a touch of authority. In particular, by means of nominalization, modality was construed as an unquestionable fact. By contrast, in New York Times, the reports, with more flexible use of the key words and much fewer use of nominalization, were more inclined to voice unequivocal attitude towards the issues of concern, and more ready to engage in making substantive discussion on the status quo and prospective situations regarding educational equity.

Engagement

The degree writers engaged themselves differed considerably between the two media. As shown in Table 2, the source of opinions in reports of New York Times was largely interviewees, the number of whom (n = 240) were almost four times those of China Daily (n = 73). The gap was even more outstanding when taking into account of the number of reports. Although China Daily (n=67) outnumbered New York Times (n = 44) in the total number of reports, over 5 people were quoted in the reports of the New York Times on average, while the proportion was only slightly over one in China Daily. The New York Times was significantly higher than China Daily in the number of interviewees, as shown by an independent-samples *t* test. The interviewees of China Daily included college faculty, high school teachers, government officials, school administrators, high school students, college students, students'

parents, scholars, and a judge. Voice from the New York Times was projected not only from the above mentioned categories, but also encompassing a much wider range of sources: institutions that set the exam, the exam organizer and supervisor, research institutes, policy makers, consulting firms, writers, non-profit organizations, consulting firms, publishers, an investigation company and test preparation institutions. This created relevance of a broader array of social forces to the ongoing discussion. Take the law community as an example. In China Daily there was only one lawyer quoted, while in the New York Times, 10 lawyers representing the disadvantaged groups were quoted in eight reports, contributing legal perspectives on fairness.

Table 2 Summary of sources of quotes

	Overall frequency	Average frequency/report	Type	Number of interviewees with identity information
China Daily	73	1	13	20
New York Times	240	5	21	240

For example, a report on disability policy for the SAT (New York Times, July 15, 2002) quoted eight persons including a guidance counselor of a high school, dean of Admissions of three different colleges, a spokesman for the college board, disability rights advocate, the public education director of FairTest, test taker, the state auditor in order to give a panoramic view of the issue. In contrast, in a report in China Daily on policy change on vision accommodation (June 7, 2005), only the principal of a high school and a blind test taker, were quoted.

Besides, the background spectrum of interviewees of the same category also varied considerably between the two newspapers. College faculty is a good case in point. Take college faculty, the largest group, as an example. In China Daily, there were only two disciplines mentioned, i.e. education and sociology in China Daily, while the New York Times involved fields of study including sociology, education, psychology, economics, Asian studies, history, English, writing, etc. In the domain of administrative staff in charge of institutions of higher learning, the New York Times quoted people from 39 different colleges, while China Daily only quoted 6. In the category of the head of college, the source of quotes consisted of 35 different universities in the New York Times while the number was much

smaller in China Daily, only 10.

Also, the New York Times provided specific background for all people quoted, which served as important information for the interpretation of quoted ideas. China Daily only provided such information for 20 of the 73 people quoted and the identity of most interviewees was only roughly specified. Again, the faculty of college is a good case in point. The New York Times made clear the discipline and position for all people quoted, while China Daily only provided identity information for 13 out of the 48 people quoted. For instance, in (14), taken from a report of the New York Times on the SAT preparation, the name, the university, the field of study and location were all clearly marked. Such information would be helpful for the reader to visualize the discussion in the development of ideas of the report and hear more concrete voice. In (15), taken from a report of China Daily, only the name and the school were given. Lack of sufficient identity information made the report more imposing in tone and less reader-centered in terms of the interpretation of the quote.

(14) "Where does it stop?" wonders Louis J. Kruger, an associate professor in the school psychology program at Northeastern University in Boston… (*New York Times*, April 14, 2011)

(15) Bai Zunmin, a professor at Shanxi Normal University, said different educational resources were the reason students go to different cities to take the exam. (*China Daily*, May 28, 2008)

Therefore, through introducing various viewpoints into the reports, heteroglossary negotiations were carried out in the reports of the New York Times. Explicit evaluation was activated into the discourse and legalized through a mosaic of direct quotes which were clearly identified. Objectivity and equal relations with the readers were established. By comparison, China Daily quoted much less densely; the quotes were overall implicitly identified; this resulted in a less dialogic and objective discourse.

Conclusion

The above analyses under the appraisal framework indicate that differences did exist between the two media in the way attitudinal evaluation contributes to the formation and structuring of

news discourse on educational equity. Specifically, in the domain of judgment, although China Daily showed generally a positive attitude towards China's college admission system, in cases where explicit assessment was expressed, the judgment was peremptory, lacking specific support or argument. It displayed a much lower degree of judgment. The use of the three sets of key words was characterized with rigidness and abstractness, whose evaluative meanings were played down or back grounded; they tended to imply either a status quo or a static goal to be achieved. Generally, the attitudinal meaning was made ambiguous, mystified and objectified. As a result, a kind of "expert's language" was formulated and the text took on a tone of authority and did not allow much challenge. In particular, nominalization of the key words occurred densely, exclusively in the positive sense of the words, presupposing "equity" "equality" and "fairness" as objectives through the detachment from the restriction of modality; this imposed upon the reader what was intended by the writer through transforming the process into an independent abstract entity. Hence, ideological infusion was strong. In short, efforts were made to mitigate the controversial nature of the subject matter and obscure critical issues; semantic, syntactic and lexical choices were deployed as strategies for maintaining the status quo ante of the existing system by creating a prevailing affirmative and undisputable atmosphere.

By contrast, reports of the New York Times displayed an apparently more critical attitude towards the SAT. Through more flexible use of the searched key words, explicit judgment was shown, resulting in concrete and substantial discussion around the issue of concern. There was no apparent applauding of the existing practice of the SAT; instead, concrete argumentative discussion was conducted. Nominalization occurred much less frequently, leading to unequivocal judgment revolving around educational equity. Normative evaluation of social propriety was consolidated by calling into attention specific inadequacies and problems. In a sense, the judgment approach realized by the linguistic maneuvering of the searched words of the New York Times made the reports more objective and the discussion more open.

As regards engagement, heteroglossary negotiations were found to be more pertinent to the reports of the New York Times, which outnumbered China Daily both in the number and range of sources of quotes. Discussion and argumentation were carried out in greater depth. A

composite of direct quotes were integrated to introduce different viewpoints in the discourse. Moreover, detailed identity information was given, which constructed a dialogic context within the text as well as an interactive relation with the reader. Such pattern of quoting was a disclaimer for the views embedded; meanwhile it created objectivity and a detached attitude. Thus, credibility and legalization of the educational discourse were more likely to be internalized with the readers. The presentation of multiple voices could be said to be a meticulously prepared chorus directed by the underlying ideological intention.

This discourse tactic was used by China Daily only sparsely. Besides, the source of quotes was overall implicitly identified, making the discourse less dialogic and argumentative. Such monoglosssariness created more subjectivity and coerciveness in the manipulation of the audience's interpretation of the stance conveyed. Although the New York Times was more straightforward in terms of the attitude conveyed in the text, attitude was mostly expressed indirectly in the form of direct quotes, building a seemingly more objective style; in this way the control on the part of the author was conducted in a more covert manner. Lower level of intertextuality of China Daily led to less openness of discussion and more explicitness in ideological instilment. This type of engagement subjected the recipient to a tougher control of ideological appraisal on educational equity.

It has to be noted that discrepancies exist between the two countries and newspapers in social and ideological settings, the New York Times being more liberal and involved in social debates than China Daily, undergoing a transition from state-controlled propaganda to a fusion with market power, is more reserved in popular expressions. The findings suggest that the appraisal theory can reveal the cognitive and ideological processes, which are not distributed arbitrarily but under certain contextual and institutional constraints, in the internalization of values constructed in media discourse. Appraisal resources can be deployed skillfully by journalists to take sides, get involved and disguise as objectivity simultaneously in framing news stories. Comparative appraisal studies of media discourse can make it easier to understand the interplay between ideological discrepancies in approaching social events and specific social and cultural settings. The appraisal frameworks adds to our understanding of news reporting as fundamentally persuasive texts which condition the receiver at various levels to develop certain interpretation frameworks, form attitude and value, and identify with

its way of defining objectiveness and fairness. Hence, this approach can place us on a more solid footing for cross cultural comparison of educational development, in view of its ability to help decipher the reproduction, confirmation and diffusion of subjective meanings, power relations and ideologies.

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The Influence of Autogenic Training on Listening Comprehension in the English Classroom

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Abstract
Autogenic training is a self-help anti-stress technique in which the practitioner repeats visualisations to induce a state of relaxation. This paper focuses on an experiment to see whether autogenic training can help students with listening comprehension tests in English. The rationale is, firstly, that listening is probably the hardest of the four language skills to master because this is where students have least control over the content of what is said; secondly that, as a result, students are likely to be stressed, which could well exacerbate the difficulty of the listening task; thirdly that it might therefore be worth equipping them with certain anti-stress techniques, such as autogenic training. A test was conducted in two parts, with autogenic training administered to participants of the experimental group, but not the control group, prior to the second part. The improvement in results was not significant overall but suggests that this relaxation technique can improve students' scores. Most interestingly, while the best students did not benefit, the weakest students benefited considerably and there is reason to believe that the technique might be yet more successful if practised regularly over an extended period.

Keywords
Autogenic training, listening tests, English

Introduction

Stress is a major issue and an almost every day topic of conversation among students and teachers at many schools. One reason why there is such pressure in the German vocational school system, the background to this study, is the direct influence exerted on it by the economy and its fluctuations. Arguably, pressure caused by the competitive nature of the

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economy and the sometimes sensationalist coverage of this in the media are indirectly responsible for distress in the classroom. This is an issue which has not received sufficient attention.

One influential factor in the German vocational school system is that students are expected to progress from the intermediate secondary school-leaving certificate to the university entrance qualification in only two years. One author's personal experience, as well as interviews with teachers and students, points to a high level of stress in this kind of school. Some of the most common problems a teacher has to deal with include anxiety, depression, drug addiction, bulimia, anorexia, aggressive behaviour and bullying. Most of these are at least partially caused by stress. Numerous scientific studies show that these difficulties would be less prominent with a more relaxed atmosphere in school (e.g. Sonntag, 1998; Groslambert et al., 2003; Yurdakul et al., 2009). Unfortunately, a degree of stress in school is unavoidable, especially in test situations and, as long as grades continue to be the main assessment method, distress cannot be eliminated. The following provides a brief overview of processes occurring in the human body when it is stressed.

In stressful situations, adrenaline flow increases. While this helps to mobilize the body in hazardous situations, and is therefore a valuable survival mechanism, it is a hindrance to learning. The production of synapses (important neurotransmitters for information flow in the brain) stalls. Communication among brain cells is blocked to a certain extent (Grüning, 2009, p. 74). In fact, the higher the adrenaline level in the human body, the less receptive or able to think a person becomes. So, the more intellectually challenging an activity is, the less we are able to resolve it. Listening comprehension, the school activity on which we will focus, is the most commonly practised language skill, employed in communication 55% of the time (compared to 23% for speaking, 13% reading or 9% for writing, according to Thaler, 2012).

Listening is arguably also one of the most complex tasks we can face in life (e.g. Rost, 1994; Ur, 1996; Hedge, 2000; Byram, 2004). It is in the listening process that one has the least control over the discourse. Since it is spoken by someone else, one has no choice regarding the grammar and vocabulary employed, which may be above the hearer's level. The pronunciation might be unfamiliar to the hearer, or simply non-standard, and s/he may be ignorant of the subject matter. Depending on the speed and clarity of the delivery, the hearer

might have insufficient time in which to process the discourse because one cannot – unlike with reading – go over difficult parts of the text a second or third time at one's leisure. Thus the hearer is obliged to listen out for and process multiple linguistic and paralinguistic features simultaneously, perhaps too fast, too unaccustomed and/or too unclear to have any chance of success. All things being equal, none of the other language skills presents anything like the level of challenge that confronts a listening interlocutor. Yet the development of listening comprehension is crucial for language acquisition and 'an integral part of an individual's communicative competence' (Hartmann, 2014, p. 72).

Relaxation techniques could conceivably help. Not all are appropriate for use in school, for practical reasons. However, Autogenic Training (henceforth AT) might be suitable for this purpose after an initial practice period, given that it may be practised almost anywhere individually or as a group and that it requires no special equipment or clothing. AT works by readjusting the balance between the *sympathetic* and the *parasympathetic* branches of the *autonomic nervous system* through short daily sessions in which the practitioner repeats visualisations to induce a state of *relaxation.* While there is not a great deal of up-to-date research on this topic, several researchers have demonstrated that stress has a negative impact on the learning process and the working memory. For example, Mackenzie et al. (2009) observe that distressed caregivers had difficulties with learning, episodic memory and working memory.

As for AT, Gibbons (2014) claims that it assists in controlling the typical stress and anxiety associated with performing in public or competing, allowing one to remain centred, calm and relaxed. It helps to conserve one's resources leading up to the event and then to maintain the focus needed to achieve success. Yurdakul (2009) attests that AT leads to self-induced calmness in mind and body and can lead to clearer thinking with regard to problems, as well as to providing new insights. Groslambert (2003) claims it can also aid with physical performance, such as in sports, while a case study of a young anorexic woman reports that after learning how to practise AT she was less preoccupied with food, experienced less interpersonal tension, had greater self-esteem and weighed more (Japanese Journal of Autogenic Therapy).

Experiments have been completed separately in AT and listening, but no-one has

thought of linking them before, as far as the authors are aware. Therefore the aim of this study was to bring AT and listening comprehension together and to see whether AT could help students to perform better in this complex language skill. Ideally, if the answer is affirmative, it could possibly encourage teachers and/or students to integrate relaxation techniques into everyday school life or, at least, raise awareness of their positive effects on the mental faculties generally and on mood, motivation and concentration in particular.

Review of the literature

The (im)possibility of knowing exactly what another person intends you to understand by any given word is one issue. The listener's own interests in context, as opposed to the interests he/she assumes the speaker to have, are another. More broadly, the question of whether a speaker's and listener's cultures need to be identical (and whether this is even possible) for 'correct' understanding to take place, constitute yet another. When considering these questions, we quickly see that they are in fact endlessly complicated (Brown, 1995, p. 23).

One plausible answer to Brown's issues above is provided by Rost (1994), who explains knowledge activation and inferencing in the listening process. He claims that when people listen they form a mental model of the total situation, which allows them to infer non-explicit information. These bridging inferences, as he calls them, complete the 'coherence gaps in our understanding' (1994, pp. 58-59) and are based on both our content schemata, i.e. world knowledge, and our formal schemata, i.e. knowledge of how discourse works.

Listening strategies

Listening strategies are a part of communication strategies, more generally, which may be employed to overcome problems in spoken communication (e.g. Rost, 1994; Field, 1998; Vandergrift, 1999; Thaler, 2012). There are broadly two kinds: *positive strategies* which compensate for defective knowledge or skills, and *negative strategies* which permit the interlocutor to avoid having to give a certain (kind of) response. Crucially, these strategies may be taught. The case for strategy training is well put by Vandergrift (1999):

> Listening is anything but a passive activity. It is a complex, active process in which the listener must discriminate between sounds, understand vocabulary and grammatical

> structures, interpret stress and intonation, retain what was gathered in all of the above, and interpret it within the immediate as well as the larger sociocultural context of the utterance. Co-ordinating all of this involves a great deal of mental activity on the part of the listener. Listening is hard work, and deserves more analysis and support (p. 168).

Different types of listening strategies that have been proposed include: cognitive (i.e. direct) strategies, e.g. inferencing, hypothesising/checking (cf. Oxford, 1990), metacognitive (i.e. indirect) strategies, e.g. monitoring listening performance (cf. Vandergrift, 1999), and socio-affective (indirect) strategies, e.g. cooperating with classmates, using techniques to reduce stress. However, Ridgway (2000) argues that 'practice is the most important thing. The more listening the better, and the subskills will take care of themselves as they become automatized' (2000, p. 183). In fact, he insists: 'Teaching listening strategies such as making inferences is a waste of time. There is no cognitive space for employing such strategies in real-time listening' (p. 184).

Most recent teaching methodology books, e.g. Thaler (2012); Hartmann (2014); Hedge (2000), distinguish between *top-down* (i.e. psycholinguistic and pragmatic) and *bottom-up* (neurological and linguistic) processes in the listening process. Top-down implies using our current knowledge to interpret meaning, e.g. by inferencing, on the deep level. Bottom-up listening, on the other hand, means that the brain decodes information from input in the context, on the surface level. These are not separate processes, but occur in different ways (Hartmann, 2014).

Factors influencing listening

Listening comprehension is a complicated processing of phonetic information which is influenced by various factors. Byram (2004) highlights knowledge of linguistic structures, prior knowledge, attention and memory as the most prominent factors in the listening comprehension process. He emphasises with regard to linguistic structures potential problems between English learners whose mother tongue does not have an SVO (subject-verb-object) structure, but for example an SOV (subject-object-verb) structure. In this case knowledge of grammar is necessary in order to avoid misunderstandings. Furthermore he stresses the issue

of different numbers of vowels and consonant phonemes in different languages. Even when a listener understands individual sounds, in authentic situations words are connected, which leads to elision, assimilation, compression or weakening, which hamper comprehension. In addition, the characteristics of rhythm can differ between the listener's mother tongue and English. While English has a stress-timed rhythm, where stress controls time, other languages like French are characterised by syllable-timed rhythm. Finally, attention is more crucial when listening than in reading and the short-term memory has an intense and complicated relationship with listening comprehension

Ur (1996. p. 111) lists typical problems encountered by foreign language learners. These include having trouble catching the actual sounds if spoken rapidly, becoming stressed due to worry they may miss vital meaning, not knowing enough vocabulary, struggling with the grammar and losing track of the gist, finding it difficult to keep up with the information expressed, being unable to predict what may come next, becoming tired and finding it difficult to concentrate. What exactly causes these problems when listening? Hedge's assessment (2000, pp. 46-55) can be summarised in terms of a lack of various competencies. These include, notably, linguistic competence (knowledge about the language, e.g. its grammar); pragmatic competence (how to understand meaning in context); discourse competence (how to interpret texts); strategic competence (how to overcome communication problems); and fluency (how to process what you hear). Arguably, while students may often be provided with sufficient practice in school, they may not be taught the skills or strategies needed for success (e.g. Field, 1998, p. 111), either in terms of language-related competence or of dealing with their own individual stress and other psychological problems.

Psychology applied to teaching and learning

An analytical approach to teaching listening might focus on both student psychology and on the specific listening skills this psychology calls for. As Rost points out, 'successful listening involves an integration of these component skills' (1994, p. 142). The implication for teachers is that they need to understand the listening process from a psychological angle, to recognise and promote the skills involved, and to investigate potential strategies that could lead to success. Arguably, enough has been written about teacher methodology, but the

listener/learner's point of view has perhaps been neglected. Probably the best-known and most convincing theory in this respect comes from Krashen (1982), whose 'Five Hypotheses About Second Language Acquisition' are today generally accepted in the world of applied linguistics.

Krashen's first hypothesis posits that *acquisition* (the development of language competence through the need to communicate, in a natural, implicit or informal manner, without any instruction per se) is far more likely to be successful than *learning*, by which he means the formal instruction in explicit rules typical of most traditional classrooms. The latter is apt to be unnatural, unenjoyable and inauthentic, leading to blockages of all sorts in the learner. Krashen's fourth, the input hypothesis, is especially applicable to listening and addresses the question of how we acquire language, answering that we progress from one acquisition stage to the next when we obtain input at a slightly higher level (what he calls *'i + 1'*), focusing on the meaning, rather than the form of the message (1982, p. 21). His fifth and final hypothesis relates to the *affective filter* and reminds us that emotional factors influence acquisition. For success, a learner should ideally have a) high motivation and b) high self-confidence, but c) low levels of anxiety. This last seems somewhat obvious today and is probably much less controversial than it once was. Most especially the question of anxiety is directly relevant to this study of listening and autogenic training.

Distress

Stress is a quintessentially 'modern' phenomenon and it seems that we now hear or read about it everywhere. However, it has probably always existed, even if it was not given a name. In Germany people speak of 'school stress' and there are numerous books devoted to coping with it. There are generally considered to be two broad types of stress: that which stimulates positively, and can therefore be helpful in meeting certain challenges, or *eustress*, and that which is harmful and destructive, called *distress*. The former, positive stress, is mainly associated with fight-or-flight situations, in which it can help to save a person's life, and with competitive sports, where it stimulates breathing and muscle function to improve performance. The latter, negative stress, distress, is associated with a disagreeable feeling of being 'under pressure' in hectic, noisy and threatening situations and with only detrimental

effects (Lange, 2008, pp. 50-53).

This negative stress is accompanied by a fear that we cannot cope with the challenges at hand. Typically we sweat and/or turn pale. We may have difficulty speaking, or perhaps a pain in the chest. It may also lead to nervousness, tiredness, inability to relax, shaking, fear of failing or feelings of helplessness, stomach problems and - in the worst instance - even to a heart attack. This type of stress, even in a mild form, can lead to a blockage in our normal thinking because stress hormones may impair our ability to process information (Teml, 1991, p. 17). Thus it can prevent pupils from retrieving or organizing syllabus material under exam conditions, despite the fact that they have learned it all thoroughly. It may also hinder pupils faced with a listening test. When it comes to counteracting these problems, stress experts primarily recommend movement and relaxation (Sonntag, 1998, p. 13). Ideally, this might take the form of sports or other physically-active hobbies. For instance, it is well-known that medical doctors frequently prescribe jogging or whatever similar cardiovascular activity is suitable for a given individual. But this is a long-term solution. What are pupils to do when overly stressed due to facing an impending listening test? Perhaps what is needed here are short-term relaxation techniques which can be employed in a school (or university) setting without recourse to extra equipment or special clothing, immediately prior to the listening test.

Autogenic Training

Why was AT chosen rather than one of the other numerous established relaxation techniques? Firstly, AT appears to be a relaxation technique suitable for application in schools. For example, no special equipment is required, unlike with yoga, where without one's yoga mat, comfortable clothes and a big, quiet room, it just would not work. AT can be practised in any position chosen from among a set of recommended postures, so teachers and students can choose the position most suitable for themselves. Furthermore, AT can be learned easily and is applicable everywhere: in a train on the student's or teacher's way home, while waiting for public transport or during a break between lessons.

Secondly, AT is the most commonly practised psychotherapeutical technique in Germany (Mensen, 1991, p. 35). Grasberger refers to it as the 'yoga of the west' (2009, p. 8),

while Gibbons (2013) asserts that it is used especially in Germany, Japan and Russia, where most of the research and literature on AT has been written. Thirdly, numerous clinical studies have proven AT's efficacy in healing disease, treating psychological disorders, managing stress, promoting general well-being and enhancing performance, resilience, decision making, problem solving and creative thinking (e.g. Mensen, 1991; Grasberger, 2009; Gibbons, 2013; Schwarz, 2013). It is taught at hospitals, medical schools and universities around the world and is being eagerly embraced by organizations for their employees and by sports psychologists in their training of elite athletes (Gibbons, 2013). Interestingly, it was a fervent wish of AT's founder, J. H. Schultz, that it be implemented in schools (Grasberger, 2009, p. 14).

Johannes Heinrich Schultz (1884-1970) described this relaxation technique in *Das autogene Training* (1932). He initially used hypnosis to cure people in his Hypnosis Institute in Wroclaw, closely studying the processes which took place in the body of a patient during a hypnosis-session. He obtained consistent feedback that their body felt heavier during hypnosis and filled with pleasant warmth. Therefore he came to the conclusion that heaviness is akin to muscle relaxation and that warmth correlates with a dilation of the blood vessels and thus with good circulation. Moreover he observed that patients were able to put themselves in this state of deep, trance-like relaxation to heal themselves with appropriate exercises. Thus he developed the method of autogenic ('generated from within') or self-help training or therapy.

It is worth pointing out that AT is a scientifically tested and approved method (Grasberger 2009, p. 78), thus many doctors in Germany offer introductory courses and recommend it especially to relieve the effects of negative stress. Gibbons (2013) highlights the fact that over 3000 clinical studies worldwide have proven the benefits of AT. Above all, she asserts that as the success in improving performance outcomes has been observed, elite athletes, musicians and other individuals around the world are being trained in it. For example, NASA's astronauts are instructed in the use of AT in order to facilitate psychological and physical adaptation to space. On the other hand, with regard to negative side effects, AT should be avoided by people with heart conditions or psychotic disorders (Rosa, 1976).

Methodology

While replacing the regular teacher in a class at a German vocational college (FOS/BOS) in early 2014, one author performed an experiment involving an English listening test in two parts. After the first part a session of AT was administered to the students. When their results then improved slightly in the second part, we were encouraged to view this experiment as a pilot for the larger scale study, later in the same year, described in this paper. The analysis encompasses objective data from a listening comprehension exercise as well as students' subjective opinions in the form of responses to a questionnaire. The experimental procedure was administered to both a control group and an experimental group, the key difference being that only the experimental group was given AT. The dependent variable in the experiment was therefore the students' score in an English listening comprehension exercise, while the manipulated independent variable was the level of relaxation in the experimental group due to practising AT. Listening competence was measured before and, again, after the intervention.

Sample population

160 twelfth- grade students of the FOS/BOS college in Fürstenfeldbruck, near Munich, participated in the present study, though only the results of 111 students could be used because some were unable to produce a correct anonymity code for themselves, while others proved uncooperative. The 111 students evaluated comprised 32 females and 80 males, aged between 17 and 24, the most common age being 18, followed by 19.

The majority (67%) of the participants were engineering students, the remainder either in economics or health & social services. The AT treatment was applied to 47 participants in the experimental groups, while 64 students in the control groups obtained a placebo.

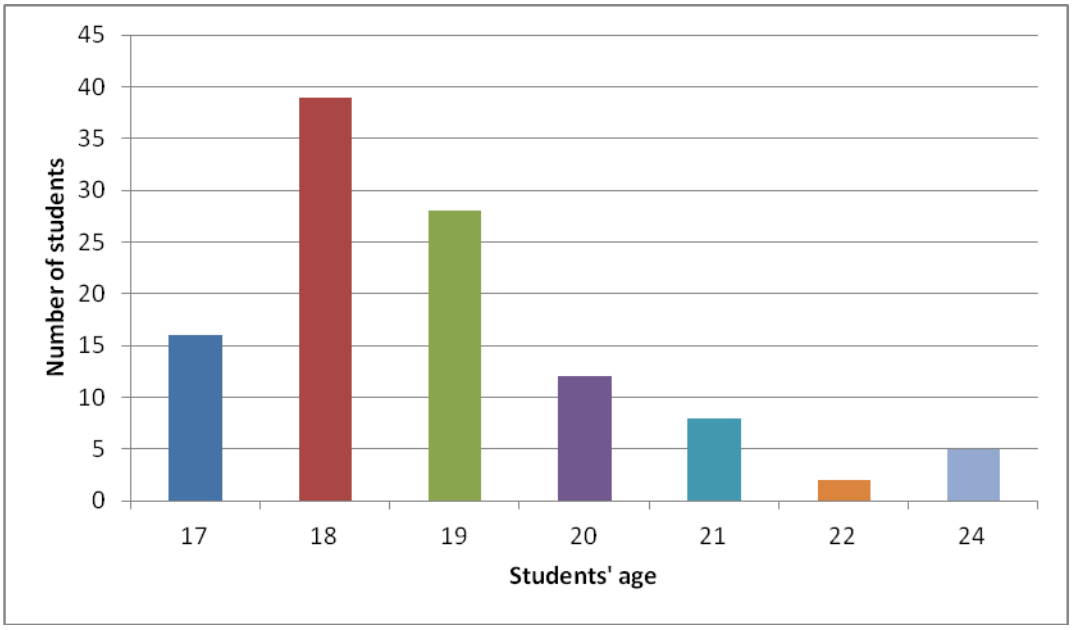

Figure 1 Participants' ages

Data collection

The listening text was taken from *Context 21: Additional Listening Comprehension* published by Cornelsen. It is a short story entitled 'The Day That Time Stood Still' about a near-death experience, read in a British accent, and it captured the students' attention from the outset. Worksheets 1 and 2 were developed for the quantitative investigation, while a questionnaire was employed for the qualitative aspects.

Finding the most suitable task type was problematic as multiple choice questions potentially allow students to give random answers and in matching exercises some might lack care or be unskilled in drawing the line connecting the two options, making it hard to recognize which answer was intended. On the other hand, gap fill answers may be reliably assessed as correct, false or empty and students are forced to think, as they cannot just tick randomly. The major problem with this method of testing is that students may guess the answers without listening to the text on the basis of logical thinking and general knowledge. Therefore we decided on a gap-fill task followed by a chronological order task.

To standardise the experimental conditions in the first and second testing phases (i.e. the two halves of the text and the questions on them), the two texts needed to be of equal length (110 words) and difficulty (approximately upper-intermediate), in similar style (a short story highlighting primarily description over action). The two gap-fill exercises had to

involve the same number of gaps (nine), a similar level of lexical difficulty (approximately five intermediate; four advanced) and number of lexical categories (four nouns; four adjectives; one verb). A questionnaire was designed to collect data on students' attitudes towards relaxation techniques and their potential implementation in schools. It consisted primarily of 'closed-items' with Likert scale options but there were also open-ended questions to allow students to express their opinions.

Experimental procedure

In Week 1, before the experiment started, every student was asked to read and sign the Statement of Agreement. After the pre-listening tasks (discussion questions in plenum) students were told that they were about to hear the listening text only once, not twice as usual, and during that time were to complete both tasks on the worksheet: a) supplying the missing words in a summary of the story, and b) putting key events from the story into correct chronological order. In Week 2, at the beginning of the second part of the experiment, students were asked whether they had heard of AT, had experience with other relaxation techniques or were practising them. They were instructed to make themselves comfortable in their seats and follow the instructions on the CD. First they participated in an AT exercise entitled 'Die Konzentration steigern' ('Increasing your concentration ') from Grasberger (2009) in German. Then they attempted the pre-listening tasks, followed by Worksheet 2 and a post-listening task. Afterwards students responded to the questions on their attitude to AT in Questionnaire 2.

The same experiment, under exactly the same conditions, was administered in a control group, but without exposure to AT, in line with Popper's (1959) stipulations regarding the isolation of causality. Instead of doing AT, control participants watched a video about it, of the same duration as the exercise completed in the experimental group.

Hypothesis

Our working assumption was that quantitative differences, if any, between listening task results achieved by students exposed to AT and those without such treatment might suggest that AT had helped with their listening competence. In other words, we attempted to refute the

null hypothesis that no differences in listening performance would be found.

Research questions

1. Does AT have an effect on listening comprehension in the English FOS/BOS classroom in twelfth grade and, if so, what effect?

2. What correlation is there, if any, between students' attitudes and exposure to AT and test results?

3. If listening comprehension is affected by AT, is it the high achievers (13+ points out of 15 in Test 1), the average students (six to twelve points out of 15 in Test 1) or the under-performing students (five or fewer points out of 15 in Test 1) whose performance is most influenced by AT, as evidenced in the Test 2 results, and in what sense (better or worse)?

Findings

The findings are based on the results of two listening tasks and the difference in score, if any, after the AT session. The worst result was -5 (Test 1 vs. Test 2) obtained by one student, followed by another who had -4, and a third with -3. The best result was by a student whose score improved by 11 points, while two improved by nine points, and another two by eight points. Figure 2 shows all of the results. There is a slightly positively skewed distribution. Including zero also as a possible result (32 students obtained the same score in each test) there were altogether 35 possible results or, percentage-wise, one difference point equates to slightly less than 3%.

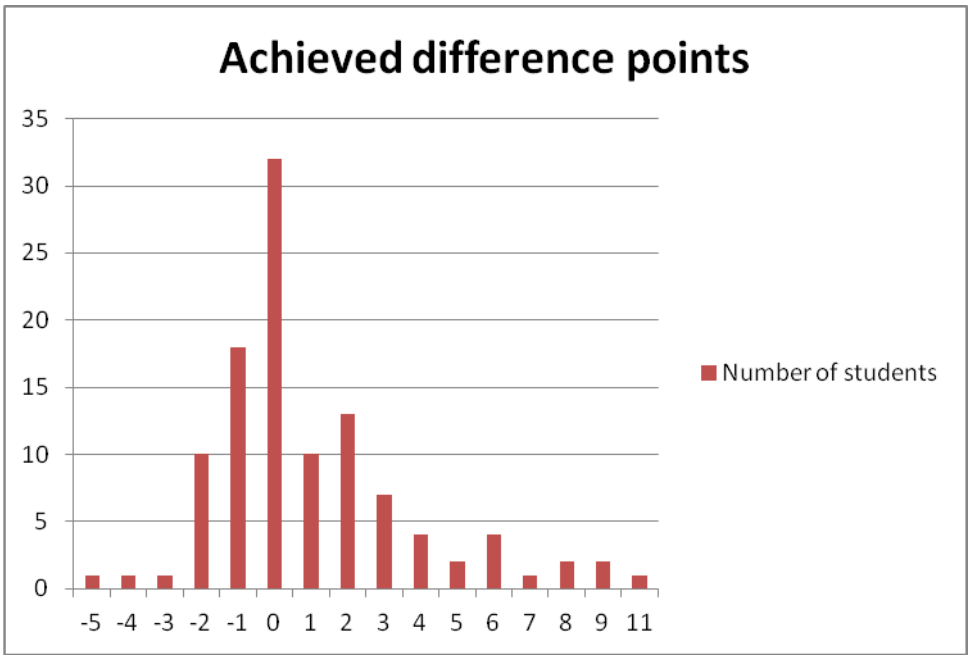

Figure 2 Difference points after AT intervention

Research Question 1

'Does AT have an effect on listening comprehension in the English FOS/BOS classroom in twelfth grade and, if so, what effect?' This effect, if any, should of course manifest in an increased or decreased number of correct answers. To answer the question it is necessary to analyze the statistics for both the control and experimental groups. The effect of AT on listening comprehension is outlined in Table 1 below.

Table 1 Statistical effect of autogenic training on listening comprehension

Sample statistics	Control group	Experimental group
Minimum	-5	-4
Lower quartile (Q1)	-1	0
Median	0	1
Upper quartile (Q3)	2	3
Maximum	6 (11 with outliers)	7 (9 with outliers)
Range	11	11
Interquartile range (IQR)	3	3
Outliers	1 (11)	2 (8,9)
Sample size	64	47

Both the range and the interquartile range remain constant in each group, while the minimum,

lower quartile, median, upper quartile and maximum are all shifted one difference point in favour of the experimental group. Therefore the group with AT treatment achieved slightly better results. In only one of the three control classes did the median rise slightly (and less than in either experimental class) while, in the other two control classes, it remained exactly the same for both tests. Additionally 75% of the difference points in both experimental classes were zero or better, while in two control groups it remained at 50%. The majority of students from the middle control class also achieved better overall results in the second test, but the median is only slightly above zero, which suggests that there were individual achievers who performed a lot better in the second test.

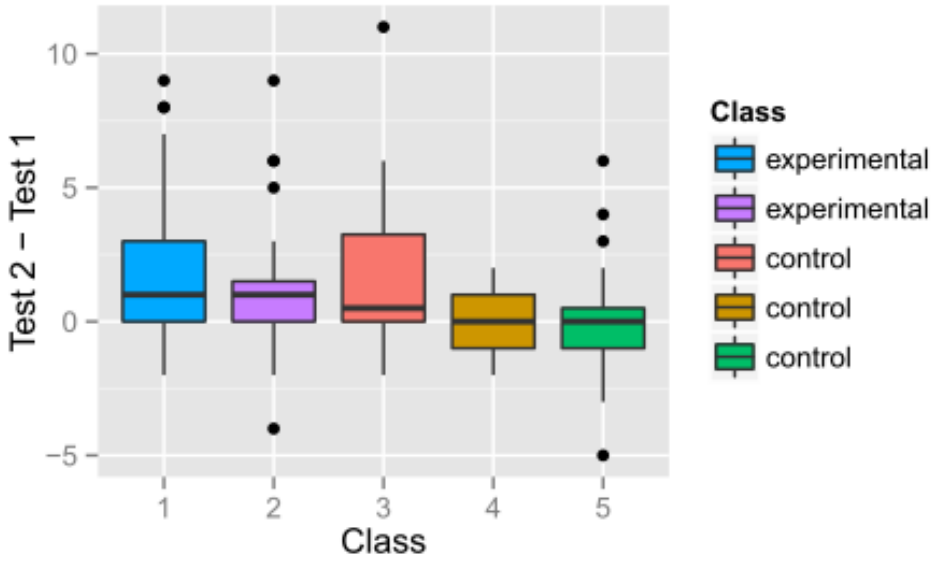

Figure 3. Results by class

Figure 3 reveals that from Test 1 to Test 2 the control students' results improved in 20 cases and dropped in 15, a slight improvement which could possibly be attributed to the fact that the participants were more familiar with the test format and/or the story the second time around. In the experimental group, however, results improved in 24 cases, dropping in only seven. If we ignore students for whom there was no change, we can say that results in the control group as a whole improved in one-third more cases than they deteriorated, while in the experimental group over three times the whole number improved compared to the number that deteriorated, a difference ten times greater than in the control group. This provides some initial evidence that AT could possibly help with students' listening tasks.

If we use mean (M), standard errors (SE) and standard deviation (SD) to present the

results instead of difference points and medians, as above, the findings are as follows: the control group achieved M = 8.23 (SE = 0.54, SD = 4.31) points out of 17 possible in the first test, with only an insignificant improvement in the second test: M = 8.78 (SE = 0.48, SD = 3.82). Before the intervention in the experimental group M was 7.83 (SE = 0.58, SD = 4.01) and after the intervention it improved significantly to M = 9.43 (SE = 0.56, SD = 3.85).

Research Question 2

'What correlation is there, if any, between students' attitudes and exposure to AT and test results?' Answers to this question were obtained using questionnaire 2, completed by the experimental groups after AT treatment. An analysis of the most interesting results follows.

Questions regarding the student's experience with relaxation techniques

50% of students who had heard of AT before the experiment improved their score in the second test by between 0 and 1.5 points (with relatively small range and interquartile ranges, i.e. their results were fairly consistent). 75% of students obtained the same result or better after the intervention. 25% of those who had heard of AT before the experiment did not change their score from one test to the other, but those students who encountered AT for the first time benefited more. Their attitude towards AT could be interpreted as negative based on what they had heard before experiencing it themselves. In each group there was an outlier.

Another question asked 'Do you know other relaxation techniques?' Both groups were similar in terms of whether they knew other relaxation techniques, but those who did performed slightly better. A possible interpretation of this result is that they had already had a (positive) experience with other relaxation techniques, suggesting that a correlation between attitude and performance does exist (i.e. there is an element of self-fulfilling prophecy).

Before the intervention

Possible answers to the question 'What was your attitude regarding Autogenic Training before this experiment?' ranged from 'very negative' to 'very positive'. 61.7% of participants in the experimental group began with neutral feelings towards AT, answering 'I don't know' at the mid-point of the Likert scale. This overall neutrality of expectations was further

confirmed by those who answered differently in so far as they were roughly equally divided between positive (21.3%) and negative (17%) stances.

During the intervention

The range of possible answers to 'How did you feel during the Autogenic Training?' was, again, from 'very positive' to 'very negative'. A majority of students ticked either slightly positive or positive and not even one felt very negatively during AT. Examples of approving responses include:

'Very good in every way. I just felt good. Mentally too' (MAHAKU, Q4).

'During the training I felt increasingly relaxed. This relaxation quickly helped me to concentrate better afterwards' (DECOIB, Q4).

Those who felt neutral about AT fell to 27.7% of all respondents, i.e. less than half the number who had previously answered that they were neutral. Those feeling negative accounted for only 14.9%. Thus, attitudes towards AT became significantly more positive when participants obtained first-hand experience of the technique, suggesting that – whether or not it helps objectively to obtain better test results – it was a pleasant factor for most students in any case.

After the intervention

The final three questions examined participants' opinions as to, firstly, whether the AT session had helped with this particular (English listening) task; secondly whether it could potentially help with other stressful tasks; and lastly, whether they could envisage using AT themselves to prepare for a difficult exam. To 'Did you get the impression that the Autogenic Training helped you to solve the tasks?' the response was surprisingly negative: 63.8% of students believed the treatment had not helped. Invited to explain, 75% of those who gave a plausible reason why they believed that AT had helped them to solve the tasks had better results in the second test, after intervention. Again, it seems there is a correlation between a positive attitude towards AT and profiting from this relaxation technique.

Interestingly, two of the most extreme outliers who achieved 8 and 9 points more after intervention were able at the same time to give good reasons why they believed that AT had

helped them to solve the tasks. Additionally, the distribution of the difference in the results in the group without a plausible reason is symmetrical, meaning it is a normal distribution. On the other hand, there is no statistical difference between believers and non-believers. Of the latter, some stated that AT had made them excessively relaxed, or even sleepy, and that this was detrimental to their concentration in the test. An example of these is:

> 'I wasn't concentrated anymore' (FEELHL, Q5).

Certain respondents claimed they had no trouble either concentrating or with feeling relaxed and that the treatment was therefore ineffective. An example was:

> 'In my opinion autogenic training isn't the right [thing] for me because I am really relaxed all day long' (JUBIHO, Q5).

Another respondent commented positively on the treatment in general but explained that it was not the right thing for this particular test:

> 'This training is [good] for my personal problems but it doesn't help me that much to focus on the tasks. I prefer to solve problems with my friends' (APBAEI, Q5).

A third felt the whole exercise was a waste of time and would have preferred to focus solely on preparing for his/her exams:

> 'I don't think it helped me because it was just an "exam" I didn't like... we want to get prepared for our final exams and not do anything else' (MAANLS, Q5).

Another respondent's reason why the treatment did not help was simply that it was not his/her usual way of relaxing:

> 'It is not the normal way […] I deal with my problems so it is not going to help me anyway' (AUKOIN, Q5).

Therefore, although a majority of respondents had felt positive about the treatment while it lasted, the number who considered it actually helped with the test fell by nearly half to 29.8%. One of the relatively small number who was distinctly positive stated:

> 'It was good because I was not stressed' (MAHAKU, Q5).

Other explanations as to why the treatment helped in the test were similar:

> '[During the training] I was completely relaxed and concentrated' (APBEHI, Q5).
>
> 'I think it mainly helped because I [was able to] go into the test [distinctly] more relaxed after the training and so everything was easier' (DECOIB, Q5).

‘My head felt free so I could concentrate completely on the task’ (APANVE, Q5).

A final interesting comment accompanying a neutral response to the question (specifically the person chose neither the ‘yes’ nor the ‘no’ box, but put his/her cross in between these two), suggested that AT might be useful if practised more regularly:

‘[…]I think [my results] would only improve if I did AT more often’ (JUSIDZ, Q5).

To the question ‘Do you have the impression that such methods could help you to deal with stressful tasks?’ possible answers ranged from ‘definitely’ to ‘certainly not’. Here response proportions were reversed vis-à-vis the previous question. Although a large majority felt the treatment had not helped with the listening test, a clear majority (59.6%) now considered it could potentially help them to deal with stressful tests, while those doubting its potential only accounted for 31.9%. This is perhaps the more interesting because, if individuals learn to use the technique, they could decide for themselves if and when to use it. It suggests that such knowledge appears to most respondents to be a valuable asset. It further possibly suggests that, if AT were to be adopted in schools or other institutions, it should be as a technique taught for individuals to use as and when appropriate for their own purposes, rather than performed en masse, as was the case in this experiment. This view is backed up by certain comments from respondents who mentioned that they were put off by the presence of their peers.

Finally, the question as to how many students felt they might actually employ the technique in future produced an inconclusive result, with the overall number stating they would use it (42.6%) exactly equaling the number stating they would not.

Due to the rather limited participant numbers involved in the experiment, the test results do not prove anything much, although they are intriguing and mean that AT might be worth encouraging among students ahead of exams or other stressful tasks. On the other hand, the participants’ responses regarding their attitudes were very interesting. 61.7% of participants in the experimental group began with neutral feelings towards AT. It was thus fascinating to read how much more positive students’ opinions became once they were actually exposed to the treatment. Responses to the question of how they felt during AT were quite different from their previous responses. 55.3% of respondents now cited positive feelings.

