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Dedication

This special issue of the *TESOL Internationa! Journal* is dedicated to the memory of Ruqaiya Hasan, whose work and writings provide deep insight into learning both the mother tongue and other tongues. Whilst deeply saddened, we are profoundly grateful that her inspiration will always continue.

Ruqaiya Hasan (1931-2015)

"A truly functional linguistics
views language as a potential for meaning, and it relates the internal form
of human language to the speakers' social contexts within which meanings develop in the
first place. In this approach to language, the form of language is not a body of rules built
into the brain, to be followed naturally and mechanically; it is a social resource for making
meanings. [...] It is essentially this functional perspective that is relevant to the
business of language teaching, because it can provide the most effective link between the
mother tongue and the other tongue which is being learned
as a second or foreign language."
(Hasan, 2011, pp. 338-339)

Hasan, R. (2011). English process, English tense: Foreign learner, foreign teacher. In J. Webster (Eds.), *Language and education: Learning and teaching in society. The collected works of Ruqaiya Hasan. Volume* 3 (pp. 336-379). London, UK: Equinox.

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Systemic Functional Linguistics and English Language Teaching

Anne McCabe*
Saint Louis University–Madrid, Spain

Chris Gledhill**
Université Paris Diderot, Paris, France

Xinghua Liu***
Shanghai Jiao Tong University, China

SFL and English Language Teaching

The articles in this special issue of the *TESOL International Journal* add to the increasingly rich repertoire of studies that demonstrate the usefulness of Systemic Functional Linguistic (SFL) descriptions of language for underpinning English Language Teaching (ELT), in foreign and second language contexts (hereafter referred to generally as L2 teaching/learning). Michael Halliday, the principal architect of SFL, from the start of his career in the 1940s as a teacher of Chinese, was "conscious of the need to provide explanations of problems faced by the learners, to try to develop some kind of coherent notion of a language, how it works, how it was learned, and so forth, in order simply to improve the quality of the language teaching" (Halliday & Hasan, 2006, p. 16). Thus, SFL was conceived with language teaching firmly in mind. Given this focus, surprisingly, Hallidayan-inspired linguistics was not taken up in a significant way in communicative language teaching, the dominant paradigm in L2 teaching, in the latter part of the previous century and even in the first part of the present one (McCabe, forthcoming 2016). At the same time, the existing studies and applications, such as those included in this introductory article and in this issue, attest to a growing interest in the understandings of language and of language teaching that SFL offers to ELT.

Halliday has always been interested in an "appliable linguistics"[1] (Halliday, 2002), as further made manifest from early articles such as "General linguistics and its application to language teaching," written in the 1960s. There, Halliday highlights the notion that the linguist's object of study, "the language" differs from the object of observation "the text," thereby distinguishing the underlying language system from its instantiations through language choices in text. Indeed, choice is a central notion in SFL theory, with the paradigms of linguistic choices available in a given context holding a privileged position in the theory. This privileging of choice can be compared with theories that are more interested in the syntagmatic dimension of language, in describing the language structures. These theories have underpinned much of language teaching, often leading to a focus on accuracy in the L2 classroom and assessment. On the other hand, a communicative approach often focuses on

*   Tel: (34) 91 554 5858 ex 237; Fax: (+34) 91 554 6202; E-mail: mccabea@slu.edu; Avda. del Valle, 34, 28003, Madrid, Spain
**   Tel: +33 (0) 1 57 2756 50; Fax: 01 57 27 56 45; E-mail: cgl@eila.univ-paris-diderot.fr; 8 place Paul Ricoeur, 75013 Paris, FRANCE cedex 13.
*** Tel: (86) 21 34205664; E-mail: liuxinghua@sjtu.edu.cn; Dongchuan Road 800, Minhang District, 200240, Shanghai, China

sets of meanings and their expressions for specific interactive situations, with little principled focus on language structures. However, as Christian Matthiessen points out, learners have to learn language "trinocularly" (Matthiessen, 2006, p.37), not only 'from below'—as with traditional grammar—and 'from above'—as with much communicative language teaching – but also from 'from within' or 'from round about'.

To understand what this means for L2 learners, it is important to note that SFL views language as stratified into four layers: context, (discourse-) semantics, lexicogrammar and phonology-graphology. Semantics and lexicogrammar are content strata, while phonology-phonetics (in the spoken mode) and graphology-graphetics (in the written mode) are expression strata. Language is stratified in that sounds (or, in the case of written text, graphological symbols) combine to form words which are organized into structures (lexicogrammar) which, in turn, construe meanings (semantics). As they are expressed as 'texts,' all meanings in turn construe and are construed by the social and cultural context. Thus, an understanding of language 'from within' means to learn the internal organization of both semantics and lexicogrammar as systems, in the structuralist sense, rather than as inventories (as they are often viewed in L2 teaching). Thus semantics and lexicogrammar are strategic resources for meaning-making in context (Matthiessen, 2006, p. 37). In this sense, it is the functional nature of language that "determines the form taken by grammatical structure" (Halliday, 1970, p. 324). SFL suggests that all languages carry out three basic metafunctions: the ideational (through language we construe our outside and inner experiences), the interpersonal (through language we enact social roles and relationships) and the textual (through language we order the first two metafunctions into coherent wholes). So, we could take the two examples:

1. *The kids ate pizza for dinner and they were all ill later that evening.*
2. *The consumption of pizza led to subsequent food poisoning.*

and note that they share meaning within the ideational metafunction, yet differ in the interpersonal metafunction, as they construe a different type of relationship between the speaker/ writer and listener/ reader through the use of abstraction in Example 2. There is also a difference in the textual metafunction, as Example 1 is ordered into two clauses, using a constant Theme pattern, '*they*' referring back to '*the guests,*' while Example 2 consists of one clause. The metafunctional nature of text is captured through the notion of register (which Halliday, McIntosh and Strevens put forth as important for language teaching in 1964), with the variables of field (what the text is about), mode (the channel of communication) and tenor (the relationship between the interlocutors).

Halliday's functional linguistic theory is often cited as a cornerstone for Communicative Language Teaching (CLT) (Richards & Rodgers, 2001, pp. 159-160; Melrose, 1995, p. 3; Brumfit & Johnson, 1979). As we have seen, Halliday's functional, meaning-based approach showed that one could eschew a traditional focus on correctness of linguistic form and embrace appropriateness of linguistic choices in context. However, Widdowson (2009) points out that the "defining feature" of CLT