Research Question 3

If listening comprehension is affected by AT, is it the higher achievers, the average students or the under-performing students whose performance is most influenced by AT, and in what sense (better or worse)?

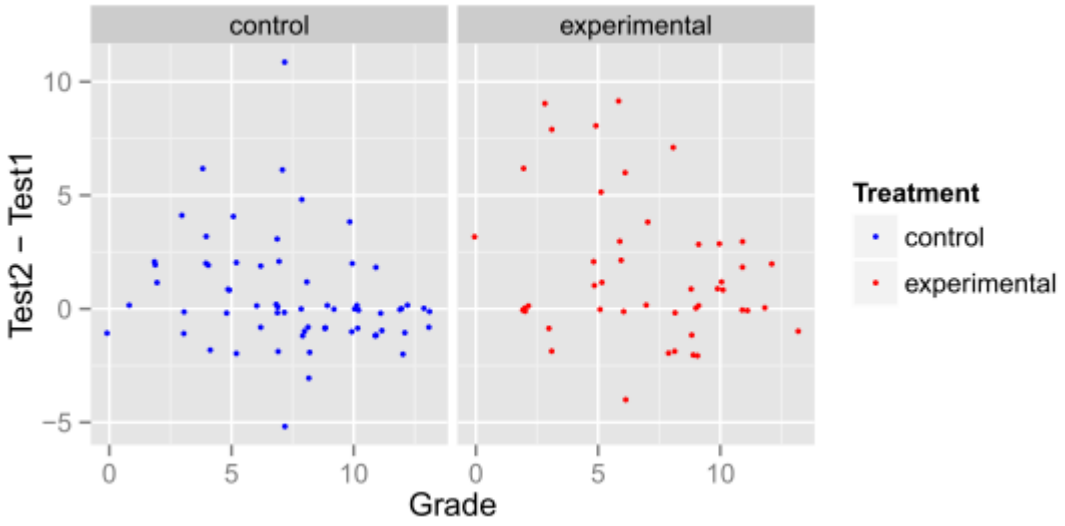

Figure 4 Change in marks: experimental vs control group

The scatter plot in Figure 4 shows that bare pass students with an English mark around five out of 15 benefit the most often, and also with the most percentage points in their grades, while the students who achieved around ten points in the previous English test also profited but there was less difference in points between the two experimental tests. On the other hand the *straight-A students* achieved slightly worse results in the second test. This is even more obvious in the control group with students who only watched a video about AT. Possible reasons for this phenomenon could be that they got bored, sleepy or de-motivated, and we would not recommend that teachers offer this method to their high achievers, because they obviously do not need it. Nevertheless, the big majority of average students did profit from AT. As the moderate achievers are the majority in almost all types of schools, and also on the basis of these results, implementing AT in school would make sense.

Demographic data

Turning to potential differences between female and male students, it is unfortunately difficult

to say whether the treatment affected the sexes in similar ways, due to the very small number of females. However, among males in experimental classes, the ratio of improvement to deterioration was 22:7, underlining the potential value of AT. Strangely enough, the control group's results were more interesting this time. Among male participants slightly more test scores worsened (14) as against those that improved (13), possibly suggesting that the young men were becoming bored since one might otherwise have expected the scores to improve due to familiarity with the test format. On the other hand, female students' scores in the control group improved in a ratio of 9:4, which arguably supports the cliché that female students make more effort in their studies, including in non-essential tests.

Discussion

All in all, the above findings suggest that AT does have a small effect on listening comprehension in English among FOS/BOS twelfth-grade pupils. Students from the experimental group performed slightly better in the second test (after AT) than the students from the control group, supporting the experimental hypothesis that this relaxation technique could potentially help stressed students to do better in tests.

Previous research

Although a number of experiments have been carried out in the areas of both AT and listening comprehension, no-one had thought of linking them together before as far as we know, so it is difficult to make a direct comparison of the results of this study with any previous research. However, several studies have shown that students in a foreign language classroom are often anxious and that this feeling inhibits their performance in the foreign language (e.g. Horwitz, Horwitz & Cope, 1986; MacIntyre & Gardner, 1991a, 1991b; Phillips, 1992; Young, 1990, 1992, 1999). 'One of the conclusions of these studies is that anxiety among foreign language students is not just a case of general classroom anxiety being "transferred" to the foreign language learning but a distinct complex of things related to the foreign language classroom learning' (Horwitz, Horwitz & Cope, 1986, p.128). If we accept the notion that listening is the most stressful of the four major language skills, given the minimal control a listener may exert over discourse spoken by another, this suggests that the level of anxiety among students

mentioned by Horwitz and others would probably be highest of all when taking a listening test. This assumption is further supported by Haß, who makes recommendations for pre-listening activities in English lessons based on the premise that students are likely to be stressed: 'The following pre-listening activities can be recommended: relaxation techniques […]' (2006, pp. 78-79).

One interesting finding of this research concerns the relative degree of stress experienced by different categories of student in listening tests or, more precisely, their relative need for a technique to help them deal with it. The study found evidence that the improvement in test scores among average students, post AT session, was markedly different to that among *straight-A students*, who failed to improve their scores. This may be attributable in part to the fact that routinely higher achieving students would arguably be more liable to become bored, finding the task too easy or, perhaps, become de-motivated due to having been informed that these tests were merely part of an experiment and that the scores obtained would, therefore, not count in any way towards their overall school grades.

We are not aware of specific research demonstrating that higher-achievers suffer less from stress than their lower-achieving peers. In fact, the anecdotal evidence of experienced teachers might instead support an assumption that higher achievers tend to be the most highly motivated and are, consequently, more – not less – stressed than lower achievers. However, it is an equally plausible notion that the most able students would be the least stressed of all (and thus least in need of AT or other relaxation techniques) simply because they would find tests such as those in this experiment easier than other students.

Problems and limitations

In order to achieve a significant effect on the listening it is necessary to practise AT regularly over a longer period in time. Bearing in mind this limitation, the improvement of 3% after only one session is promising and an invitation for more research to be conducted in the field. Unfortunately, such an extensive study would be beyond our means. However, all the above research studies citing AT were carried out with participants who had practised it for a longer period of time. For example, Patel (1990) mentions '*at 4 year follow up*, people with high blood pressure[…]' and Kanji (2006) states that 'anxiety for university level students is

significantly reduced with *consistent AT practice*'. It must again be emphasised that the conclusions in this present study are based on only limited data and the experiment would need to be repeated with a great deal more participants for confirmation. Additionally, in this experiment there were too many male, as opposed to female, participants. Performing it with a different type of school might have led to completely different male:female ratios. Lader et al.'s (2006) claim that young men tend to seek relaxation in sports, whereas women more often favour other kinds of relaxation, raises the issue that women might potentially benefit more from AT. It would be interesting if other researchers could confirm or disconfirm.

A further problem was that students appeared to be bored at times. To produce good results with AT requires a situation in which participants need to deal with stress. Dealing with boredom is a very different matter. Students were even more relaxed and/or bored than usual, knowing the test was not a 'real' exam. We tried to make it slightly more stressful by getting them to solve two tasks at once and allowing them to hear the text only once. The assumption remains that participants facing a 'real' test (particularly one whose outcome might have a bearing on their future careers) could conceivably respond quite differently to AT.

Similarly there is a problem with how to word questions and interpret answers. Even if it were possible to produce completely discrete and comprehensible questions, researchers cannot ultimately prevent participants from answering in their own way. For example, one respondent, when answering question 1 on feelings before a listening task, chose to ignore the Likert scale boxes and to create his/her own extra box 'depends on the importance of the test' (MAHEOE, Q1). Moreover, it is sometimes difficult to know whether what seems at first sight like a contradictory answer has just been written without due consideration or whether it is a thoughtful and reliable answer, based on reasoning not obvious to the researcher.

Recommendations and implications

Naturally, we hope that similar research can be undertaken with more participants, especially more female students. Equally, we hope that setting up similar tests will be possible without interference from certain complicating variables, although in a classroom there will always be elements beyond one's control, making it risky to assume a simple line of causality between

one factor and another. For instance, one respondent gave as the reason why the treatment had not helped: 'I had [had] a maths test just before so my concentration was [exhausted]' (MAVINE, Q5). This means we can never provide exactly the same experimental conditions in every class.

A further issue involves the language(s) of treatment. Participants heard the exercise ('Die Konzentration steigern' from *Autogenes Training* by Dr Delia Grasberger) in German, while the control group watched a video in English and had more input in English. In order both to provide extra English practice for the experimental group and also make the two groups more directly comparable, perhaps future researchers should use AT sessions in English too.

Lastly, since one student commented, referring to AT, 'I don't believe in voodoo', and since there is clearly a close connection between students' attitudes and their performance in tests, it might be advisable for the researcher to explain that AT is a scientific technique that has been objectively proven to help, rather than something you have to believe in for it to work. Then it is possible that results could be more significant. The big question arising from this study is whether there is a place for AT in school or at university and, if yes, how, when, where, in what capacity?

Conclusion

This study has provided a small but tangible piece of evidence that relaxation techniques or, more specifically, AT, could potentially help students to perform better in English listening tests. Presumably, if AT can help with listening in English, it could also help with listening tests in other languages and, perhaps, with other types of tasks in language classrooms. Indeed there is no obvious reason why it might not help students with other sorts of hurdles they have to face. It is therefore to be hoped that other researchers might study the possible effects of AT with greater participant numbers over a longer period of time to produce more conclusive results one way or the other.

Assuming that future research can confirm the findings of this study and show that relaxation techniques are worth incorporating into school life, what form should they take? There are different potential forms for the implementation of AT in the classroom. It could be

2-3 minutes before a listening task, comprising deep breathing, a fantasy trip or any other method which helps an individual to mentally go into his/her inner world. Or it could be a few minutes' break for each student to practise AT at their own pace and in their own way. AT is flexible enough to allow many different variants.

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The Tonal Constraints on Vietnamese Perception of English Stress

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Abstract
The experiment reported in this paper investigated tonal transfer in Vietnamese perception of English stress. 95 Vietnamese subjects including 17 advanced Vietnamese speakers of English and 80 beginning learners of English from four regional dialects (Hanoi, Saigon, Hue and Nghe An, 20 speakers of each dialect) participated in a perception test. The subjects listened to English words and marked each syllable with the nearest Vietnamese tone that they perceived. The results indicated that an English syllable could be perceived as a certain Vietnamese tone depending on the syllable structure (a closed syllable ending in an obstruent or a syllable ending in a sonorant) and stress levels (stressed and unstressed). Regional dialectal differences in the expression of tonal contrasts also affected subjects' performance on the tone identification task. It is argued that the results of the experiment support a stress to L1 tonal transfer strategy in Vietnamese learners' initial adaptations to English stress and accent patterns.

Keywords
tone, stress, perception, Vietnamese, English

Introduction and background

Background

In regards to the acquisition of a second language sound system, Trubetskoy has a metaphor that the sounds of a new language are "filtered" through the "sieve" of the mother tongue (Trubetzkoy, 1958). There is abundant evidence that L2 learners make perceptual reference to the phonological categories of their L1 in the perception of segmental features in L2 speech. Much less is known about prosodic transfer effects in second-language speech perception and most of the observations that have been made are based on impressionistic or anecdotal

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evidence. A number of writers have observed that English stress levels are perceived as tonal contrasts by tone-language speaking L2 learners of English. In a study of the interpretation of English stress by Chinese English bilinguals when they switch from Chinese to English, Cheng (1968) indicates that English stresses are interpreted as Chinese tones with high pitch by Chinese speakers. In another study, Amayo (1980) observes that Nigerian speakers of English perceive and reproduce English stress as tone. He argues that they convert English stress patterns into tone patterns, and derive the allotones of the basic tones by applying the tone rules of their mother tongue. According to his observations, primary stress converts to high tone, and all other stresses convert to low tone. Sometimes, secondary and tertiary stresses are converted to mid tone; which appears to depend on the relative height of the pitch of such syllables.

Vietnamese speakers learning English inevitably have difficulties with both perception and production of the English word stress and some prosodic transfer effects between Vietnamese and English have been previously reported. Nguyen Dinh Hoa (1980) points out that a Vietnamese hearer will notice “a kind of tune” in what speakers of English say, which may range from low to high pitch level although this does not affect the meaning of the English utterance. For example, the word “you” in English may appear to have four contrastive lexical tones to a Vietnamese listener: /ju:/, /ju’: /, /ju`:/, and /ju.: /. Each of these extra diacritic marks corresponds to one of four Vietnamese tones: tone Ngang (Level), tone Sac (Rising), tone Huyen (Falling) and tone Nang (Drop) respectively. At the production level, Nguyen Dang Liem (1970) noted that Vietnamese speakers of English tend to substitute the high rising tone for primary stress resulting in exaggerated pitch changes on stressed syllables, implying that they perceived English stress as tones. It is also observed by Ho Dac Tuc (1997) that there is the degree of perceived similarity between stressed or unstressed syllables in English and the Vietnamese tones which range from high to mid-level pitch. Ingram and Pittam (1987) and Riney (1988) observed tonal effects provoked by English words with obstruent final syllables which were produced with a checked quality of the Sac (Rising) tone easily identified by its abrupt high rise.

The present study was conducted to assess the validity of a prosodic ‘tone to stress level’ transfer strategy, which is postulated to operate in at least the initial stage of second

language learning, when speakers of a tonal language are exposed to contrasts of lexical stress and phrasal accent in English. Vietnamese learners of English at two levels of familiarity/experience in L2, drawn from the three major dialect regions of Vietnam (northern, central, southern), were asked to transcribe target syllables in English words (e.g., present [v] vs. present[n]) and phrases that encoded broad and narrow focus and compound lexical stress patterns (e.g., *silver **fish**:* fish made of silver, ***silver** fish:* not a golden fish, and ***silver**fish:* a type of insect) into their closest equivalents using Vietnamese orthography (which codes syllables for tone). The results show that Vietnamese listeners, regardless of their English language experience, used relative F0 as the effective cue for stress to tone mapping, consistent with impressionistic accounts of prosodic transfer effects mentioned above. We argue on the basis of differential performance by the dialect groupings and results from companion experiments (Nguyen, 2003; Nguyen and Ingram, 2005; Nguyen, Ingram and Pensalfini, 2008) using the same stimuli and subjects but different response requirements, that the results of this experiment are not merely task specific but indicative of a prosodic transfer strategy that applies more generally to parsing of L2 speech in naturalistic contexts. However, the final judgment on this matter awaits further evidence.

The central finding of the present study, and its claim to contributing new insight into prosodic transfer effects in second language learning, concerns the way regional dialectal differences in the expression of tonal contrasts in L1 control the perceptual categorization of 'stress levels' in a non-tonal language like English.

The tonal system in Vietnamese

Vietnamese is a contour tone language which is generally agreed to have three main dialects: the Northern, the Central and the Southern (Vu Thanh Phuong, 1981; Thompson, 1987; among others). Northern Vietnamese has six phonological tones while Central and Southern Vietnamese each have one tone less because the fourth and the fifth tones (tones Nga (Broken) and Hoi (Curve) respectively) have historically merged (Emeneu, 1951). As far as phonological features of the six tones are concerned, all investigations of Vietnamese tones have agreed that it is possible to speak of the tones in terms of three levels of pitch height: high, mid, and low, and pitch movement: level, rising, falling, and falling-rising or concave

(Vu Thanh Phuong, 1981). In addition, voice quality, particularly the laryngeal features of creakiness and breathiness are distinctive tonal features characterizing Vietnamese tones at the physical phonetic level across dialects. Creakiness, in addition to occurring as a regular feature on the Broken and Drop tones of the Northern dialect and the Curve tone of the Central dialect, also occurs on some local variants of the Southern Drop tone (Vu Thanh Phuong, 1981). Creakiness and breathiness are found to accompany falling, drop, curve and broken tones of the Hanoi dialect and claimed to be a distinctive register feature, distinguishing low register tones from high register tones (Pham, 2003).

There is dialectal variation not only in tone types (Northern: 6 tones, Southern and Central: 5 tones) but also in tone levels (the same tone can be of different pitch height in different dialects) and tone range. It has been found that the tone range in Central dialects is rather compact in comparison to that of the Northern or Southern one. Vu Thanh Phuong (1981) found that the tones of so-called "Central Vietnamese" are realised within a 40 Hz range (to be compared with the values he gives for his Northern reference, 128 Hz, and Southern reference, 108 Hz). Seitz's results (1986) are comparable; he gives 50 Hz for Hue, 110 Hz for the North and 220 Hz for the South. Vu Thanh Phuong (1981) noted many revealing differences in pitch height and contours of the same tone among three dialects. For example, the level tone is mid-level in Northern and Southern dialects, but high-level in the Central one. The falling tone is low-falling in Northern and Southern dialect but mid-falling in the Central one. The rising tone is high-rising in Northern and Southern but mid-rising in the Central dialect. The drop tone is low-falling with laryngealized ending in Northern, low-falling in Central and low-concave in Southern dialect. In terms of pitch height, rising and level are relatively high in all dialects while the others are relatively low. Vu Thanh Phuong's cross-dialect tone perception study (1981) shows that generally tones in isolated words were identified fairly well by speakers of different dialects but there were some variations according to dialects, individual tones and subjects. Particularly, misinterpretation usually occurred between two tones having some common features (either pitch height or contour or voice quality) either within or across dialects. For example, the Northern broken tone was perceived as the curve tone by 6%, 40.3% and 37.6% by Northern, Central and Southern subjects respectively. The central drop tone was perceived as falling tone by 57.8%, 26.3%

and 64.9% by Northern, Central and Southern subjects respectively probably due to 'similar F0 trajectory between these two tones in Central dialect' (Seitz, 1986).

Stress in English

As a first approximation, stress represents levels of relative prominence among syllables in spoken language (Hulst, 2005). In English, and other stress-accent languages we need to account for two types of stress or prominence. Lexical stress refers to the relative prominences of syllables in individual words. Normally, words of more than one syllable will have one syllable that carries primary stress or accent. Other syllables may carry secondary stress, or will be unstressed. For example, in two-syllable words there are two levels of stress (stressed vs. unstressed: present [n] vs. present [v]), but one can still discriminate at least three levels of stress in a compound such as silverfish (a kind of insect) with a heavy or primary stress in sil-, a less heavy or secondary stress on fish and least heavy or unstressed in -ver.

The three English stress patterns of interest in this study namely compound, broad focus noun phrase and narrow focused phrase (e.g., silverfish, silver **fish** and **silver** fish) are also shown to have contrastive pitch prominence. The phrasal and emphatic stressed syllables (fish in silver **fish** and sil- in **silver** fish, respectively) have enhanced sharp rising pitch prominence (L+H*) in compared to its lexical stress counterparts (e.g., a H* tone on sil- of the compound silverfish and broad focus pattern silver **fish**) (Hardcastle, 1968; Nguyen, Ingram and Pensalfini, 2008). These distinct pitch accent types were reflected in clear differences in average F0 values for the three stress patterns in the stimuli used in this experiment (Table 2). The differences between the highest and lowest of the mean F0 differences clearly exceed pitch perception difference limens (Gandour, 1978) and contrasts between the mid and low and mid and high groups probably also exceed discrimination thresholds, although this was not formally tested. Nor, was it tested whether Vietnamese listeners perceived differences among the three English stress levels categorically. The question of categorical perception of accent types is a vexing one in monolingual prosody perception (Ladd & Morton, 1997). Its significance for L2 prosody perception or prosodic transfer effects is unclear at the present time.

Perceptual patterns of Vietnamese tones and English stress

On the basis of the definition of (non-) tonal languages given in the literature and the contrastive review of studies on stress and tone above, English and Vietnamese may be distinguished in terms of how pitch variations convey linguistic information: pitch variations in English do not distinguish monosyllabic lexical items while they do in Vietnamese; tonal pitch which is usually assumed to be stored as part of the lexical entry in Vietnamese is used to contrast individual lexical items or words, while in English, an intonation language, variation in relative pitch prominence is used to indicate syntactic and/or semantic distinctions at the phrase or sentence level (Gandour 1978; Ladefoged 1962; Pike 1948; Wang 1967). Nevertheless, although English has no lexical tones, lexical stress in English can be said to behave in much the same way as pitch operates in Vietnamese, in the sense that pitch is a significant cue for the perceptual differentiation of lexical items in both languages.

Due to the somewhat similar perceptual function of pitch in the two languages, it is predicted that Vietnamese learners will make reference to pitch as it is used in their tonal system in the perception of English stress. Stressed or accented English syllables are perceived to be of higher pitch than unstressed ones, and are consequently categorized as Vietnamese high versus low tones according to the Vietnamese phonological custom of assigning a tone to each syllable. However, this basic prediction is modulated by the way that tonal contrasts interact with segmental constraints on Vietnamese tones and regional dialect specific phonetic correlates of tone.

In brief, this study aims at examining the tonal constraints on Vietnamese perception of English stress by testing the following hypotheses, which are postulated on the basis of the observed cross-language pitch-level mapping perception pattern of Vietnamese listeners and the tonal features of Vietnamese tones as reviewed above. The tone-mapping will depend on the relative height of the pitch of English syllables such that L2 syllables with higher pitch will be mapped onto high tones and vice versa, and syllables of lower pitch will be matched with lower tones.

(1) Due to segmental constraints, the English syllables ending in obstruents (*checked syllables*) will be perceived as the rising tone when they are stressed and as the drop tone when they are not stressed.

(2) The English syllables ending in sonorants (*non-checked syllables*) will be perceived as the rising or level tone when they are stressed because these two tones are relatively high across dialects and as the falling tone when they are not stressed because this is a low tone.

(3) The remaining three tones drop, curve and broken may not be a good match for English non-checked syllables in neutral intonation in this study due to their specific tonal features: drop with heavy laryngealisation, curve and broken with fall-rise contour and glottalisation.

(4) Vietnamese listeners will not only be sensitive to the difference in pitch at lexical stress level (i.e., between stressed and unstressed syllables) but also at the accentual level (i.e., between normal and emphatic accent or between lexical and phrasal stress). As a result of this, syllables with phrasal stress or emphatic accent will receive more tones of higher level than those with lexical stress or normal accent.

A secondary aim of the study is to examine whether there is any dialectal variation in perception patterns.

Methodology

Stimulus items

Minimal pairs of two-syllable nouns and verbs such as ***up****set*(n) and *up****set***(v) and triplets of compounds, broad focus noun phrases and narrow focus noun phrases (e.g., ***silver****fish:* type of insect, *silver* ***fish****:* fish made of silver, and ***silver*** *fish:* not a golden fish) were used as the stimulus items for the perception tests. The purpose of using compounds and broad vs. narrow focus noun phases was to examine whether different degrees and types of English stress (lexical stress in compounds, accentual [phrasal and emphatic] stress in phrases, and unstressed syllables) are perceived differently by Vietnamese learners. There were in total 15 noun-verb pairs and 5 triplets of compounds/noun phrases. These stimulus items are made up of two, three and four syllables with two different segmental structures: (1) closed syllables ending in obstruents (*checked syllables*) and (2) syllables ending in sonorants (*non-checked syllables*); this enables the examination of the segmental constraints on the perception of

stress.

The stimulus items were segmented from carrier sentences which were recorded by two male Australian speakers of English via a sound editing and analysis program (Speech Station). The compounds/phrasal nouns came from contextual sentences such as *"This fish is made of silver. It's a silver fish*". The verb/noun pairs came from the carrier sentence *"Say the word "upset" again."* It was shown from the observations of the pitch contours of the stimuli that with this kind of frame, the nuclear accent (the most prominent pitch) was typically on the syllable that has primary stress in the target word or phrase.

Participants

Two groups of subjects were used for this experiment; Vietnamese beginning speakers of English and Vietnamese advanced speakers of English.

The beginning group consisted of eighty subjects (20 Hanoi, 20 Hue, 20 Nghe An and 20 Saigon speakers; 10 males and 10 females in each dialect group) with no known auditory deficiencies. All were first- year English major students at universities in Hanoi, Hue, Nghe An and Saigon. They all started learning English at the age of 12 (in secondary school) with the Grammar Translation method which focuses mainly on vocabulary and grammar learning. However, they were exposed to communicative English learning during their first year in university. As soon as they finished their first year, they participated in this experiment

The advanced group consisted of 17 postgraduate students at the University of Queensland (9 Saigon, 4 Hanoi, and 4 Hue speakers). They were in the age range 25-32. Their length of residence in Australia varied from 8 months to 5 years. All of them achieved a proficiency level of 'competent' and 'good user of the English language' since they had at least an average band score of 6.5 on the IELTS test (International English Language Testing System - a 9-band proficiency test of English on four skills: listening, speaking, writing and reading). Fourteen were teachers of English who had a BA. degree in EFL teaching and two to three years teaching experience and were undertaking an MA in TESOL; 3 other subjects were doing science studies. All of the subjects started learning English at the age of twelve with the Grammar Translation method during secondary school and high school. Those who had a B.A. degree in EFL teaching were exposed to the communicative language teaching

method during four years of undergraduate study.

Procedure

Participants listened to the English words or phrases and used Vietnamese orthography and tone diacritics to mark each syllable that sounded like a Vietnamese syllable with its accompanying tone. Syllables that did not sound Vietnamese were marked underneath with an "X".

The Advanced Vietnamese speakers of English listened to the test items via a computer in the Phonetics Laboratory at the University of Queensland, while the beginning speakers did the perception test in a quiet classroom at a university in each location (Hanoi, Hue, Nghe An and Saigon) via a Compaq laptop computer with loud speakers of good quality.

Analysis

The subjects' task was to assign each syllable of every stimulus word or phrase to one of seven tonal categories. There were 15 two-syllable contrastively lexically stressed noun/verb pairs and five triplets of compound/phrasal constructions (of which four were four-syllable and one was three-syllable), spoken by two speakers, yielding a total of 234 syllables for judgement by each listener.

On the basis of the previous observations on Vietnamese learners' perceptual reference to tones, it was predicted that the subjects in this study would hear a "tune" (i.e., tone) on every syllable of the English utterances, indicated by having few "x" responses. It was hypothesized that distribution of tonal categories would vary according to the stress levels (stressed vs. unstressed) and the syllable types (checked [closed by an obstruent] or nonchecked) of the target English syllable. For the initial analysis of the data, stress was treated as a binary category (stressed and unstressed) and the tonal distributions of the target syllables were separately analyzed for each of the following four categories of stress-and-syllable types.

Stress- and- Syllable Type- Total number of observations: 234

(1) Stressed checked syllables (SC): 46 syllables

(2) Unstressed checked syllables (UC): 34 syllables

(3) Stressed non-checked syllables (SN): 74 syllables

(4) Unstressed non-checked syllables (UN): 80 syllables

The purpose of the study was to examine the distribution of tones perceived for each syllable within a stress-and syllable type (1-4 above). For example, for the first stress-and syllable type above (stressed checked syllables), which tone(s) were mostly perceived among the seven tone types (Level, Rising, Falling, Drop, Curve, Broken, and unidentified [x])? In order to pursue this aim, cross-tabulation analyses were conducted on the percentage scores for each stress-and syllable type and each listener group (beginners vs. advanced) separately. It is noted that the percentage of response scores was used instead of the raw response scores in order to take into account the unequal sample size between each of the beginning groups (N=20) and advanced listener group (N=17). The percentage score were responses to a given syllable that were assigned to one of the seven tonal categories, which were tabulated over the total number of listeners in each dialect group. It was calculated by the following formula:

Percentage of responses to a given syllable = (R x 100)/ L

R: number of responses (i.e. listeners) for a tone for that syllable

L: total number of listeners in a dialect group

Hence, there were in total eight separate cross-tabulations (one for each of the four stress and syllable types and two listener groups). The results are reported in Table 1. As the data do not follow a normal distribution and the variance is not homogeneous, statistical analyses used generalized linear model with a logarithm as a link function. The model included the effects of listener groups (four dialect groups and an advanced group) and tones (seven tones). A chi-square test was used to determine significance among tones in each listener group.

It is noted that within the stressed level, there were two further levels of stressed types: phrasal stress/accent and lexical stress. The examination of difference in the perception pattern between phrasal stress and lexical stress, which concerned the compound vs. broad and narrow focus noun phrase tokens, is separately analyzed.

Results

As predicted, the subjects had no trouble understanding the task and both groups of listeners used very few “x” responses (less than 3% as shown in table 1). This means that both the beginning and the advanced learners readily assimilated the pitch pattern on nearly every

syllable in the English utterances with one or another of the five or six contrasting lexical tones of Vietnamese. This confirms the perceptual references to tonal features as observed by previous researchers.

Table 1 Full table of mean percentages of responses to each stress-and–syllable type and each dialect (HN, HU, NA, SG) within each speaker group (beginner and advanced).

Syllable types	Speakers	Dialects	Rising	Level	Falling	Drop	Curve	Broken	XX	Total
Checked stress	beginner	HN	**75**	6	3	15	0	0	1	100
		HU	**80**	11	6	3	0	0	0	100
		NA	**79**	11	5	5	0	0	0	100
		SG	**87**	4	1	8	0	0	0	100
	advanced	TOTAL	**87**	5	1	6	0	0	0	100
		HN	**82**	5	0	13	0	0	0	100
		HU	**86**	4	2	8	0	0	0	100
		SG	**81**	7	0	11	0	0	1	100
Checked untressed	beginner	HN	**41**	4	5	**47**	0	1	1	100
		HU	**40**	7	**40**	13	0	0	0	100
		NA	**53**	10	11	**25**	0	0	0	100
		SG	16	3	0	**81**	0	0	1	100
	advanced	TOTAL	9	7	9	**74**	1	0	0	100
		HN	11	9	0	**79**	0	0	1	100
		HU	**38**	11	15	**32**	3	0	1	100
		SG	8	16	6	**68**	1	0	1	100
Nonchecked stress	beginner	HN	**23**	**62**	9	0	1	1	3	100
		HU	**34**	**56**	8	0	0	1	1	100
		NA	**18**	**69**	12	0	0	0	1	100
		SG	**63**	**32**	3	0	0	0	2	100
	advanced	TOTAL	**48**	**45**	2	0	1	1	3	100
		HN	**21**	**75**	2	0	1	1	0	100
		HU	**19**	**73**	6	0	0	1	1	100
		SG	**60**	**34**	4	0	0	0	2	100
Nonchecked unstress	beginner	HN	4	**29**	**63**	1	0	0	3	100
		HU	3	**18**	**79**	1	0	0	0	100
		NA	3	**31**	**66**	0	0	0	1	100
		SG	3	**42**	**53**	1	0	0	1	100

	advanced	TOTAL	3	**11**	**83**	1	0	0	2	100
		HN	0	**47**	**51**	0	1	0	1	100
		HU	0	**20**	**76**	2	0	0	2	100
		SG	0	**33**	**65**	0	1	1	0	100

This section examines the differences in perceived tonal patterns among dialects. Note that checked and non-checked syllables were analyzed separately as it was expected that Vietnamese listeners would treat them differently, with respect to tonal assignment. The complete table of the mean of percentage of responses by tones and dialects for each listener groups and stress-and-syllable types taken from cross tabulations is presented in Table 1 (where bolded figures are the most significant perceived tones). It is worth noting that since there were very few speakers in each dialect of the advanced speaker group (4 Hanoi, 4 Hue and 9 Saigon), the main statistical inference for the advanced group is based on the perceptual pattern of the total number of listeners while that of each dialect is presented for further reference only.

Stressed checked syllables

As it is shown in Figure 1 below and Table 1 above, stressed checked syllables were perceived as the rising tones by all dialect groups of the two levels of proficiency (beginning group: above 75% in the left figure; advanced group: above 80% in the right figure). The reader is reminded that since there were very few speakers in each dialect of the advanced speaker group (4 Hanoi, 4 Hue and 9 Saigon), the main statistical inference for the advanced group is based on the perceptual pattern of the total number of listeners while that of each dialect is presented for further reference only. The Chi square test shows that the rising tone received significantly greater responses than all six other tones across all listener groups.

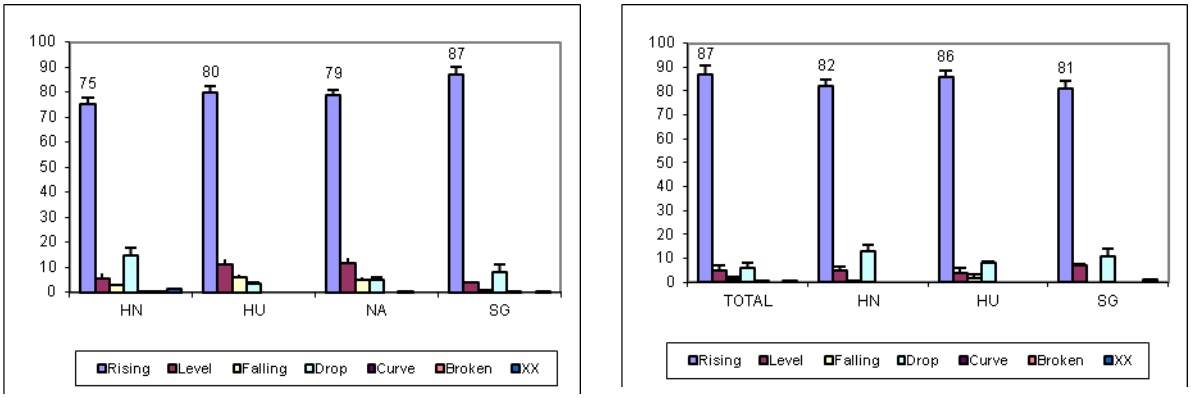

Figure 1 Comparison of stressed checked syllables across dialects. Left figure: beginning speakers, right figure: advanced speakers. HN: Hanoi, HU: Hue, NA: Nghe An, SG: Saigon, TOTAL: total number of listeners in the advanced group. Only numerical values of the largest in the distribution are labeled.

Unstressed checked syllables

The unstressed checked syllables were significantly perceived as the drop tones by Saigon listeners (Beginners: 81% and Advanced: 68%). They were perceived as either the rising or drop tones by Hanoi and Nghe An listeners (Beginners: Hanoi: 41% vs. 47%: significantly more drop than rising; Nghe An:53% vs. 25%: significantly more rising than drop). Hue listeners heard this syllable type as either the rising or falling tone by (40% vs. 40%: insignificant difference).

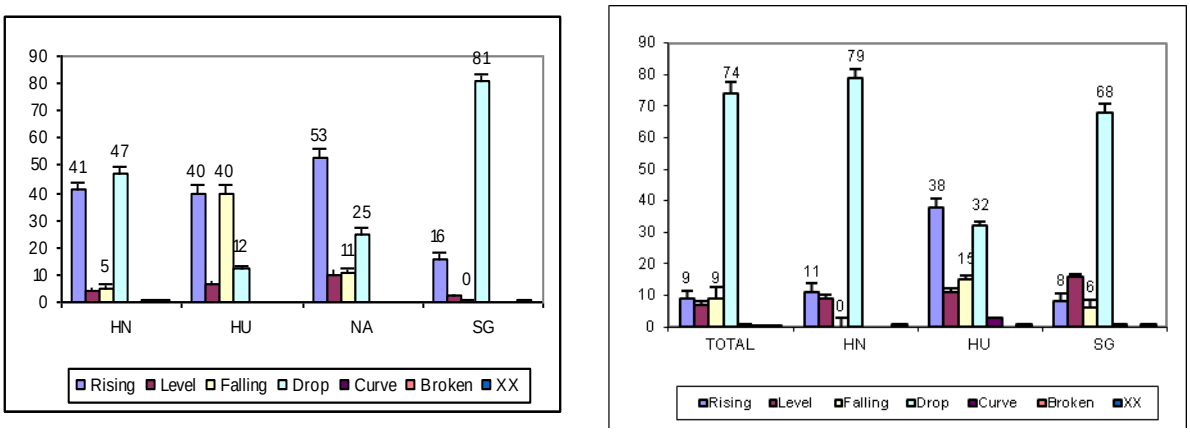

Figure 2 Comparison of unstressed checked syllables in five dialects. Left figure: beginning speakers, right figure: advanced speakers. HN: Hanoi, HU: Hue, NA: Nghe An, SG: Saigon, TOTAL: total number

of listeners in the advanced group. Only numerical values of the two largest in the distribution are labeled.

Due to the segmental constraint on tone distribution, only two tones can occur on a checked syllable: tone rising (high rising) and drop (low falling). The stressed checked syllables were consistently perceived as the rising tone (the finding in the above section), therefore it was expected that the unstressed checked syllables should be consistently perceived as the drop tone. Nevertheless, the results showed that many listeners perceived them as the rising tone (Beginners: HN: 41%, HU: 40%; NA: 53%). This can be due to the transfer of micro-prosodic effect of checked syllables (ending in obstruents) that trigger the perception of the rising tone which has been observed in Vietnamese pronunciation errors by many previous researchers (Ingram & Pittam, 1987; Riney, 1988, Nguyen and Ingram, 2004).

It is noted that while the unstressed checked syllable tended to be perceived as the drop tone by listeners of other dialects, it was heard as the falling tone by many Hue listeners (40% vs. 40% respectively, an insignificant difference by the chi square test). This might result from the high degree of similarity between the falling and drop tones in Hue dialect, as found by Seitz (1986) that "Hue drop tone's F0 trajectory is very similar to that of the Hue falling tone. The only difference is that the drop tone has a lower onset and is absolutely flat" (p. 215). It may be due to this feature that many Hue listeners heard the English unstressed checked syllables (with falling pitch) more like a falling tone than a drop tone.

Stressed non-checked syllables

Figure 3 shows that stressed non-checked syllables were generally perceived as either the level or rising tones. While the stressed non-checked syllable tended to be perceived as the level tone by Northern (Hanoi) and Central (Hue and Nghe An) listeners (level significantly greater than rising), it was heard more as the rising tone by Southern (Saigon) listeners (Beginners: rising [63%] significantly greater than level [32%]; Advanced: rising [60%] significantly greater than level [34%]).

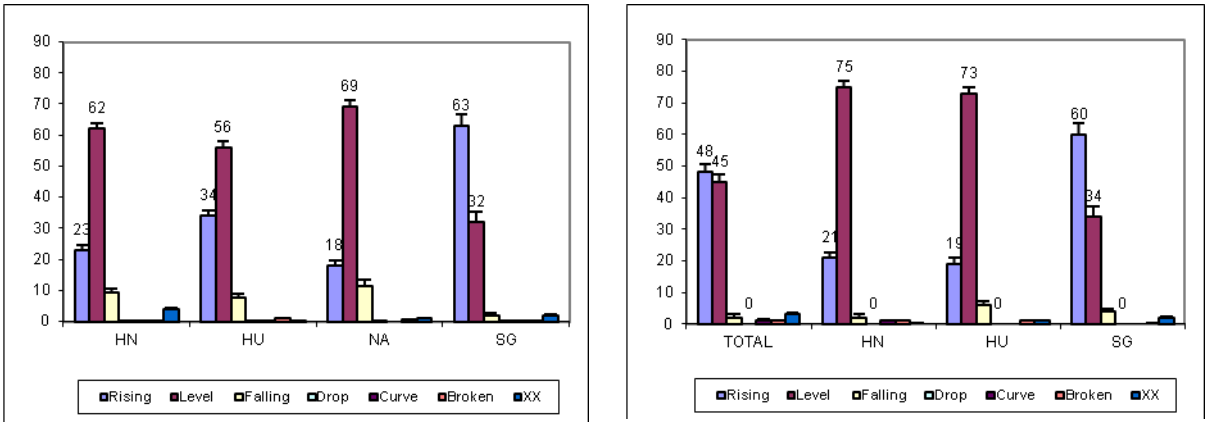

Figure 3 The comparison of the mean of response percentage of stressed non-checked syllables in five dialects. Left figure: beginning speakers, right figure: advanced speakers. HN: Hanoi, HU: Hue, NA: Nghe An, SG: Saigon, TOTAL: total number of listeners in the advanced group. Only numerical values of the two largest in the distribution are labeled.

In terms of pitch height, rising and level tones are high- register tones produced in the above-average pitch range (mid-to high) and thus comparable with English stressed syllables. In terms of pitch contour, the English stressed non-checked syllables having high F0 with either trailing or slight falling contour, in accord with a commonly described English declarative intonation pattern (H*L-L%) (Beckman and Pierrehumbert, 1986) is more similar to the Vietnamese level tone, characterised by a mid-high F0 with gentle declination toward the end. However, many Vietnamese particularly Southerners (Saigon) matched them with rising tone, indicating that Vietnamese listeners rely primarily on the relative pitch level in mapping English syllables to tones.

Why Southerners mapped English stressed syllables to rising tone while speakers of other dialects preferred the level tone can be attributed to the revered relative F0 levels of these two tones in these dialects. The rising tones of the Northern and Central dialects start lower than the level tone and thus the first one-third level part of the contour are clearly lower than that of the level tone, while the rising tone in the Southern dialects starts from and above the onset of the level tone. In other words, in the Southern dialect rising is higher than level and this is reversed in other dialects; consequently whichever is the higher is the one

preferred for English stressed syllables. The examination of the F0 contour on syllables perceived as the rising tone by the Hanoi, Hue and Nghe An dialects shows that they tend to have a stronger pitch rise in the shape of the L+H* patterns, indicating that in these dialects only syllables with a clear rising contour receive a rising response.

Unstressed non-checked syllables

Figure 4a shows that unstressed non-checked syllables were perceived more significantly as the falling tone than as the level tone across the dialects and proficiency groups.

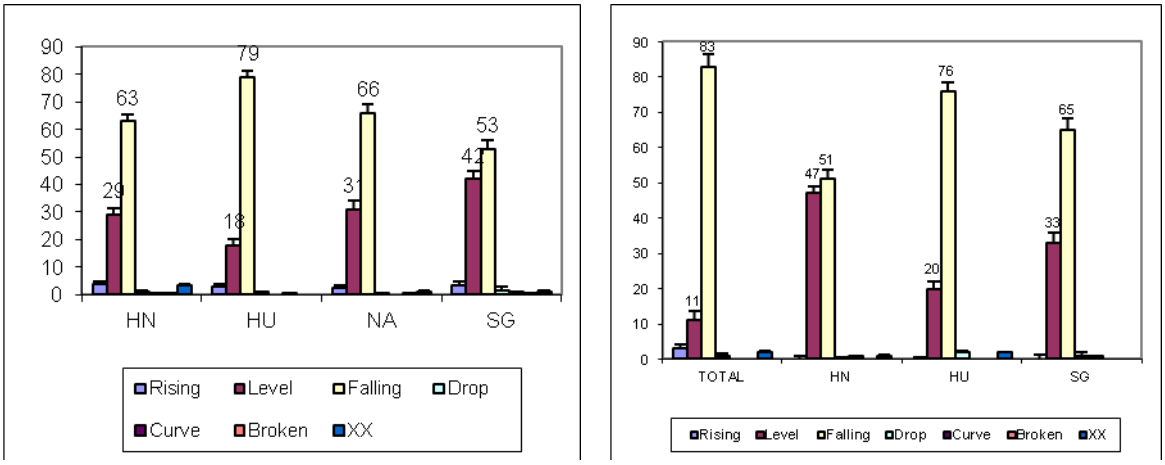

Figure 4a The comparison of the mean of response percentage of unstressed non-checked syllables. Left figure: beginning speakers, right figure: advanced speakers. HN: Hanoi, HU: Hue, NA: Nghe An, SG: Saigon, TOTAL: total number of listeners in the advanced group. Only numerical values of the two largest in the distribution are labeled.

In terms of F0 contour, all three Vietnamese tones: level, falling and drop can be candidates for English unstressed syllables because they all have falling pitch contours with only different falling scopes. The results show that only falling and level were chosen. The reason why drop tone was not a good match for English unstressed syllables is probably due to the laryngealisation of this tone particularly in the Northern and Southern dialects.

Between the two tones level and falling, falling is a better match for English unstressed syllables due to its low pitch level. However, many English unstressed syllables were perceived as the level tone. This is found to be due to two main effects: (1) syllable position: pre-tonic vs. post tonic and (2) the relative F0 onset of the syllables.

First, the examination of the position effect (figure 4b below) on the transcription of the unstressed syllables before the nuclear stress and unstressed syllables after the nuclear stress showed that the unstressed pre-tonic syllables were perceived as either the level or falling tone while post-tonic syllables were significantly perceived more frequently as the falling tone than as the level tone by both speaker groups. This may be because the post-tonic syllables have steeper falling contour and thus more resemble that of the falling tone.

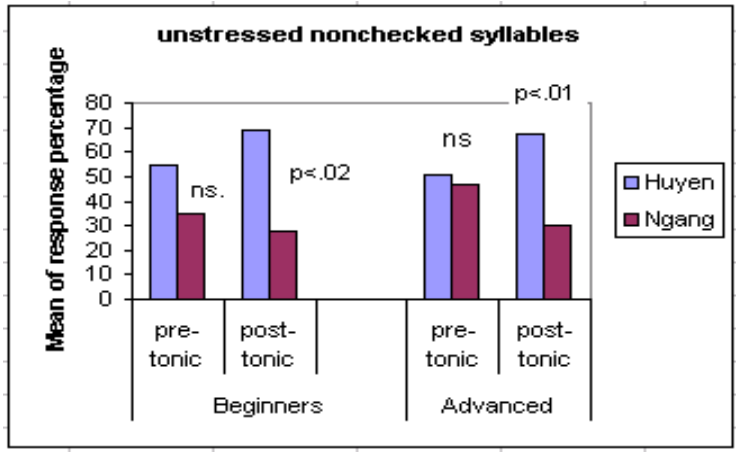

Figure 4b The comparison of the mean of response percentage of unstressed non-checked syllables between pre-tonic and post-tonic positions

Second, in order to examine whether there was any correlation between the syllable pitch level and the incidences of choice for level rather than falling tones, a correlation analysis was conducted on the number of level responses and the mean F0 values of four F0 points in the first half of the pitch contour. The result shows a positive correlation for the Hanoi, Nghe An and Saigon dialects (Hanoi: r =0.39, Nghe An: r = 0.44, Saigon: r = 0.41, Hue: r = 0.02 ns., Advanced r = 0.25 ns.), suggesting that the higher the F0 onset of the unstressed syllable, the more it was matched with the level than falling tones by Vietnamese listeners.

The phrasal and lexical stress levels

In this section the difference in perceptual patterns between the two stress levels (phrasal and lexical) is examined. The phrasal accent included the default phrasal stress on the second

constituent of the broad focus phrase and the contrastive stress on the first constituent of the narrow focus phrase (e.g., the bolded syllables in table 2 below), while lexical stress included all accent-bearing syllables other than these two (the italicised syllables). On the basis of this classification, there were in total 16 pairs of checked syllables (phrasal vs. lexical) and 24 pairs of non-checked syllables (phrasal vs. lexical). Separate analyses were conducted on these two syllable types. First, a three- way ANOVA analysis (6 syllable positions [B1, B2, N1, N2, C1, N2], 4 listener groups: 3 beginning dialect groups and an advanced group; and the 2 most commonly perceived tones of each syllable type: rising and drop for checked syllables, and rising and level for non-checked syllables) was conducted on the perception scores. Second, correlations were conducted between the vowel midpoint F0 value and the perception responses for each tone in each listener group. The results were summarised in figure 5a, 5b and 5c.

Table 2 Illustrations of phrasal accented and lexical stressed syllables in the three stress patterns

Stress patterns		Broad focus		Narrow focus		Compound	
Syllable positions		B1	B2	N1	N2	C1	C2
Examples		*Sil*ver *Eng*lish	**fish tea**cher	**Sil**ver **Eng**lish	*fish tea*cher	*Sil*ver-*Eng*lish-	*fish tea*cher
Mean F0 (Hz)	Speaker 1	138	***135***	**164**	110	154	112
	Speaker 2	111	***100***	**132**	82	109	83
	Both	**125**	***118***	**132**	**98**	**148**	**96**

Phrasal accented vs. lexical stressed 'checked' syllables

The ANOVA results showed significant effect for syllable positions, tones and their interaction only (Syllable positions: $F(1,5)= 11$, $p<.001$; tones: $F(1,2)= 668$, $p<.001$; syllable positions and tones: $F(1,5)=19$, $p<.001$). Pair comparison among syllables positions showed that more than 82% of first accent-bearing syllables across three stress patterns (B1~N1~C1: on the top right legend of figure 5a were consistently perceived as the rising tone. The default phrasal stressed syllable of the broad pattern (B2) had significantly higher rising responses than its counterparts in the compound and narrow patterns (C2~ N2), which vice versa received more drop responses. Correlation analysis showed a positive relationship between

syllable pitch level (F0 value) and incidences of rising tone and a negative relationship between F0 value and the drop tone across all listener groups (summary of correlation results at bottom right of figure 5a).

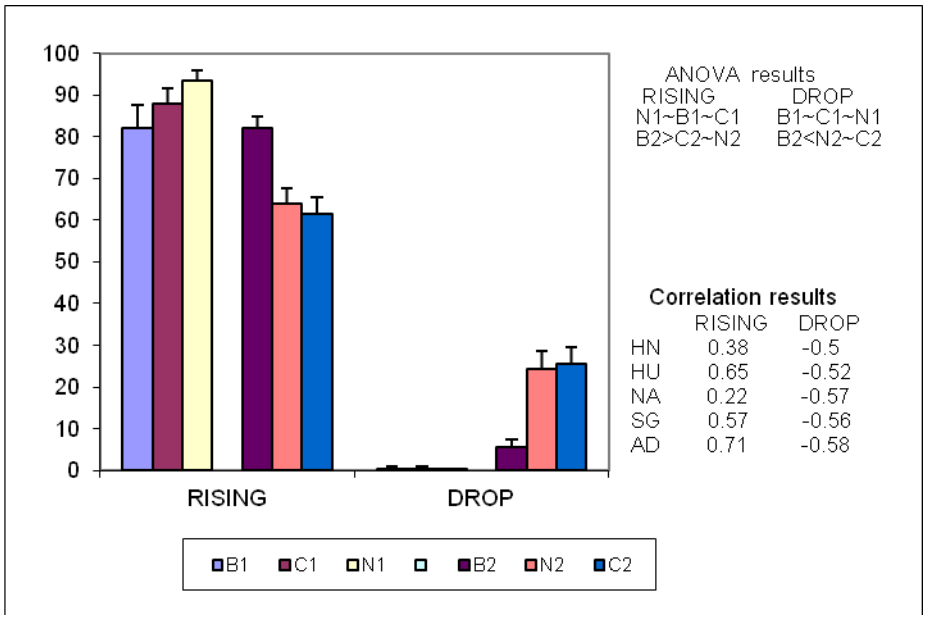

Figure 5a Comparison of the perceptual patterns (as rising and drop tone) among accent-bearing checked syllables with different levels of prominence of the three stress patterns: compound (C1 C2), narrow (N1 N2) and broad focus (B1 B2). Top right: pattern of ANOVA significance, bottom right: correlation results.

Phrasal accented vs. lexical stressed 'non-checked' syllables

The three way ANOVA results showed a significant main effect of syllable positions, tones, and the interactions of tones with syllable positions and listener groups (Syllable positions: $F(1,5)= 4$, $p<.01$; tones: $F()1,1)= 83$, $p<0.001$; tones x syllable positions : $F(1, 5)= 41$, $p<.001$; tones x listener groups: $F(1, 4)=178$, $p<.001$).

The interaction between tones and listener groups (Figure 5b) showed that while beginning Southern (Saigon) speakers and advanced speakers (with 9 southerners out of 17) gave more rising responses for accent-bearing syllables; speakers of the other three dialects preferred the level tone for both levels of stress (Figure 5.b below), consistent with the perceptual patterns on lexically stressed non-checked syllables above.

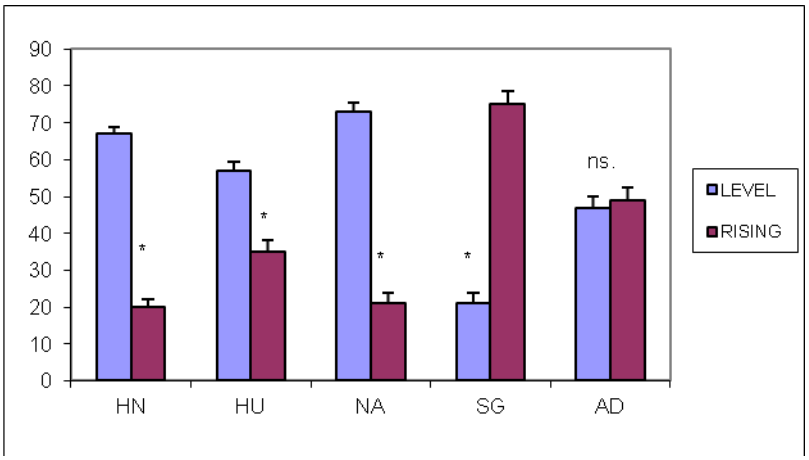

Figure 5b Comparison of level and rising tones responses for accent-bearing syllables across listener groups. *: significant at p<.01, ns.: non significant.

Pair comparison among syllables positions in the interaction of tones with syllable positions (Figure 5c) showed that the emphatic stressed syllable of the narrow pattern (N1) and the default phrasal stressed syllable of the broad pattern (B2) significantly received more rising responses (Rising: N1>B1~C1 and B2>N2~C2 respectively) than their lexically stressed counterparts, which vice versa significantly had more level responses (Level: B1~C1>N1). Correlation analysis, though not highly significant (r<0.4), showed a general reverse pattern for the relationship between syllable F0 value and tones: a positive relationship for rising tone and a negative relationship for level tone, indicating the choice between rising and level responses are influenced by syllable pitch levels.

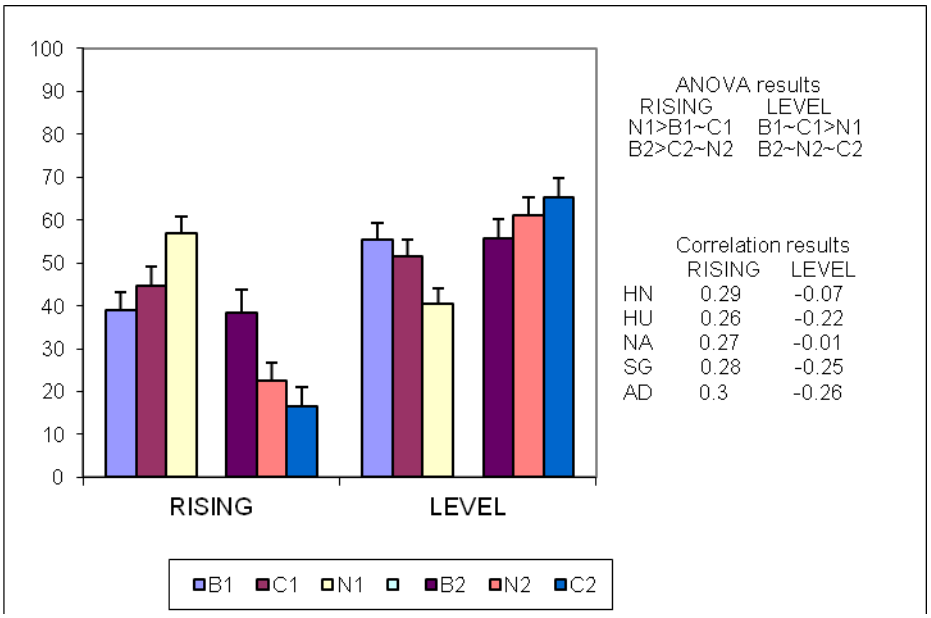

Figure 5c Comparison of the perceptual patterns (as rising and level tone) among accent-bearing nonchecked syllables with different levels of prominence of the three stress patterns: compound (C1 C2), narrow (N1 N2) and broad focus (B1 B2). Top right: patterns of ANOVA significance, bottom right: correlation results.

In brief, the results showed that syllables with phrasal or contrastive accent significantly had more rising responses (i.e., mapped with tones of rising and higher pitch level) than lexically stressed syllables. This is arguably due to the difference in pitch level and pitch contour between the two stress levels. The syllables with a phrasal/contrastive stress had higher pitch level and greater pitch excursion (L+H* pattern) than those carrying lexical stress and thus sounded more like the high rising tone while pitch of the lexical stress (H* pattern) with lower level and flatter contour, were thus heard more as the level tone. In addition, phonologically, the second accent-bearing syllables of the narrow and compound patterns (C2 and N2) are stressed syllables. Phonetically, they tend to be deaccented (see Jannedy, 1997 and reference therein). The correlation results between F0 value and subjects' responses, particularly many accent-bearing syllables having low F0 value matched with low drop tone (Fig. 5a), indicate that subjects rely strongly on phonetic F0 cues in L2 stress perception.

The syllables perceived as the Curve and Broken tones

Generally, the curve and broken tones were not used at all, probably because both have a fall-

rise contour, which is not a good match for any of the English syllables in neutral intonation. As shown in the table of the mean of percentage of responses (Table 1), less than 3% of the syllables were perceived as the curve or broken tone or unidentified (classified as xx). From auditory judgement and pitch contour of the syllables perceived as the curve or broken tones, it is shown that these syllables are either pharyngealised/ glottalised or have a falling- rising pitch contour which are the features of the curve and broken tone of the Central and Northern dialects.

Discussion

The results of the experiment may be summarized in the following findings, which generally support the predictions:

(1) English checked syllables were perceived as the rising tone when they were stressed and as the drop tone when they were unstressed. This stems from a syllable structure constraint on the occurrence of these two tones in Vietnamese stop-final syllables, which is transferred into learners' perception of English syllables. It is interesting that all obstruents (not merely voiceless stops) in English syllables triggered the perception of "checked" quality, supporting our prediction and confirming previous observations (Ingram & Pittam, 1987; Riney, 1988).

(2) The non-checked English syllables were generally perceived as the rising or level tone when they were stressed and as the falling tone when they were unstressed. This suggests that Vietnamese learners made reference to relative pitch levels as it is used in their tonal system in the perception of English stress degrees. This is shown in different ways. First, though English lexical stressed syllables do not have a sharp rising F0 tail similar to the Vietnamese rising tone, they were matched with the high-rising tone on the basis of their high F0 level by many listeners. Second, phrasal and contrastive accent with higher pitch level and greater pitch excursion triggered more rising tone than lexical stress. Third, unstressed syllables with high F0 onset triggered the level tone instead of the falling tone. Finally, dialectal variation with the reversed preference for rising versus level between Southerners and listeners of other dialects

due to the reversed relative pitch levels of these two tones in their dialects is also evidence for their reference to the relative F0 level.

(3) In addition to making perceptual reference to the relative F0 level, Vietnamese listeners also relied on other tonal features such as F0 contour and voice quality in their perception of English syllables. For example, stressed and accented English syllables with a strong pitch excursion (e.g., L+H* pattern) tended to have more rising responses. Post-tonic syllables with steeper falling contour were perceived more as the falling tone. Drop tone was not chosen for non-checked unstressed syllables even though it is a possible candidate (on the basis of F0 feature) because it requires a laryngealisation quality. Curve and broken tones were basically not used at all because both have a fall-rise contour and some glottalisation, which is not a good match for any of the English syllables in neutral intonation; only a few syllables with these features were perceived as the curve or broken tone.

(4) Regional dialect variation in the expression of tonal contrasts affected listener's perception of English stress patterns in significant ways. First, while an unstressed checked syllable tended to be perceived as the drop tone by other dialects (Hanoi, Saigon, and Nghe An), it was heard as the falling tone by many Hue listeners due to the similar features between the falling and drop tones in the Hue dialect, consistent with Seitz's (1986) observation and Vu Thanh Phuong's (1981) results on the misinterpretation of these two tones not only by outsiders but also by within-Hue dialect listeners. Second, stressed non-checked syllables were generally perceived more as the level tone by listeners of other dialects (Hanoi, Hue, & Nghe An), while they were heard more as the rising tone by Southern listeners as a result of the reversed relative F0 height of the two tones on these dialects.

(5) The fact that both groups of listeners used very few "x" responses (less than 3%) indicates that they readily assimilated the pitch pattern on nearly every syllable in the English utterances with one or another of the 5 or 6 contrasting lexical tones of Vietnamese, confirming the perceptual references to tonal features as observed by previous researchers (Nguyen Dinh Hoa, 1980; Nguyen Dang Liem, 1970) and consistent with the way foreign words are adapted into Vietnamese (e.g., đốc tờ:

doctor, xúc xích: saussage). In addition, the perceptual pattern of the advanced Vietnamese speakers of English is generally very similar to that of the beginning learners of English, indicating that they still internalize the L2 sounds in terms of their L1 parameters in spite of their advanced level of English.

(6) There may be a concern that the low usage of drop, curve, broken tones is due to the task which singles out rising/level/falling tones as examples of responses and thus has a bias against drop, curve and broken tones. Nevertheless, the relatively high use of drop tone for unstressed checked syllables indicates that this is not so.

Conclusion

Findings from this study indicate that Vietnamese learners of English transfer tonal features into their perception of English stress. They made perceptual reference to the relative pitch levels in their tonal distinctions in the perception of stress levels in English. English stressed syllables were heard as the tones associated with higher pitch, while English unstressed syllables were perceived as tones with lower pitch level. Other acoustic features of tones such as pitch direction (rising vs. falling) and voice quality (e.g., pharyngealization) also influenced their perception of the English sounds. In addition, the transferred factors were not only restricted to the acoustic features of tones such as pitch level, pitch direction and voice quality but also included the segmental constraints on tonal occurrence in the language. The restriction of rising or drop tone in checked syllables was transferred into learners' perception of English in such a way that English syllables ending in obstruents were mostly heard as either the rising or drop tone depending on the pitch levels. This suggests that native speakers of tone languages perceive pitch and segmental information in an integral fashion, consistent with Lee and Nusbaum's (1993) findings on Mandarin, in contrast with native speakers of English who were found to perceive the two dimensions as orthogonal. Furthermore, tonal transfer effects due to regional dialectal differences in the phonetic expression of tonal contrasts in terms of F0 level and pitch range were observed. This lends further support for the constraints of native language tonal systems on learners' perception of a second language sound. In addition, a comparison of the perceptual patterns between the two groups of listeners with different levels of English proficiency indicated that even though learners have

acquired an advanced level of proficiency in the second language, they more or less still internalize the L2 sounds in terms of their L1 parameters.

It is conceded that the experimental task may have encouraged the adoption of an L1 strategy and enhanced the transfer of tonal effects, more than would have been observed with an L2 identification task. Nevertheless, the fact that both groups of listeners used very few "x" responses (less than 3%) indicates that they readily mapped every English syllable to a Vietnamese lexical tone, indicating that this is more than a task effect. This is further supported by loan word adaptation and previous impressionistic and anecdotal evidence. While a better and alternative methodology has not yet been found to empirically investigate this widely observed phenomenon of perceptual tonal transfer in L2 learning and further research is needed, it cannot be denied that the results of this study not only confirmed impressionistic observations by many previous researchers (Nguyen Dinh Hoa, 1980; Nguyen Dang Liem, 1970; Riney, 1988, Ingram & Pittam, 1987; Ho Dac Tuc, 1997) but also gave further insight into the segmental-tonal constraints of a tonal L1 on a non-tonal L2 perception and consistent with findings on tonal effects from other tone languages (Cheng, 1968; Amayo, 1980). In addition, since the advanced listeners, though highly proficient in the language, have acquired English in a foreign language context with Vietnamese as their major means of daily communication while the use of English is limited to the educational and/or work environment, it would be interesting for future research to replicate this study with Vietnamese-English bilinguals who grow up in a second language environment where English is more widely used in order to examine whether they make perceptual reference to the tonal features of Vietnamese in the perception of English sound.

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Psycholinguistic Analysis of Operational Communication (Part I): the Standard Usage of Communication in High Risk Industries

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Abstract
Professionals are used to developing a specific language at work, an operational form of communication particularly reinforced in high risk industries (e.g. energy industries, aircraft companies, hospitals). This is favored by a high level of technicality of the context that usually provides the roots of this language. Although a psycholinguistic approach may help people to assess whether this kind of standard usage of communication is reliable enough, not to lead to a mistake that may give rise to undesirable events (such as deviation from the expected results), the literature is void of such studies.

Simulated and real operational working situations were observed over two years involving French nuclear reactor operators. Analyses were undertaken from psycholinguistic and socio-psychological standpoints based on observations, video-recordings and interviews. Analysis has established the process of elaboration of the standard usage of communication. We showed that the operators' self-assessment was positive regarding the reliability of this way of communicating, but the analysis pointed out weaknesses: in some communication contexts characterized by replacements in a team or discussions between two different professions, the level of reliability could seriously decline, hence favoring mistakes. These results led us to conclude that the established standard usage of communication could no longer be used.

Keywords
discourse analysis, operational communication, cooperative principle, reliability, risk

Introduction

Industrial processes involve workers in the development of specific forms of communication due to their industrial context. The materials, the process itself, the sciences to which the

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process refers, lead them to name and then to use specific words to indicate what they want to do, where they need to go and what they expect from each other… With time and use, the expressions used in operational communication are shortened by removing syllables from certain words (see for example the study of train traffic controllers by Andrén, Sanne and Linel, 2010). Oral communication at work will henceforth be called "operational communication". This includes implicit messages in dialogue through a standard usage of communication. Most of the time, it helps workers to be more efficient because their exchanges are faster and mental resources are used for other cognitive tasks rather than developing and understanding long sentences. However sometimes, when combined with other factors, it may produce undesirable safety events, especially in the context of high risk industry. When referring to an undesirable event, it should be understood that the result of the work activity is not up to expectations. These events are also called "safety events".

Despite the fact that psycholinguistic studies have been carried out regarding discourse analysis and communication in the workplace (Cameron & Webster, 2005; Limaye, 1992; Roth, 2004) or regarding style of communication (Chovanec, 2008; Dunkerley & Robinson 2002), the literature is void of studies focusing on operational communication between workers: it is impossible to find the definition of "operational communication". Examining the literature regarding "organizational communication" or "interpersonal communication" does not give anything more. In his paper, Dekay (2012) complained that "interpersonal communication in the workplace resembles a largely unexplored region" (p.449). The only proposal we found regarding "operational communication" appeared in an industrial report over twenty years ago (Rocky Flat Plant, 1995) which suggested that operational communications are "messages concerning the operation of the plant". Therefore it seems important to define this expression in the context we are interested in, that is to say the workplace.

We suggest that:

"Operational communication at work" is all communication regarding operations related to a work activity, in the aim within the objective of performing a given task.

Therefore, operational communication may take various forms among which oral forms (e.g. dialogue on the phone) or written forms (e.g. procedures used by workers), and

for each, operational communication may have different characteristics.

The aim of this paper is to contribute towards repairing the oversight concerning operational communication by presenting a study regarding the balance between the efficiency of operational communication when words are shortened (by omitting formal parts of functional labels) hereafter referred to "standard usage of communication", versus performance in terms of potential misunderstanding and consequent occurrence of a safety event.

Methods and Instruments

The analysis was undertaken on French Nuclear Power Plants (NPP) both in real operating and simulated situations. This allowed us to characterize what contributed towards the effectiveness of operational communication in use and to highlight its limits.

Effectiveness and limits of operational communication

The analysis was undertaken with the operating teams in French nuclear units. Data was acquired from real operating situations in control room and simulated operating situations on a full-scale simulator at the plant. The study was conducted over two years with observations and analysis.

The workers were observed in the control room operating the reactor (real operating situation), and in the control room of a full-scale simulator (Fauquet-Alekhine, 2011). This represented about fifty hours of observation. Additional experiments were carried out using specific scenarios developed and used on simulator to put the workers into potentially difficult communication situations. The aim was to understand and to assess the robustness of communication. Observations were made without interference: about three hours non-stop on simulator, and about one hour continuously in real operating situation. Simulation sessions were filmed.

Every observation gave rise to an interview and validation of observations between the workers and the work analysts. This was carried out just after each observation.

In order to characterize speech performance, a syllable count of locutors was applied to

observed exchanges. The syllable count was used as an indicator of the perceived cognitive load of speech by locutors: interviews with workers systematically showed the importance for them to reduce the length of their utterances during oral work exchanges. This was done in order to “save time”, “be more efficient” and “reduce the energy used when speaking” in their own words. Syllable counts have been widely used to characterize speech in various research contexts: frequency and syllable length measurements to investigate spoken hesitations (Clemmer, 1980), to explore speech fluency (Kormos & Denes, 2004), syllable count and frequency analysis to measure the distributional stress regularity in conversational and formal speech (Temperly, 2009), syllable duration and syllable count in speech to characterize speech sound disorder (Peter, 2012). Kowal, O'Connell, Forbush, Higgins, Clarke & D'Anna (1997) carried out an interesting study on the basis of textual response measurements to characterize speech performance: among others, they used frequency-of-occurrence ratios of syllables including speech rate (syl/total speaking time), utterances not interrupted by pauses (syl/articulatory phrase) and articulation rate (syl/total articulation time).

Modeling communication

Vygotsky (“Thought and language”, 1934/1986, chap VII) noted that should the word, the basic unit of language, be deprived of its meaning then it is no longer a word even if it remains a neograph (“phonemes which can be read and pronounced as a coherent group of signs, but without any meaning” (Fauquet-Alekhine and Fauquet-Alekhine-Pavlovskaia, 2011)). From a psychological standpoint, meaning is a general implementation, a mental concept, and therefore an act of thought. Word is therefore a phenomenon of language but also of thought. Thought is fostered by overall representations, while language is made of discrete elements; thus, there must be a process of transition and of transformation unifying thought and language. In this process, meaning serves as mediation: the direct communication between two consciousnesses is impossible; this communication is therefore indirect by the mediation of the meaning of the thought towards the meaning, and then towards the words or writings, and finally attains the other’s consciousness.

According to Vygotsky’s approach, the shortened formulations implemented within communication at work described in this paper can be considered as part of an operating

language elaborated as a mode of action (Korta, 2008; Malinowski, 1923).

Coming back to the definition we suggested above regarding "operational communication at work", the mediation of the meaning through words between locutors stands as a crucial factor while considering matters of safety, security or productivity within time limits. A misunderstanding concerning this mediator may result in an inappropriate or distorted mode of action leading to serious accidents or a substantial loss of money. Inappropriateness or distortion may occur at the level of both addresser and addressee as we shall discuss further.

Furthermore, it has been demonstrated that language does not participate in a simple exchange of informative data in the process of communication, and that this informative data is not the only source of information: the vector of information for example, and its mode of use, also transmit information between a source and a target. If language (mostly verbal communication, linguistic interactions, acts of language) comes from an innate specific capacity, it nevertheless requires the development of a specific skill and a lexical and syntactic integration of a coding (Chomsky, 1972; see also Chomsky's rationality analysis by Beaugrande, 1998). An internal rationality is highlighted, as well as language interaction rationality: the subject who speaks has an effect on the world (see the "speech act theory" by J.L. Austin 1969; further developed by Searle, 1969, Searle & Vanderveken, 1985, Love, 1999).

Several models were suggested to explain communication. Shanon and Weaver (1949), then Jakobson (1960), Anzieu (1975) and Anzieu and Martin (1990), highlighted functions associated with language, and helped to understand its internal and interaction rationalities:

- Emotive function (or expressive function) associated to the addresser permits him/her to express his/her attitude regarding the object of the topic.
- Conative function refers to the effect the addresser wants to have on the addressee.
- Phatic function concerns contact and maintaining contact between interlocutors (maintaining this contact using terms such as "*hello*?", "*sorry*?").

- Metalingual function (or metacommunication function) concerns the message being exchanged; it happens when the interlocutors verify that they are talking about the same thing.
- Referential function (or denotative function) concerns context and develops a dependence of the meaning of the message in context.
- Poetic function concerns the form of the message.

The school of Palo-Alto (see for example: Watzlawick, 1978) suggested approaching language as a behavior, whether it be verbal or not, with the postulate that any form of behavior has a sense, and communication is not an alternation of behaviors but a jointly constructed co-action.

These conceptual considerations applied to communication helped us to understand how operational communication is sized and shaped.

Socio-psychological approach of operational communication

Clot (1999) and Clot, Fernandez and Carles (2002) introduced the concept of professional genre. “Genre” is here defined as a social entity in which the values that regulate the work activity in a tacit manner are shared within a group. This is induced by the formal prescription, the informal needs of the group itself, the history and the way of life of the group, including attitudes, behaviors and forms of communication. This concept is related to others like the tradition of Winnicott (1971) or the rules of the trade suggested by Dejours et.al. (Dejours, Dessors & Molinier, 1994; Fauquet, 2008). Whatever the concept or the theory used, we must remember here that communication during the work activity is closely linked with the professional genre.

Furthermore, Clot (1999) and Clot et al. (2002) suggested that the shared rules of the professional genre are both a resource and a constraint for the workers as rules are not fixed but can be questioned and changed. The professional genre sets up a psychological function for each worker through a transpersonal dimension. To be effective in all situations encountered by workers, the professional genre cannot be fixed: it must be re-visited, re-questioned permanently so as to be adapted to the work context which also varies (Fauquet,

2006).

Thus, communication at work is also sized and shaped by professional genre and in return contributes to size and shape the professional genre. Professional genre obviously appears as an important dimension at work for operational communication. The analysis of this dimensional relationship helped us to better understand the links between workers and operational communication.

Results

Effectiveness of operational communication

Observations showed that making the exchange of information reliable was dependent on the complexity of the activity and the work context. More the situation was complex, and more the workers felt the need to explain their understanding of the activity and to question the interlocutor. Observation showed that referential function was thus used to target the expected action. This function was mainly present and effective as illustrated below. This phenomenon was modeled par Rasmussen, Pejtersen and Goodstein (1994) and Rasmussen and Svedung (2000): This mode of reliability, by the explicit enunciation of what is done and will be done, is often used when the workers are not particularly familiarized with the task to be accomplished. During interviews, several reactor pilots and experienced maintenance engineers explained that they could transmit a lot of implicit information during an exchange with an experienced or trusted subordinate co-worker but they acted differently with non-experienced or unreliable colleagues.

In the simplest contexts (that is to say for work activities familiar to the workers because they had already carried them out several times), two recurrent reliability modes were observed (Fauquet, 2006; Fauquet-Alekhine, 2011, 2012b):

- Reliability of oral exchange using a written support: the oral message was reinforced with the help of a visual support, in this case the operating document; the document was held in the hand of the addresser so that the addressees could confirm their understanding of the message by reading it at the same time.

- Reliability of the oral exchange using a device support: the oral message was enforced using the visual support of the control panels in the control room. The addresser showed the control equipment concerned by the message to the addressee. The equipment was given a tag indicating the name of equipment. However, it was assumed that each of the locutors understood that this gesture (showing the control equipment) concerned what they spoke about.

Observations also confirmed that the mode of oral exchange relied on a “standard usage of communication” (introduced in Fauquet-Alekhine, 2012b) specific to the industrial environment and founded on the typical location of equipment in industrial premises.

This mode of standard communication aimed at reducing the message by shortening the length of the signifiers in speech between interlocutors without altering their meaning. It was made possible by the tasks that were to be fulfilled and by the location of equipment in industrial premises: tasks and premises were linked through a “basic system” of the industrial processes illustrated hereafter. On a French nuclear power plant, every basic system is labelled with a number and a trigram (example: 1RRI, 2RCV, 4SEF) where the number designates the reactor to which the basic system is devoted. Every piece of equipment labelled with three numbers and two letters; the letters indicate the type of equipment (example: PO for pump, VA for valve) and the number designates the identifying number of the piece of equipment. For example, 1RRI002VA indicates the valve # 2 of the RRI system of reactor #1.

This functional label “1RRI002VA” was replaced by “2VA” in what we have named the standard usage of communication. As we explained it, most of the tasks concerned a group of given equipment identified as belonging to a “basic system”. Here, the basic system is RRI.

In these conditions the exchange between actors concerned a specific basic system, and speech generally started with giving the trigram of the basic system, which was then no longer referred to in order to make transmission and understanding of information more efficient, according to workers.

In effect, the transmission of information aimed systematically at minimizing the number of words and the length of the signifiers; this implied that the number of the reactor

and the trigram of the basic system were systematically no longer referred to.

After the first enunciation of the number of the reactor and the basic system at the beginning of the exchange, these were then considered as implicit in the discussion.

Sample 1 below is an example of this: the pilot of reactor # 1 had encountered a problem for which he sent a field worker to check the equipment; for this purpose, the form used was utterance #1.

Shortened utterance #1 :

(1) Tranche 1 s'il-te-plait, j'ai un soucis sur RIS mon pote. Au refoulement de la 1PO [yn-pe-o]. J'aimerais que tu ailles voir sur place si la 59VP [sɛ̃kãt-nəf-ve-pe] est bien ouverte.

Reactor 1 please, I have an issue on RIS mate. In pushing back of 1PO [wʌn-pi-o]. I would like you to go there and see if the 59VP [fifti-nain-vi-pi] is properly opened.

It is necessary to understand here that the pilot asked for the opened position on the valve 1RIS059VP located downstream of the pump 1RIS001PO to be confirmed. Complete formulation would give sample 2:

Complete utterance #1 :

(2) Tranche 1 s'il-te-plait, j'ai un soucis sur le système RIS mon pote. Au refoulement de la pompe 1RIS001PO [yn-ris-zero-zero-yn-pe-o]. J'aimerais que tu ailles voir sur place si la vanne 1RIS059VP [yn-ris-zero-sɛ̃kãt-nəf-ve-pe] est bien ouverte.

Reactor 1 please, I have an issue on the system RIS mate, in pushing back of pump 1RIS001PO [wʌn-ris-zero-zero-wʌn-pi-o]. I would like that you go there and see if the valve 1RIS059VP [wʌn-ris-zero-fifti-nain-vi-pi] is properly opened.

The tendency to shorten numbers in exchanges has been pointed out in a general manner (Coupland, 2011), and the omission of parts of formal requirements has been observed in

other professions. Therefore, the syllable count of locutors appeared to be a relevant parameter to help us compare utterances.

When the two samples were compared in terms of length (table 1), we obtained a significant difference for the formulation used by French workers. A gain was calculated: it represents the reduced rate of syllables with the used formulation of the standard usage of communication compared to complete formulation. It is noted G_{short} referring to the gain for the shortened formulation. The gain is positive if the use of the shortened formulation rather than the complete one saves some syllables. In parallel, it was considered interesting to calculate the increase induced by the complete formulation compared to the shortened one. It was noted I_{compl} (table 2).

The way syllables are counted follows phonotactic rules based on a syllabification considering that when speaking, two syllables CV-C turn into one syllable CVC from a phonetic standpoint.

For example, the word /place/ made of two syllables /pla•ce/ is counted as one abstracted CVC syllable [plas]. This is also the case of the words: /tranche/, /refoulement/ (for /foule/), /pompe/, /ailles/, /ouverte/ (for /verte/).

This suggestion is in accordance with the findings and conclusions of the well-known specialist for French language, Jacques Mehler. With co-workers (Melher et al. 1981), he found out how a word carrying a CV (resp. CVC) syllable leads to faster detection of a CV (resp. CVC) syllable by a subject, than the detection of a CV (resp. CVC) syllable within a word carrying a CVC (resp. CV) syllable.

This means for example that the CVC syllable /pal/ gives better detection in /palmier/ (CVC word carrier) than in /palace/ (CV word carrier). This also means that /place/ gives a CVC detection [plas] and must be considered as one CVC syllable rather than a two CV-C syllables [pla•s]. These results have been obtained for French words and French subjects. Cutler et al. (1983) also showed that this was a specificity of the French language with French people.

Table 1 Syllable comparison for shortened and complete French utterance #1

Utterance type	Utterance sample
used formulation	Tranche• 1• s'il•te•plait•, j'ai• un• sou•cis• sur• RIS• mon• pote. Au• re•foule•ment• de• la• [yn•pe•o]. J'ai•me•rais• que• tu• ailles• voir• sur• place• si• la• [sɛ̃kãt•nəf•ve•pe] est• bien• ou•verte.
complete formulation	Tranche• 1• s'il•te•plait•, j'ai• un• sou•cis• sur• le• sys•tème• RIS• mon• pote. Au• re•foule•ment• de• la• pompe• [yn•ris•ze•ro•ze•ro•yn•pe•o]. J'ai•me•rais• que• tu• ailles• voir• sur• place• si• la• vanne• [yn•ris•ze•ro•sɛ̃•kãt•nəf •ve•pe] est• bien• ou•verte.

Table 2 Comparison between the number of syllables for shortened and complete French utterance #1 given in samples (1) and (2)

	used formulation	complete formulation	gain= (Np-Ns)/Np	increase= (Np-Ns)/Ns
French syllables	*Ns*=42	*Np*=67	G_{short}=+37.3%	I_{compl}=+59.5%

The comparison, objectified through G_{short} and I_{compl}, showed that, during the observed operating exchange, workers shortened the length of their speech by a quarter when they used the standard usage of communication. Here, when referring to the ratio of number of syllables per utterance to the measurement of the utterance for comparison across subjects, it is important to bear in mind that the study is based on a particular language, this of the French nuclear industry.

Limits of operational communication

Observations and discussions showed generally that:

- The addressee reformulated what the addresser said notably in the following cases: noise pollution not allowing to clearly understand what is enunciated, doubts over the understanding of what is said, doubts over understanding the addressee (for example in case of doubts concerning the competence of the interlocutor), and sometimes due to a long exchange (the actors want to synthesize what must be kept for action and make a summary).
- The actors preferred meeting face-to-face rather than to exchange by email or by telephone: when the pilot had to discuss a task to be accomplished with a specialist or a

worker, s/he preferred a direct meeting in the control room and asked the interlocutor to come and see him/her because a pilot cannot leave his/her post; this allowed implementation of the aforementioned reliable modes.

However, a meeting was not always possible: sometimes the pilot's interlocutor could not leave their post either. Exchange was then made by telephone. In general, when one of the actors was in an environment that did not allow an exchange of good quality (loud area for instance or bad quality telephone line), one of the actors asked the exchange to be postponed so as to find more suitable conditions for an exchange.

Whether using this standard usage of communication or not, typical missing information were observed in a recurrent manner in the transmission of information (Fauquet, 2006; Fauquet-Alekhine, 2011, 2012b; Fauquet-Alekhine and Pehuet, 2016). They were seen both in observations of situations and in analysis of events:

- The omission of a part of the message. For instance, the addresser skipped specifying the expiry date of the action. This type of error was difficult to pick up on as it was not explicit, and was also difficult to identify through observation.
- Half questions favored confusion. Example: "You are sure of your value?" A complete question consists of specifying which value it is, because the answer can be positive without the interlocutors being sure they are speaking about the same parameter.

This last point appeared to be a typical source of error: the fact that a word or an expression may be multifunctional in spoken dialogue (this may even happen sometimes with contradictory functions) created misunderstandings leading to possibly undesirable events. For example, a multifunctional word which was ubiquitous in operational communication was /okay/. It could take the value of an agreement, an acknowledgement, a progression check, a word of transition, a question that queries the aforementioned values and so on. The possibilities are wider than the huge quantity of literature treating the case of /okay/ states in the spoken discourse and about which Gaines (2011) gave a large overview that nevertheless remains incomplete according to Gaines himself. Many other words can be multifunctional in the discourse (see for example the /now/ of Waring, 2012). From a safety standpoint, such multifunctional words or expressions have to be bounded in order to restrict the functional scope of values, and to help locators increase the reliability of their exchanges.

Discussion

Psycholinguistic approach in operational communication at work

Let us first explain what occurs from a cognitive standpoint when an actor decides to use the full number of signs for a signifier. This explanation is made using a model suggested in a previous article (Fauquet-Alekhine and Fauquet-Alekhine-Pavlovskaia, 2011). For subject A who is the addresser, a concept #1 (the valve n ° 2 of the system RRI of the reactor n°1) is transmitted to subject B who is the addressee, using a signifier made up of the whole set of signs required: 1RRI002VA. This fits the use of complete formulation. The signifier perceived by subject B is therefore associated immediately to a signified which is concept #1. The information is correctly transmitted independent of the work context: whatever the work context, 1RRI002VA designates only one given valve (see diagram on Figure 1).

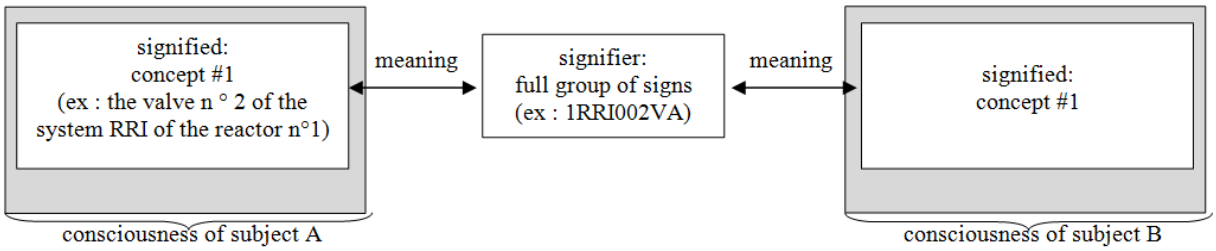

Figure 1 Model for operational communication when addresser uses all signs of the material label for complete formulation.

When the subject A decides to use a shortened signifier within the standard usage of communication, it implies s/he assumes that the context will give enough information for the addressee to understand what s/he means, and that what is understood will match the concept #1 s/he is thinking about. The diagram Figure 1 becomes what is presented on Figure 2.

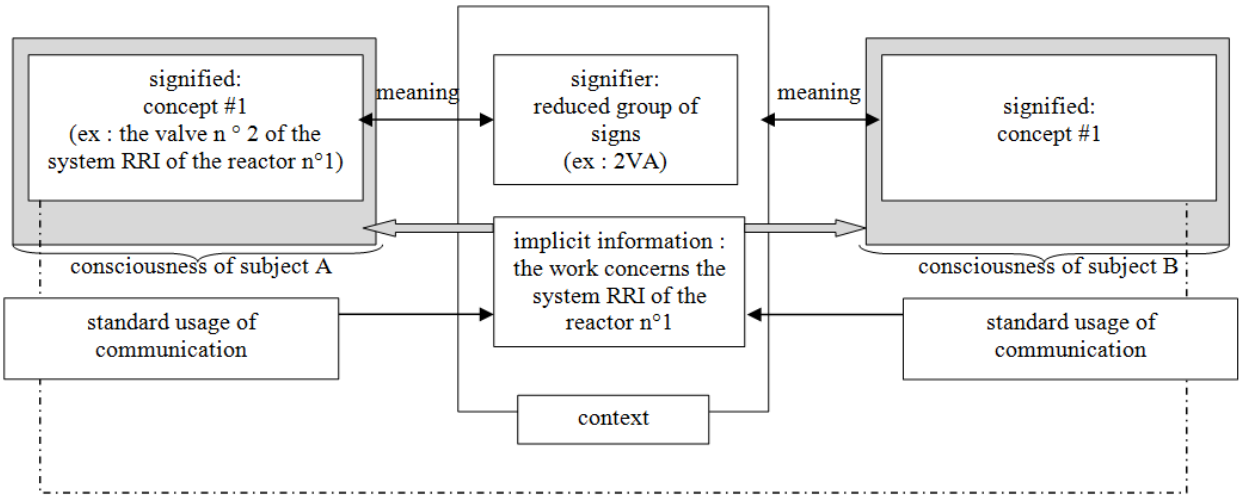

Figure 2 Model for operational communication when addresser uses part of the signs of the material label (shortened formulation) in a context of sufficient implicit information and a shared standard

The grey arrows in Figure 2 illustrate that this implicit information extracted from the work context may be slightly different for subjects A and B. On Figure 1, this difference is reduced by the use of the complete signifier 1RRI002VA.

The dotted line represents the necessary link between the standard usage of communication that must be known and shared by subjects A and B including specificities due to a group of workers. In this case, the concept thought by actor B can match the one thought by actor A by contributing to seizing the same implicit information from the context.

In the case of a standard usage of communication that is not shared, including particularities specific to a certain profession, the diagram becomes the one presented on Figure 3, where the context displays a different implicit for subjects A and B.

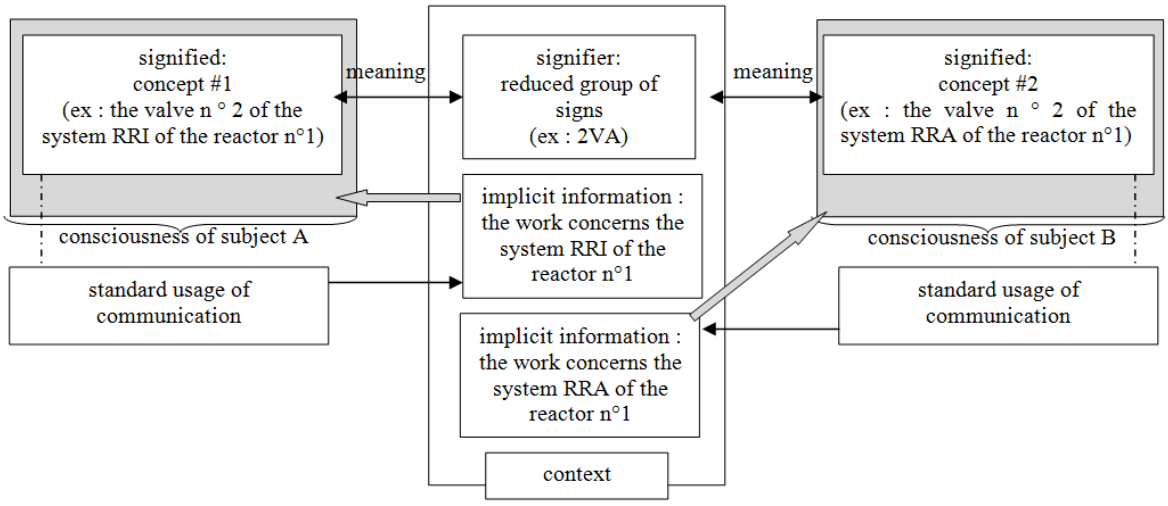

Figure 3 Model for operational communication when addresser uses part of the signs of the material's label in a context of sufficient implicit information and different standard usages of communication compared to the addressee.

This difference of implicit leading to implicatures (techniques worked out by the addressee to maintain cooperation and conversation (Grice, 1975; 1989)) may be due to:

- The fact that the context suggests several possible basic systems concerned by the exchange such as the realization of different activities in parallel, one concerning RRI and one concerning RRA.
- A weakness in the standard usage of communication.

It should be noted that in both cases (Figures 2 and 3), the context includes all the information necessary for the addressee to match concept #1. The difference just concerns the dotted line: the standard usage of communication is not the same for each actor or should it be the same, it produces different extractions of information from the context usually because several options are offered: subjects A and B will choose an option according to their feeling, their understanding of the situation and their background. It is obvious here how the communication is not just a transmission of signs from one person's mind to another, but a complex process where contextual possibilities and features are intrinsically ongoing according to an integrationist approach of communication (Bathkin, 1986; Gretsch, 2009; Salmon, 2010; Sbisà, 2002).

Thus, it can be interesting to know what are the factors, parameters, dimensions, to be

taken into account beyond the coding chosen by workers to designate the signified and the material. This will help us to have a better understanding of the effect of the context. For this aim, we must consider that these operating codes proceed the signifiers which can be considered as a language, or at least as words belonging to a language. With such considerations, we can consequently examine the functions associated with language (presented in section “modeling communication”) regarding the standard usage of communication described above as follows.

Emotive function

As the standard usage of communication is fully included within professional practices, when workers were watched in both simulated and real operating situations, it was observed that the sound modulations in their speech were naturally coherent with, on one hand, the utterances and with the addresser’s intention, and on the other hand, the addresser’s apparent state of mind.

Conative function

The observations showed that the standard usage of communication was integrated a daily language type. Vocatives and imperatives were used by workers in a way which was specific to each one according to his own way of speaking. In these conditions, the conative function was directly linked to the subject’s capacity to communicate (sample 3).

(3)a -D’accord, tu le fais maintenant, mec?
-Ok, you do it now, man?

(3)b -Oui mon pote, pas de problem, ta 1VP [yn-ve-pe] sera ouverte dans deux minutes.
-Sure mate, no problem, your 1VP [wʌn-vi-pi] will be opened in a couple of minutes.

Phatic function

The standard usage of communication being integrated as a daily language type, contact terms were naturally integrated in the workers’ exchanges (sample 4).

(4) -J'ai besoin que tu ouvres la 1VP [yn-ve-pe]! Tu m'entends? Alors fais-le maintenant, s'il-te-plait.
-I need you to open the 1VP [wʌn-vi-pi]! D'you hear me? So do it now, please.

Metalingual function

Some cases of control of comprehension were observed, not systematic. The workers used some reflexive control of their exchange only when one of the interlocutors had some doubt about the comprehension of the message by the other (sample 5).

(5) -Trop de bruit: je ne te comprends pas. Tu as dis que je dois ouvrir la 1VP [yn-ve-pe]?
-There's too much noise: I don't understand you. You told me I have to open the 1VP [wʌn-vi-pi]?

Referential function

This function was mainly present and effective: the description we made above goes to prove it (as all exchanges were depended on the context).

Poetic function

This function was fully developed in many different ways. The different forms it took could be linked to the affective relationship that existed between subjects, the mood of the addresser, the physical and/or psychological state of the addresser, the addressee's perceived competence by the addresser, the short-term experience of workers' daily life (the fashion movie or the joke of the day for example).

Observation showed that referential function was used to target the expected action. Dealing with the referential function as it happened matched the cooperative principle of the Gricean theory (Grice, 1975; 1989). The maxims of quantity, the maxim of relation (relevance of information) and the maxim of manner (being clear) were particularly strengthened.

It was observed usually that emotive and phatic functions served the conative function by using acts of language in order to increase the addressee's involvement in the expected

action.

Poetic function served the conative function in an affective way, most of the time based on humor.

This analysis of the standard usage of communication used by workers shows that the standard could be quite reliable provided that the referential function worked in the same manner for interlocutors and could extract a quasi similar information from the context. Referring to Anzieu and Martin (1990), there is a symbolic resonance leading to an associative chain of meanings, but meaning may not be the same for each: generally, although every speaker shares the same situation during the exchange, each one has his/her own field of consciousness including his/her own filters which intervene between them. Unfortunately, there can be many factors affecting the meanings. According to circumstances, these factors do not have the same weight: referential function proceeds in different ways if the interlocutors are physically present, talking on the telephone or communicating by email.

The associative chain of meanings introduced above can be envisaged as an unconscious irrationality. When it exists, this irrationality does not come first: it is preceded by a rational and structured process that can be linked to the internal and interactive rationalities discussed above. The process is partly induced by the language itself.

This means that, even using the same standard usage of communication, workers had many other influencing factors for the referential function to be less effective or have a different effect.

Socio-psychological approach of the standard usage of communication

The professional genre defined by Clot and presented in section “Introduction” (Clot, 1999; Clot et al., 2002), considered as a social entity regulating the work activity in a tacit manner, was observed during our investigations: in this case, it was clear that workers used the specific language to designate their work, materials and industrial process, and that it was a part of their professional identity. A young worker said: “*the first time you work in the operating team, you don’t understand a word they say. But after several weeks together, you understand, you speak the same way; it’s at this moment that you know that you are becoming one of them*”.

From these considerations, we can see how the standard usage of communication contributes towards the professional genre and belongs to professional identity.

As suggested by Clot (1999), we found that the standard usage of communication helped the workers to put the professional genre into words, appearing as shared rules, thus setting up a psychological function for each worker through a transpersonal dimension.

Conclusion

Studies carried out at Chinon nuclear power plant have contributed towards defining the way reactors pilots and maintenance workers were used to shortening operational communication. It showed how they could be more efficient depending upon the context and what the limits of such communication in terms of nuclear safety were. It was demonstrated on full-scale simulators for pilots that if such communication was often efficient for most workers involved in piloting the reactor, it could sometimes destabilize other workers who were not used to exchanging in that way, and could thus disturb the work activity.

We have shown which subtleties workers could implement in operational communication through vocational tradition, and have represented and analyzed the form of standard usage involved in this industry for operational communication and for the location of equipment in industrial areas. We have demonstrated how the standard usage of communication was inscribed within workers' professional identity and professional genre, mainly through the referential function of dialogue, with particular use of emotive and metalingual functions.

Following these results combined with others, the French nuclear production division operating the nuclear fleet has decided to involve all workers in a large reliability action plan, the Human Performance Program, concerning reliability of operational communication. The impact of such an implementation in terms of results and consequences is the object of another study and the subject of a forthcoming paper. More specifically, analyzing the impact of the transformation of the standard of the operational communication in terms of potential

loss should be welcome: indeed, the reliability action plan assumes a gain in reliability for communication, but nothing is known about the subsequent associated drawbacks.

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A Quantitative Study of the Japanese Particle *GA*

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Abstract
It is generally assumed among linguists that the Japanese particle *ga* marks the subject of both independent and dependent clauses in Modern Japanese. The purpose of this paper is to demonstrate whether *ga* is a 'subject marker', and if so, to what extent *ga* can be legitimately called a 'subject marker' in spoken Japanese. Through a quantitative analysis of 6255 predicates that appear in natural discourse data, the following statements can be made: 1) the occurrence of *ga* is actually infrequent (11%); 2) 85% of *ga* instances appear in the S role, instead of the {A} role; 3) the appearance of *ga* is strongly associated with certain intransitive, stative predicates, most notably 'intransitive partners' (20%); 4) 82% of *ga*-marked NPs are semantically 'non-agentive'; 5) and even among the 'agentive NP-*ga*', 78% of them appear inside embedded clauses or relative clauses. Further, *ga* as a subject marker in an independent clause represents merely 0.4% of the total number of predicates examined in this study (27/6255). In conclusion, although *ga* does function as a 'subject marker', the above findings indicate that *ga* as a 'subject marker' represents only a minor function at best in present day conversational Japanese.

Keywords
Japanese particle *ga*, subject, spoken Japanese

Introduction

Many modern approaches to Japanese grammar treat the particle *ga* as a marker indicating the grammatical relation, 'subject'. This might be attributed to the fact that Japanese patterns align with Nominative-Accusative type languages as opposed to an Ergative-Absolutive pattern. That is, the case system groups together the 'subject' of an intransitive verb and the

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'subject' of a transitive verb in the same way (by the use of the post-positional particle *ga*) while using *o* for the 'object' of a transitive verb. Notice that the particle *ga* is consistently glossed as a nominative case marker, as exemplified in (1) and (2) below:

(1) Tom-***ga*** ki-ta.
Nom come-past
'Tom came'

(2) Tom-***ga*** ringo-*o*tabe-ta.
Nom apple-Acc eat-past
'Tom ate an apple'

Due to this fact, Shibatani's (1990) following statement exemplifies a common understanding of *ga* among a majority of linguists: "The particle *ga* marks the subject of both independent and dependent clauses in Modern Japanese. In this regard it is comparable to the nominative case in European languages" (p. 347).

The purpose of this paper is to demonstrate, through a quantitative analysis of 6255 predicates, whether and to what extent *ga* is a 'subject marker', and if so, to what extent, *ga* can be legitimately called a 'subject marker' in spoken Japanese.

Ono, Thompson, and Suzuki's (2000) earlier study concluded that *ga* is not a subject marker at all. Through an examination of a much larger discourse data sample, however, this research reveals that *ga* can be legitimately called a 'subject marker'. Nonetheless, this study claims that *ga* as a 'subject marker' functions only in a minor role in everyday conversational Japanese.

Here, we provide clear definitions of 'grammatical subject' as used in this study. The first definition (a) incorporates the three-way system of S, A, and O, following Dixon[4] (1979,

[4] Dixon (1994) argues that all languages work in terms of three basic syntactic-semantic categories, A, S, and O, and claims that these three categories are universals and applicable to every type of clause in every language (p. 113). Dexion (1979) defines these three core syntactic-semantic relations as follows:

Subject of an intransitive clause: S
Subject of a transitive clause: A
Object of a transitive clause: O (Dixon 1979: 61)

Some scholars such as Comrie (1978), Croft (1991), and Palmer (1994) employ P (for patient) instead of O.

1994), Comrie (1981), DuBois (1987), Payne (1987), Croft (1991), Blake (2001), and Palmer (1994). The second definition (b) follows the definition proposed by such linguists as Keenan (1976), Comrie (1981), DuBois (1987), Shibatani (1990), Mithun (1991), and Dixon (1994).

(a) In accusative languages, the universal category of 'subject' can be defined as treating S and A alike as the set {S, A} equally. S is defined as the only argument of a single argument clause. A is the most agent-like participant in a multi-argument clause, or, that entity which is morpho-syntactically treated as an agent.
(b) Basic subjects normally express the *agent* of the action, if there is one.

In the following section, we will review three different 'schools' with respect to the notion of 'subject' in Japanese and the particle *ga*, which is commonly considered as the 'subject marker'.

Background

We will begin reviewing the issue of 'subject' in Japanese the first section. A discussion of the particle-*ga*, then, follows in second section.

The Issue of a "Subject"

The two opposing schools: the First vs. the Second School

Regarding a 'subject' in Japanese, the *First* school, which is represented by Kuno, Shibatani, and Fuji (1991), clearly recognizes the Japanese 'subject' as a syntactically most prominent category. The *Second* school, represented by Mikami and Kanaya (2002), strongly rejects the notion of the 'supremacy of the subject' in Japanese and considers that all NPs, including the *NP-ga*, have the same syntactic status.

In the *First* school, Shibatani insists on the relevance of these grammatical relations in Japanese and argues that "it is not the case that all NPs have the same syntactic status," but that "the hierarchy of grammatical relations is also observed in Japanese" (Shibatani 1990: 281). Thus, Shibatani rejects the notion of a flat structure and proposes the 'primacy of the subject' in Japanese. Shibatani also points out that "subject as a syntactic category results

from a generalization based on the agentive nominal[5]" (p. 282).

Fujii (1991) agrees with Shibatani's arguments (1978, 1990), and she employs the same syntactic criteria, subject honorification and the use of the reflexive form *jibun* 'self' in order *syntactically* to identify the 'subject' in Japanese (pp. 49-54).

On the contrary, in the Second school, Mikami and Kanaya (2002) vehemently argue against both the concept and the term itself and insist *shugo* 'subject' must be abolished in a discussion of Japanese grammar. Mikami (1963) defines the 'subject' as an element that meets *both* of the following criteria: 1) the subject dominates the verb[6]; 2) the subject can be defined as either *doer* or *be-er* (p. 67). Mikami insists that there is no element that can be legitimately called the 'subject' in Japanese and that *NP-ga* is merely a 'nominative complement' instead of the 'subject'. According to Mikami, a *complement* indicates simply a "modifier of the predicate" (1975, p. 230).

Kanaya (2002) strongly supports Mikami's arguments and argues that it is not only NP-*ga* that behaves like a 'subject'. NP-*wa*, NP-*ni*, NP-*no*, and NP-*de* also can convey the semantic meaning of *doer* and *be-er*, and all of these four noun phrases can also occupy the canonically 'subject' position in the sentence. Kanaya also refutes the two syntactic tests, subject honorification and the use of the reflexive form *jibun* 'self', that Shibatani and Fujii employ to determine the 'subject' in Japanese and claim that these tests are not consistently applicable.

The Issue of the Particle-Ga

Next, we will review how the particle-*ga* is interpreted and defined by three different schools.

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[5] Shibatani continues by arguing that the agentive nominal that occurs in an intransitive clause, as in *he* of *He came*, or of *He fell asleep*, is treated like the agentive nominal of a transitive clause as in *he* of *He hit her*, the subject of a passive clause as in *He was killed*, to possessor nominals, as in *He owns a car*, the perceivers, as in *He sees a woman*, and to experiencers, as in *He loves the woman*.

[6] In order to meet the first criterion, a language must have an entity that can be nicely filled into the <u>*underlines*</u> provided below:

"_____ agrees with a finite verb, and no other elements such as (objects) can agree with the finite verb, except for _____. That is, *only* _____ can agree with the finite verb. If a language has an element that can be placed in the _____ , then the language has a "subject-predicate" structure. And, the term that will be filled in the <u>*underlines*</u> would be 'subject' (Mikami 1963: 67, my translation).

The *First* school of Kuno, Shibatani, and Fujii, recognizes that *ga* is a nominative case marker that marks the 'subject' in a sentence. The *Second* school of Mikami and Kanaya claims that *ga* is the nominative case marker and semantically indicates either the "*do-er*" or "*be-er*" of a sentence. The *Third* school represented by Ono, Thompson, and Suzuki treats *ga* as a pragmatic marker, based upon the examination of naturally occurring discourse data.

The *First* group of scholars, Kuno, Shibatani, and Fujii (1991), observes a parallelism between the subject in Japanese and the subject in English and emphasizes that *ga* is the subject marker. As a representative of the *First* school, the following is a definition of the particle-*ga* by Shibatani: 1) it can be identified as a nominative case marker, and its primary function is to mark the subject of a clause (2001, p. 321); 2) it marks the subjects of both transitive and intransitive clauses (1990, p. 258); 3) a 'subject' is semantically an "agent/actor" (1991, p. 103); and 4) the most "archetypical subject" represents a transitive clause whose subject is semantically an "agent" (1991, p. 101).

Fujii (1991) examines diachronic changes in the particles that mark subjects. Through the examination of a series of translations of *The Tale of Genji* (originally published in 1021), Fujii finds that the usage of the particle-*ga*, which played a peripheral role in a limited domain in earlier times, greatly increased in frequency from 1830 onward[7]. In the original *The Tale of Genji*, *ga* as a nominative case marker appeared only in relative and other subordinate clauses. However, in 1830, the nominative case *ga* appeared not only in relative and subordinate clauses, but also appeared in the independent clauses as well.

The *Second* school, Mikami and Kanaya, argues that *ga* always appears in the nominative case and it semantically indicates a *do-er* and *be-er*. However, as Kanaya points out, unlike English where the subject always appears in the nominative case, the "subject-like" element in Japanese is not only the nominative case marker *ga*, but other particles such as *ni* (dative case), *de* (instrumental case), *no* (genitive case), and *wa* (topic marker) can substitute for the so-called 'subject' (i.e. semantically *doer* or *be-er*, and can be placed at the

[7] Fujii finds that the particle *ga* hardly appeared in the original work (1.6%); however, it increased in its frequency starting from 1830 (17%). In 1959, however, the appearance of *ga* jumped up to 46.2%. This period coincides with when the influence of Western languages was most strongly felt. In 1978, the occurrence of *ga* dropped again to 27.8%.

beginning of the sentence, which is canonically a 'subject' position). Mikami and Kanaya emphasize that Japanese is a *topic prominent* language. That is, Japanese exhibits only a 'topic-comment' sentence structure, never the 'subject-predicate' type.

The *Third* group of scholars, Ono, Thompson, and Suzuki (2000), claims that the particle *ga* is not a subject marker at all, but is essentially a discourse-pragmatic marker. Ono et al. (2000) performed a quantitative analysis based on naturally occurring, everyday discourse data in order to determine the frequency of *ga* from the point of view of predicate-argument relations[8]. Ono et al. conclude that *ga* can be best characterized as a pragmatic marker of relationship between its NP and the state-of-affairs named by the predicate.

Methodology

Through the analysis of their conversational data, Ono et al. (2000) find the *discrepancy* between "what speakers think they know about their language and what they actually do when they speak can be fairly wide" (p. 59). They suggest that a number of constructed Japanese examples such as shown in examples (1) and (2) might be in fact influenced by *written* Japanese. This issue of 'register' (difference between spoken and written Japanese) needs to be taken into account when we examine the particle-*ga*, since it is quite conceivable

[8] Ono et al. (2000) present the following three major findings:

(1) *Ga is rare in Japanese conversation (10%).*

Ono, Thompson, and Suzuki found that *ga* is highly infrequent, and when it does occur, its use appears to have to do with pragmatic reasons rather than with grammatical relations (p. 73). Ono et al. argue that "the use of *ga* is very marked in Japanese conversation" (p. 62).

(2) *NP-ga occurs typically with S NPs (intransitive subject) and with intransitive predicates*.

Ono, Thompson and Suzuki investigated the distribution of NP-*ga* in terms of the roles of S and A. Out of 34 NP-*ga*, which are traditionally considered as 'subjects' (i.e., A and S), 32 tokens (94%) appeared in the S role. Only two tokens were found in the A role. This extremely skewed appearance of NP-*ga* indicates two things: a) *ga* almost exclusively occurs with intransitive predicates; and b) no strong evidence can be found to suggest that *ga* functions as the subject marker, since it hardly ever occurs with A. Ono et al. argue that these facts cast doubt on the claim that *ga* is a subject marker, since the 'subject' is a grammatical relation that minimally includes A and S.

(3) *NP-ga occurs mostly with a semantically, highly constrained set of predicates*.

Ono et al. found that NP-*ga* tends to occur in a small number of semantic classes of intransitive predicates such as Nominal/adjectival/adverbial predicates (22%); Existential (e.g., *iru* 'exist' for animate; *aru* 'exist' for inanimate) (22%); Presentatives (e.g. *dekiru* 'come into being') (12%); Motion verbs (e.g. *kuru* 'come') (10%).

that "uses of *ga* in written Japanese might influence linguists' intuitions about the grammar of spoken Japanese" (Ono at el. 2000, p.78). The current study aims to investigate whether *ga* is used as the 'subject marker' by native speakers of Japanese in their daily conversation. Therefore, the data collected in this study is limited to naturally occurring everyday conversation.

Data Collection

The data collected for this study is from the *CallHome* Japanese (CHJ) speech corpus, a collection of 120 recorded telephone conversations transcribed in Japanese[9]. It was developed by the Linguistic Data Consortium (LDC) in 1996. These conversations were recorded between June 17th, 1995, and November 15th, 1995 (Fry 2003, p.28). The recruited native Japanese speakers agreed for their conversations to be recorded in exchange for a free long-distance telephone call for up to 30 minutes. All calls originated in North America and were placed to various locations in Japan. Most participants called either their family members or close friends, and each transcript records casual, everyday conversations between participants.

We randomly selected twenty-two data sets[10] from this larger collection. The data is predominantly in the colloquial Tokyo standard accent (out of 22 data sets, the participants in 20 of them speak with a Tokyo accent). Out of 45 participants, 41 of them are females and 4 of them are male speakers. The majority of the participants are adults, although 6 of them are juveniles, and 1 is a small child. The relationships of the participants are either as close friends, couples, or family members. Each of the selected data sets consists of materials ranging in size from six to fourteen pages of transcription in Japanese.

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[9] *Callhome* Japanese (CHJ) comes from the Linguistic Data Consortium (LDC) at the University of Pennsylvania, which was founded in 1992 to provide a new mechanism for large-scale development and widespread sharing of resources for research in linguistic technologies.

[10] The data sets used are: *train* ja_0856, ja_0924, ja_1099, ja_1041, ja_1425, ja_1461, ja_1667, ja_1713, ja-1889, ja_1999, ja_2215, ja_2180, ja_2199, ja_2206, ja_2222, ja_2225, ja_2243, ja_2157; *devtest* ja_1966, ja_2196, ja_3001; and *evtest* ja_3008. More information can be found at http://www.ldc.upenn.edu/About/ldc_intro.shtml.

Findings

In this section, we will provide the findings of quantitative analyses of 664 instances of NP-*ga* in our discourse data.

Ga is Indeed Rare

Table 1 The number of appearances and percentages of appearance of the particle *ga*

	Number	Percentage
Number of predicates	6255	100%
Number of –*ga*	664	**11%**

We first compared the number of appearances of *ga* with the number of predicates that appear in the corpus[11]. Notice that out of all 6,255 predicates, *ga* only represents 664 tokens, which is only **11%** as illustrated above in Table 1. However, the low frequency in the corpus does not immediately mean that NP-*ga* as the 'subject' cannot be maintained. Let us further provide the rest of the findings. In the following section, we will provide the findings regarding the distribution of *ga* between S role and A role.

Most Ga-Marked NPs are Found in the S Role

We follow Dixon (1979, p. 61) for the definition of S role and A role. Dixon defines three core syntactic-semantic relations as follows:

S role: Subject of an *intransitive* clause

A role: Subject of a *transitive* clause

O role: Object of a transitive clause

Table 2 below which shows the *ga*-marking in terms of its S role and A role.

Table 2 S and A roles and the particle-*ga*

[11] It needs to be clarified that in the entire data that we examined, 711 *ga* were actually found. However, 47 of them appeared without predicates. Since the analyses will be made from the point of view of both argument and predicates in this section, I eliminated these 47 *ga* from the analysis in Table 1 above.

	Number	Percentage
S role	**567**	**85%**
A role	97	15%
Total	664	100%

The figures shown above in Table 2 indicate that 85% (567 tokens out of 664) of *ga*-marked NPs are found in the S role, and 15% are in the A role. The appearance of *ga* seems highly skewed toward the S role.

In addition to the low frequency (11%) illustrated earlier, this skewed appearance of *ga*-marked NPs calls upon further investigation. In the following section, we will show that certain predicates that belong to the S role are closely associated with *ga*-marking.

The Appearance of Ga is Strongly Correlated with Certain Intransitive

Predicates: Intransitive Partners, Existentials, and Predicate Adjectives.

In this section, all of the predicates that are associated with *ga* will be exhibited. By doing so, we can investigate to see if any particular predicates are strongly associated with the appearance of *ga*. Again, the focus in this section is on the kind of predicates that are associated with NP-*ga*. Consider Table 3 below. The first 9 rows belong to the S role, and the next 6 rows represent the A role.

Table 3 Types of predicates that appear with the particle *ga*

Types of predicates	Instances of NP-*ga*	Percentage of Total
Intransitive partners	**131**	**19.7%**
Existentials	**119**	**17.9%**
Predicate adjectives	**119**	**17.9%**
Predicate Nominals	55	8.3%
Intransitives	47	7.1%
Motion Verbs	37	5.6%
Ability	26	3.9%
Predicate adverbs	6	0.9%
Others	27	4.1%
S role Sub-total	**567**	**85.4%**
Concrete doings	67	10.1%
Saying	18	2.7%

Transitive Pairs	5	0.8%
Bodily interaction	3	0.5%
Perception	3	0.5%
Exist	1	0.2%
A role Sub-total[12]	**97**	**14.6%**
Total	664	100%

As Table 3 indicates, the particle *ga* most often appears with a few, very specific types of intransitive predicates. It needs to be noted that more than half of NP-*ga* (55.5%; 369/664) appears with three particular intransitive predicates: intransitive partners, existentials, and predicate adjectives. Intransitive partners, especially, account for nearly one-fifth (19.7%) of all of the predicates that appear with *ga*. 'Intransitive partners' indicate counterparts or variants of the 'transitive and intransitive members of morphological pairs'. We will use this term 'intransitive partner' in this paper to mean that it is one of the members (counterparts) of transitive and intransitive members of morphological pairs. The detailed discussion of this construction will be offered in the next section.

Further, what is common among these intransitive predicates shown in Table 3 is that not only these three predicates, but also the majority of these intransitive predicates are stative[13] predicates. Hanzawa, Abe, and Kaneko (2002) point out an interesting fact through their diachronic comparison of the original *Tale of Heike*, which was written in the early thirteenth century, and *Tale of Heike - Amakusa* version - published in the late sixteenth century. Hanzawa et al. observe that while in the original *Tale of Heike* no particles are found in the subject position, the later version carries the particle *ga* only if the predicates are stative. If the predicates are action verbs, no particle appears. When we take Hanzawa et al's

[12] Some of the semantic groupings shown below are based on Scheibman (2001). However, some of them are classified using my own judgment. Details of the semantic grouping are as follows:
Concrete doing includes: 'do'; 'write'; 'manage'; 'use'; 'put'; 'lend'; 'greet'; 'apologize'; 'investigate'; 'get'; 'meet';'greet'; 'apologize'; 'investigate'; 'get'; 'meet'; 'take a video';
Saying includes: 'say'; 'speak'
Bodily interaction includes: 'eat';
Perception includes: 'see'; 'realize'; 'feel';
Exist includes: 'stay'.

[13] Soga defines "stative" as follows: "stative verbs refer to states or unchanging situations, whereas non-stative verbs refer to actions, events, or dynamic situations" (Soga 1986: 62).

observation into account, it might be possible that *ga* is closely associated with stative predicates which have to do with their historical development.

The following sections will provide examinations of each predicate that is associated with *ga* along with actual examples found in the discourse data. We will start with 'intransitive partners', which is most strongly associated with the employment of *ga*.

Intransitive Partners

The Japanese 'transitive vs. intransitive verb pairs' is one of the most discussed issues in Japanese morphology, most notably by Jacobsen[14] (1992). Let us first provide some explanation on these Japanese 'transitive and intransitive members of morphological pairs'. Observe the following two examples (7) and (8) Jacobsen provides (1992, p. 61). According to Jacobsen, the grammatical transitive prototype in Japanese has two aspects: one is syntactic and the other is morphological transitivity. Example (7) below is syntactically transitive due to the presence of the accusative marker *o* following the noun *tako* 'kite'. (7) is also morphologically transitive due to the endings *–eru* on the verb *ageru* 'raise'. In contrast, example (8) exhibits the intransitive partner (counterpart or variant), *agaru* 'rise'. Notice that the verbs (7) and (8) share the phonologically and morphologically identical initial verbal root *ag*, but carry different suffixes *–eru* and *–aru* respectively, resulting in a pair of verbs.

(7) Kod omo ***ga*** **tako** ***o*** ageta (<ag***eru***) (Vtr)
child NOM kite ACC raise-PAST
"The children flew (raised) a kite."

(8) **Tako** ***ga*** agatta. (<ag***aru***) (Vin)
kite NOM rise-PAST
"The kite rose."

[14] Jacobsen (1992) shows in the appendix a list of approximately 350 intransitive vs. transitive verb pairs which are classified into sixteen classes on the basis of suffix type and directionality of derivation.

Recall that the appearance of *ga* is most strongly associated with such intransitive predicates (i.e., 'intransitive partner') as in (8) above. Notice that (8) displays a single argument and non-accusative syntactic structure. The accusative NP *tako-o* 'kite' in transitive case marking in (7) corresponds to the nominative NP *tako-ga* 'kite' in the intransitive case marking pattern in (8). That is, the semantic role of the object of a morphologically transitive verb is identifiable with the semantic role of the subject of its intransitive partner (p. 60). Jacobsen (1992, pp. 106-110) offers the following explanation for such intransitive morphology in the predicate as in (8): Example (8) places a semantic object in the role of syntactic subject and presents a particular event as coming about apart from any intentional involvement on the part of the subject. Jacobsen calls such constructions as *zihatu* 'spontaneous'. This term 'spontaneous' means *zihatu* constitutes a polar opposite to the transitive meaning prototype. It refers to emotions or perceptions which *involuntarily* arise in the perceiving subject. To make the opposition between (7) and (8) above clearer, let us compare the transitive prototype (9) and the *spontaneous* prototype (10) (Jacobsen 1992, p. 124):

Example (9): the transitive prototype:

a) There are two entities involved in the event.
b) One of the entities (the agent) acts *intentionally*.
c) The other entity (the semantic object) undergoes a change.
d) The change occurs in real time.

Example (10): the *spontaneous* prototype:

a) There is one entity involved in the event—the semantic object.
b) The semantic object undergoes a change
c) The change occurs in real time.

Jacobsen (1992) notes that Japanese is particularly rich in the *spontaneous* prototype described above. The Japanese grammar has means for expressing an emotional object or state as either being brought about *voluntarily* or as occurring *spontaneously*. In doing so,

Japanese makes use of transitive vs. intransitive morphological pairs[15], shown in (9) and (10) respectively. Jacobsen further notes that the *spontaneous* prototype as in (10) exhibits a greater frequency and range of uses in Japanese than in English.

Recall that the intransitive partners of transitive vs. intransitive morphological pairs as in (10) are most closely associated with the appearance of *ga*. Let us next observe the actual examples of intransitive partners drawn from the discourse data.

(11) Chotto, kyuuni **kion-*ga*** **kawat**-te-shimt-ta monode.
a little suddenly temperature–GA change-L-COML-PT because
"Because the temperature has changed all of a sudden," (1099)

Example (11) shows one of the most typical usages of intransitive partners. The outside temperature going up and down is not under anybody's control. It occurs *spontaneously*, *involuntarily* and *naturally*.

Consider another example shown in (12) below:

(12) **Fuyu-*ga*** **owaru** kara.
winter-GA end because
"Because (this) winter ends," (2206)

A season comes and goes. This is beyond our control. All we humans can do is to accept what *nature* does.

The last example from the data (13) contains both a transitive partner and an intransitive partner in the same sentence.

(13) Acchi kocchi hora **ano ibo-*o*** **yai-ta** kara
here and there see that wart-O burn-past as

[15] Jacobsen (1992) also points out that this transitive vs. intransitive morphological opposition bears a close affinity to the causative vs. passive morphology respectively, an affinity which is a clear semantic motivation (Jacobsen 1992: 59-60).

ke-*ga* **nuke-te** nai shi ne.

hair-GA lose-L non-exist and FP

"See, as ____ burned that wart here and there, hair got lost and not there."

(An underline above means that the actor is not overtly expressed) (3008)

The transitive partner, *yai-ta* (*yaku*), means that a veterinary surgeon (an agent) intentionally burned (her dog's) wart. The wart, which is marked by the particle-*o,* is clearly "affected" by the surgeon's action. In contrast, the intransitive partner, *nuke-te* (*nukeru*), which means *get lost*, expresses the current state of being or change of state of her dog's *hair*. This sentence gives a clear impression to the hearer that an *agent* intentionally burned the wart, but nobody intentionally eliminated the dog's hair. It just happened *naturally*.

What can be observed from a quick look at these examples is that intransitive partners are not only intransitives, but they also express a certain state of being. Another observation that can be made from these examples is that intransitive partners do not appear to imply any agents, whereas the transitive counterpart always carries an agent even though it is often not overtly expressed in Japanese. Lastly, intransitive partners also seem to carry a connotation that things occur *naturally*, *involuntarily*, and *spontaneously* beyond human beings' control and intentions. The intransitive partners are, again, most strongly associated with the appearance of *ga.*

Existentials

Table 4 indicates that the second most common predicate that is associated with the *ga* is existentials (17.9%; 119 tokens out of 664). 'Existentials' represent the kind of predicates that mean to 'exist': *aru*[16] and *iru* (*nai* and *inai* for the negative form) in Japanese. Ono, Thompson, and Suzuki (2000) also point out the common association of 'existentials' with *ga*. The following are examples drawn from the discourse data:

[16] Japanese differentiates between something animate which exists "*iru*" and something *inanimate* exists "*aru*", although the "*aru*" can be used to refer to human sometimes, such as *Kodomo ga aru* "I have a child".

(14) Chigau, chigau, **Kyomi-*ga*** **nai**.
no no interests-GA non-exist
"No, no, (I) am not interested. (Interests do not exist)" (1288)

(15) Wakai hito dat-tara hora, **junnoosei-*ga*** **aru** kara-sa.
young person CP-if see adaptability-GA exist because-FP
"See, because (they) have adaptability, if (they) are young people. (Adaptability exists)"
(1667)

It is noteworthy that out of 119 tokens of existentials found in the data, 95 tokens are *aru*/*nai* (inanimate NP 'exists/does not exist'). That is, 80% of existential predicates are expressed with inanimate NP-*ga*, as such examples are provided above in (14) and (15). And, these tokens certainly represent *states*, not actions or events.

*Predicate Adjectives: P*redicate adjectives are also commonly associated with the appearance of *ga*, as Table 3 indicates (17.9%; 119 tokens out of 664), which demonstrates the exact same percentage as existentials that we just observed. Here is an example of predicate adjectives from the corpus:

(16) Kono ko-wa **kiokuryoku-*ga*** **warui** n da to omott-te-i-ta kedo
this kid-TOP ability to memorize-GA bad N CP QT think-L-PROG-PT though
"Although (I) was thinking that this kid's ability to memorize is bad," (lit.)
"Although (I) was thinking that this kid can't memorize," (1288)

Along with existentials, predicate adjectives also typically represent *states*, as we can observe from the above example. No human intentionality or voluntarity seems to be involved.

Other Predicates Associated with the Particle-ga

Predicate Nominals: represent the fourth most common predicates (8.3%; 55 tokens out of 664) among all the predicates that are associated with *ga*. Ono, Thompson, and Suzuki

(2000) also find[17] that *ga* tends to occur with "semantically rather empty" predicates such as adjectival predicates, existentials, and presentatives, and motion verbs. Further, non-verbal predicates such as nominal, adjectival, and adverbial predicates, only name a class or a property without necessarily invoking any participants (pp. 76-77). We also find similar tendencies. Observe (17) below taken from our data:

(17) Ano **sakura-*ga*** ima **mankai**. Kinoo, kyoo.
that cherry trees-GA now in full bloom yesterday today
"These cherry trees are now in full bloom. Yesterday, today." (3008)

Again, cherry trees are in full bloom occurs *naturally*, *involuntarily*, and *spontaneously* without agent's control and intentions.

Intransitves: What we mean by intransitive here is an intransitive verb that does not have partners (counterparts or variants) with transitive verbs, unlike intransitive partners. Examples of intransitives are provided below in (18):

(18) **Eigo-*ga*** **tuuji**-nakat-ta noyo.
English-GA make myself understood-NEG-PT FP
"(I) could not make (myself) understood in English." (1288)

Unlike intransitive partners, some intransitive verbs tend to be more non-stative. However, Soga (1986) argues that "stativity in a verb may have to be considered in terms of gradation: some stative verbs are more ideally stative than others, and they are less liable to be used as non-stative verbs" (1986: 61). Example (18) seems to share this stative feature. However, there can be examples where clearly non-stative intransitive verbs are still marked by *ga*, as

[17] Ono, Thompson, and Suzuki (2000) found the following predicates that are closely associated with the occurrence of *ga*: Nominal/adjectival/adverbial predicates (22%); Existential (e.g. *iru* 'exist' for animate; *aru* 'exist' for inanimate) (22%); Presentatives (e.g. *dekiru* 'come into being') (12%); Motion verbs (e.g. *kuru* 'come') (10%).

shown below in (19):

(19) Ii janai, datte **kaeru-*ga*** **tobikomu** tte i-eba.
fine CP:TAG becasie frog-GA jump in QT say-if
"(It is) fine, isn't? Because if (you) say that the frog jumps in (in the haiku poem)" (2180)

This issue will be touched upon later in section 4.6.

Motion Verbs: Motion verbs are ranked as the sixth most commonly associated predicates with the employment of *ga* (5.6%; 37 tokens out of 664). As we can see, the number of appearances of NP-*ga* is rather small.

(20) Sorede, **Kurisumasu-*ga*** **ki**-ta[18] kara.
so Christmas-GA come-PT because
"Because Christmas came," (2180)

(21) Jaa, **ore-ga** kocchi-e **kaet-te-ki**-ta koro?
then I-GA here-to return-L-come-PT time
"then, is (it) (about) time (when) I return here?" (1713)

Ability (Potential): The next examples (22)-(24) show potential verbs, which are often translated as 'I can (cannot) do ~'[19]. However, as we can observe from the gloss, it is not the case that *I can't understand English*, *I can see Mrs. Kojima's garden*, or *I can't hear Yoko's voice*. Rather, with these potential verbs, the *ga*-marked NP simply indicates that *English is*

[18] This *ki-ta* 'come-past' is a motion verb only in a metaphorical sense. However, I still counted it as a "Motion verb". In categorizing verbs according to the types of predicates that appear with *ga* as shown in Table 3, it seemed most appropriate.

[19] The *ga*-marking in examples (25)~(27) is often considered the object marker of a sentence. Kuno (1973) claims that the Japanese particle-*ga* "is used not only for marking the subject but also for marking the object of all transitive adjectives and nominal adjectives (*keiyoo-dooshi*) and of a certain class of transitive verbs", and these predicates can be categorized as "not actions but states" (1973: 81), as reviewed in section 2.0..

not comprehensible, Mrs. Kojima's garden is visible, and *Yoko's voice is not audible*:

(22) **Eigo-*ga*** **wakara-nai.**
English-GA comprehensible-NEG
"(I) can't understand English."
"English is not comprehensible" (lit.) (1288)

(23) Soo shi-tara, Kojima-san-no **niwa-*ga*** yoku **mieru** wake.
so do-if Kojima-TM-GEN garden-GA well visible EMPH
"If (I) do so, Mrs. (I) can see Mrs. Kojima's garden well."
"Mrs. Kojima's garden is well visible" (lit.) (3008)

(24) Nanka, Yooko-chan –no **koe *-ga*** yoku **kikoe-nai** noyo ne.
Somehow Yoko-TM–GEN voice-GA well audible-NEG FP FP
"Somehow, (I) can't hear Yoko's voice well."
"Somehow, Yoko's voice is not well audible" (lit.) (2180)

In (22)-(24) above, it is not the case that these examples are expressing the ability of the speaker. Jacobsen (1992) notes that *involuntary* perception such as *wakaru*, *mieru* and *kikoeru* (*understandable*, *visible* and *audible*, respectively) in (22)-(24) are in fact intransitive in their morphology. That is, (22)-(24) are different in argument structure from *understand*, *see* and *hear* in English, requiring only a single argument representing an entity which impinges on the senses but neither of them represents a sentient perceiver. (22)-(24) are inherently stative, and stative constructions in general receive nominative markings (p. 49).

Compare the following examples provided by Jacobsen (1992: 29-31). Notice in (25) that English translations show canonical transitive structure *(I) can see a mountain* and *I can hear music*, but Japanese requires only a single argument displaying an intransitive structure:

(25) Yama ***ga*** mieru. Ongaku ***ga*** kikoeru.
mountain visible music audible

"Mountain is visible" (Lit.)	"Music is audible" (Lit.)
"(I) can see a mountain"	"(I) can hear music"

(26)	E	*o*	miru.	Ongaku	*o*	kiku.
	picture		look	music		listen
	"(I) look at a picture"			"(I) listen to the music"		

Jacobsen (1992) argues that Japanese is stricter than English in requiring the presence of *intentional* meaning in transitive expressions (p. 49). Example (26) shows a common property of expressing a perception which is *intentional* and directed toward some objects. The difference between (25) and (26) is not in the object of perception, which is equally unaffected. Instead, it has to do with whether perception is an *intentional* act or not. In (26), the perception satisfies an intention of the perceiver, where as in (25) the perception is *spontaneous*. And, this type in (25) is closely associated with *ga*.

We have analyzed each predicate that appears in the S role. It seems clear that the employment of *ga* is closely associated with intransitive and stative predicates. We also found that these predicates carry certain connotations such as *spontaneous*, *unintentional*, and *naturally occurring*.

The Ga-marked NPs Tend to be Semantically 'Non-agentive'

In this section, we will shift our focus from predicates to arguments, more specifically, to the semantic role of *ga*-marked NPs. Recall that the definition of the 'subject' (b) states that 'Basic subjects normally express the *agent*[20] of the action, if there is one'. We will see if the finding meets this definition. Observe the following Table 4. Notice that among all [+ human] NP-*ga*, agentive[21] NPs account for only 18%.

[20] We followed Andrews' definition of agent here: "an Agent is a participant which the meaning of the verb specifies as doing or causing something, possibly intentionally (i.e. because (s) he wants to). The intention is qualified as possible because most verbs taking a causing or active participant (*kill* and *hit* in English, for example) are consistent with that participant acting intentionally, but do not require it to" (1985: 68).

[21] In categorizing agentive NPs, we also included all 24 [+ human] NPs that appear with Motion Verbs, although they are usually considered semantically 'theme' rather than 'agent'. The reason for this decision is to make sure to include even the slightest possibilities that might involve a "participant acting intentionally" when a [+ human] NP appears with Motion Verbs.

Table 4 Non-agentive NPs vs. Agentive NPs

Ga-marked NPs	Number	Percentage
Non-agentive NPs	**543**	**82%**
Agentive NPs	**121**	**18%**
Total	664	100%

Table 4 above indicates that 82% of *ga*-marked NPs are in fact semantically non-agentive. This finding is noteworthy because it contradicts the definition (b) of 'subject', repeated again above. Recall also that in prototypical elicited sentences, such as (2), illustrated in section 1.0., *ga*-marked NPs are almost always semantically agentives, and they are usually [+ human] NPs. However, Table 4 above indicates that the great majority of *ga*-marked NPs are in fact semantically not agents.

So far it has been established that the appearance of *ga* is rare, 85% of *ga*-marked NPs are in fact found in the S role, *ga* is closely associated with three intransitive and stative predicates (namely intransitive partners, existentials, and adjective predicates) and referents of NP-*ga* are typically not agents. These findings do not seem to meet the definition of 'subject' (a) and (b) quite appropriately.

In the next section, we will examine and focus on the argument-predicate relations of these 543 tokens of non-agentive NP-*ga* to determine how these tokens are distributed in different predicate types.

'Non-Agentive' Interpretation for Their NP-ga.

The following Table 5 illustrates the relationships between the types of predicates and the semantically non-agentive NPs and agentive NPs:

Table 5 Relationships of types of predicates, both agentive and non-agentive

Types of predicates	Non-agentive	Agentive	Total
Intransitive pairs[22]	**131 (100%)**	**0 (0%)**	**131**
Existentials	**119 (100%)**	**0 (0%)**	**119**

[22] Although we did not find any in our data analyzed for this study, there are some cases where *ga*-marked NP can be agentive with 'intransitive partners'.

Predicate adjectives	**119 (100%)**	**0 (0%)**	**119**
Predicate Nominals	**55 (100%)**	**0 (0%)**	**55**
Intransitives	43 (91%)	4 (9%)	47
Motion Verbs	13 (35%)	24 (65%)	37
Ability	26 (100%)	0 (0%)	26
Predicate adverbs	6 (100%)	0 (0%)	6
Others	27 (100%)	0 (0%)	27
Total for intransitive predicates	**539 (97%)**	**28 (3%)**	**567**
NP-*ga* with Transitive pairs	**0 (0%)**	**5 (100%)**	**5**
Transitives	4 (4%)	88 (96%)	92
Total for transitive predicates	**4 (4%)**	**93 (96%)**	**97**
Total	543 (82%)	121 (18%)	664

Table 5 above demonstrates the striking correlations between non-agentive NPs and the type of predicates that are closely associated with the appearances of *ga*. Notice that the intransitive partners, existentials, predicate adjectives and predicate nominals, the four types of predicates that are most strongly associated with *ga*, do not show any agentive interpretation for their NP-*ga*.

Ikegami (1981) argues that Japanese has a strong tendency not to express the agent, and this tendency is quite contrary to English, which prefers clearly to express the agent (p. 198).

Ikegami points out that even in expressing that someone is getting married, which is clearly a couples' decision to get married, Japanese speakers much prefer to employ an expression such as *ni narimashita* 'has become' in order to imply that what is going to happen is beyond the speaker's will or intention, and this intention is something '*hitsuzen*' (by necessity) that cannot be controlled by humans. Ikegami (1981) argues that this tendency is firmly entrenched within the common usage of native speakers of Japanese (p. 198).

Morita (1998) focuses on the particular conceptions held by Japanese people and how they prefer to express these conceptions. He points out that the most 'Japanese-like' expressions are ones which show an expectation that things will "take their *natural* course" and accept that things are "beyond one's control" (p. 162). Morita (1998) argues that the most typical examples of these are what we have called "intransitive partners" (p. 163). It is

interesting that *ga* is most closely associated with non-agentive NPs and the most 'Japanese-like' verb type, 'intransitive partners'.

Another intriguing fact that can be observed from Tables 5 is that if the predicates are 'statives', the percentage for [- human] NP-*ga* and non-agentive NP-*ga* becomes higher. Here, concerning *ga*, we can observe a clear correlation between [- human] NP-*ga* (non-agentive NPs) and stative predicates. Apparently, this is the specific environment where *ga* is most often employed.

Regarding 'Agentive-ga'

Table 5 above shows that 18% of the instances of NP-*ga* are in fact agentive. If we assume a close relationship between the NP-*ga* and non-agentiveness, how can it be explained that the 'transitive partners' and 'transitives', which allow agentive interpretations for their NPs, still also employ *ga*? In this section, we will address this issue by focusing this time on agentive NP-*ga* and non-stative predicates.

Table 6 below shows the kinds of predicates that indicate agentive NP-*ga* and where in a sentence they actually appear. Observe first the distribution of agentive NP-*ga* in four different types of clauses:

Table 6 Distribution of agentive NP-*ga* with its predicates in embedded, relative, coordinate, and independent clauses

	Embedded Clauses[23]	Relative Clauses	Coordinated Clause	Independent Clause	Total
Intransitives	2	0	0	2	4
Motion Verbs	13	4	4	3	24
Tran. pairs	2	0	2	1	5
Transitives	44	10	13	21	88
Total	**61 (50%)**	**14 (12%)**	**19 (16%)**	27 (22%)	**121**

Table 6 directs the reader to the fact that 78% (50% + 12% + 16% above) of agentive NP-*ga*

[23] Although relative clauses are often treated as a subtype of embedded clauses, we purposefully separated these two clausal types in this study.

actually appear inside either embedded clauses, relative clauses, or with coordinated clauses. First, we will examine 'motion verbs'. Motion Verbs are intransitives, and they are not statives. 88% of the instances of agentive NP-*ga* that occur with motion verbs appear either inside embedded clauses, relative clauses, or with coordinate clauses. Examples of Motion Verbs is given below:

(27) **Tookyoo -no hito-*ga*** Kyuushuu-ni **iku** to,
Tokyo–GEN person–GA Kyuushuu to go if
"If a person (from) Tokyo goes to Kyuushuu," (1288)

Among the five instances of agentive NP-*ga* that appear with Transitive Partners, four (80%) of them occur either inside embedded clauses or coordinated clauses. Example (28) below shows an instance in which agentive NP-*ga* and a 'transitive partner' *ake* (*akeru*) appear inside an embedded clause. Here, the agent, *a fireman*, is clearly expressed. This indicates that a fireman *intentionally* opened the door of the storeroom, which was on fire.

(28) Ano **shoboosho-no hito-*ga*** monooki-no to-***o*** patto **ake** tara,
that fire house-GEN person-GA storeroom-GEN door-ACC suddenly open when
"When the fireman suddenly opened the door of the storeroom," (2180)

What is clear from these findings is that agentive instances of agentive NP-*ga* tend to appear inside either embedded clauses, relative clauses, or coordinated clauses (78%), instead of in independent clauses, as Table 7 shows:

Table 7 Distribution of agentive NP-*ga* in embedded, relative, coordinated clauses, and independent clauses

	Agentive NP-*ga*	Percentage
Embedded clauses	61	50%
Relative clauses	14	12%
Coordinate clauses	19	16%
Sub-total	**94**	**78%**

Independent clauses	**27**	22%
Total	**121**	100%

Furthermore, Table 8 below reveals that the percentage of instances of [+ human] agentive NP-*ga*[24] that appear in independent clauses is quite low (21%).

Table 8 Distribution of [+ human] agentive NP-*ga* with its predicates in embedded, relative clauses, coordinate, and independent clauses

	Embedded Clauses	Relative Clauses	Coordinated Clause	Independent Clause	Total
Intransitives	1	0	0	2	3
Motion Verbs	13	4	4	3	24
Tran. pairs	2	0	2	1	5
Transitives	41	10	11	17	79
Total	57	14	17	**23**	111
Total percentage	51%	13%	15%	**21%**	100%

We can now see that human agentive NPs in independent clauses—supposedly the basic use for *ga*—make up only 0.36% (23/6255) of all the utterances coded in this study. What is fascinating here is that the prototypical, constructed sentences we see so often in the Japanese linguistics literature are not representative of common sentences uttered by native speakers of Japanese engaged in everyday conversation. Examples such as (2) provided in the Introduction as a prototypical Japanese sentence, shows that [+ human] agentive NP-*ga* + predicate in an independent clause, are in reality extraordinarily rare.

[24] Examples such as the following, which exhibit cases of "agentive NP-*ga*", are included in Table 6. However, since *Pochi* here refers to an animal, this example is excluded in Table 8. Three other examples just like this were found in the data.

Pochi-*ga* nanka isshookenmei **tebe-**te-iru none.
Pochi-GA something earnestly eat-L-PROG FP
"Pochi (a dog's name) is eating something earnestly." (3008)

Conclusion

In this paper, we have sought to demonstrate whether *ga* is a 'subject marker', and if so, to what extent *ga* can be legitimately called a 'subject marker' in spoken Japanese.

The summary of the findings are as follows: 1) the occurrence of *ga* is relatively rare (11%); 2) over 85% of the instances of *ga* appear in the S role; 3) the appearance of *ga* is strongly associated with certain intransitive, stative predicates, most notably intransitive partners (19.7%); 4) the four predicates that are the most strongly associated with *ga*, intransitive partners, existentials, predicate adjectives and predicate nominals, do not show any agentive interpretation for their NP-*ga* (0%); 5) 82% of *ga*-marked NPs are semantically non-agentive; 6) even among the agentive NP-*ga*, more than three-fourths of them appear inside embedded clauses or relative clauses, or with coordinated clauses (78%).

Let us compare our findings with the definition of the "subject" provided in section 1.0. For clarification, we will provide the definition again as used in this study:

(a) In accusative languages, the universal category of 'subject' can be defined as treating S and A alike as the set {S, A} equally. S is defined as the only argument of a single argument clause. A is the most agent-like participant in a multi-argument clause, or, that entity which is morpho-syntactically treated as an agent.

(b) Basic subjects normally express the *agent* of the action, if there is one.

Findings (1) and (2) above indicate that although *ga* appears only in S and A roles, never in O role, its appearance is highly skewed to S role. This does not quite meet the definition (a) above, since *ga* cannot be defined as "treating S and A alike as the set {S, A} *equally*".

Next, let us review our findings in (3), (4), and (5). Recall that the four types of predicates that are most strongly associated with *ga*, the intransitive partners, existentials, predicate adjectives and predicate nominals, did not show any agentive interpretation for their NP-*ga*. These four predicates alone amount to 78% of all non-agentive NP-*ga*. Also, the "intransitive partners", which is most strongly associated with the employment of *ga*, seem to carry particular connotations of *jihatu* (spontaneous), *hitsuzen* (by necessity), and *shizen* (natural), named by Jacobson (1992), Ikegami (1981), and Morita (1998), respectively.

Further, these terms also suggest uncontrollability by humans, transcendence of human ability, and nature's taking its own course. These ideas seem to exhibit the exact opposite of voluntariness or intentionality, the terms that are often expressed to describe the *agent*'s action. Furthermore, the finding in (5) demonstrates that 82% of all *ga*-marked NPs are in fact semantically non-agentive. These findings (3), (4), and (5) seem to indicate that NP-*ga* does not quite meet the definition of a 'subject' (b), which states "Basic subjects normally express the *agent* of the action, if there is one".

The NP-*ga* that fits the received definition of the 'subject' was found in 121 tokens out of 6255 predicates, which accounts for 1.9% of the data. That is, our findings indicate that *ga* can be the 'subject marker' only 1.9% of the time. Further, out of these 121 tokens, 94 of them appear inside either embedded clauses, relative clauses, or with coordinated clauses. This leaves 27 tokens, out of the entire 6255 predicates, which represent less than one percent, 0.4%, as agentive NP-*ga* appearing in the independent clause. Further, prototypical, constructed sentences, as shown in (2), which we see often in the Japanese linguistics literature, which show [+ human] agentive NP-*ga* + predicate in an independent clause, amount to merely 0.36% (23/6255). Although *ga* does function as 'subject marker', the above findings indicate that *ga* as a 'subject marker' is a minor function at best in spoken Japanese.

It seems that the Japanese 'subject marker' *ga* is multi-functional. I hope that this finding will open a door for further research to investigate what the other functions of *ga* might be.

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List of abbreviations

Grammatical Terms

ACC	accusative case marker
CL	classifier
COM	completion
CP	copula
DAT	dative case marker
EMPH	emphasizer
F	filler
FP	final particle
GEN	genitive case marker
L	linking morpheme
N	nominalizer
NEG	negative
NOM	nominative case marker
PROG	progressive
PL	plaural
PT	past tense
Q	interrogative marker
QT	quotative marker
TAG	tag question
TM	title maker
WA	topic maker

‘Are You Black Hen?’- Wordplay Among Teenage Vietnamese Bilinguals

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Abstract
This study aims to foster discussion of whether contact with English has some effects on the use of English among Vietnamese teenagers in the early stage of language contact between the two. A corpus of 120 magazine issues for Vietnamese youth (from 1992 to 2015) were collected and analysed to find out the types of wordplay used by Vietnamese teenaged bilinguals during this period. Six types of wordplay were found, they are: spelling based calquing, plain calquing, homophone calquing, rhyming similes, combining affixes with a Vietnamese word, and bi-directional calquing via synonym and homophones. Results show that calquing was the popular method used by young people when playing with English to create humorous expressions. The use of wordplay among bilinguals during the investigated period can be seen as an early sign of the transitional process in bilingualism progress among Vietnamese teenagers.

Keywords
language contact, corpus, bilingualism, wordplay

Introduction

Since 1986, the use of English has undergone a rapid expansion in Vietnam. Children have the chance to learn the English language in both primary and secondary schools. Furthermore, not only are young people exposed to English because it is a subject offered at schools, but they also may gravitate towards it as a prominent tool to enable access to the Western lifestyle and culture. According to the annual report of the Ministry of Education and Training in 1993, 85% of students chose English as their foreign language subject. Since the number of English

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speakers among young people is increasing each year, the chance that they will incorporate English into their Vietnamese escalates accordingly. It is easy to notice the appearance of English in wordplay used among young people such as *no star where* (no problem), *ugly tiger* (embarrassed), and so on. The use of wordplay among young people not only serves to create humorous expressions but also acts as an indication of group identity.

This article explores the phenomenon of wordplay through informal expressions made by young Vietnamese bilinguals in *Hoa Hoc Tro*, a famous magazine for Vietnamese teenagers. The first reason for choosing *Hoa Hoc Tro* is because it is the most popular magazine for teenagers in Vietnam and it is one of the highest circulated and most widespread magazines among high school students. As Abrahamson (2007) notes, magazines for teenagers play a special role in the lives of their readers; they create an affinity group where readers can actively interact as members. These magazines are considered, in Abrahamson's words, to be 'not only a product of fractionalisation of culture that took place at that time, but also drivers of transformation itself' (Abrahamson, 2007, p. 669). That is, the magazine both works as a mirror to reflect the change in society and culture and simultaneously as a force of change in its own right. Secondly, the magazine has a close connection with readers because it is written for and mainly by teenagers. The language usage, therefore, reflects the real language used among them. Moreover, due to the widespread distribution of the magazine, wordplay is not restricted to a small group of readers.

Although English wordplay in Vietnamese was rather popular among teenagers, no research on this interesting linguistic phenomenon has been carried out. With the aim of identifying English wordplay used by Vietnamese teens, this study collects 120 *Hoa Hoc Tro* issues (from 1992 – 2015) using the stratified random sampling method; that is, any 5 issues per year were collected for a period of 24 years to build up a corpus of 120 issues. All English occurrences were collected and 47 cases of wordplay were noted and classified into different types for analysis.

Language Contact between Vietnamese and English

Throughout the history of Vietnam, language contact has occurred in different settings from

the conquest by China for more than a thousand years from 111 B.C. (a series of Chinese dynasties such as Han and Eastern Han governed Vietnam during this period) to French colonialism for nearly a century from 1858[2] to 1945. The current contact between English and Vietnamese occurs due to both cultural and trade settings. In the Vietnam War between the North and the South from 1954 to 1975, North Vietnam received support from Russia and China; therefore, the contact in this region was mainly between Russian and Chinese, and contact with English was rare. In contrast, South Vietnam received sponsorship from the U.S., so that English was used in newspapers and magazines, and at schools. English became so popular in the area that it led to the creation of a pidgin used among Vietnamese and Americans (Crystal, 1997, p. 336; Reinecke, 1971, p. 47), which was put to an end when the war ended in 1975. In December 1986, Vietnam started its open door and *đổi mới* 'renovation' policy and encouraged contact with other countries in trade, technology, and cultural exchange. Vietnam normalised political relations with China in September 1991 and with the United States in July 1995. Vietnam also formally joined the Association of Southeast Asian Nations (ASEAN) in July 1995, the *Asia-Pacific Economic Cooperation* (APEC) in December 1998, and the World Trade Organization (WTO) in 2007. Since cooperation with foreign countries and companies has increased, accessing and learning English has become crucial for Vietnamese people. Contact with English has become popular, either through direct means, such as the return of overseas Vietnamese (Viet kieu) and doing business with foreigners, or by means such as mass media. English training centres and English evening classes have mushroomed in big cities; in schools English has become the first choice in foreign language options. According to reports from the Ministry of Education and Training (MOET), in 1993, among several foreign language options such as French, Chinese, Russian, and English, more than 85% of learners chose to study English. Contact with English has created bilingual environments among certain groups (e.g., students learning English in schools, Vietnamese employees using English at work, and so on) in which the competence of bilinguals varies from a mere smattering of meaningful utterances in some basic conversational English to 'literary mastery' (Haugen, 1956, p. 10), when a bilingual is

[2] The French attacked the port of Danang (Vietnam) in September 1858 and expanded their conquest in later years.

highly proficient in two languages. As English has become more popular in Vietnam, the frequency of English borrowings has increased, most notably in relation to technology and communication, pop culture and entertainment, and politics. With the development of media, and information technology (IT), there seems to have been less resistance to preventing the flow of borrowings. New terms have been adopted for imported concepts such as *internet*, *website*, and *CD*, as well as to partly or fully substitute for the Vietnamese equivalents as in the examples of *OK*, *bye*, *album*, and *festival*.

Bilingualism

Being bilingual is a prerequisite for code-switching and borrowing. The correlation between borrowing and bilingualism is proposed by a number of authors. Kaufman and Thomason (1988), Myers-Scotton (2002), and Campbell (2004), for example, agree that in order to borrow a foreign word, the first users must have a certain level of bilingualism. That is, they must have the ability to produce a word in the borrowed language as well as the borrowing language. However, to define bilingual and bilingualism is not an easy task. Numerous definitions have been proposed and rejected by scholars. Some researchers suggest a very strict prerequisite in which a bilingual is defined to have 'the native-like control of two languages' (Bloomfield, 1933, p. 56). However, Haugen (1969) disfavours this definition, arguing that it has put 'bilingualism in a paradoxical position of being either invisible or non-existent: if a speaker is bilingual, he must be then indistinguishable from a native of each language; if he is distinguishable, he cannot be a bilingual' (Haugen, 1969, p. 58). Haugen takes a wider perspective of the bilingual phenomenon and recognises a bilingual as a 'user of more than one language' (Haugen, 1987, p. 3) who can simply understand what is spoken and read what is written. It is not necessary for a bilingual to 'entail a mastery of all its skills or its entire range' (Haugen, 1987, p. 3). As a result, according to Hagen even a student in a language class can be considered a bilingual in the widest sense of the term.

In connection with language proficiency, Van Coestsem (2000) suggests two levels of bilingualism. The first level, called 'symmetrical', is the balanced form of bilingualism when a bilingual shows equal proficiency in two languages. Because it is impossible to achieve

perfectly symmetrical proficiency, the notion of ‘near symmetrical’ is normally used. The second level is ‘asymmetrical’, a term applied to bilinguals who show unequal proficiency in their languages (Van Coetsem, 2000, p. 83). In practice, bilingualism varies in degree of proficiency in languages from symmetrical to asymmetrical.

Another definition is proposed by Spolsky (1998, p. 45), who describes a bilingual as ‘a person who has some functional ability in a second language’ such as reading newspapers, and doing arithmetic. The functional ability, therefore, may range from a limited ability in one or more domains such as counting and cursing, to a very strong command of both languages, for example, an expert translator or lecturer (Spolsky, 1998, pp. 45-46). In addition, the context and the interaction in communication can affect the language use. That is, one person may have limited linguistic skills but be a successful communicator on some topics. Likewise, a person who has a mastery of linguistic skills can be an unsuccessful communicator in some contexts. Therefore, this functional bilingualism is concerned with place, time, and the person with which the two languages are used (Baker, 2011, p. 5).

Regarding bilingualism in Vietnam, ‘the most popular foreign language in school (and elsewhere) is English’ (Denham, 1992, p. 64). English is introduced from primary school onwards with the aim to provide students with simple communicative skills, listening as well as reading and writing. After three years in primary school, students are expected to be able to produce complete and meaningful utterances in both Vietnamese and English, and to be able to use these skills to respond to questions related to topics they have learnt in school, as well as have introductory knowledge of the cultures and people in English speaking countries (Government, 2003). Students at this stage should be able to easily use English for functions such as reading stories and counting. Moreover, at a later stage, many colleges and universities specify English as the required foreign language and a certain level of English competence is required for graduation. Despite the fact that the outcome of English competence of Vietnamese students is not very high, about 50% of students pass the English requirement at universities (Doan, 2008). Furthermore, English is required for studying overseas, studying higher education, and applying for jobs (Nguyen, 2012, p. 262). Therefore, Vietnamese students can be considered bilinguals according to the definition proposed by Haugen and Spolsky cited above. However, because students can acquire different levels of

language proficiency in communication and academic arenas, some may attain high language competence while others have limited ability. For the purpose of this study, it is safe to treat English-Vietnamese bilingualism in Vietnam as stretching from asymmetrical to a near-native point of language control, with language proficiency varying from limited to very strong command in both languages, as proposed above by Haugen (1987), and Spolsky (1998).

Findings

The wordplay seen in the magazine involves the new interpretation of Vietnamese or English items. In this process, both Vietnamese and English words are used to create new English-based items that may not be understandable to native English speakers. This study discusses six types of wordplay found in the corpus, they are spelling based calquing, plain calquing, homophone calquing, rhyming similes, combining affixes with a Vietnamese word, and bi-directional calquing via synonyms and homophones.

Spelling based calquing

The first type of word play is based on orthography/spelling, that is, an English translation of the Vietnamese orthography/spelling is used to create a new phrase that is different from the original Vietnamese. For example, the Vietnamese phrase *chảnh* is used to refer to a person who is extremely conceited. However, instead of using the English phrase *stuck up*, a new phrase *lemon question* is created. The word play evolves as follows. First, the orthography/spelling of *chảnh* is given as *chanh hỏi* in which *chanh* is the spelled word and *hỏi* is added to indicate the tone on the word. Second, a word-by-word English translation of the given phonetic spelling is applied: *chanh* is translated into English as *lemon*, and *hỏi* is translated as *question.* The combination of the two translated words creates the phrase *lemon question*, which is used instead of the English *stuck up* or the Vietnamese term *chảnh*.

Plain calquing of Vietnamese phrases

Plain calquing is word-by-word translation from a Vietnamese term. That is, the semantic meaning of the whole phrase is ignored; however, the meaning of each word is selected and translated to make a new phrase. In other words, for this type of word play, the phrase is split

into several words and each word is translated into English to create a new English phrase. For example, the phrase *vô tư đi* means *no worries*. However, to play with the word, the phrase is split up into three individual words *vô*, *tư*, and *đi,* and is translated separately as v*ô* 'no', *tư* 'four', *đi* 'go' to make a new English phrase as *no four go*. Therefore, instead of using the English phrase *no worries* or the Vietnamese phrase *vô tư đi*, a new English phrase *no four go* is created and used. Other examples of word-by-word translation are *chicken boy*, which is the translation of *thằng gà* (thằng: boy; gà: chicken) to refer to a silly boy, or *ugly tiger,* which is used to refer to the Vietnamese term *xấu hổ* (xấu: ugly; hổ: tiger) for the English word *embarrass*. In brief, in the plain calquing, a Vietnamese phrase is divided into individual words and is translated word-by-word to create a new English expression.

Calquing of Vietnamese homophone phrases

In this type of word play, the homophone of the whole phrase is translated instead of translating each split word in the phrase. In other words, the Vietnamese homophone phrase is the subject of English translation to create a new expression instead of the translation of the original meaning of the phrase or individual words. The existing English equivalent of the original Vietnamese phrase is, therefore, not used. One example is the Vietnamese phrase *không sao đâu,* which means *no problem/no worries*. The phrase is divided into two parts: *không sao* and *đâu,* both of which have homophones: the meaning of the homophone of *không sao* (worries/problems) is *no star* (starless), and the homophone of the word *đâu* means *where*. So, instead of translating the original meaning of *không sao đâu* as *no problem*, the meaning of the homophones is translated to create a new English phrase, *no star where*, which is used to mean *no problem*. Using the same rule, another homophone word play can be extended for the Vietnamese phrase *không bàn* or *miễn bàn,* which means *no more discussion*. The homophone meaning of *không bàn* is 'there is no table'. The word *bàn* 'discuss' has the same spelling as *bàn* 'table' and this homophone is used; as a result, the English phrase *no table,* which is the homophone translation of *không* 'no' and *bàn* 'table', is created, and used to mean *no more discussion*.

Rhyming similes

The fifth type is borrowing English to create rhyming similes. In this type of wordplay, an English word which has a similar sound and can rhyme with a Vietnamese word is chosen to create a simile. For example, in the simile *sếc- xi con gà Ri* 'sexy as a Ri hen', *xi* in *sếc-xi* 'sexy' rhymes with *Ri* in *gà Ri* (Ri hen). Another example of this type of wordplay is *Xăm như Béc-căm* 'tattooed like Beckham'. In this phrase, 'xăm' and 'căm' rhyme with each other. The comparisons drawn in rhyming similes can have unusual semantic meanings. Furthermore, the described quality or characteristic can be either unrelated to the compared object as the example of *sexy* and *Ri* hen or related as *tattoo* and *Beckham* because Beckham has quite a few tattoos on his body. However, the aim of this comparison is to create humorous and entertaining expressions rather than giving the precise comparison between comparing and compared objects (Nguyen & Zuckermann, 2012).

Combining prefixes or suffixes with Vietnamese words

Another form of wordplay found in youth language is the combination of English prefixes and suffixes such as *super* or *–ing* with Vietnamese words. Examples include *super khó* 'extremely difficult', *super soi* 'works hard to find fault', and *super siêu* 'extremely brilliant'. The combination often occurs between an English suffix and a Vietnamese adjective or verb. No example of combing *super* and a noun is found although the translation of this prefix as 'siêu' has been used with nouns in a number of cases such as *siêu người mẫu* 'supermodel', *siêu nhân* 'superman', and *siêu xe* 'supercar'. Moreover, by combining an English suffix and a Vietnamese word, young people create a new expression. For example, the phrase *bốc phét tinh* 'boasting' is the combination of Vietnamese verb *bốc phét* 'boast' and the English suffix *–ing* (which is spelt as *inh* in Vietnamese) to refer to a continuous action of showing off and telling lies. Because there is no continuous tense in Vietnamese verb, the 'half Vietnamese, half English' combination is used to denote a continuous action, and creates entertaining expressions used among young people.

Bi-directional calquing via synonym and homophones

Different from these two types of calquing above, in which the Vietnamese term is the object

of the translation, bi-directional calquing via synonym and homophone is based on English terms. That is, in this kind of wordplay, an English phrase is translated into a Vietnamese phrase that has a synonym that is homophonous with another English term or phrase (1). For example, the wordplay for the English word *OK* is used as follows:

(1) *A: Này, hôm nay có 3 tiết xong về ăn bún ốc nghe?*

*B: '**Black hen'***

A (tức giận): Đừng bày đặt nghe, không đi thì thôi lại còn bảo tao hen hả?

*A: 'Oh my god' sao mày ngu quá trời vậy. 'Black hen' là 'gà đen', 'gà đen' là **ô kê***

Trans:

A: Hey, we have only 3 lessons today. Once we finish class, how about having snail rice noodle soup?

B: 'Black hen'.

A (angry): Don't be funny. Even if you do not feel like going, you should not say I have asthma[3].

B: Oh my God, how silly you are. 'Black hen' means OK.

The adapted spelling of the English word *OK* is *ô kê*, which is homophonous with Sino-Vietnamese '*ô'* and *'kê',* and from this adapted orthography the wordplay is created. First, synonyms of each word in the phrase *ô kê* are used: another Vietnamese word for *ô* is *đen,* and synonym of *kê* is *gà*. Second, the phrase *đen gà* is reversed according to Vietnamese word order into *gà đen*, which is translated word by word into English as *black hen.* Hence, instead of saying *OK*, users can use either *black hen* or *gà đen* to express their agreement. This type of wordplay is sophisticated because users and readers must be competent in both Vietnamese and English to find the connection of the Vietnamese synonym that is homophonous with the English items.

Discussion

Before 2000, these types of wordplay occurred in the magazine while the occurrence of English was not at a high percentage, only 0.15% of the total three million words in the

[3] Of *black hen*, A heard only the word *hen* which means asthma in Vietnamese.

magazine. After 2000, the use of the mentioned wordplay disappeared from the magazine whereas the use of English increased sharply. Moreover, the use of correct English phrases has replaced the English calquing of Vietnamese phrases. For example, since 2001, *no for go* (mentioned earlier) has no longer been used; instead, *no worries*, or *no problem* has been introduced and used throughout the corpus. Likewise, *black hen* seems to be the unique one because no similar wordplay has been found. The disappearance of these types of wordplay leads to the question of their roles in the development of bilingualism process. From 1986[4] to 2000, several language policies and social factors which encouraged English learning came into effect such as the decree 442, the political relation normalisation with the United States, etc. As a result of the language policy and decree 442 by the Prime Minister in 1994 who encouraged state administrators and state officials to improve their foreign language skills (mainly English), the English learning movement exploded (Do, 2006, p. 8; Nguyen, 2012, p. 261). This period, however, should be considered the early stage of English bilingualism (pre-bilingualism) in Vietnam with few English occurring in the magazine such as *fan*, *music*, *album*, and so on. In this period, users normally used simple words or sentences and they tended to translate word for word either from English to Vietnamese or Vietnamese to English. This could explain why there was a great amount of wordplay of this type occurring in this time in the form of calquing.

English borrowings were flexibly used to create new Vietnamese-English phrases during the first period of language contact between English and Vietnamese. The purpose of word play was to create a humorous and unique English phrase used among teenagers. These phrases appear only in expressions and compliments, and normally apply to daily conversation. No wordplay is found in other fields such as technology or economics. The reason for this specific occurrence is that in other fields precise translation is necessary to avoid confusion or misunderstanding by readers. However, in daily expressions the humorous and creative use of words can create an entertaining atmosphere for readers. This wordplay, in some way, is used by teenagers to create and express a group identity. In addition, the increase in the use of English borrowings and wordplay is tied to the increase of bilingualism.

[4] In 1986, Vietnam started its 'renovation' policy. In 1995, Vietnam and the US normalized political relations.

In addition, the creativity in using the borrowings shows teenagers' confidence in using English to enrich their vocabulary. The fact that English borrowings have become an object of word play shows that these borrowings have been established as a part of the vocabulary and/or simply just exhibits a high level of mastery of English by teenagers.

Conclusion

English words have been flexibly used to create new Vietnamese-English phrases. The use of wordplay among bilinguals can be seen as a sign of a transitional process in bilingualism progress. The mentioned wordplay, hence, indicate the early stage of bilingualism among teenaged Vietnamese. After years of contact between the two languages and with a possible higher competence among bilinguals, besides wordplay, Vietnamese teenagers tend to code-switch more often in their everyday conversation.

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Gambits Across Genres: A Corpus-based Study

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Abstract
Gambits are not randomly assigned to utterances, but are appropriately used under precise and well-defined conversational conditions. These conversational conditions may comprise a specific genre that in turn may lead to specific gambit employment. As a means to an end, a corpus of fifteen films pertaining to action, comedy, and romance genres was analyzed to uncover the underlying gambits in each genre. To our surprise a low association was found between gambit types and genres, that is, the type of gambits did not vary with genre alteration, while their frequency differed. The long lasting belief that 'cajolers' are the most frequent gambit type was challenged thus, shedding light on chronological language change. The results may also prove pedagogically fruitful in that teachers could find it useful to be mindful of prioritizing which gambits to teach especially in EFL contexts where time is a never resolving issue.

Keywords
gambits, genres, corpus analysis, sociolinguistics

Introduction

According to Bachman (1990), it is crucial for second language learners to have pragmatic knowledge as well as the knowledge of grammar and text organization to be successful in their interactions. How can success be defined? Is success merely a matter of interacting regardless of the interlocutor or more precisely the situation in which the interaction takes place? If this were the case, then the term 'sociopragmatic failure' would be futile. According

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to Erickson (1984, as cited in LoCastro, 2011, p. 85) sociopragmatic failure 'derives from divergent assessments of the social aspects of the context of utterance'.

A mismatch between what you have in mind and how you actually speak your mind, considering the imposed circumstances by the embedded genre, will inevitably result in pragmatic failure which can in turn lead to dire consequences, depending on the situation. This is acknowledged by Chen (1996), who believes that pragmatic failure can cause miscommunication and as a result obstruct successful communication. 'Communication' is a rather conspicuous term. We live by a code, that is, communication. From the moment we are born till the day we close our eyes we are communicating. Functionalists believe that communication is in fact the primary function of language (Van Valin, 2002). It seems that the development of language owes itself to the necessity of communication, not the other way around. If we consider communication taking place due to the sake of having a language, then we are underestimating the value of communication. In other words, it seems that the need to communicate has led to language development. An aspect of communication involves an appraisal of the context or more specifically the genre in which the communication is embedded. Developing generic awareness may be deemed as a vital element in pragmatic competence which is a necessity in what Sadler and Eroz (2001) called 'true communicative competence'.

However, pragmatic knowledge alone may not suffice for successful communication. What we need are mechanisms or more precisely strategies to implement that knowledge according to the specific genre. It is precisely here where *gambits* can be informative. Gambits as a means of bridging the gap between pragmatic competence and pragmatic performance may entail a successful communication with regard to the specific genre. Bearing this in mind, the following study focused on the distribution of gambit types and their frequencies within three superordinate film genres as a means to provide a wide snapshot regarding the relationship of gambits across genres.

Literature Review

Film Genre

Most definitions of genre establish a connection with Mikhail Bahktin's work. For Bakhtin

(1986, p. 60) language is realized through individual concrete utterances by participants in various areas of human activity where 'each separate utterance is individual, of course, but each sphere in which language is used develops its own relatively stable types of these utterances. These we may call speech genres'. According to Neale (2000, as cited in Bruti & Perego, 2005) 'Genre is a ubiquitous phenomenon common to all instances of discourse'. Thus, it stands to reason that genre has an influence on the type of choices that speakers make for one particular genre, as opposed to other genres.

Film and genre have recently been analyzed by various authors and from different perspectives, as the recent wide-ranging literature in the field demonstrates (Kozloff, 2000; Aimeri & Frasca, 2002; Eugeni & Farinotti, 2002). In terms of film genres, Altman's (1995) audience-based approach assumes that the meaning of a genre lies in the audiences' application of their own knowledge regarding the conventions of genre construction. Thus, it is quite reasonable to assume that one audience may perceive a film as an action/adventure film, while another audience may perceive it as a horror film, given their background knowledge and attitudes. In other words this approach emphasizes the processes of applying the conventions of generic knowledge as central to constructing the meaning of a genre.

Most films have a combination of genres, that is, most films have mixed genres. The point to remember is that usually one of these genres is dominant. The films subject to analysis in this study were classified according to their dominant genre. Tim Dirk's web site (http://www.filmsite.org/) provides extensive information about a wide range of different genres. The film genres comprising the corpus of our study were: action, comedy, and romance, which are defined below. Note that the following definitions regarding these genres are mostly taken from the aforementioned website, so readers are advised to refer to this website for more information.

Action/adventure films typically involve high-budget portrayals of main characters engaged in a series of dramatic, dangerous events involving narrow escapes, fights, or rescues, all filmed in a fast-paced style that keeps audiences wondering if the hero or heroine will make it out alive at the end of the film.

Comedy has been one of the most consistently appealing genres. Comedy films are designed to elicit laughter from the audience. Comedies are light-hearted dramas, crafted to

amuse, entertain, and provoke enjoyment. The comedy genre humorously exaggerates the situation, the language, action, and characters. Comedies observe the deficiencies, foibles, and frustrations of life, providing merriment and a momentary escape from day-to-day life. They usually have happy endings, although the humor may have a serious or pessimistic side. The roles in comedy are typically one-dimensional prototypes, as opposed to tragic characters that are complex and contradictory (Hartley, 2001).

Romance films are love stories, or affairs of the heart that center on passion, emotion, and the romantic, affectionate involvement of the main characters (usually a leading man and lady), and the journey that their love takes through courtship or marriage. Romance films make the love story or the search for love the main plot focus. Many romantic films do not have fairy-tale, wishful-thinking stories or happy endings, although love serves as a shield against the harshness of the real world. Romantic comedies may have some romance in their plots; but note that they usually subordinate the love element to their primary goal, that is, to provide humor or serious drama.

Why a film-corpus?

Context seems to be a crucial factor in corpus pragmatics. This is supported by Gumperz (2002, as cited in Prevignano & Aldo, 2002) in his interview statement, ‘we always rely on a corpus, in the sense that to analyze anything at all in any depth we must prepare written transcripts. My problem with corpus linguistics is that it treats talk as if it were a literary text. As to corpus pragmatics, pragmatics always requires us to take context seriously’ (p. 21). There are objections leveled against films forming the corpus of study. Due to the staged and recreated nature of films, these objections rely on the difference between the language of films and spontaneous discourse.

However, Alvarez-Pereyre (2011) demonstrated ‘how the very qualities that differentiate film discourse from spontaneous real-life talk make it suitable for pedagogical purposes’ (p. 57). Along the same lines he stated that ‘the objection that dialogues in films are different from spontaneous speech is to ignore that substantial proportions of language as it is encountered are not spontaneous’ (Alvarez-Pereyre, 2011, p. 57). Although the discourse in films is different from spontaneous discourse, nevertheless one cannot deny that they are a

reflection of community values and beliefs. This is also supported by Alvarez-Pereyre (2011) in that '[…] telecinematic texts reorganize and recreate language (together with time and space) in their own way and with respect to specific socio-cultural conventions' (p. 62). Thus, films may be considered a reflection of community values.

It must be noted that films cut across several genres (i.e., subgenres) with a dominant genre. This was noted by Bruti and Perego (2005) in that 'many films straddle several film genres' (p. 14). The dominant genre, which we call the super ordinate genre, is the most general in nature and which encompasses the subgenres. Another advantage that may arise from basing the analysis on film corpora is the resolution of the 'Observer's paradox'. According to Furman (2011), 'One of the problems that analysts often encounter in gathering naturally occurring speech data is the Observer's Paradox' (p. 9). This phenomenon may lead to artificial behavior on the participants' part.

Gambits

According to Keller (1979), 'A psycholinguistic analysis of conversational discourse is concerned with the strategies used by speakers to structure their content and their conversational procedure. Some of these strategies have an overt and verbal representation in the form of semi-fixed expressions that are called gambits' (p. 219). Along the same lines, Keller (1979) indicates that gambits can serve one of the following four main functions, or a combination thereof:

1. Semantic introducers indicating the general frame of the topic which is about to be broached in the conversation. A topic can be framed for example as an opinion or a piece of unpleasant realism by saying 'the way I look at it' or 'whether we like it or not'.
2. Signaling the participants' social context in the conversation indicating a wish to take a turn, to end it or to get another participant to answer. E.g., 'that's pretty much it' when wishing to end a turn.
3. State of consciousness signaling a person's readiness to receive information, for instance by saying 'Yes, I'm listening'.
4. Communication control sharing the purpose of gaining time to look for a word or a syntactic structure. Hesitations such as ' you know' or 'you see' can serve this purpose. In

addition some gambits are used for assuring that the communication channel is open, such as ‘Are you with me?’ or ‘Is that clear?’

Gambits may also perform other functions. Consider a type of gambit which Edmondson (1976) called the *Downtoner*. The *Downtoner* is a classic case of Lakoff’s (1973) first maxim of politeness. It is used in order to attenuate the force of the speech act it happens to accompany to make it more acceptable to the hearer. The *Downtoner* may either precede or follow the central speech act but normally precedes. For example: *Correct me if I’m wrong but…*. As can be seen the statement following this gambit can be a disagreement on the hearer’s part towards what the speaker has previously mentioned. Another type of gambit is what Edmondson (1976) calls ‘pick-up’ or ‘theme-rheme’ gambits which occur when the hearer repeats part of what has been said to him. Although this gambit can serve a number of functions, that is, as time-gaining devices used by someone short of a ready answer, saving one’s own face, or showing respect to the speaker, as pointed out by Nikmehr and Farrokhi (2013), ‘it can be used for corrective purposes, as well’ (p. 231).

Due to the aims of this study, we will be focused on gambits pertaining to social functions rather than didactic ones. Thus, considering the variety of functions performed by gambits, it seems that being armed with a wide repertoire of them will lead to successful communication. Remember that verbal communication, especially in dialogic mode, is a rapid phenomenon. In other words, interlocutors may not have sufficient time to assess the context in order to appropriately contribute to the ongoing conversation. What they need are gambits to give them time to come up with an appropriate response; that is, to control the communication, to politely end their turn or grab one, or to imply that they are finished so their interlocutor does not stare at them with the hope of getting more information. As Keller (1979) indicates:

> The polished conversationalist is a familiar figure. He breaks smoothly into conversations, picks up the thread effortlessly, holds the listeners enthralled as he develops his point, and then elegantly bows out of conversation. How does he do it? No doubt the answer is complex, involving personality factors, group dynamics, and the degree of familiarity between the speaker and the other conversation participants. But from a purely linguistic point of view, it is also

> possible to identify a further factor for facilitating conversational discourse, the presence or absence of a certain set of signals in the conversationalist's speech, used to introduce level shifts within the conversation, or to prepare the listener for the next turn in the logical argument. This set of signals will here be called 'gambits'. (pp. 219-220)

As can be seen from Keller's definition, gambits may prove extremely fruitful in lubricating a conversation and consequently as a means of avoiding sociopragmatic failure. Gambits as time-gaining devices may provide the necessary means to go about a more appropriate assessment of the context. However, it is obvious that the functionality of gambits moves beyond the role of insufficient time compensation. As Nikmehr and Farrokhi (2014) put it:

> The notion of gambits subsumed under communication strategies, has been misunderstood and in turn taken for granted as some reduce gambits to merely 'pause fillers' (see for example Dornyei & Scott, 1997, p. 190) while others believe that they are fixed expressions (see Tavakoli, Dastjerdi & Esteki, 2011). The thing is that there is much more to gambits than initially believed and in order to truly appreciate its value, first we have to understand its vastness. (pp. 77-78)

Due to the purposes of our study, the well-known model provided by Edmondson and House (1981) which involves a detailed classification of gambit categories based on their functions, in addition to the recently coined gambits given by Nikmehr and Farrokhi (2013) will be employed.

Related Studies

To our best of knowledge there have been no studies up to now regarding the distribution of gambits across different film genres. The closest study to the current one has been conducted by Bruti and Perego (2005) which investigated the function of vocatives as a subtype of discourse markers and their translation in interlinguistic subtitles over different film genres. The aim of their study was to investigate the various roles vocatives played in the construction of the narrative according to the different needs that different film genres aimed

to fulfill. The corpus they used included a full-length animated feature from Walt Disney Pictures. They conclude that there is a certain difference in the type of vocatives chosen in each film depending on the genre. Another interesting finding they came across was different functions that the same category of vocatives had across genres: 'insults, for example, seem to be the category that is most strongly influenced by genre, which in fact determines their number, type, function, and translation' (Bruti & Perego, 2005, p. 45).

Lier, Fuchs, and Muller-Kulmann (2000) conducted a study considering the function of gambits in chat room discourse. They believed that because gambits have a distinctive function in spoken discourse and typically do not occur in written conversation, a comparison might help classify the status of chat room conversation in linguistic terms. In spite of their initial hypothesis that there were almost no gambits to be found in chat room discourse, they found out that the frequency of gambits is quite significant. They conclude that a possible explanation for this surprising fact could be that participants in a chat room conversation envision themselves to be in a face to face conversation. That is why they are so tempted to use gambits.

Against this backdrop, the present study sought to answer the following research questions:

1. What types of gambits are frequently used in action, comedy, and romance genres?
2. Is there a relationship regarding gambit employment across these genres?

Method

Design of the Study

This study attempted to examine the gambits employed in different film genres in order to reveal that different genres lead to both different frequency and types of gambit use. To this end, the researchers used a corpus-based qualitative-quantitative design. A quantitative approach is taken to account for the type and frequency of gambit occurrences, while a qualitative approach takes a pragmatic lens catering for the underlying reasons of gambit distribution across different genres. The three film genres, that is, action, comedy, and romance are the independent variables which will influence the distribution of gambits, i.e. the dependent variable.

Instrumentation and Procedure

In order to address the aims of the study, a corpus of five films based on each of the three genres was compiled. Each of the films was categorized as belonging to a certain genre according to the genre classification given on the www.imdb.com, which is the most renowned and authentic film-related site to date. The films subject to the study, alongside their year of production, are presented in the following table.

Table 1 Film classification

Action Genre	Comedy Genre	Romance Genre
The Hunger Games (2012)	The Five Year Engagement (2012)	About Time (2013)
Gangster Squad (2013)	Identity Thief (2013)	Safe Haven (2013)
Man of Steel (2013)	Last Vegas (2013)	The Great Gatsby (2013)
The Escape Plan (2013)	21 & Over (2013)	Warm Bodies (2013)
The Last Stand (2013)	We're the Millers (2013)	Endless Love (2014)

As can be seen from the table above, the films chosen for the following study have approximately the same year of production and are very close to the present time. The underlying reason for this preference pertains to the notion that genres are dynamic and evolve in time, so the type and frequency of gambits used in a movie twenty years ago will most likely differ from its current distribution. Thus, time may present itself as an intervening variable, which is ruled out in this study by adhering to the selection of more or less the same production year.

After the films were initially transcribed and scanned for gambits, the AQUAD software was used as a meticulous means to tally the frequencies of each gambit type. Based on the observed frequencies in each genre, descriptive statistics were generated using SPSS. Among the measures of central tendency, the median was chosen to conduct the rest of the analysis due to the small set of data and extreme points obtained for each gambit type.

An attempt was made to compare the distribution of gambits across the three genres. As a means of achieving this purpose a clustered bar graph was generated, revealing the median frequencies of all three genres. In order to determine the significance regarding the

relationship between gambit types and genres, the researchers attempted to consult inferential statistics by means of a chi-square test, as data was on the nominal level (i.e., frequencies) and did not meet the requirements of parametric tests.

Data Analysis and Results

After the initial transcription of the films, the researchers attempted to code 25 percent of each film once more after a two-week time interval, for the sake of reliability. The resulting reliability based on Pearson's Product-Moment Correlation was 0.92 which ensured the reliability of the transcriptions.

The recorded frequencies of each gambit type pertaining to each of the five are presented in the following tables. As previously stated, we were merely interested in gambits performing social functions and not didactic ones thus; gambit types such as *aside, recast marking, post-recast marking, revival, and self-recasting* were excluded from the analysis.

Table 2 Gambit frequency distribution of the action genre

Action Films / Category	The Hunger Games	Man of Steel	Escape Plan	The Last Stand	Gangster Squad
Uptaker	108	62	79	88	69
Clarifier	18	25	17	31	23
Appealer	7	9	6	15	11
Starter	62	63	41	56	32
Dodgy	15	9	5	17	12
Felicity	11	3	7	7	9
Sheer	21	7	16	18	13
Comforting	18	3	9	7	12
Irreversible	12	2	8	9	8
Whenever	9	7	6	12	5
Rheme-free	44	41	28	27	38
Wrap-up	3	7	8	6	12

The descriptive statistics based on the recorded frequency for each are presented in Table 3.

Table 3 Descriptive statistics for the action genre

	N	Range	Minimum	Maximum	Sum	Median	Mean	Std. Deviation
Uptaker	5	46	62	108	406	79	81.20	17.936
Clarifier	5	14	17	31	114	23	22.80	5.675
Appealer	5	9	6	15	48	9	9.60	3.578
Starter	5	31	32	63	254	56	50.80	13.700
Dodgy	5	12	5	17	58	12	11.60	4.775
Felicity	5	8	3	11	37	7	7.40	2.966
Sheer	5	14	7	21	75	16	15.00	5.339
Comforting	5	15	3	18	49	9	9.80	5.630
Irreversible	5	10	2	12	39	8	7.80	3.633
Whenever	5	7	5	12	39	7	7.80	2.775
Rheme-free	5	17	27	44	178	38	35.60	7.701
Wrap-up	5	9	3	12	36	7	7.20	3.271

The column pertaining to the median in Table 3 reveals that the *uptaker* is the most frequent type of gambits in the action genre followed by the *starter* and *rheme-free* gambits. The recorded frequency, in addition to the descriptive statistics pertaining to the comedy genre, is revealed in tables 4 and 5.

Table 4 Gambit frequency distribution of the comedy genre

Comedy Films / Category	The Five Year Engagement	21 & Over	Identity Thief	We're the Millers	Last Vegas
Uptaker	422	617	438	563	417
Clarifier	87	67	93	123	82
Appealer	7	16	6	22	11
Starter	104	98	115	147	99
Dodgy	25	16	8	36	14
Felicity	34	12	18	22	27
Sheer	24	17	9	53	13
Comforting	57	34	39	21	32
Irreversible	7	3	3	14	6
Whenever	30	12	21	33	8
Rheme-free	96	102	82	132	117
Wrap-up	12	4	7	18	5

Table 5 Descriptive statistics for the comedy genre

	N	Range	Minimum	Maximum	Sum	Median	Mean	Std. Deviation
Uptaker	5	200	417	617	2457	438	491.40	92.338
Clarifier	5	56	67	123	452	87	90.40	20.611
Appealer	5	16	6	22	62	11	12.40	6.656
Starter	5	49	98	147	563	104	112.60	20.379
Dodgy	5	28	8	36	99	16	19.80	10.918
Felicity	5	22	12	34	113	22	22.60	8.414
Sheer	5	44	9	53	116	17	23.20	17.556
Comforting	5	36	21	57	183	34	36.60	13.164
Irreversible	5	11	3	14	33	6	6.60	4.506
Whenever	5	25	8	33	104	21	20.80	10.895
Rheme-free	5	50	82	132	529	102	105.80	19.292
Wrap-up	5	14	4	18	46	7	9.20	5.805

As was the case with the action genre, the comedy genre also has the uptaker as its most frequent gambit type, again followed by the starter and rheme-free gambits. However, compared to the action genre, the uptaker has a significantly higher frequency in the comedy genre. The last genre subject to the study was the romance genre. The following tables illustrate the statistics of this genre.

Table 6 Gambit frequency distribution of the romance genre

Romance / Films / Category	Endless Love	The Great Gatsby	About Time	Safe Haven	Warm Bodies
Uptaker	292	417	198	256	148
Clarifier	40	42	31	67	23
Appealer	16	33	17	10	5
Starter	77	92	85	78	61
Dodgy	15	34	31	18	24
Felicity	19	38	17	22	12
Sheer	3	7	2	4	3
Comforting	12	15	7	9	2
Irreversible	8	5	6	3	8
Whenever	19	37	33	27	13

Rheme-free	65	129	50	84	42
Wrap-up	8	16	2	3	7

Table 7 Descriptive statistics for the romance genre

	N	Range	Minimum	Maximum	Sum	Median	Mean	Std. Deviation
Uptaker	5	269	148	417	1311	256	262.20	102.534
Clarifier	5	44	23	67	203	40	40.60	16.592
Appealer	5	28	5	33	81	16	16.20	10.569
Starter	5	31	61	92	393	78	78.60	11.546
Dodgy	5	19	15	34	122	24	24.40	8.142
Felicity	5	26	12	38	108	19	21.60	9.864
Sheer	5	5	2	7	19	3	3.80	1.924
Comforting	5	13	2	15	44	8	8.80	4.970
Irreversible	5	5	3	8	30	6	6.00	2.121
Whenever	5	24	13	37	129	27	25.80	9.859
Rheme-free	5	87	42	129	370	65	74.00	34.663
Wrap-up	5	14	2	16	36	7	7.20	5.541

Again the uptaker, starter, and rheme-free gambits were the most frequent types in the romance genre as was the case with the previous two genres.

Table 8 Crosstabulation of genres *gambits

Genres		**Gambits**												**Total**
		UP	**WH**	**RF**	**WU**	**CL**	**AP**	**ST**	**DO**	**FE**	**SH**	**CO**	**IR**	
Action	Count	79	7	38	7	23	9	56	12	7	16	9	8	271
	% within Genres	29.2%	2.6%	14.0%	2.6%	8.5%	3.3%	20.7%	4.4%	2.6%	5.9%	3.3%	3.0%	100%
	% within Gambits	10.2%	12.7%	18.5%	33.3%	15.3%	25.0%	23.5%	23.1%	14.6%	44.4%	17.6%	40.0%	16.1%
	% of Total	4.7%	0.4%	2.3%	0.4%	1.4%	0.5%	3.3%	0.7%	0.4%	0.9%	0.5%	0.5%	16.1%
Comedy	Count	438	21	102	7	87	11	104	16	22	17	34	6	865
	% within Genres	50.6%	2.4%	11.8%	0.8%	10.1%	1.3%	12.0%	1.8%	2.5%	2.0%	3.9%	0.7%	100%
	% within Gambits	56.7%	38.2%	49.8%	33.3%	58.0%	30.6%	43.7%	30.8%	45.8%	47.2%	66.7%	30.0%	51.3%

	% of Total	26.0%	1.2%	6.1%	0.4%	5.2%	0.7%	6.2%	0.9%	1.3%	1.0%	2.0%	0.4%	51.3%
Romance	Count	256	27	65	7	40	16	78	24	19	3	8	6	549
	% within Genres	46.6%	4.9%	11.8%	1.3%	7.3%	2.9%	14.2%	4.4%	3.5%	0.5%	1.5%	1.1%	100%
	% within Gambits	33.1%	49.1%	31.7%	33.3%	26.7%	44.4%	32.8%	46.2%	39.6%	8.3%	15.7%	30.0%	32.6%
	% of Total	15.2%	1.6%	3.9%	0.4%	2.4%	0.9%	4.6%	1.4%	1.1%	0.2%	0.5%	0.4%	32.6%
Total	Count	773	55	205	21	150	36	238	52	48	36	51	20	1685
	% within Genres	45.9%	3.3%	12.2%	1.2%	8.9%	2.1%	14.1%	3.1%	2.8%	2.1%	3.0%	1.2%	100%
	% within Gambits	100%	100%	100%	100.%	100%	100%	100%	100%	100%	100%	100%	100%	100%
	% of Total	45.9%	3.3%	12.2%	1.2%	8.9%	2.1%	14.1%	3.1%	2.8%	2.1%	3.0%	1.2%	100%

The cross tabulation revealing relative frequencies, provides a comprehensive understanding of gambit use within the three genres of the study. Due to the lack of space, acronyms for each gambit type were used in this table. As revealed in the third column, the uptaker (UP) occupying an overall of 45.9% in all genres is the most frequent gambit type. In the action genre with a frequency of 79, uptakers allocated 29.2% of the gambits within this genre, while the comedy and romance genres respectively entailed 50.6% and 46.6% uptakers compared with other gambit types. The result from the chi-square disclosed a significant difference in gambit distribution across genres (χ (22) = 104.376, p < .05). However, the Cramer's V test revealed a rather low association of 17.6% between the variables, indicating that the relationship between genres and gambits is not straightforward and should be cautiously interpreted.

Discussion

With regard to our research questions, it was truly intriguing to find that uptakers, starters, and rheme-free gambits were the most frequent types across all three genres and that there was a weak association regarding the relationship between gambits and genres. Despite studies on context-sensitive language change in the field of sociolinguistics, the way people start, maintain, and end a conversation and the way they use rheme-free gambits in order to

gain time to structure what they want to say next seems to be more or less invariable. In other words, it seems that the type of gambits used remains constant independent of genre alteration. Thus, regardless of the speech genre, uptakers were most frequently employed as a way to re-represent the original message (picking up), to reflect resignation or anger, to react when the previous utterance contains unwelcome information, to extend a turn without interrupting the flow of talk; to request confirmation, repetition or clarification, and so on.

The importance of uptakers revealed as the most frequent gambit type in all three genres may also be explained in terms of listenership reflected in backchannels. Uptakers by definition entail feedback to speakers, showing that their messages have been understood (Edmondson & House, 1981). Thus, they seem to perform backchannel functionality. In terms of backchannel functionality, it is important to realize that they may be more than just mere signals for speaker continuation of talk as Stenstrom (1994, as cited in Pipek, 2007) states '[…] backchannels can reflect empathy, enthusiasm and indignation, but they can also reflect a lack of interest, indifference and impatience, although such feelings are generally expressed in a different form' (p. 16). This multi-functionality of backchannels is also supported by Schegloff (1982, as cited in LoCastro, 2011) as he states that these listener responses 'may signal (a) attentiveness, (b) understanding, (c) agreement, and (d) continuation of the talk' (p. 97). Thus, the reason that uptakers such as 'Hmm', 'Uhum', 'I see', 'Right', 'Great', and 'Okay' are the most frequent gambit type regardless of the speech genre seems axiomatic, as by definition they cater for backchannel functionality.

Another interesting result was related to the category of *clarifiers*, which occupied the fourth position on the gambit frequency type scale. Cajolers such as 'I mean' and 'you know' were the most common tokens of this type which was in line with the findings of Edmondson and House (1981), which argued that cajolers were the most frequently used gambit type in English. Although this gambit is still frequently used today, the results of this study pointed out that they are not the most frequent type, running against Edmondson and House's (1981) findings.

Recall that *cajolers* as a subcategory of *clarifiers* have a 'fumbling function for the speaker because he suspects that what he/she is about to say might not be welcome to the hearer, he can downplay the impact of what he is saying' (Edmondson & House, 1981, p. 75). Thus,

cajolers may indicate politeness, whereas their absence may fall into one of Culpeper's (1996) impoliteness strategies called 'Withhold politeness' which is 'the absence of politeness work where it would be expected' (Culpeper, 1996, p. 357). It seems that with regard to English, there is a tendency towards less concern for face-threatening communication. However, other corpus-based research is needed in order to shed light on this issue.

Conclusion

The results of this research revealed that the type of gambits employed in everyday communication has chronologically experienced a significant alteration. However, more studies need to be carried out to prove such a strong claim. Although language, and more specifically gambit types, seems to have undergone a chronological alteration, speech genres are not significantly influential regarding this change in English. However, whether the same findings can be applied to other languages is a matter yet to be discovered through future studies. If such a trend proves to be true in other languages we would be able to claim some universality for gambits. This is something which Nikmehr and Farrokhi (2013) have rushed towards in claiming its existence, as they used the term 'Universal Gambits'. We believe that such a strong claim without concrete evidence seems invalid for the time being.

In addition, from a pedagogical perspective, the revelation of uptakers as the most frequently used gambit type regardless of the speech genre implies that EFL instruction should raise learners' awareness in terms of listenership duties, thus cautioning teachers and material developers not to underestimate the role of uptakers in lubricating conversation due to their backchannel functionality. As Ward et al. (2007) puts it, 'A learner who lacks back-channeling skills, even if a master of the vocabulary and grammar, can easily appear uninterested, ill-informed, thoughtless, discourteous, passive, indecisive, untrusting, dull, pushy, or worse' (p. 2).

Overall, being equipped with gambit knowledge seems vital in rendering learners' pragmatically competent as communication will always entail issues such as appropriateness and face-saving. The findings reported here provide a clear indication of prioritizing gambits in EFL contexts where interaction is imprisoned within classroom walls thus, attempting to compensate for the lack of language exposure.

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The Treatment of Vowel-Initial Syllables in Somali Syllable Structure: A Constraint-Based Approach

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Abstract
The onset in Somali syllable structure provokes considerable argument among scholars who are interested in the syllable structure in this language. Owrin (1996) and Saeed (1999) agree that segmental-filling in the onset position is mandatory in this language, whereas Zetterholm and Tronnier (2012) state that segmental-filling in the onset position is as optional as in the coda in this language. Therefore, this research is to investigate whether onsets in Somali syllable structure are mandatory or optional in light of Optimality Theory (OT). This study primarily depends on data taken from extant literature including books, articles, and theses. Furthermore, 10 Somali native speakers were consulted about the fact of data. This study concludes that consonant epenthesis as well as resyllabification manifests the importance of onsets in Somali. Consonant epenthesis occurs initially when a monosyllablic word begins with a vowel (onsetless syllable), e.g., **/èj/→ [ʔèj]** 'dog'. Likewise, this type of epenthesis is found in the intervocalic position when syllables of the form CV are associated with vowel-initial suffixes, e.g. **/ma-a:n/→ [ma.ʔa:n]** 'not I'. The process of resyllabification in Somali is motivated by syllable types CVC and CVVC that are associated with vowel-initial suffixes, e.g. **/na:g -i/→[na:. gi]** 'woman', **/war.qad-u:/→ [war.qa.du:]** 'formal letter'.

Keywords
Somali, syllable structure, onset, optimality theory

Introduction

Syllable structures in languages were taken into consideration by many phonologists who agree that segmental-filling in the onset position is obligatory in some languages and optional

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in others. For instance, in Arabic, some phonologists, including McCarthy (1979; 1981), Broselow (1984), Ito (1986; 1989), Abu-Mansour (1987), Abu-Rakhieh (2009), and Alqahtani (2014) unanimously state that segmental-filling in the onset position is mandatory when dealing with vowel-initial syllables. On the other hand, segmental-filling in the onset position is optional in the syllable structure of other languages, e.g. English, Spanish, Finnish, Turkish, Pirahã, and Fijian. These arguments are demonstrated in the next section.

This paper aims to illuminate the status of the onsets in Somali in light of OT. To achieve this aim, there are two questions that should be addressed: are onsets mandatory in Somali?; and how can we account for onsets in Somali using OT?

In the next sections, I will review some previous studies on the status of onset cross-linguistically. The following section consists of some background information about the phonology of Somali. This paper ends with the analysis of onsets in Somali using OT as a framework, plus a conclusion, as the final section, where findings are shown.

Literature Review

Most scholars cross-linguistically focus on segmental-filling in the onset position in languages in the world, and whether it is possible or optional. Based on Clements and Keyser's (1983) syllable typologies, onsets and codas are possible in some languages and optional in others, whereas nuclei are obligatory because the disappearance of this constituent leads to disappearance of the entire syllable (Blevins, 1995). By looking at the syllable typologies (Clements & Keyser, 1983), the nucleus is found in every syllable, whereas onsets and codas are found in some syllables and absent in others, i.e. CV, VC, V, and CVC.

Segmental-filling in the onset position in some languages has been addressed by most phonologists. For instance, in Arabic varieties, scholars including Abdul-Karim (1980), Jarrah (1993), Ingham (1994), Al-Mohanna (1998), Haddad (2005), Gouskova & Hall (2009), Rakhieh (2009), Ibrahim (2012), and Alqahtani (2015) unanimously agree that Standard Arabic as well as Arabic varieties do not permit onsetless syllables. This, seen through a prosthetic glottal stop as segmental-filling, is used to avoid vowel-initial syllables, e.g., **Ahmed** (a proper name) →/**ʔa**h.mad/. Like Arabic, onsetless syllables in Hausa are avoided

by inserting a glottal stop initially (Jaggar, 2001; Caron, 2011; Alqahtani & Musa, 2015), e.g. **aiki** ‘work’ → **[ʔai.ki]**. Furthermore, according to Jaggar (2001) and Caron (2011), all of the syllable types in this language exclude vowel-initial syllables. On the other hand, an epenthetic glottal stop is not the only way to comply with the Onset Principle (Itô, 1989) when dealing with a sequence of CV.V. For instance, vowel deletion is another process used to avoid vowel-initial syllable in the above sequence with reference to Kinyarwanda (Kimenyi, 2006); in this language, vowel deletion that targets one of the vowels in the sequence CV.V yields the CV form. However, the vowel-initial syllable in the sequence CV.V can be avoided by epenthetic consonants rather than vowel deletion, with reference to Belhare (Bickel, 2003). In Belhare, according to Bickel (2003), an epenthetic glide [j] is motivated by the form CV that is associated with a vowel-initial suffix, e.g. **/so-u/→ [so.jo]** ‘wait for him or her’. Uffmann (2007) similarly observes that a consonant is inserted intervocalically in Japanese in order to avoid the sequence CV-V; this insertion is conditioned by a neighboring vowel. For instance, the epenthetic glide [j] is determined by the vowel /i/, because the epenthetic glide [j] is homorganic to the vowel /i/, while Christade (1988) states that intervocalic glottal stop epenthesis is conditioned by the vowel /a/ because they share a [+Pharyngeal] feature (Jarrah, 1993; McCarthy, 1994).

Unlike epenthetic consonants, according to Michailovsky (1986), in the Maiva-Meva dialect of Limbu, the sequences of CVC-VC and CVC-V do not obligate epenthetic consonants or prosthetic onsets. Instead, the coda of a non-final syllable is resyllabified as an onset of the following syllable, i.e. /CVC-V/→ [CV.CV]. Likewise, the sequences of CVVC-V and CVCC-V are avoided by resyllabifying the last consonants in non-final syllables as onsets of the following syllables (Watson, 2007; Alqahtani, 2014), i.e. /CVVC-V/→ [CVV.CV]. The functions of resyllabification are to have an onset in the final syllable since all varieties of Arabic ban onsetless syllables and do not have non-final superheavy syllables.

In contrast with onset languages, vowel-initial syllables as well as the sequences of CV.V, CVC.V, and CVC.VC (hiatus) are found in some languages including Cyuvava, Mazateco, Mokilese, Finnish, Spanish, and Dutch (Levelt & Van de Vijver, 2004). The optionality of segmental-filling is found in some syllable types in these languages. Similarly, Zec (2007) states that segmental-filling in the onset position is not possible cross-

linguistically citing languages such as English, Spanish, Finnish, Turkish, Pirahã, and Fijian, which are known as free onset-languages.

Nevertheless, free onset-languages exclude CV syllables; Fikkert (1994), who conducted studies on phonological acquisition, supports Clements and Keyser's (1983) idea of CV syllable being universally unmarked even in languages where segmental onset-filling is optional. Fikkert (1994) states that children of free-onset languages tend to surface CV-syllables by default in early production when dealing with vowel-initial syllables. In other words, she observes that children's inputs lack vowel-initial syllables in the early stage of production through the insertion of a glottal stop or any equivalent consonant in the phonetic realization onsetless syllables.[2]

The studies above show the importance of onsets in different languages through the avoidance of vowel-initial syllables, even though these languages refer to different procedures that help to ban onsetless syllables. Some of them allow prosthetic consonants, whereas others permit vowel deletion to block vowel-initial syllables. Other languages adhere to a resyllabification process as a solution to ban onsetless syllables. With respect to scholars who did the studies above, there is no study addressing the status of onsets in Somali syllable structure using OT in order to see whether onsets are obligatory or not in this language. Therefore, this paper is devoted to investigating this syllable constituent in Somali. Before addressing onsets in Somali syllable structure in light of OT, the next section will manifest some background information about Somali.

The Somali Language

Somali is an Afro-Asiatic language in the East Cushitic family (Saeed, 1999; Gabbard, 2010), spoken by 9-16 million people. Most speakers of this language primarily live in Somalia, whereas others are allocated to Djibouti, Kenya, and Ethiopia. There is another large group of the speakers of this language who live in diasporatic communities in the Middle East, Europe, and North America (Gabbard, 2010). The next subsection provides the consonant inventory in Somali.

[2] This happens in languages like Dutch, French, and Portuguese (Fikkert 1994).

Consonant Inventory in Somali

The entire number of consonants in Somali is twenty-six, gathered in the table below and conventionally represented by place and manner of articulation.

Table 1 Manner and place of articulation of consonants in Somali

	bilabial	labio-dental	dental	alveolar	post-alveolar	retroflex	palatal	velar	uvular	pharyngeal	glottal
Stops	b		t d			ɖ		k g		q	ʔ
Fricative	β	f	ð	s	ʃ			ɣ	x ʁ	ħ ʕ	h
Affricate					ʧ						
Nasal	m			n							
Trill				r							
Lateral				l							
Glides	w						j				

The place and manner of articulation in Table 1 is cited from Saeed (1999) and Gabbard (2010). The number of consonants in the table above is twenty-six, starting with stops and ending with glides. In other words, the manners of articulation are presented vertically in the table depending on the degree of sonority as well as the degree of constriction. For example, stops are the least sonorous, whereas glides, as semivowels, are the most sonorous. With regard to manners of articulation, consonants are subdivided into obstruents and sonorants; obstruents are stops, fricatives, and affricate. Sonorants are nasals, lateral, and glide. The places of articulation are presented horizontally, starting from bilabial, as the front part of mouth, and ending up with a glottal, as the part behind an oral cavity. Some examples of these segments are shown below:

(1)

a. **[b̲a:.b̲u:r]** ‘car’ n. **[tʰ̲uke]** ‘cow’

b. **[d̲a:h]** ‘curtain’ o. **[d̲ɛg]** ‘ear’

c. **[kʰab]**	‘shoe’	p. **[gal]**	‘pond’
d. **[gɑ:d]**	‘take’	q. **[loʔ]**	‘cattle’
e. **[malmo]**	‘days’	r. **[no:l]**	‘livestock’
f. **[ro:ti]**	‘bread’	s. **[ho:n]**	‘wasp’
g. **[kʰa β o]**	‘shoes’	t. **[fure]**	‘key’
h. **[bahðo]**	‘the noble’	u. **[sal]**	‘base’
i. **[ħo:ʃ]**	‘gray hair’	v. **[luχo]**	‘legs’
j. **[χ igɑ:l]**	‘relative’	w. **[tʰaraʁʲo]**	‘match’
k. **[wa:b]**	‘small hut’	x. **[ʃa:h]**	‘tea’
l. **[ʔa:.jo]**	‘stepmother’	y. **[ʧʰa:.li.ɟad]**	‘community’
m. **[ʕunto]**	‘food’	z. **[fure]**	‘key’

After demonstrating the consonant inventory in this language, the next subsection aims to clarify vowels found in Somali.

Vowels in Somali

Saeed (1999) and Gabbard (2010) state that short vowels in this language are /i/, /ɪ/, /e/, /ɛ/, /a/, /ɑ/, /o/, /ɔ/, and /u/, while long vowels are /i:/, /ɪ:/, /e:/, /ɛ:/, /a:/, /ɑ:/, /o:/, /ɔ:/, and /u:/. The following examples show short vowels, along with their long counterparts (Saeed, 1999; Gabbard, 2010):

(2)

a. **nin**	**[nɪn]**	‘man’	**shiiq**	**[ʃɪ: χ]**	‘sheikh’
b. **kibis**	**[kibis]**	‘bread’	**biiq**	**[bi:q]**	‘coward’
c. **búste**	**[bustɛ]**	‘blanket’	**hadhìuudh**	**[hɑɖu:ɖ]**	‘millet’
d. **tol**	**[tɔl]**	‘kinsfolk’	**gool**	**[ɡɔ:l]**	‘lioness’
e. **dheg**	**[ɖeg]**	‘ear’	**gees**	**[ɡe:s]**	‘side’
f. **lax**	**[la χ]**	‘sheep’	**raag**	**[ra:g]**	‘be late’
g. **tog**	**[toɡ]**	‘river bed’	**goo**	**[ɡo:]**	‘cut (verb)’
h. **guddi**	**[ɡuddi]**	‘assembly of judges’	**guul**	**[ɡu:l]**	‘victory’

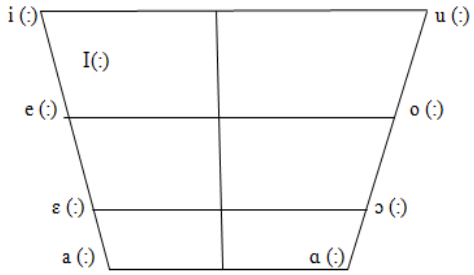

Figure 1 Short vowels in Somali with their long counterparts

The Somali language also has five diphthongs including /au/, /ɛɪ/, /ɑɪ/, /oɪ/, and /ɔu/. These are illustrated in the following examples:

(3)

a. **oday** **[ʔɔdɑɪ]** 'old man'
b. **awr** **[ʔaur]** 'male camel'
c. **shaley** **[ʃɑlɛɪ]** 'yesterday'
d. **qoy** **[qoɪ]** 'to wet'
e. **dhow** **[ɖou]** 'near'

Diphthongs in Somali are shown in the vowel chart below:

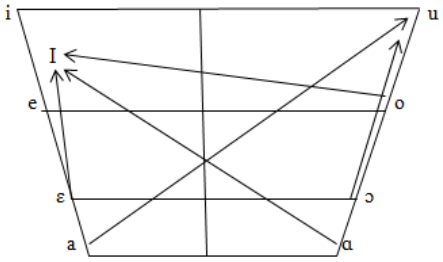

Figure 2 Diphthongs in Somali

In conclusion, the total number of vowels in Somali is twenty-three; nine short vowels along with their nine long counterparts plus five diphthongs. The next subsection is devoted to Somali syllable structure.

Somali Syllable Structure

Orwin (1996) and Saeed (1999) state that syllable structures in Somali are divided into light and heavy syllables; hence, the weight of syllables in this language mainly depends on vowels only, whereas consonants are weightless. For instance, CV syllable is light cross-linguistically, while CVC syllable is heavy in some languages where codas are moraic, and light in other languages, including Somali, where codas are non-moraic as well as onsets.[3] On the other hand, CVV and CVVC syllables are heavy because they are bimoraic, i.e. having two moras.[4] Consider the following representations of Somali syllable structures:

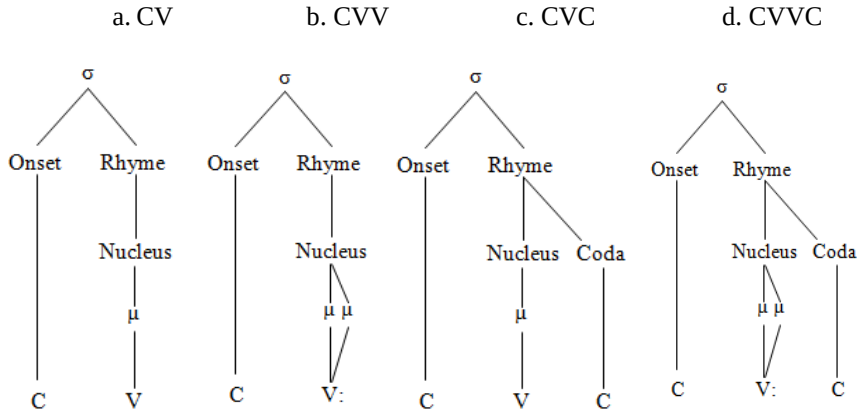

Figure 3 Representations of Somali Syllable Structures

As shown in the representations in Figure 3, the nucleus is an obligatory syllable constituent that can determine the weight of any syllable in Somali since moras are directly linked to nuclei only. For instance, the CV syllable has one mora, which belongs to a nucleus only. Likewise, in the CVC syllable, one mora is possessed by a nucleus, and the coda is weightless as well as the onset. A long vowel has two moras as shown in (3-b) and (3-d). Therefore, CVV and CVVC syllables are heavy. By looking at the syllable structures in Figure 3, a coda is optional since it is found in two syllable types, CVC and CVVC, and absent in other syllables, CV and CVV. This next subsection demonstrates how onsets are mandatory in Somali.

[3] In Arabic, according to most scholars of Arabic phonology, the final unstressed consonant in a CVC syllable is light because the coda of this syllable is extrametrical, i.e. weightless.
[4] Mora is the syllable weight unit and its symbol is μ.

Onsets in Somali and Optimality Theory (OT)

Epenthetic consonants in Somali manifest the necessity of onsets in Somali syllable structure. For instance, an epenthetic glottal stop results from having vowel-initial syllables in Somali, e.g., **/èj/**→ glottal stop insertion→ **[ʔèj]** 'dog'. As discussed previously, this behavior is also found in Arabic and Hausa, where onsetless syllables are banned by glottal stop epenthesis (Abdul-Karim, 1980; Jarrah, 1993; Ingham, 1994; Al-Mohanna, 1998; Jaggar, 2001; Haddad, 2005; Gouskova & Hall, 2009; Rakhieh, 2009; Caron, 2011; Ibrahim, 2012; Alqahtani, 2014; Alqahtani & Musa, 2015). The glottal stop insertion in vowel-initial syllables in Somali is accounted for within OT. The following constraints are used for the analysis of this type of epenthesis:

(4)

a. ONSET (Prince & Smolensky, 2004): Syllables must have onsets.

b. MAX-IO (McCarthy & Prince, 1995): Every segment of S_1 has a correspondent in S_2.

c. DEP-IO (McCarthy & Prince, 1995): Every segment of S_2 has a correspondent in S_1 (S_2 is "dependent on" S_1).

The candidates of the input **/èj/** 'dog' undergo the analysis of OT in the following table:

Table 2 /èj/ - ONS>>MAX-IO>>DEP-IO

/èj/	ONS	MAX-IO	DEP-IO
a. èj	*!		
b. j		*!	
c. t̲èj			*
d. ʔèj			*
e. j̲èj			*

Table 2 fails to determine the candidate of the input **/èj/** 'dog' since candidates (c), (d), and (e)

equally violate the DEP-IO constraints. There should be a constraint that can eliminate candidates (c) and (e) and assign (d) as the optimal candidate. By looking at the epenthetic consonants in candidates (c) and (e), the [+coronal] is the feature that is peculiar to the epenthetic consonants [t] and [j]. Accordingly, I adhere to the constraint *COR (Lombardi, 2002) in order to terminate epenthetic consonants with [+coronal] feature. Consider the following table:

Table 3 /èj/ - ONS>>MAX-IO>>DEP-IO>>*COR

/èj/	ONS	MAX-IO	DEP-IO	*COR
a. èj	*!			
b. j		*!		
c. **t̲**èj			*	*!
d. ☞ʔèj			*	
e. **j̲**èj			*	*!

Candidate (d), as a desired output, is distinguished in table 3 as the optimal candidate of the input **/èj/** because it avoids violation of the *COR constraints while the same constraint is subject to violation by candidates (c) and (e) due to their epenthetic consonants, as [+COR]. Candidate (a) cannot become optimal since it violates ONS as the most highly-ranked constraint, whereas this constraint is satisfied by candidate (b) through the deletion of the initial vowel /e/. However, this deletion results in the violation of the MAX-IO constraint. Therefore, this candidate is eliminated from being optimal. The same set of constraints in Table 3 is used to evaluate the candidates of the input **/inan/** ‘boy’. Consider the following table:

Table 4 /inan/ - ONS>>MAX-IO>>DEP-IO>>*COR

/inan/	ONS	MAX-IO	DEP-IO	*COR
a. nan	*!			

b. nan		*!		
c. **t**inan			*	*!
d. ☞ʔinan			*	
e. **j**inan			*	*!

Table 4 identifies candidate (d) as the optimal output of the input **/inan/** 'boy' since it satisfies the *COR constraint which is, on the other hand, violated by candidates (c) and (e). Therefore, neither candidate is nominated as the optimal output. Likewise, candidate (a) is eliminated from being optimal due to the violation of the ONS constraint, even though this candidate is deemed the most faithful output to the input. The violation of the ONS constraint is also avoided by candidate (b) through the deletion of the initial vowel but this deletion consequently leads to the violation of the MAX-IO constraint. For this reason, this candidate cannot become optimal. The candidates of the input **/idan/** 'incense burner' undergo evaluation by the same set of constraints in the following table:

Table 5 /inan/ - ONS>>MAX-IO>>DEP-IO>>*COR

/idan/	ONS	MAX-IO	DEP-IO	*COR
a. idan	*!			
b. dan		*!		
c. **t**idan			*	*!
d. ☞ʔidan			*	
e. **j**idan			*	*!

Candidate (d) in Table 5 becomes the optimal output of the input **/idan/** because it avoids the violation of the *COR constraint while candidates (c) and (e) fail to satisfy the same constraint. As a result, they fail to be optimised. Similarly, candidates (a) and (b) are not determined as optimal due to the violation of the ONS and MAX-IO constraints.

There is a restriction on V syllables that follow CV syllables in Somali (Saeed, 1999), i.e. *CV.V. These syllables (V syllables) are avoided by the epenthetic consonants [ʔ] and [j] for two reasons. First, these epenthetic consonants are permitted intervocalically in order to

block onsetless syllables, i.e. /CV.V/→ consonant epenthesis→ [CV.**C**V]. Second, these epenthetic consonants, as Saeed (1999) states, are known as the hiatus avoidance rules, i.e. /C**V**.**V**/→ consonant epenthesis→ [CV.**C**V]. For the sake of homorganicity, epenthetic consonants [ʔ] and [j] are conditioned by the preceding vowels. However, an epenthetic glide [j] in Somali is not permitted in the intervocalic position when the preceding vowel is /a/, while an epenthetic glottal stop [ʔ] is homorganic to the vowel /a/ because they share the same place feature, which is [+pharyngeal]. This idea is relevant to what is discussed by Christade (1988), Jarrah (1993), McCarthy (1994), and Uffmann (2007) regarding the identity of epenthetic consonants (see literature review section). The intervocalic consonant epenthesis is accounted for with OT. The candidates of the input **/min.di-o/** 'knives' are evaluated in Table 6:

Table 6 /min.di-o/ - ONS>>MAX-IO>>DEP-IO>>*COR

/min.di-o/	ONS	MAX-IO	DEP-IO	*COR
a. min.di.o	*!			
b. min.di		*!		
c. ☹min.di.**ʔ**o			*	
d. min.di.**j**o			*	*!

Candidate (d), the desired output, fails to be optimised due to the violation of the *COR constraint. Also, candidates (a) and (b) are prevented from being optimal because they violate the ONS and MAX-IO constraint. As a result, candidate (c), as the wrong output, has been chosen as an optimal output. In order to determine candidate (d) as an optimal output, there should be a constraint that can eliminate candidate (c) and, on the other hand, identify candidate (d) as optimal. By looking at candidate (c), an epenthetic consonant glottal stop [ʔ] is not homorganic to the preceding vowel /i/, since a glottal stop has a [+pharyngeal] feature, whereas the vowel /i/ has a [+coronal] feature. On the contrary, candidate (d) has the same features of the place of the vowel /i/. Accordingly, the following constraint will be used to optimise candidate (d).

(5) a. Homorganicity (HOMORG): An epenthetic consonant should be homorganic to the preceding vowel.

The above constraint will be added to the set of constraints in the next table to analyse the candidates of the input **/min.di-o/** 'knives'.

Table 7 /min.di-o/ - ONS>>MAX-IO>>DEPIO>>HOMORG>>*COR

/min.di-o/	ONS	MAX-IO	DEP-IO	HOMORG	*COR
a. min.di.o	*!				
b. min.di		*!			
c. min.di.**ʔ**o			*	*!	
d.☞ min.di.**j**o			*		*

Table 7 distinguishes candidate (d) as an optimal output because this candidate avoids the violation of the HOMORG constraint which is, on the other hand, violated by candidate (c). Therefore, candidate (c) fails to be optimised. The failure of optimisation is also found in candidates (a) and (b), which violate the ONS and MAX-IO, as highly-ranked constraints. The set of constraints in Table 7 will be used in the next table to evaluate the candidates of the input **/ma-a:n/** 'not I'.

Table 8 /ma-a:n/ - ONS>>MAX-IO>>DEP-IO>>HOMORG>>*COR

/ma-a:n/	ONS	MAX-IO	DEP-IO	HOMORG	*COR
a. ma.a:n	*!				
b. ma:n		*!			
c.☞ ma.**ʔ**a:n			*		
d. ma.**j**a:n			*	*!	

Candidate (c) is identified in Table 7 as the optimal output of the input **/ma-aan/** 'not I' since this candidate avoids the violation of the HOMORG constraint which is, on the other hand,

subject to a violation by candidate (d); the epenthetic glide [j] in candidate (d) is not harmonic to the preceding vowel /a/ because they have different place features. The vowel /a/ has a [+pharyngeal] feature, whereas an epenthetic glide [j] has a [+coronal] feature. Therefore, this epenthetic consonant is not harmonic to the vowel /i/, as a preceding vowel. Candidate (a) again fails to be optimised due to the violation of the ONS constraint while the violation of the same constraint is avoided by candidate (b). However, this candidate, (b), is not determined as optimal since it fails to satisfy the MAX-IO constraint.

There is another phonological process used alternatively to avoid onsetless syllables in Somali when dealing with the syllables of the forms CVVC and CVC that are associated with vowel-initial suffixes. In this case, consonant epenthesis is not blocked, whereas the last consonants in these syllables, as codas, are resyllabified as onsets of the following syllables, i.e. /CVVC-V/→ [CVV.CV], /CV.CVC-V/→ [CV.CV.CV]. Consider the following examples:

(6)

a. /na:ɡ-i/→ [na:.ɡi] ‘woman’
b. /mi:s-as/→ [mi:.sas] ‘tables’
c. /war.qad-e:d/→ [war.qa.de:d] ‘ a paper’
d. /war.qad-u:/ → [war.qa.du:] ‘ formal letters’

This phenomenon is accounted for within OT. The next table is to evaluate the candidates of the input **/na:ɡ-i/** ‘women’.

Table 9 /na:ɡ-i/ - ONS>>MAX-IO>>DEP-IO>>HOMORG>>*COR

/na:ɡ-i/	ONS	MAX-IO	DEP-IO	HOMORG	*COR
a. na:ɡ.i	*!				
b. na:ɡ		*!			
c. na:ɡ.**j**i			*!		*
d.☞ na:. ɡi					

Table 9 identifies candidate (d) as the optimal output since it has no violation of highly-

ranked constraints, compared to other candidates. For instance, candidate (a) has no chance to be optimised due to the violation of the ONS constraint. On the other hand, the ONS constraint is satisfied by candidate (b) through the deletion of a vowel-initial suffix, but this deletion results in the violation of the MAX-IO constraint. As a result, this candidate is eliminated from being optimal. Candidate (c) adapts another phonological process to avoid the violation of the ONS constraint, i.e. consonant epenthesis. However, this type of epenthesis leads to eliminate this candidate due to the violation of the DEP-IO constraint. The candidates of the input **/mi:s-as/** 'tables' are analysed in the following table:

Table 10 /mi:s-as/- ONS>>MAX-IO>>DEP-IO>>HOMORG>>*COR

/mi:s-as/	ONS	MAX-IO	DEP-IO	HOMORG	*COR
a. mi:s.as	*!				
b. mi:s		*!*			
c. mi:s.**j**as			*!		*
d.☞ mi:.sas					

Candidate (d) is distinguished in Table 10 as the optimal output of the input **/mi:s-as/** due to the avoidance of the violation of the constraints in the same table. On the other hand, these constraints are subject to violation by the rest of candidates in Table 10. For instance, candidate (a) allows no resyllabification to avoid a vowel-initial syllable, the final syllable; therefore, this candidate fails to comply with the ONS constraint and is eliminated from being optimal. The vowel-initial syllable is deleted in candidate (b) but this deletion triggers the violation of the MAX-IO constraint. Candidate (c) invokes the epenthetic consonant [j] to satisfy the ONS and MAX-IO constraints, but this epenthesis results in the violation of the DEP-IO constraint. The candidates of the input **/war.qad-e:d/** 'a paper' are evaluated in Table 11:

Table 11 /war.qad-e:d/ -ONS>>MAX-IO>>DEP-IO>>HOMORG>>*COR

/war.qad-e:d/	ONS	MAX-IO	DEP-IO	HOMORG	*COR
a. war.qad.e:d	*!				
b. war.qad		*!*			
c. war.qad.**j**e:d			*!		*
d.☞ war.qa.de:d					

Table 11 discriminates candidate (d) as optimal since it has no violation of highly-ranked constraints, compared to the rest of the candidates in the same table. For example, the ONS constraint is violated by candidate (a) due to an onsetless syllable. Unlike candidate (a), the ONS constraint is satisfied by the deletion of a vowel-initial syllable in candidate (b), but this candidate fails to be optimised because it violates the MAX-IO constraint. The ONS and MAX-IO constraints are not subject to violation by candidate (c) through the insertion of an epenthetic glide [j]. However, this sort of epenthesis leads to the violation of the DEP-IO constraint. Consequently, candidate (c) is prevented from being optimal. The following table is devoted to evaluate the candidates of the input **/war.qad-u:/** 'formal letters':

Table 12 /war.qad-u/ -ONS>>MAX-IO>>DEP-IO>>HOMORG>>*COR

/war.qad-u/	ONS	MAX-IO	DEP-IO	HOMORG	*COR
a. war.qad.u	*!				
b. war.qad		*!			
c. war.qad.**j**u			*!		*
d.☞ war.qa.du					

The violation of highly-ranked constraints is avoided by candidate (d). For this reason, this candidate is determined as the optimal output of the input **/war.qad-u/** 'formal letters'. Candidate (a) is not compatible with the ONS constraint since there is an onsetless syllable. Consequently, this candidate fails to be optimised. Again, both candidates (b) and (c) fail to

be determined as optimal due to the violation of the faithfulness constraints, i.e. MAX-IO and DEP-IO.

Conclusion

This research has addressed the following questions: Are onsets mandatory in Somali? How can we account for onsets in Somali using OT? The processes of consonant epenthesis and resyllablification, as discussed previously, illuminate how important onsets are in Somali syllable structure. For example, an epenthetic glottal stop [ʔ] occurs initially in monosyllabic words that lack onsets, e.g., **/èj/→ [ʔèj]** 'dog'. Epenthetic consonants [ʔ] and [j] are permitted intervocalically when syllables of the form CV are associated with vowel-initial suffixes, e.g. /CV-V/→[CV.**C**V] or /CV-VVC/→ [CV.**C**VVC]. The epenthetic consonants [ʔ] and [j] which occur intervocalically are determined by the preceding vowel in order to achieve homorganicity. For instance, the epenthetic consonant [j] occurs after the stem vowel [i] because they are both [+coronal]. The epenthetic glottal stop [ʔ] in the intervocalic position follows the stem vowel /a/ since they are both [+pharyngeal]. However, these epenthetic consonants are blocked when the forms CVVC and CVC are associated with vowel-initial suffixes, in which case the resyllabification process is used alternatively to avoid onsetless syllables. In other words, the codas of the preceding syllables are resyllabified as the onsets of the following syllables, e.g., **na:ɡ-i/→ [na:.ɡi]** 'woman', **/war.qad-u:/ → [war.qa.du:]** ' formal letters'. OT is used in this paper to analyse the status of onsets in Somali syllable structure; hence, the ONS is set as the most highly-ranked constraint. The function of this constraint is to reject the optimality of candidates with vowel-initial syllables. Other constraints including MAX-IO, DEP-IO, HOMORG, and *COR along with ONS are organised in a single set of constraints that is analytically used to demonstrate the importance of onsets in Somali syllable structure.

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Postpositions in Mazandarani: Evidence for Generalizing, Historical Harmony and Natural Serialization Principle

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Abstract
This paper adopts a typological approach to adpositional phrases in Mazandarani (Mazani), a language spoken in the north of Iran, and argues that contrary to many Iranian languages and dialects it enjoys absolute concordance with the OV word order. Mazandarani, having the noun-postposition and genitive-noun order, is in complete agreement with Greenberg's (1974) number 2 and 4 universals and at the same time with Vennemann's (1974) Natural Serialization Principle. Postpositional phrases like *kelide ja* "with the/a key" and *kale myun* "in the middle of the garden" indicate that there is no difference between the original postpositions and the noun-like postpositions in Mazandarani in this respect. The head-dependent word order is a confirmation of the intact typology of Mazandarani. We follow Hawkins (1983) in claiming that adpositions are better and more general indicators of language types.

Keywords
adpositions, head-dependent, language universals, Mazandarani, OV, postpositions

Introduction

Linguistic typology is a field of inquiry that studies and classifies languages according to their structural and functional features. Typology is simultaneously concerned with establishing the diversity and uniformity of languages through investigation of the range of

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variation in human languages as well as establishing constraints and order in that variation (Comrie, 1981; Plank, 2007). Comrie (2001) adds that linguistic typology assumes that some general principles govern those diversities.

In this paper the typology of the Mazandarani language is studied, mainly through taking the structure of adpositional phrases as a criterion. Mazandarani, commonly used on the southern and southwestern coast of the Caspian Sea, belongs to the northwestern Iranian languages. The language, also known as Tabari or even sometimes as Gilaki, is geographically widespread and has complicated distribution. Although the majority of Mazandarani speakers live in the province of Mazandaran, many speakers of the language can also be found in the neighboring provinces of Golestan, Semnan and Tehran. The geographical spread has bred different varieties which, in some cases, can cause mutual intelligibility among the speakers of the regional dialects (Amouzadeh, 2003).

Disagreement over whether Mazandarani is a language, an accent or a dialect is a hotly debated issue, one that does not appear easy to resolve. The issue has been raised about other Iranian languages and local dialects as well. Some linguists (e.g., Sadeghi, 2000) regard Mazandarani as an accent, others (e.g., Kalbasi, 1997) see it as a dialect, and yet others (e.g., Humand, 1990) say it is a language. As Amouzadeh (2003) has rightly pointed out, if we exclude the non-linguistic factors and rely only on linguistic criteria, calling Mazandarani an accent or dialect would certainly be problematic. Making a decision on the issue needs to be based on scientific evidence. In this paper, we regard Mazandarani as a language because it has certain features at all three levels of phonology, vocabulary, and syntax that distinguish it from standard Persian. The focus of this research is determining the typology of the Mazandarani language through investigating the position of adpositions in the language. It will be argued that the intact presence of postpositions in Mazandarani is the evidence that the language is an absolute type of SOV languages. Moreover, the position of postpositions, in line with the dual structural sequence and the language speakers' processing, conform to Natural Serialization Principle and Historical Harmony.

Out of the 1,185 languages analyzed in the World Atlas of Language Structures (WALS), 577 are postpositional, 512 are prepositional, and only eight are inpositional (Dryer & Haspelmath, 2011). There are a few languages which use either none or both kinds of

adpositions (30 and 58 respectively). The order of adpositions as the head and its complement, usually a noun phrase, is strongly correlated with other structural and functional features related to typology of that language. For instance, postpositional languages usually have the object-verb ordering, whereas prepositional languages have verb-object ordering (Greenberg, 1963). The Mazandarani language, unlike its close linguistic relative Gilaki, has no prepositions. The following examples from the language show that not only the simple and original adpositional phrases (APs)[3] but also the compound and spatial adpositions are postpositional. Consider the sequence of noun phrases and adpositions in the following examples:

1) **/ʃi/ /piər-e/ /jɒ//bu:rde/ /bɑ:q/**

/شی (his)/ /پدر (father)/ /با (with)/ /رفت (went)/ /باغ (garden)/

POSS PRO[4], NP (OBJ of PREP), (simple) PREP, V (PST, SBJ implied), NP, ADV (of place)

با پدرش به باغ رفت. (S/he went to the garden with his/her father.)

2) **/ækber/ /pele/ /ru:dʒɒ/ /rædbæjə/**

اکبر (Akbar) پل (the bridge) از روی (over) ردشد (passed)

PR (SBJ), NP (OBJ of PREP), (compound) PREP, V (PST)

اکبر از روی پل رد شد. (Akbar passed over the bridge.)

3) **/kelid/ /mize/ /ben/ /dære/**

کلید (the key) میز (the desk) زیر (under) است (is)

NP (SBJ), NP (OBJ of PREP), (spatial) PREP, V (PRES)

کلید زیر میز است. (The key is under the desk.)

As the above sentences show, the head element follows the NP in all three AP structures, no matter whether it is simple (ex.1), compound (ex.2) or spatial (ex. 3). In other words, Mazandarani enjoys homogeneity in the AP structure, a characteristic from which we take advantage to support the idea that the language has not experienced typological change.

[3] AP is usually the abbreviation of adjective phrase. In this study, however, AP stands for adpositional phrase.

[4] See the appendix for the list of abbreviations

Theoretical Framework

“With overwhelmingly greater than chance frequency, languages with normal SOV order are postpositional” (Greenberg, 1963:79).

Greenberg (1974) makes a distinction between individualizing and generalizing approaches to language typology. Unlike the individualizing approach which investigates a unique property in a language, the generalizing approach examines universal features that can apply to all and every language and not one certain language. It seems that in this approach we are dealing with conditional and predictive universal rules. That is why every rule of this kind deals with a specific aspect of language.

Greenberg (1974) considers universals that are based on generalizing approach as tools for explaining linguistic phenomena according to more basic and fundamental ones. Dabir-Moghaddam (2013) believes that the generalizing approach, also known as partial typology, has become the dominant perspective in today's typological studies. The perspective allows cross-linguistic comparison of particular structures to achieve linguistic generalizations. Although in Dabir-Moghaddam’ opinion universals reflect similarities between languages and typology indicates their differences, Greenberg (1989) believes universals and typology are closely related and implicational universals particularly have a prominent place in language typology studies. Thus, for Greenberg whether Gilaki and Mazandarani are among the verb-last languages, for instance, is a typological issue that is discernable from implicational universals.

Dabir-Moghaddam (2013) believes that what has always been extremely significant in the partial typology is the correlation between structural properties. Therefore, a *type* has essentially been conceived as an accumulation of correlated properties. The concept of unidirectional correlations — sometimes called implicational rules and, more recently, implicational universals — indicates correlation between linguistic items. The concept implies that if element X exists in a language, element Y will definitely be found in that language.

The implicational universals not only imply the conditional existence of linguistic elements, but also, and supporting the partial typology, lead to the conditional order of

linguistic elements. Inter-language comparisons such as word order, agreement, negation, gender, and many other syntactic factors are among grammatical elements which are employed to investigate implicational language universals. Dryer (1992) made a very significant contribution to these universal occurrences, putting forward the technical term *correlation pairs* which he defines as: "If a pair of elements X and Y is such that X tends to precede Y significantly more often in VO languages than in OV languages, then <X,Y> is a CORRELATION PAIR and X is a VERB PATTERNER and Y an OBJECT PATTERNER with respect to this pair," (Dryer, 1992: 87). Dryer intended to find out the answer to these questions: what are the pairs of elements whose order correlates with that of the verb and object? And why do these correlations exist? Adopting Greenberg's typological approach, Dryer (1992) argues about the correlation between some linguistic structures on the one hand and the order of object over verb on the other hand.

In this article, we refer to these linguistic structures as dual structures where the arrangement serialization is somehow correlated with the order of object over the verb. One of these dual structures is the order of adpositions and nouns, which is of particular interest in this article. The question we ask is: what kind of relationship is there between each element of the dual structures or structures with correlation patterns showing uniform arrangement?

Greenberg (1966: 110) explains linguistic universal 2 as follows: "In languages with prepositions, the genitive almost always follows the governing noun, while in languages with postpositions it almost always precedes." Therefore, as postpositional languages, Gilaki, Mazandarani and Shahmirzadi[5] place the genitive before the governing noun. What is deductible from universal 2 is that languages regularly design their word order arrangements and do that far beyond chance. Therefore, if a language makes SOV as its unmarked arrangement, it implicitly anticipates the order of other dual structures, which will be the reverse in an SVO language.

On the other hand, Hawkins (1994) proposed a performance theory of word order which aims at explaining and predicting universals of word order. Certain language patterns may be processed with higher efficiency. The principle of Early Immediate Constituents

[5] Shahmirzadi is one of the northwestern branch of the Iranian languages spoken in the town of Shahmirzad in Semnan province.

(EIC) formulated by Hawkins (1994) suggests a VO language with [V [P NP]] order and an OV language with [[NP P] V] order can be processed with maximum efficiency. However, Hawkins' research has some consequences for typological classification, two of which are as follows:

1. SVO is no longer a type indicator; that is, nothing correlates with SVO in a unique and principled way, according to our evidence. There are, of course, many languages with SVO, but there is no "SVO-type".
2. VSO and SOV are type indicators, but limited ones. Much better and more general type indicators are prepositions and postpositions (Hawkins, 1983: 16).

The second consequence gives us another reason for considering adpositions as a much more reliable source of evidence for studying language typology.

In response to a similar question on the kind of relationship between each element of the dual structures, Moravcsik (2006: 151) argues that structures with the uniform arrangement in different languages are somehow placed in one type. It should be explained that in the unidirectional relation of dual elements, the first structures are from one type and the second structures are from another. In fact, all the first structures have certain properties in common over the second ones. The main challenge, however, would be the proper formulation of these syntactic structures. Indeed, what matters is precisely achieving the relevant properties, which places all the former structures as a class opposed to another that usually follows those structures. Moravcsik reviews the research on this topic and puts their recommendations in the three following categories:

1. Heads and dependents: in any one language, all head constituents tend to be ordered the same way relative to their dependents.
2. Branching and non-branching constituents: in any one language, all branching constituents tend to be ordered the same way relative to their dependents.
3. Mother node constructing and non-mother node constructing constituents: in any one language, all mother node constructing constituents tend to be ordered the same way relative to their non-mother node constructing constituents. (p. 152)

Although Dryer (1992) criticizes the head-dependent term on the ground that there is no way to be precisely sure which element is the head and which is the dependent, the approach

definitely has its own benefits, at least in terms of the PPs. Following Moravcsik in this article, we use the head-dependent approach which is applicable to the Mazandarani language. In analyzing data from Mazandarani we will argue that, without any exception and contrary to most languages including Tehrani Persian, the language is in accordance with the head-dependent approach. We also argue that the order of all the dual structures in this language is head-final like all the main constituents of the sentence.

Analysis of data

According to the three aforementioned approaches, namely the head-dependent, branching/non-branching structure and the mother node/non-mother node construction, one main hypothesis can be proposed for all the cases: in every language, all selectors tend to be placed uniformly over selectees. Languages tend to arrange their dual structures uniformly, but deviation from this principle is seen in all languages. Indeed, every language is coordinated in some components and uncoordinated in some other ones. Therefore, instead of absolute arrangement of constituents, we usually talk about tendency or strength/weakness in languages, but in this regard, Mazandarani reflects absolutely no deviation.

Taking these assumptions into account, Moravcsik (2006: 153) believes that Vennemann's (1973) seminal theory can desirably explain this typological behavior. Vennemann's Natural Serialization Principle stipulates that operator-operand relation is defined by a unidirectional serialization. That is, operator-operand serialization is expressed everywhere as operator-operand or operand-operator. Later on, Vennemann used “head” for the operand and “specifier” for the operator. Following Dryer (1992), we refer to Vennemann's theory as the head-dependent theory.

The list of heads and dependents that Vennemann provides is as follows: verb-subject, verb-prepositional phrase, verb-adverb of manner, noun-relative clause, noun-genitive noun, noun-adjective. Now, if we assume Mazandarani as an SOV-type language, the order of main components of a sentence will be in the form of subject-object-verb and therefore we can make the following predictions:

1) Object preceding verb

2) Prepositional phrase preceding verb
3) Adverb of manner preceding verb
4) Relative clause preceding noun
5) Noun preceding genitive
6) Adjective preceding noun

Based on the samples from the Mazandarani language and the field research investigating the frequency of occurrence which indicates the dominant order, it was found that in these serializations, without any exception, the data are in concord with the above patterns. The only case not in agreement with the above word orders is the serialization of the relative clause and noun (ex. 7) which seems to be the only deviated form. Consider the following examples:

4) Object preceding verb

/piræn/ /re/ /dæpüʃime/

پیرن (shirt/dress) ر (direct object marker) دپوشیمه (wore)

NP (OBJ of PREP), (DO marker), V (PST, SBJ implied)

پیراهن را پوشیدم. (I wore the dress.)

5) adpositional group preceding verb

/kelide/ /dʒɒ/ /dær /re/ /vɒz hɒkerde/

کلید (key) جا (with) در (door) ر (direct object marker) واز هاکرده (opened)

NP (OBJ of PREP), PREP, NP (OBJ of PREP), PREP, V (PST, SBJ implied)

در را با کلید بازکرد. (S/he) opened the door with the key.

6) Adverb of manner preceding verb

/jævæʃ/ /jævæʃ/ /dü gite/

یواش (slowly) یواش (slowly) دوگیته (was running)

ADV (of manner), ADV (of manner), V (PST CTN, SBJ implied)

یواش یواش می‌دوید. (S/he) was running slowly.

7) * relative clause preceding noun

/mɒʃini/ /ke/ /bædimi/ /xæle/ /gerün/ /biə/

ماشینی (the car) که (that) بدیمی (saw) خله (very) گرون (expensive) بیه (was)

NP (OBJ of PREP), PREP, V (PST, SBJ implied), INT, (linking) V (PST)

.ماشینی که دیدیم خیلی گران بود (The car we saw was very expensive.)

8) Genitive preceding genitive noun

/piəre/ /sere/ /bæxetemi/

پیر (father's) سره (place) بختمی (slept)

NP (+ POSS marker), NP (OBJ), V (PST, SBJ implied)

.منزل پدر خوابیدیم (We slept at father's place.)

9) Adjective preceding noun

/belende/ /mærdi/ /tʃe/ /hevɒsdʒæm/ /biə/

بلنده (tall) مردی (the man) چه (how) حواس جمع (careful) بیه (was)

ADJ, NP (SBJ), EXCLAM, ADJ, (linking) V (PST)

.اون مرد بلندقد چه حواس جمع بود (How careful the tall man was!)

While according to Movavcsik (2006: 154) for each language only some of these predictions turn to be true, in examining Mazandarani, it turned out that this language is in accordance with Vennemann's natural serialization in all cases. The only case where the Mazandarani language does not follow the natural serialization patterns is the relative clause and noun (ex. 7). Introducing the branching and non-branching structures to address the question why some structures do not follow this theorem, Dryer (1992) concludes that since some structures are branching and some of them are single-word structures, there is a difference in their behaviors. However, the main point regarding the analysis of the Mazandarani language, which Dryer applies to explain the branching and non-branching structures, is that structural simplicity against structural complexity is significant for the order of syntactic structures. For Vennemann (1973), what defines the order of similar structural classes is whether these structures are heads or dependents. For Dryer, the relevant classes are branching and non-branching categories.

As the typological behavior of Mazandarani structures are in accordance with Vennemann's claim and his natural serialization, we follow Vennemann in claiming that in relative clauses nouns function as heads; hence, serialization of this dual structure is expected to be in the same direction with other structures. By looking carefully at all dual structures on

the above six patterns on Vennemann's list, however, we realize the only structure with significant structural complexity are the relative clauses (example 7, marked by *). Therefore, contrary to other cases on the list, relative clauses follow the head due to its complexity, which has a processing rationale.

Referring to the concept of a constituent's heaviness, Hawkins (1983) explains placement of the relative clauses after the nouns. He believes heavier dependents exhibit more tendencies to be placed after the head. The apparently irregular serialization of the head and relative clause is in accordance with this explanation, and its processing rationale is in accordance with the concept of Heaviness. Although Hawkins (2014) proposes new perspectives in his latest account of complexity, the relative strength of competing principles, and the definition of 'dependency', we resort to his more classic view here. Hawkins' (1983: 90-91) Heaviness Serialization Principle (HSP) is concerned with the fact that in many (if not most) languages, noun modifiers occur on both sides of the head noun:

Rel $\geq_R$ Gen $\geq_R$ Adj $\geq_R$ {Dem/Num}

"where "$\geq_R$" means exhibits more or equal rightward positioning relative to the head noun across languages'. Moravcsik (2013: 101) ultimately concludes two main arrangements of word order as follows:

a) In most OV languages, the noun phrase precedes the adposition, the possessor precedes the possessum, and the relative clause precedes the noun.
b) In most VO languages, the adposition precedes the noun phrase, the possessum precedes the possessor, and the noun head precedes the relative clause.

As can be seen in the example sentence below, the Mazandarani language originally follows the head-dependent and head-final pattern; however, it is proposed that processing of complex structures is the only rationale behind the serialization of noun and relative clauses following serialization of the head noun and dependent in the language.

10) mi/ /ketɒb/ /ündʒe/ /dære/

می (my) کتاب (book) اونجه (there) دره (is)

POSS PRO, NP (OBJ), ADV (of place), V (PRES)

.کتاب من اونجاست (My book is there.)

Below, we consider another set of data discussed by Hawkins (1983), which relates to the serialization of verbs and adpositions. Indeed, Hawkins dealt with the adjacency relations between verbs and adpositions in each of two types of languages and came up with the following specifications (Moravcsik, 2013: 253):

A) OV-type languages

a) V & PP with preposition

V [**P NP**] pp] vp

e.g. “ **live in** Paris ”

b) V & PP with postposition

V [**P NP**] pp] vp

e.g. “ **live in** Paris ”

In fact, Hawkins (1983) claims that both prepositions and postpositions occur in OV-type languages. In addition, in both prepositional and postpositional patterns, the adpositional group precedes the verb. However, the main point and the interesting fact is that according to Moravcsik (2013) and based on examining sample of languages, there are 34 times more languages following the (b) pattern than those having the (a) pattern. These findings quite match with the typological properties of Mazandarani. In fact, Mazandarani is in perfect accordance with the universal unmarked pattern and follows the pattern much more than standard Persian does.

11) /færhæd/ /æhmæde/ /pæli/ /kɒr kende/

فرهاد (Farhad, proper noun) احمد (Ahamad, proper noun) پلی (with/besides/in the same place as) کارکنده (works)

NP (SUBJ), NP (OBJ of PREP), PREP, V (PRES)

.فرهاد پیش احمد کار می کند (Farhad works with/besides/ in the same place as Ahamad)

Hawkins' theory, according to which the adjacency of verb and adposition is favored for processing ease, is confirmed again. The (b) pattern has higher frequency and that is because verbs and adpositions — the two constituents that indicate the basic sentence structure and its meaning core — are placed in close serialization and thus they act in favor of perception and processing; while in the (a) pattern, in which two structures are separated, the case is not so. The data provide further indication of the similar parallelism between languages.

i) VP: post P V (Paris in live)

ii) GN: post P (peter's book in)

12) /Tehrɒne/ /dele /kɒr kende/

تهران (Tehran) دله (in) کارکنده (works)

NP (OBJ of PREP), PREP, V (SUBJ implied)

تو تهران کار می کنه. (S/he works in Tehran.)

13) /mi/ /mɒʃin/ /birün/ /pɒrke/

می (my) ماشین (car) بیرون (outside) پارکه (is parked)

POSS PRO, NP, ADV (of place), V

ماشین من بیرون پارکه. (My car is parked outside.)

On the other hand, languages reflect an interesting parallelism in serialization of adpositional structures: in OV languages, adpositions follow the genitive structures or possessor-possessed structures; while VO languages tend to put adposition and possessor-possessed in sequence. This tendency has been called the historical process of Harmonization, the tendency of languages to remain either "VO, NG & P" or "OV, GN & P" throughout the time (Moravcsik, 2013). Here, we only deal with OV-type languages regarding adpositional groups and verbs (in group "VP") and dual structures of possessor-possessed and adpositons in serialization of the genitive structure and noun (in genitive group "GN"):

i) VP: post P V (Paris in live)

ii) GN: post P (peter's book in)

14) /Tehrɒne/ /dele /kɒr kende/

N (OBJ of PREP), PREP, V (SUBJ implied)

تو تهران کار می کنه. (S/he works in Tehran.)

15) /mi/ /mɒʃin/ /birün/ /pɒrke/

می (my) ماشین (car) بیرون(outside) پارکه (is parked)

POSS PRO, NP, ADV (of place), V

ماشین من بیرون پارکه. (The car is parked outside.)

Sentence 14 shows that serialization “I” acts well in the Mazandarani language. In fact, adposition /*dele*/ (in/within) comes after the noun and immediately before the verb. Sentence 15 arranges serialization of possessor and possessed as possessor-possessed (/*mi*/ /***mɒʃin***/) (my//car), too. Therefore, coordination of the two former patterns is in accordance with the historical process of harmonization.

According to Moravcsik (2013), the historical process of harmonization is a tendency with one or both of the following performance processes:

1) Speakers prefer a single order pattern applying to the various constituent types by classifying them either as heads versus dependents, or as branching versus non-branching types.
2) Speakers look for easy and efficient processing. If they have a choice, they prefer structures where functionally-related words are adjacent rather than separated. Since verbs, adpositions, and possessed nouns share the role of announcing the overall structure of sentences, their preferred arrangement is adjacency.

The first process has been previously verified in typological theories and the second one, which mostly deals with processing patterns, is especially emphasized by the historical process of harmonization. These two processes are clearly visible in the Mazandarani language.

Conclusion

Contrary to many languages that underwent many changes which brought about some

exceptions in them, Mazandarani, as an SOV-type language, follows universal patterns completely. First, this language is in accord with Greenberg's generalizing approach. According to this approach and in verification of Greenberg's universal 4, languages with the unmarked SOV word order are postpositional by a much more frequency that can be attributed to chance. The interesting point about Mazandarani is that this language is postpositional without any exception. The language has no prepositional structures even in cases with a controversial place of adposition including compound adpositions or noun-like ones.

On the other hand, this language has precisely chosen the unidirectional dependant-head serialization, according to Vennemann's list of dual structures. In fact, contrary to many languages that have multi-facet or exceptional behavior on this list, Mazandarani is head-final without any exception and unilaterally grants all head-dependent serializations. Mazandarani is linguistically considered as an absolute head-final language. The only particular case is serialization of noun and relative clause, which seems to be quite different from other cases for structural and processing reasons. Complexity of relative structure over the head noun, heaviness, and branch of this structure are some of the formulated and universal cases which make explanation of this dual structure's serialization different from other cases.

The historical process of harmonization is another supporting explanation for which the Mazandarani language has a unique tendency to survival in its old pattern as OV, GN & P. It means possessor precedes possessed and adpositions follows it in this language as an OV-type language. This pattern indicates that without any turn leading to an exception, the Mazandarani language still follows the Harmonization Principle as its historical fate.

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Appendix: List of Abbreviations

ADJ: Adjective

ADV: Adverb

CTN: Continuous

DO: Direct object

EXCLAM: exclamative

INT: Intensifier

NP: Noun phrase

OBJ of PREP: Object of proposition

POSS: Possessive

PR: Proper noun

PRES: Present tense

PRO: Pronoun

PST: Past tense

SBJ: Subject

V: Verb

A Corpus-Based Investigation of Dative Alternation in Use of the Verbs 'Give' and 'Send': A Sample of Corpus of Contemporary American English (COCA)

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Abstract
The aim of the present study is to investigate the frequency of use of sentences in written academic texts in two different syntactical dative forms. The study deals with dative verbs in two different ways. First, because the give-type verbs have the same meaning regardless of the syntactic structure in which they are involved, the researcher has tried to investigate the frequency of use of the verb 'give'. "Is the verb 'give' more frequently used with the to-dative construction or with the double object construction?" is the first research question of the present study. Second, the researcher investigates the use of metonym with dative constructions in sentences with both the verbs 'give' and 'send'. "With which verb – give or send – is the frequency of use of metonym in object position more frequent?" is the second research question of the study. In order to answer the research questions, the Corpus of Contemporary American English (COCA) is taken as a reference. The first 500 academic sentences with each 'give' and 'send' are investigated for the frequency of occurrence of metonym in object position in two different dative constructions. The results show that the use of double object construction is more frequent than the use of prepositional dative construction and the use of metonym in dative alternation structures is very limited.

Keywords
dative alternation, double object construction, to-dative construction, direct object construction, prepositional object construction

Introduction to Dative Alternation

Two different syntactic constructions, 'Double Object Construction' (Direct Object Construction) and 'To-Dative Construction' (Prepositional Object Construction) form the basis of dative alternation, referring to the transfer of any entity from one to another with

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either a caused possession meaning or a caused motion meaning. Different languages have different syntactical constituents for the same grammatical case.

1) a) Ayşegül gave Elif the book.
NP0 V/give NP1 NP2

b) Ayşegül gave the book to Elif.
NP0 V/give NP2 to NP1

2) a) Ayşegül Elif'-e kitab-ı verdi.
NP0 -e Dat.case I- acc.case
recipient theme

b) Ayşegül kitab-ı Elif'-e verdi.
NP0 I-acc.case -e dat.case
theme recipient

3) Die Frau gab dem Mädchen das Buch.
Nom./the woman give Dat./female child Acc./ book

In English, in examples 1a-1b, NP0 is the agent of the action in which it performs the act of transfer of NP2 by moving or changing its possession to NP1 as a recipient or a goal. The two sentences (1a and 1b) slightly differ from each other in terms of the sequence of the constituents. In sentence (1a), the recipient is used without 'to' and before the theme; however, in sentence (1b), the theme precedes the recipient used with 'to'. The same meaning is conveyed in Turkish and German by means of the dative and accusative cases. In example (2), while the theme 'kitap' has an accusative case, the recipient 'Elif' is in the dative case. In example (3), while the dative case is used to express the meaning for the recipient, the accusative case is used to mark the entity which moves or passes into other hands.

The literature consists of a group of studies which dealt with the dative alternation issue in terms of order of acquisition (e.g. Snyder and Stromswold, 1997; Campbell and

Tomasello, 2001) or frequency of use in various varieties of English (e.g. Cuypere and Verbeke, 2013; Mukherjee and Hoffmann, 2006). However, satisfactory knowledge about the learners' syntactic selection regarding two different dative constructions is limited. It is the purpose of this paper to fill the void in the literature by examining the frequency of use of two different dative structures. The order of acquisition does not express anything by itself. The earlier acquisition of one structure than the other is good knowledge; however, if it is promoted with the knowledge of learners' syntactic selection in their real-life situations, it becomes more practical. At this point, the study is designed to evaluate learners' syntactic selection with regard to two different dative constructions.

The Aim and the Research Questions of the Study

The aim of the present study is to shed light on the frequency of use of sentences in written academic texts in two different syntactical dative forms. The study deals with dative verbs in two different ways. First, because the give-type verbs have the same meaning regardless of the syntactic structure in which they are involved, the researcher has tried to investigate the frequency of use of the verb 'give'. 'Is the verb 'give' more frequently used with to-dative construction or with double object construction?' is the first research question of the present study. Second, the researcher seeks to investigate the use of metonym with dative constructions in sentences with the verbs 'give' and 'send'. "With which verb – 'give' or 'send' – is the frequency of use of metonym in object position more frequent?" is the second research question of the study.

In order to answer the research questions, the Corpus of Contemporary American English (COCA) is taken as a reference. The first 500 academic sentences with each 'give' and 'send' are investigated for the frequency of occurrence of metonym in object position in two different dative constructions. The frequency of occurrence of 'give' in double object construction and in to-dative construction is also investigated in the methodology part of the present study. Before starting the analysis, some background knowledge related to the issue is shared with the readers in the next part of this paper.

Monosemy/Polysemy Views

As implied in the term, dative alternation has two different syntactic units as double object and prepositional object construction. The monosemy view asserts that dative verbs do not have different meanings when they are used in either of two different constructions and some researchers (Emonds, 1972: 557; Dryer, 1986: 811) name the prepositional construction as basic and the double object construction as derivational; however, some (Aoun and Li, 1989: 164) name the double object construction as basic and the prepositional object construction as derivational. In other words, the prepositional construction and the double object construction do not differ in terms of semantics but they do differ syntactically; two different syntactic constructions give the same semantic meaning. However, the polysemy view underlines that some type of verbs are selective for syntactic constructions in which they take part (Krifka, 2003: 2); different syntactic structures have different semantic meanings. At this moment it is favourable to interpret examples (1a) and (1b) by giving an example from Pinker cited in Krifka (2003: 6).

1) a) Double Object: NP0 CAUSES NP1 to **HAVE** NP2

   b) Prepositional Object: NP0 CAUSES NP2 to **GO TO** NP1.

In (1a) the double object construction gives the meaning that Ayşegül causes Elif to have the book; however, in (1b) the prepositional object construction connotates that Ayşegül causes the book to go to Elif. Even though in (1a) the intended meaning is possession, in (1b) is motion. Even though the polysemy view underlines that these two different syntactic structures have different meanings, Rappaport Hovav and Levin (2008: 132) describe a verb sensitive approach in which it is asserted that while give-type verbs give the meaning of caused possession not only in double object construction but also in prepositional object construction, throw-type verbs give the meaning of either caused possession or caused motion meaning in the syntactic structure of prepositional object but of only caused possession meaning in double object construction. At this point, it will be better to group the semantic verb types at first.

The Semantic Verb Types

Dative verbs having only a caused possession meaning

(a) Verbs that inherently signify acts of giving: give, hand, lend, loan, pass, rent, sell

(b) Verbs of future having: allocate, allow, bequeath, grant, offer, owe, promise

(c) Verbs of communication: tell, show, ask, teach, read, write, quote, cite

Dative verbs having both caused motion and possession meanings

(a) Verbs of sending (send-type verbs) : forward, mail, send, ship

(b) Verbs of instantaneous causation of ballistic motion (throw-type verbs): fling, flip, kick, lob, slap, shoot, throw, toss

(c) Verbs of causation of accompanied motion in a deictically specified direction : bring, take

(d) Verbs of instrument of communication: e-mail, fax, radio, wire, telegraph, telephone

(Rappaport Hovav and Levin, 2008: 134)

The above-mentioned semantic verb types are grouped under two different semantic features. While the give-type verbs, future-having verbs and verbs of communication give the meaning of caused possession in both the prepositional construction and double object construction, send-type verbs, throw-type verbs, and verbs of instrument of communication are associated not only with caused motion but also with caused possession. Ormazabal and Romero (2010: 5) name the former type verbs as Only-caused-possession (OCP) but the latter type verbs as also-caused-motion (ACM) verbs. In order not to digress from the primary concern and to specify the issue, give-type verbs from the first group and send-type verbs from the second group will be dealt with in this study.

Lexical Restrictions

Give-type verbs have an animacy feature as a lexical restriction. That is, the recipient should have animacy feature; in other words, it should be human or animal. Giving an example

4)‘He had given his reaction to the press on Mr. Unnikrishnan’s comments in the house’ from the Indian English corpus of Kolhapur, Cuypere and Verbeke (2013: 173), the authors state that organizations and institutions should be acknowledged as animate. They accept the *press* referring to a group of people or journalists as animate object. In a similar way, Krifka (2003: 3) discusses the following two sentences in terms of animacy:

5) a) Ann sent a package to London.
   b) Ann sent London a package.

He underlines the fact that in order to get possession of the package, London should be a metonym for an organization.

6) a) The Prime Minister sent the letter to the White House.
   b) The Prime Minister sent the White House the letter.

As seen in (4), (5a), and (6a), the possessive to (recipient) prerequisites an animate object. In line with the examples of *London, the press,* and *the White House* is a metonym. Even though it is the official residence of the president of the U.S.A, it is a substitute for the president himself or for the administration.

Relevant Studies

Snyder and Stromswold (1997) examine the spontaneous speech of twelve children from the CHILDES database. All but one acquire the double object dative form before the prepositional dative construction. They further investigate whether the input frequency of parental use of dative alternation has any effect on children’s syntactic acquisition of double object and to-dative constructions. They do not find any significant correlation between the input frequency of parental use and children’s order of syntactic acquisition.

In the same vein as Snyder and Stromswold, Campbell and Tomasello (2001) use the language use of seven children whose ages range from 1;6 (years; months) to 5;0 from the CHILDES database in order to analyse their dative constructions in their speech. Their analysis underlines that the children first acquire the use of the double object dative

construction before the prepositional dative construction. At this point they discuss the effect of frequency on children's acquisition of English verb-argument structure. Frequent parental use of verbs in double object form shapes the children's syntactic acquisition.

Conwell and Demuth (2006) interrogate the children's abstract English syntactic knowledge. The study is conducted by means of two different experiments in which the generalization hypothesis and item-based hypothesis are tested. The result of the first experiment underlines that the children do not have abstract knowledge of the dative alternation. The children use the study's novel verbs in the same way as how they are conveyed to them. In this experiment the children hear only one type of dative alternation; consequently, they use the novel verbs in line with how they are modelled to them in advance. This result contradicts with the generalization hypothesis, which advocates the existence of children's abstract syntactic knowledge. In the second experiment, the children learn one novel verb in one dative form and another novel verb in another dative form. Along the way, they are informed about the existence of two different dative alternations and their frequency of use of both dative alternation form increases relatively compared to the result of first experiment. The result of the second experiment supports the premise of the Item-based hypothesis, which underlines that children cannot use any novel verb in any form apart from how they are modelled to them. The overall results of this study remark that children do not have syntactic generalization in terms of the use of two different syntactic form of dative alternation.

Cuypere and Verbeke (2013) conducted a corpus-based study in which they searched for the effects of lexical restrictions on language users' preference of dative alternation in Indian English (IndE). The Kolhapur corpus of IndE forms the dataset, with 943 sentences for the researchers. The results show that the use of the prepositional dative construction is more frequent in IndE than other varieties of English. Three lexical restrictions – pronominality of the recipient, semantics of the verb, and the length of the recipient and the theme – are ascertained as factors affecting the language users' preference of syntactic construction in terms of dative alternation in IndE. Searching for the frequency of use of 'give' in IndE and BrE, Mukherjee and Hoffmann (2006) find similar results as Cuypere and Verbeke. They attain the result that the use of the verb 'give' in prepositional object construction in IndE is

more frequent than its use in BrE.

The related literature implies that the double object construction is acquired before the prepositional object construction. However, whether the input frequency of parental use has a significant effect on the newly encountered syntactic construction of dative form is a controversial issue. Different views for and against the effect of input frequency on dative form acquisition are available. Finally, IndE consists of more frequent use of prepositional dative construction than the other varieties of English. Especially in IndE, the use of the verb 'give' is more frequent in prepositional dative form than its use in British English (BrE).

Methodology

The Corpus of Contemporary American English **(**COCA**)** makes a significant contribution to this research with its plentiful content. COCA, as underlined in Lee (2010), is a 'mega-corpus' involving nearly 400 million words at its beginning. It has a function of recording the linguistic evolution of American English through the addition of new data every six to nine months. The content of the corpus is selected from the web as well as from other electronic sources. Although COCA does not permit downloading the data due to copyright law, it includes an online searchable interface. A diverse range of genre categories such as academic texts, magazines, fictions, and newspapers are included in it (110). From these diverse genre categories, academic written texts were chosen to analyse for dative alternation in the present study for the following reasons. First, both of the verbs in question are frequently used both in spoken and written English. As writing is a planned activity, learning about the authors' tendencies while writing with regard to dative alternation may help learners plan or organize their writing process in an efficient way. Second, instead of using data devoted to the use of dative alternation in other genres, data based on its use in academic writing can yield more meaningful results in teaching academic writing. Third, the authors' selection of dative alternation can give form to the teaching of these verbs in textbooks used in primary education.

The researcher analysed N=1000 sentences sampled from academic written texts in total. In the first part of the study, 500 sentences were analysed in order to shed light on the

first research question in which the researcher interrogates the frequency of use of the verb 'give' in two different syntactical structures (double object construction and prepositional construction). The second part consists of the analysis of an additional 500 sentences to answer the second research question in which the frequency of use of metonym with the verbs 'give' and 'send' in the double object construction and the prepositional object construction was investigated. Metonym use in sentences with the single-object construction was ignored.

Results

The 500 sentences in the first part contain the verb 'give', of which the frequency of use in the double object construction or the prepositional construction was investigated. The researcher eliminated five different uses of 'give' which are ineligible for the present study. First, the researcher excluded set phrases which are formed with the combination of 'give' and a noun + preposition. Of the original 500 sentences, 6% (thirty-three sentences) contain different idiomatic uses of 'give' with different nouns and the prepositions 'to' and 'into'.

Table 1 Idiomatic Uses of 'give'

Set Phrases	Frequency
Give rise to	14
Give importance to	2
Give insight into	1
Give shape to	2
Give priority to	2
Give attention to	1
Give credibility to	1
Give way to	4
Give weight to	1
Give birth to	5

Second, sentences with phrasal verbs formed with the use of 'give' were also eliminated from the analysis. Five different phrasal verbs were used in forty-three (8.6% of the original 500) sentences.

Table 2 Excluded Phrasal Verbs

Phrasal Verbs	Frequency
Give up	28
Give away	4

Give in	5
Give off	3
Give out	3

Third, the researcher left out the inaminate object use with the double object construction and the prepositional construction. 3.4% of the total, seventeen sentences with inanimate direct object and inanimate indirect object as a recipient were omitted from the analysis. In the following seventeen sentences the recipients as inanimate object are italicized.

Table 3 The recipient as inanimate objects

Experimentation is the key to success, so **give** *it* a try……
……. **give** a renewed push *to economic relations between Russia and the United States*
…. **give** themselves *to passion…*
… **give** voice *to such a cry…*
…. **give** *the whole matter* an upbeat spin…
…as long as we **give** *this last term* the aura of an active inter-locution …
… **give** *it* much thought…
… **give** *test scores* a deep reading …
... give *it* power …
... give *it* some credence …
... give *the ancient city* a human face…
… **give** ostensibly *scientific testimony* greater weight than its actual probative value warrants.
… **give** *it* a last shot.
my soul alienated from all spiritual thing…. **give** *it* solace and joy.
... give *reconciliation processes* more momentum …
… **give** *the terrain* a micro-topography…
… **give** *what is now called " originalism "* a bad name…

Fourth, one of the sentences (0.2%) in which ‘give’ is used in the infinitive form was also excluded from the analysis:

> […]speak, to laugh, to love, to hate, to desire, **to give**, to receive, to rejoice, to be angry, to fight[…]

Fifth, 36.4% of the total, 182 sentences in which ‘give’ is used as a monotransitive verb were excluded from the analysis, as the use of the verb with only one object is contrary to the spirit of dative alternation. A few examples are given in the following table in which the objects are italicized.

Table 4 Examples of ‘give’ as a monotransitive verb

…writers describe the emigrants' experiences graphically, the object of this article is to **give** the insider's view.
…They are much more likely to **give** *blood.*
…indicated that the treatments did not **give** *results that were significantly different from those obtained in the control tanks* for any given…
Ask each student to **give** *a short talk* on a famous immigrant…
Western European or NATO conscript states (a total of 37) were asked to **give** *their opinions* by questionnaire.
Request agenda items and **give** *a two-week deadline* for input.
The Office of Education seemed willing to **give** *the extra money needed.*
I don't want to **give** *the wrong impression*.

After excluding the above-mentioned restrictions from the analysis, there remained 224 (44.8%) sentences to be investigated for the frequency of use of ‘give’ in two different dative alternation forms. Of 224 sentences, double object construction forms the syntactic structure of 179 sentences (79.9%). This means that 79.9% of the total which contain the verb ‘give’ as a main verb are used with two different objects and formed in double object construction. Some of the double object constructions are included in the following table.

Table 5 'Give' in Double Object Construction

…she will **give** him money and presents…
Let me **give** you an example, " he said.
The latter had asked Simn to **give** Ludovico some coins on her behalf.
…and kill a man who will not **give** them a cigarette…
I **give** him two Lexotans…
You **give** them a sheet that tells them what you're doing…
All the teachers **give** you their e-mail address…
Would I not anyway give him an injection or **give** him some pills…

However, 20.1% are formed with the to-dative construction. In other words, forty-five of 224 sentences are formed with the preposition 'to' referring to the recipient of the theme. It is easily in evidence that the frequency of use of double object construction in sentences with 'give' as a main verb outnumbers the frequency of use of prepositional object construction. Some sentences using the prepositional object construction are in the following table.

Table 6 'Give' in Prepositional Object Construction

…he comes to **give** the news **to Burke's daughter, Mary**,…
…sell your possessions and **give** your money **to the poor**…
…give the money **to incumbents**…
The parents do not only **give** life **to the child**…
…and **give** the upper place **to him**…
" Please **give** this **to that lady**! "
…will **give** financial compensation **to those farmers**…
…to **give** these coins (usually no large sum) **to the elders**.

In the second part of the study the researcher searched for an answer to the second research question, in which the frequency of use of metonym in object position with the verbs ‘give’ and ‘send’ was investigated. The same 500 sentences used for answering the first research question, which have the verb ‘give’ as the main verb, were scrutinized again to find the use of metonym in object position. The excluded sentences in the first part were included. The eleven metonyms used in object position with the main verb ‘give’ and the essential meaning they substitute for are shared in the following table.

Table 7 Metonyms in Object Position

The metonym used in sentence written in bold / the essential meaning it substitutes for
… to give **courts** authority to … / referring to the member of jurisdiction
Britain was only willing to give a limited number of military installations and territory to **China /** referring to the government of China
… to give frank answers to **central Europe's agonizing questions.** / the people from Central Europe
… give **parties** the opportunity … / the member of the parties
… give direct benefits to **religion** … / people who believe in the referred religion
… to give **the IMF** the right … / the authorized people working for the IMF
… to give prominent individuals in the government, **the media**, and interest groups the chance… / the media employees
… *give* **the government** *an excuse …* / the member of the cabinet
… to give **Moscow** a veto … / referring to the ruling party
… give **my class** things to do... / the teacher’s students
… give **Iraq** an edge over Iran…/ the state with reference to the community

Another 500 sentences which contain the verb ‘send’ as a main verb were also examined in order to list the use of metonym in object position. The nine sentences consisting of the use of metonym are listed below.

Table 8 Metonyms with 'Send'

The metonym used in sentence written in bold / the essential meaning it substitutes for
… to send a written communication to **the Canadian company** / the workers in Canadian company
…. send the things back to **the African museums** so they can sell them again to someone…/not African museums as a building but the employees of the museum because the museum cannot perform the action of 'sell'.
... it was Japanese government policy to send students to **the West**…/ the countries in the West side of the Japanese
……. send a firm message to **the nation's colleges and universities** to prepare physical educators competent. /administration of nation's colleges and universities
The embassy in Rome …… to send **Washington** a translation of an article … / the government of U.S.A.
…. to send a clear signal to **the Soviet Union** …/the government of the Soviet Union
… the U.S. president should send a message to **Pakistan** … /the government of Pakistan
….. Kazakhstan, Kyrgyzstan, and Uzbekistan did send limited peacekeeping contingents to **Tajikistan.** /the government of Tajikistan

The frequency of use of metonym in object position with the verbs 'give' and 'send' in the double object construction and in the prepositional construction is almost similar. 500 sentences which have the verb 'give' as the main verb contain 2.2% metonym use while the other 500 sentences having the verb 'send' as the main verb consist of 1.8% metonym use.

Discussion

The first result, that the use of the double object construction is more frequent than the use of the prepositional dative construction, is similar to the result of the thesis of Buysse (2012). In that study, Buysse analysed 3300 sentences taken from the British National Corpus (BNC) in which sixty-eight different dative verbs take part as main verbs and found that 88% of the sentences were formed with the double object construction. This purports an overwhelming majority of use in the double object construction in the sample chosen. In another study, Bresnan et al. (2007) used the Switchboard collection of recorded telephone conversations and found that the double object construction occupies the syntactic construction of the overwhelming majority of the sentences in question. 79% of the sentences were constructed with the double object dative form (89). The studies conducted by Buysse (2012) and Bresnan

et al. (2007) analysed spoken data supplied by two different corpora. However, the present study examines the content of sentences from academic written texts. In that case it can be suggested that the use of the double object construction gets an edge over the prepositional dative construction not only in informal but also in formal contexts in terms of their frequency of use.

The second result indicates the very low frequency of use of metonym in object position in dative structures. Even though the total of 1000 sentences contained a lot of metonym use in object position, only metonym use in the double object construction or the prepositional object construction was taken into consideration. It is easily observable that the use of metonym in dative alternation structures is very limited. A very rare use of metonym in dative alternation structures in the present study provides insight into the lack of metonym use in dative alternation in literature.

Conclusion

Two research questions were investigated in the present study. Firstly, the frequency of use of dative structure with the verb ‘give’ was examined. The analysis of 500 different academic written samples containing ‘give’ as their main verb showed that 224 sentences (44.8%) were used either in double object construction or in prepositional object construction. Of those, 79.9% were formed in the double object construction while only 20.1% were formed in the prepositional object construction. Phrasal verbs and set phrases formed with ‘give’ and mono-transitive use of ‘give’ were eliminated after examining the original 500 sentences. Secondly, metonym use in object position for both the verb ‘give’ and the verb ‘send’ in dative alternation sentences was investigated. While the frequency of use of metonym with ‘give’ was observed in 2.2% of the sample sentences, its use with ‘send’ was seen in only 1.8% of the total of ‘send’ sentences. The result shows that the frequency of use of metonym with these two different verbs is similar and its overall use in 1000 sentences is quite rare.

As a suggestion to future researchers, in order to see whether the order of acquisition of the double object construction or the prepositional object construction has any effect on language users’ syntactical selection, it can be useful to match the learners’ order of

acquisition and their current syntactic selection while expressing anything in the double object construction or the prepositional object construction. Snyder and Stromswold (1997) and Campbell and Tomasello (2001) draw a conclusion that the double object construction is acquired before the prepositional object construction. If the children they investigated for their order of acquisition had previously provided them with new data related to their current dative syntactic selection, it would have been possible to deduce the effect of order of acquisition on speakers' or writers' selection of the double object or the prepositional object construction.

Future researchers may also try to compare different corpora to see whether there are any differences between different English varieties in terms of syntactic use of dative construction. Even different genres can be compared to reveal differences in selection of object position. The same comparison can be made between spoken and written English to see any difference occurs with regard to the order of objects.

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Low Back Merger in Native and Nonnative Speakers of American English

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Abstract
This paper presents a detailed acoustic analysis of the low back merger of the *caught* and *cot* type in native and nonnative speakers of American English. The merger is observed in some speakers in both groups, but the majority still retains the vowel contrast. Some individual speakers have an inconsistent phonetic habit with regard to the merger. Overall, the nonnative speaker group is characterized by generally lower values of F1 and higher values of F2 compared to the native speakers in the production of both vowels.

Keywords
low back merger, American English, vowels, native, nonnative

Introduction

Phonetic descriptions of the American English (AE) vowel inventory classify /ɔ/ and /ɑ/ as back vowels, but they differ with regard to the relative position of the tongue. The former is regarded as a mid vowel (or more precisely, a low-mid vowel), but the latter is artuculated as a low vowel (Yavaş 2011: 78–79). Some regions in the US have preserved the phonetic difference between the two back vowels, but in others where the distinction is neglected, it is known as a "low back merger". This phonetic phenomenon has been widely studied and recognized as an attested change in many areas of the US. In his description of the vowel sounds in various English dialects, Ladefoged (2005: 28) claims that the existence of the /ɔ/-/ɑ/ vowel contrast is probably not preserved among most younger American English speakers, but it is also observed in the speech of some national newscasters in the States.

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The low back merger is not a new phenomenon in AE. A brief overview of acoustic vowel studies of American English ensues in order to find out how the vowel contrast has been treated. In their seminal acoustic study on American English vowels, Peterson and Barney (1952: 178) found that /ɔ/ and /ɑ/ were distinct vowels occupying their own phonetic space in the vowel chart in most of their speaking group participants. On the other hand, another group of their participants whose perception of vowel contrasts was tested had difficulty differentiating between the two back vowels in their listening task. More recently, Bradlow (1993) similarly did not report the merger, but only a slight increase in F1 and F2 formant values of both /ɔ/ and /ɑ/, compared to Peterson and Barney' study (1952). Yang (1996) also records a notable upward movement in the F2 of back /ɔ/ and a low back vowel merger that is in progress, with the vowel /ɔ/ shifted towards the spectral characteristics of /ɑ/. Hillenbrand et al's acoustic study (1995: 3100) deliberately excluded acoustic data on the low back merger. Their subjects were required to have kept the vowel contrast, i.e. those where the suspension of the contrast was evident were not recorded and their speech sample was not studied further.

Sociophonetic research shows that the low back merger is found in more than half of the geographic territory of North America (Labov, Ash and Boberg 2006: 60). Extensive research of American English dialects shows that there is strong evidence that this merger is now complete in northern New England, the West and Canada, as well as in parts of the Midland and South [... and] is in progress in the remaining parts of the Midland and South – more advanced in some communities and social groups than in others – and may even be making inroads among younger, upwardly mobile speakers in the areas that have historically resisted it, as the pronunciation features that prevented it in the past become socially stigmatized." Boberg (2015: 288)

Even though there is strong evidence that the merger is spreading, it is not always clear when the vowel contrast is suspended or retained. In his phonetic study of the low back merger in Kentucky English, Irons (2007: 145) points out that in order to fully describe the speech of his participants, a category of a *partial merger* needed to be introduced for those who maintain a clear distinction between the two vowels only in certain phonetic environments, and not in all of them.

This paper studies the degree of occurrence of the low back merger in native speakers (NS), as well as nonnative speakers (NNS) of American English in two word forms of English, namely *bought* and *pot*. The nonnative group was uniform, and included only the native speakers of Serbian, long-term residents of the United States and late learners of English. The analysis of each of the two groups is followed by a comparison across the two groups that focuses on the differences between native and nonnative vowel productions.

Experiment 1

Participants, materials and recording procedures

Nine male native speakers (M1-M9) of American English took part in Experiment 1. At the beginning of the recording session, each participant was asked to fill in a questionnaire. The participants were not pre-screened for the use of the low back merger in their speech which makes this research study unbiased.

The surveys show that the participants of the study are from the American Northeast, except for M2 who was born in Minnesota, and also lived in Hawaii), but spent 10 years of his adult life in Ithaca, NY. All nine participants were students at Cornell University, Ithaca, NY, at the time of the recordings. Their age ranges from 19 to 36 (average 23.4, median 21). Table 1 summarizes the relevant information on the participants of this study:

Table 1 Background information on English native speakers

Subject	Age	Birthplace
M1	19	New York City, NY
M2	36	Mankato, MN
M3	19	Pittsburgh, PA
M4	20	Cortland, NY
M5	20	Haverhill, MA
M6	21	Columbia, MD
M7	21	Manhasset, NY
M8	28	Washington, DC
M9	26	Mt. Laurel, NJ

Acoustic Experiment 1 targets the English words *bought* and *pot*. These selected English forms have a CVC phonological structure, with an initial labial consonant, either /b/ or /p/. The final consonant is the coronal /t/ in both word forms.

The studied forms were embedded in the frame sentence “Say ___ again”. The recordings

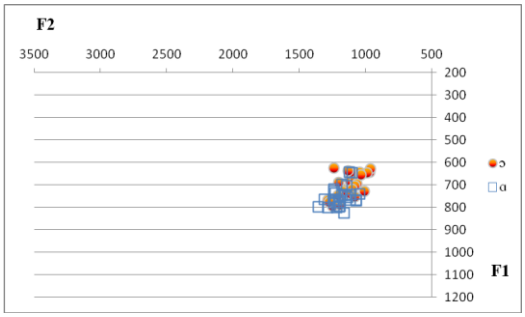
were made in a sound-attenuated booth in the Phonetics Laboratory at Cornell University, in *Praat* speech software (Boersma & Weenink, 2013). The utterances with target forms embedded in the frame sentence were recorded three times, giving a total of 27 tokens for each vowel (9 speakers x 3 repetitions x 1 words). In order to ensure objectivity, the experiment included 9 more vowels of American English in a minimal or near-minimal set (*beat*, *bit*, *bet*, *bait*, *bat*, *but*, *boot*, *put* and *boat*), see also (Čubrović, 2016).

Participants were presented with the utterances on the computer screen, in Power Point, one utterance on a slide at a time. Before the start of the recording, participants were given the opportunity to familiarize themselves with the utterances. After they had got acquainted with the materials, the participants were instructed to read the sentences "as naturally as possible". The experimenter monitored the recording level throughout the session so as to avoid weak or overloaded acoustic signals.

Analysis and discussion

The recordings were digitized at 22,000 Hz and labelled manually. A Praat script written by DiCanio (2013) was used to extract the acoustic data. The measurements of F1 and F2 are then plotted on two-dimensional vowel charts. To ensure the most objective results of the acoustic measurements, for both F1 and F2 the mean value from each of three equal intervals over the duration of the vowel was computed. The three points measured were generated by DiCanio's script (2013), and occasionally checked manually by the experimenter if an error was obvious.

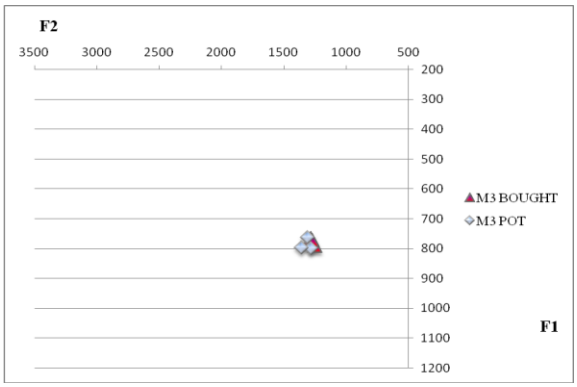
Graph 1 shows the acoustic vowel space for /ɔ/ and /ɑ/. We observe that /ɔ/ and /ɑ/ in our native speaker data exhibit some degree of neutralization, as dialectal phonetic literature suggests.



Graph 1 Vowel dispersion of /ɔ/ and /ɑ/ for NSs

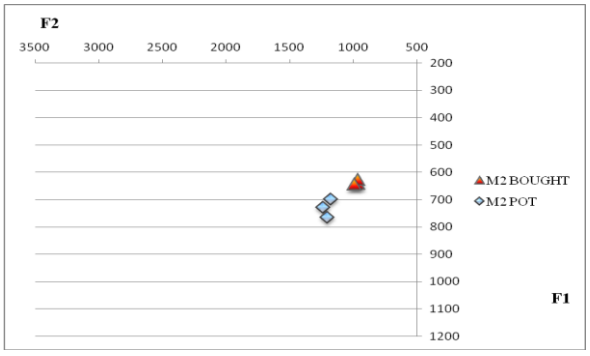
Graph 1 displays a certain degree of variability between the two vowels. However, there is a tendency of F1 of /ɔ/ to be generally lower than the F1 measurements of /ɑ/.

In order to study the extent of the merger, i.e. the suspension of the vowel contrast, it is necessary to look into the acoustic data of individual speakers. Acoustic analysis shows that some experiment participants have completely lost the vowel contrast, namely M3, M4 and M9. For illustration, Graph 2 displays the phenomenon of a complete low back merger in speaker M3:



Graph 2 A complete merger in NS M3

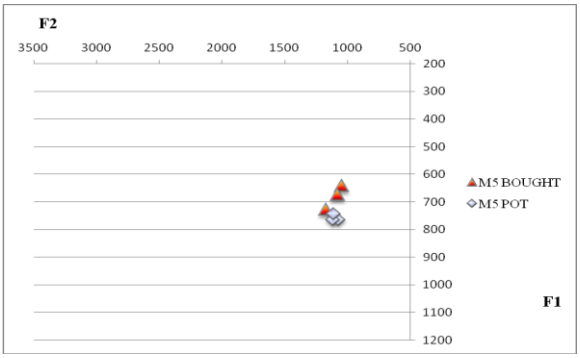
On the other hand, the majority of speakers have retained the vowel contrast, resisting the merger, and they still distinguish between the two vowel qualities in *bought* and *pot*. To illustrate this phenomenon, Graph 3 displays this variability in M2, and similarly speakers M6, M7 and M8 exhibit the same pronunciation feature:



Graph 3 Distinct vowel qualities in NS M2

Finally, two speakers show some inconsistencies in their tokens (speakers M1 and M5), in the way that some of the token pairs lose the vowel contrast and some keep it. An apparent vowel distinction is observed in four of their tokens, whereas they have suspended it in two tokens.

Graph 4 displays the tokens of speaker M5:



Graph 4 Low back merger in progress in NS M5

The average formant measurements for /ɔ/ across the 9 experimental subjects who are native speakers of English are 699 (sd 53) Hz (F1) and 1122 (sd 90) Hz (F2), and 753 (sd 43) Hz (F1) and 1183 (sd 75) Hz (F2) for /ɑ/. However, there is a high variability in the vowel quality of these two vowels and the mean values may predominantly be used to complete an overall picture of the American English vowel system, but also to allow a comparison with nonnative realizations of the two vowels in this vowel study.

Experiment 2

Participants, materials and recording procedures

Experiment 2 investigates the acoustic realizations of the two back vowels in 9 nonnative speakers of English. All 9 are long-term residents of the United States with Serbian as their mother tongue. Even though the period of time that they have spent in the USA is significant, we treat them as nonnative speakers, hypothesizing that their vowels of English may deviate from the native acoustic data.

Similar to Experiment 1, each nonnative participant was asked to fill in a questionnaire at the beginning of the recording session. The Serbian participants were additionally asked to report the length of residence (LOR) in the United States and language(s) used at home and at work. They were all born in Belgrade, Serbia (except for one participant, M5, who was born in the south of Serbia, but lived in Belgrade for 27 years prior to moving to the US). All nine participants lived in Belgrade until they moved to the US. They lived in Atlanta, GA, at the

time of the recordings. Their age ranges from 35 to 45, mean age 39.7, median age 40. All experimental subjects had lived in the US for more than 12 years at the time of the recordings. Most speakers' place of residence was Atlanta only. Table 2 provides selected information:

Table 2 Background information on non-native speakers

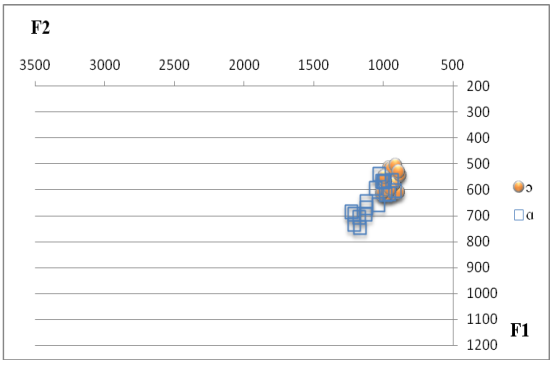
Subject	Age	Place of residence	LOR
M1	40	Atlanta, GA	12
M2	41	Atlanta, GA	23
M3	40	Atlanta, GA	14
M4	40	Atlanta, GA	15
M5	44	Atlanta, GA	15
M6	37	Atlanta, GA	16
M7	45	Atlanta, GA	16
M8	36	Atlanta, GA	13
M9	35	Atlanta, GA	14

Experiment 2 uses the same pair of word forms and the same methodology as Experiment 1. All recordings were made in a quiet room in Atlanta, GA, using Praat (Boersma & Weenink 2013), with Sennheiser noise-cancelling headphones and a Sony laptop computer.

Analysis and discussion

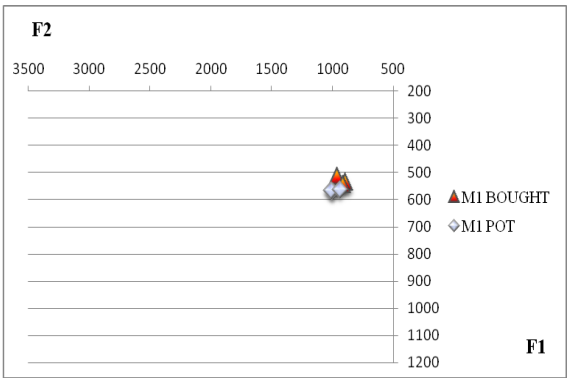
In addition to the acoustic analysis, an audio analysis was performed on the nonnative speaker group to check for any pronunciation deviations. The tokens of three speakers were eliminated due to mispronunciation. Participants M6 and M7 consistently diphthongized their tokens of *bought*, and speaker M5 had a strong impact of Serbian. The analysis that follows involves 6 participants of the nonnative speaker cohort (M5, M6, and M7 are excluded).

We observe a more distinct separation between the two vowel categories in the NNS group, compared to the data given in Graph 1 for the NS group. However, some tokens show evidence of a merger, similar to the native speaker group. Graph 5 displays the realizations of the two back vowels in the nonnative sample:



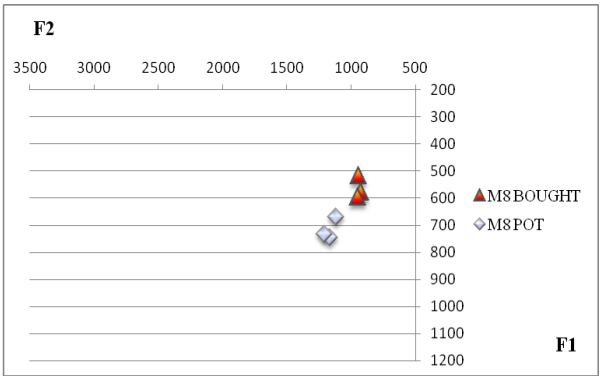
Graph 5 Vowel dispersion of /ɔ/ and /ɑ/ for 6 NNSs

The acoustic data for individual speakers are plotted next. It is found that a merger is complete in speakers M1 and M9. Graph 6 displays the tokens of M1 to illustrate this:



Graph 6 A complete merger in NNS M1

The vowel contrast between /ɔ/ and /ɑ/ is retained by 3 participants who belong to the nonnative speaker group: M3, M4, and M8. Graph 7 displays the acoustic data for speaker M8:



Graph 7 Distinct vowel qualities in NNS M8

Speaker M2 forms a distinct category. He occasionally loses the vowel contrast, but also keeps the distinction between the two vowels at times.

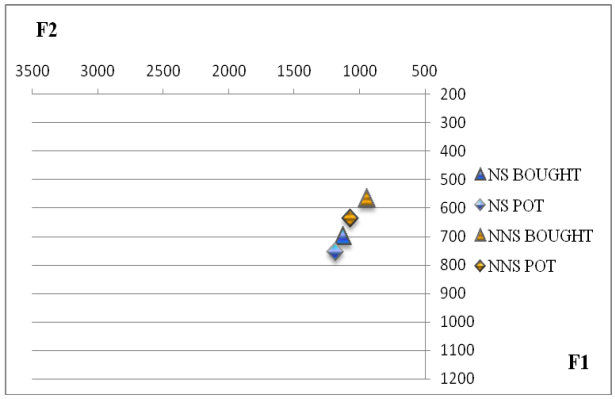
The average formant measurements for /ɔ/ across the 6 nonnative speakers of English are 567 (sd 39) Hz (F1) and 946 (sd 43) Hz (F2), and 637 (sd 64) Hz (F1) and 1070 (sd 101) Hz (F2) for /ɑ/. All average values of the nonnative speaker group's tokens are lower relative to the native speakers' F1 and F2 acoustic measurements.

Conclusion

Phonetic realizations of the vowels in American English *bought* and *pot* vary from speaker to speaker in both native and nonnative speaker groups. The low back merger is not complete in most tokens in both groups. The native speaker group is represented by three speakers who have lost the vowel contrast, and within the nonnative speaker group two study participants follow this tendency. Four speakers in the native speaker cohort have retained the contrast between /ɔ/ and /ɑ/, whereas 3 (out of 6) in the nonnative speaker group follow the same trend.

Some evidence of the low back merger of /ɔ/ and /ɑ/ is seen in the approximation of the F1 frequencies of the two vowels, 699 Hz for /ɔ/ and 753 Hz for /ɑ/ in the native speaker group. Bradlow (1993), who did not report the merger and who dealt with the same word tokens, reported the average value of 620 Hz for /ɔ/ and 780 Hz for /ɑ/ for F1. Similarly, the average values of F2 come close to one another in this study of native English speakers, 1122 Hz for /ɔ/ and 1183 Hz for /ɑ/.

A comparison across groups suggests that the nonnative speaker group is characterized by generally lower values of F1 and higher values of F2, compared to the native speakers, which is shown in Graph 8:



Graph 8 Average values of NS and NNS /ɔ/ and /ɑ/

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When What Sounds Interesting Becomes Fascinating: Review of Recent Publications by John C. Wells

Reviewed by **Ružica Ivanović**[1]

Introduction

Professor Wells's keen interest in the intricacies of English pronunciation culminated in the publication of his two recent titles: *Sounds Interesting: Observations on English and General Phonetics* (2014) and *Sounds Fascinating: Further Observations on English Phonetics and Phonology* (2016). These are collections of posts from his renowned blog (http://phonetic-blog.blogspot.com/), which continues to inspire students and researchers in the fields of English phonetics and pronunciation. Both volumes are written as a series of entries that can be read separately and in any order, as each tells a different story about the author's experience with mispronunciations. On the other hand, the entries are grouped into chapters that revolve around a specific topic, such as the pronunciation of interesting or unusual words (including proper names and place names), phonetic processes, intonation, English accents, etc. These two books are important additions to the growing literature on pronunciation teaching, and they are particularly strong in identifying the words that are commonly misused, mispronounced or mistranscribed.

As far as notation is concerned, both books follow the same convention. Pronunciations are transcribed using the IPA symbols printed in bold, without enclosing them in slant brackets. By contrast, the spelling of the word in question is given in italics. Slashes and square brackets are used only when it is necessary to mark the difference between phonemes and allophones. In keeping with the prosodic notation used in his *English*

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Intonation: An Introduction, intonational phrases are separated by vertical strokes, while the nuclei are underlined and marked with tones. Finally, the author uses his Standard Lexical Sets of vowel keywords, which are printed in capital letters.

It seems to be a challenging task to discuss the work of such a prolific author, given that "there is absolutely nothing having to do with the speech sounds of English – and language in general – that John Wells cannot write about brilliantly, persuasively, knowledgeably and entertainingly" (Trudgill) [quote taken from the back cover of *Sounds Interesting*]. With this in mind, the present review aims to provide a summary of the topics covered in the books and to highlight the differences between them.

Sounds Interesting: Observations on English and General Phonetics

The book is subdivided into seven chapters, followed by a postscript, an index of words discussed, and an index of general terms. The chapters are of varying length, as are the entries within them. The black-and-white illustrations by Lhinton Davidson add to the humorous effect of the malapropisms discussed. As the author explains in an interview, the book is of interest to those who are "fascinated with phonetics and with pronunciation" and people who "deal with phonetics in their daily everyday life", including speech therapists, EFL teachers, actors, and people concerned with training actors.

In the first chapter, entitled "How Do You Say...?", Wells analyzes idiosyncratic pronunciations of a variety of lexical items, ranging from common words such as *hello* or the name of the letter *H* to those less frequent ones, including *plethora*, *diocese* and *liege*. Among these, there are commonly confused *proceed*/*precede, prostate*/*prostrate,* and *silicon*/*silicone.* Apart from general vocabulary items, the chapter contains a number of medical terms, brand names, personal names, and difficult-to-pronounce Welsh place names. Furthermore, the author examines the pronunciation of loanwords from Greek, German, Chinese and Tagalog, such as *omega*, *schnitzel*, *feng shui* and *ylang-ylang*, respectively. Pronunciation errors covered in this section include the misplacement of primary accent, the insertion of sounds under the influence of analogous lexical items – for example, the insertion of /j/ in the word *escalator* by analogy with *speculator* and *articulator* – as well as those that stem from a false analogy with words that have similar spelling patterns – for example, the word *sloth* /sləʊθ/

that is pronounced in the same manner as the word *cloth*, i.e. */slɒθ/.

As its title suggests, the second chapter "English Phonetics: Theory and Practice" covers a range of relevant issues, among which are observations on the status of schwa and the use of the happY vowel, as well as those that discuss problems with lexical stress and stress shift. This is by far the longest chapter with many up-to-date examples of connected speech processes, including assimilation, world-internal intrusive /r/, weak forms, and reductions – for example, /ˌmetərəˈnæləsɪs/ or *imma* /ˈaɪmmə/ for *I'm going to*. A considerable amount of attention is given to the processes of compression and decompression. The former refers to the reduction of the number of syllables within a word, as in /ˈreɪ.di.ənt/ vs. /ˈreɪ.djənt/, while the latter pertains to the addition of an extra syllable to a word, as in /ˈɪŋgələnd/ or /pəˈliːz/. The only comment about the organization of the chapter would be that the discussion about the incorrect use of the archaic verb forms for the 2nd and 3rd person singular present simple tense (e.g. *hast* vs. *hath* or *thou sayest* vs. *he saith*) is perhaps more suitable for the previous chapter, because these types of errors are not necessarily caused by phonetic factors.

The third chapter is concerned with the challenges faced while teaching phonetics and EFL, and is therefore invaluable to language instructors. Drawing on his extensive experience at University College London, the author provides an overview of common mistakes that students make in written and oral exams in phonetics. Significantly, these are strikingly similar to those made by Serbian EFL students, and include the following: (1) uncertainty about the correct pronunciation of the plural *–s* and the past simple/past participle *–ed* endings; (2) incorrect transcription of the word *then* as /ðən/ by analogy with *than*; (3) erroneous transcription of the word-initial consonant digraph *wr*, as in *wrong* as */wrɒŋ/. Furthermore, the chapter contains an example of a practical text given to MA Phonetics students at UCL, and explains the structure of the IPA examination for the Certificate of Proficiency in Phonetics. Other entries discuss commonly confused abbreviations and minimal pairs, such as *i.e.* vs. *e.g.* and *tart* vs. *tort*. Finally, the author addresses the debate about whether EFL teachers should teach British or American pronunciation. In his opinion, they should concentrate on the "common phonetic core of all kinds of English" and practice the pronunciation of individual sounds, including "important phonemic oppositions," as well

as “word stress placement, nucleus placement... and spelling-to-sound rules” (Wells 2014: 99). Once the students have acquired these skills, they can choose the pronunciation model that they wish to imitate. However, this can be rather difficult, because they rarely have the opportunity to practice with native speakers.

The fourth chapter on intonation looks at the three systems at work: tonality, tonicity and tone, focusing primarily on their behaviour in English, but also including examples from other Germanic languages. The author provides guidance on how to implement theoretical knowledge in real-life situations – for example, how to sound polite or how to use fixed tones and fixed tonicity patterns in exclamations and set phrases such as *ˌOoops!* and *ˈGood for ˈyou!* , as opposed to the word *hello*, which can be pronounced with any tone. Considerable space is given to the unpredictable nucleus placement in counterpresuppositionals, i.e. utterances by which the speaker rejects the interlocutor’s presumption, as in *I’ve ˈno reason ˈto apologize*, where the nucleus is placed on the preposition that is normally unaccented. A number of other entries are concerned with idiomatic intonation patterns such as *ˈSearch ˈme!* or *ˈThat’s ˈa reˌlief!* , among which there are examples in German and Swedish. Again, with reference to prosodic conventions, the nucleus is underlined rather than written in capital letters because the author finds this type of notation to be intuitive. Apart from tonicity, the chapter also examines ‘empty’ words and phrases that are typically unaccented and provides a contrastive analysis of stress placement in English and German compounds. Finally, the author provides a detailed description of the UCL intonation exam, which is of most interest to those who teach and study English prosody.

The fifth chapter addresses the issues related to English spelling and the design of the International Phonetic Alphabet. In the opening entries the author provides exact Unicode values for the voiced labiodental flap [ⱱ] and other IPA symbols that are easily confused – such as /θ/ and /ð/ or /ɑ/ and /a/ – which are helpful for students who struggle with transcription tasks. These are followed by the discussion on the development of various IPA symbols, including those that represent different types of clicks and other rare sounds. It is worth noting that one entry looks at the difference between the symbols *ezh* /ʒ/ and *yogh* /ȝ/ which is often overlooked, even by phoneticians. The latter part of the chapter looks at spelling-to-sound correspondences, explains the use of the possessive apostrophe and double

consonants, and offers suggestions on how to make English orthography more consistent. Once more, these observations are important for teachers and students alike.

The sixth chapter, entitled “English Accents”, explores social and geographical variation in English from a sociophonetic perspective. The main focus is on recent changes within RP, with quite a number of entries that discuss the varieties of English spoken in the West Indies. The spread of substandard features into upper-class RP is exemplified by observations that the younger members of the British Royal Family frequently use glottal stops and vocalized /l/s. Other tendencies in General RP are also observed, including GOAT allophony, CURE lowering, /t/ voicing, yod coalescence, smoothing, and sandhi /r/. As far as other dialects are concerned, there are two entries that discuss the pronunciation of /t/ sound in American English and in Irish English, and one that examines Maori words in New Zealand English. The information contained in this chapter is essential for phoneticians, dialectologists, and all those who wish to know more about the varieties of English.

The last chapter, entitled “Phonetics Around the World”, covers a variety of languages, including Scottish Gaelic, Welsh, Icelandic, German, Italian, Czech, Polish, and Serbian. The emphasis is on the pronunciation of Welsh words, including place names that are spelled with the digraph *ll*. In addition, the chapter contains two Welsh hymns that are fully transcribed in IPA. BCS readers will be pleased to find information on the pronunciation of their famous tennis players’ surnames, including Djoković, Ivanović, Tipsarević, Ivanišević, and Troicki, whose name is pronounced as /troˈitski/ in Serbian, but with a different stress pattern in its anglicized form /ˈtrɔɪtski/. The final chapter is followed by a postscript that reveals how the author began his career as a phonetician.

Prof. Wells’s witty observations are based on a lifetime of research and scholarship, and written in a manner that will appeal to specialists and general readers alike. *Sounds Interesting* is a skilful blend of facts and amusing anecdotes that will encourage the readers to do their own research on the topics discussed. Perhaps even more importantly, the text contains excellent examples that EFL teachers can use for pronunciation and intonation practice, vocabulary building and classroom debate. Finally, this entertaining and practical book is an excellent source of reference for researchers, students, and those who are simply curious about the pronunciation of a particular word.

Sounds Fascinating: Further Observations on English Phonetics and Phonology

The volume is structured differently from its predecessor in that the chapters are much shorter and grouped into four parts: Part 1, "Words, Names, People and Places" (chapters 1-8); Part 2, "Sounds and Letters" (chapters 9-12); Part 3, "Applying Phonetics" (chapters 13-18); and Part 4, "Roundup" (chapters 19-21). As in the previous edition, the text is interspersed with illustrations by Lhinton Davidson, and followed by an index of words and a general index. Furthermore, the book follows the same notational conventions as *Sounds Interesting.*

The first eight chapters of *Sounds Fascinating* cover the same topics as the introductory chapter of *Sounds Interesting*. Chapter one focuses on the pronunciation of unusual words, including plant names, scientific terms, borrowings, and slang words. The second chapter examines loanwords for food items, such as *flummery*, which was borrowed from Welsh, or *kumquat* and *lychee* that were borrowed from Cantonese. The third chapter, entitled "Interesting Words", incorporates a variety of lexical items, from the commonly confused *aged* /ˈeɪdʒd/ and /ˈeɪdʒɪd/ or *then*/*than* to ecclesiastical terms that are used in the Church of England, such as *synod* and *sojourn*. Furthermore, it brings forward an interesting discussion pertaining to substandard pronunciations of words *diamond* and *jewellery*. Namely, while /ˈdaɪmənd/[2] has become so common in British English as to be considered standard, the pronunciation of /ˈdʒuːləri/[3] is still regarded as non-standard. The fourth chapter looks into country names, company names, and names of mythological figures, such as *Israel*, *Bombardier*, and *Laocoön*, respectively. On the other hand, the fifth chapter is specifically concerned with personal names, many of which are foreign in their origin, e.g. *J.M. Coetzee*, a South African novelist whose name is pronounced as /kuːtˈsiːə/, /kʊtˈsiː/ or /kʊtˈsɪə/ and *Kim Jong-Un,* the Chairman of the Worker's Party of Korea. The sixth chapter is devoted solely to English toponyms, and includes a number of counterintuitive pronunciations such as *Slaugham* /ˈslæfəm/ and Aigburth /ˈegbəθ/[4]. Similarly, the seventh chapter details the pronunciation of foreign place names, e.g. *Sichuan* /ˌsɪtʃˈwɑːn/, *Wroclaw* /ˈvrɒtslɑːv/, and *Duisburg* /ˈdjuːzbɜːg/. Finally, the eighth chapter examines other foreign words in English,

[2] In contrast to RP /ˈdaɪəmənd/ or /ˈdaəmənd/.

[3] Rather than /ˈdʒuːəlri/ or /ˈdʒʊəlri/

[4] Slaugham is a village in West Sussex. Aigburth is a Liverpool suburb.

such as personal names (e.g. *Sharapova, Kvitova*), brand names (e.g. *Pinot Grigio*) , botanical terms (e.g. *ginkgo*) and music titles (e.g. *Liebestod*).

There is a close parallel between the second part of *Sounds Fascinating* and the fifth chapter of *Sounds Interesting*, as both explore transcription and spelling issues. However, this time the author includes observations on allophonic realizations of sounds in words such as *exist* or *start button* that can be pronounced as / ɪkˈzɪst/, /ˈstɑːˌbʌʔn̩/ or /ˈstɑːʔˌbʌʔn̩/. These are discussed in the ninth chapter, entitled "Allophones", that also examines the plosives that are realized with no audible release or release masking. Wells argues that the term 'incomplete plosion' is incorrect because it is not mentioned in any of the major works on English phonetics. However, Patricia Ashby uses the expression in her book *Understanding Phonetics*. The tenth chapter, entitled "Phonetic Processes" covers mainly elision and H-dropping, with examples such as *corned beef* /ˌkɔːnˈ biːf/, *endless* /ˈenləs/, *amendment* /əˈmendmənt/, *adhere, /*əˈdɪə/, etc. Furthermore, there is a lengthy discussion on syllabic consonants in English, and a rather unexpected entry on initial consonant clusters in Ancient and Modern Greek. Once again, the author comments on common mispronunciations such as */ˈgriːviəs/ for *grievous* /ˈgriːvəs/; */prəˌnaʊnsiˈeɪʃn̩/ for *pronunciation* /prəˌnʌnsiˈeɪʃən/ or */diˈtɪərieɪt/ for *deteriorate* /diˈtɪəriəreɪt/. Even though the title of the eleventh chapter is "Spelling", it contains entries that discuss pronunciation errors such as */eˈpɪtəʊm/ for *epitome* /ɪˈpɪtəmi/ and */ˈsʌndrid/ for *sun-dried* /ˈsʌn draɪd/. However, most of the observations pertain to spelling-to-sound correspondences and letter combinations, and include a number of borrowings and transliterations, such as words of Latin origin that contain the digraph *cc*, words of Greek origin that are spelled with the trigraph *rrh*, Russian names where the Cyrillic letter *ж* is transliterated as the digraph *zh*[5], etc. Furthermore, the author argues that "many writers of foreign language textbooks have little knowledge of phonetics" (Wells 2016: 86), and therefore they provide descriptions of individual sounds that are impressionistic and imprecise. This claim is supported by providing an excerpt from an unnamed Spanish phrasebook, where there is no mention of the fact that the Spanish voiced plosives /b, d, g/ are realized as fricatives [β, ð, ɣ] in intervocalic and word-final positions.

[5] E.g. *accelerate, myrrh, Лужков → Luzhkov*, respectively.

Finally, the chapter examines the related phenomena of spelling pronunciation, non-spelling pronunciation, and pronunciation spelling. The twelfth chapter, titled “Transcription”, is concerned with various IPA symbols and diacritics. Furthermore, it re-examines the status of the weak happY vowel and explains the difference between phonemic and phonetic transcription. Finally, the author provides an overview of symbols, characters and diacritics that were introduced in versions 6.0 and 7.0 of the Unicode Standard.

The third part of *Sounds Fascinating*, entitled “Applying Phonetics”, covers various topics such as the classification of sounds (Chapter 13), teaching EFL (Chapter 14), accents (Chapter 15), lexical stress (Chapter 16), and intonation (Chapter 17). Many of these issues were discussed in chapters 2–3 and 6–7 of *Sounds Interesting*. However, it should be noted that the present volume gives far less space to intonation than the previous one. In the final chapter of this section (Chapter 18), the author provides sample texts that are written entirely in phonemic transcription. Chapter 13, titled “Classification”, begins with an explanation as to why it is not appropriate to classify the /h/ sound as an approximant, followed by a discussion on English plosives in terms of aspiration, VOT, and different types of release. After these observations, the author turns his attention to the pronunciation of sounds in languages other than English, such as the French palatal nasal /ɲ/, the German vowel /y:/, the implosives [ɓ, ɗ, ʄ, ɠ] of Sindhi and the guttural speech sounds that are found in Dutch, German, Welsh, Hebrew and Arabic. Chapter 14, simply titled “EFL”, is considerably shorter than the corresponding Chapter 3 of *Sounds Interesting*. Another difference is that this time the focus is on pronunciation errors made by EFL learners rather than on the common problems encountered by EFL teachers. The chapter includes examples of widespread mispronunciations such as */ˈsaʊðən/ for *southern* /ˈsʌðən/, */kaʊntri/ for *country* /ˈkʌntri/, and */ˈkʌmfəteɪbəl/ for *comforable* /ˈkʌmftəbəl/. Furthermore, the interference from French into English is observed in the mispronunciation of vowels in words such as *rain* */ʁɛn/ and *law* */lo/. Finally, the author lists keywords for the English voiced palatoalveolar fricative /ʒ/[6] and explains his use of the term 'buttressing'[7]. Chapter 15, entitled “Accents”, covers

[6] E.g. *plea<u>s</u>ure, vi<u>s</u>ion.*

[7] The author invented the term in 1992 to refer to the situation when an unaccented preposition is pronounced in its strong form after the nucleus, as in *I’ve got a <u>pres</u>ent for you* /aɪv ˈgɒt ə ˈprezn̩t fɔː ju/**.**

pronunciation features that characterise different varieties of English. As in the previous edition, there are entries that discuss Caribbean English and Montserrat Creole, but this time the focus is more on regional dialects within Northern English. These include comments on the loss of distinction between vowels /ʊ/ and /ʌ/ in Birmingham and Leicester, the merger of /eə/ and /ɜː/ in Liverpool, and the tendency to pronounce /g/ after the velar nasal in words such as *sing* and *hung* in certain northern dialects. Furthertmore, there are entries that outline pronunciation differences between RP and Estuary English, as well as those that discuss the loss of vowel distinction in words such as *merry, marry*, and *Mary* in certain parts of the United States. Chapter 16, titled "Lexical Stress", includes observations on the Latin stress rule in adjectives that end in suffixes *–ant* and *–ent,* e.g. *conˈvergent* vs. *conˈstituent,* as well as those that pertain to the dual behaviour of the ending *–ean,* either as a stress-carrying suffix or the one that places the primary stress onto the preceding syllable, e.g. *European* /ˌjʊərəˈpiːən/ vs. *Shakespearean* /ʃeɪkˈspɪəriən/. The final entry is concerned with the different accentuation of two-element names such as ˌ*Mertonˈ Park* vs.ˈ*Glis-glis*. Chapter 17, entitled "Connected Speech", is concerned with focus and intonation rather than connected speech processes. The chapter opens with contrastive utterances in which speakers may accent suffixes that are normally unaccented, as in ᵛ*careful* vs. *care*ˬ*less* and *interest*ᵛ*ing* vs. *interest*ˬ*ed*. These are followed by observations on the rhythmic alternation of strong and weak vowels in words such as *irritating,* and examples of utterances in which the function word *would* is accented, as in *It* ˬ*would start raining* | ˈ*just as we went out*ᵛ*side*! Finally, the author explains his reasons for classifying the Rise-Fall nuclear accent as a subvariety of the Fall tone. As already mentioned, the final chapter of this section (Chapter 18) consists entirely of passages transcribed in IPA that are useful for transcription reading practice.

The fourth and final part of the book opens with Chapter 19, entitled "Rhetoric", where the author provides an overview of common mistakes that speakers make when giving presentations. Furthermore, he addresses the issue of whether phoneticians are born or made, and retells his experience as an expert document examiner in a court case in Trinidad. Chapter 20, entitled "Language Mosaic", covers topics as varied as the pronunciation of Polish

sounds[8] and consonant clusters in Ndjuka Creole, the phenomenon of phonetic false friends, and the development of customized typewriters with phonetic characters that were used before the computer age. In the final Chapter 21, titled "Postscript", the author recalls the days of the British pre-decimal currency system of pounds, shillings and pence, and words such as *threepenny bit* /ˈθrepni ˈbɪt/, *5d* /ˈfaɪfpəns/, and the *farthing (¼d)* /ˈfɑːðɪŋ/, which are no longer in use. The book ends with a personal account of the author's life and his reflections on growing old.

As already observed, *Sounds Interesting* is more extensive in its coverage of intonation than *Sounds Fascinating*. Aside from this, the second volume is a logical continuation of the first, and written in the same readable and engaging style. Once again, Wells has demonstrated an enormous depth of knowledge and passion for phonetics and languages in general that readers will find fascinating. Equally captivating are the stories about his life and career that reveal a variety of languages that he learnt and a number of amusing situations that he found himself in. In conclusion, *Sounds Interesting* and *Sound Fascinating* are best read together, as a rich reference source that deserves a place on the bookshelves of scholars, teachers, students and all language enthusiasts.

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[8] The author reports that, according to the 2011 census data, "Polish is spoken by over half a million people in the United Kingdom, making it now our third most widely spoken language after English and Welsh" (Wells 2016: 202).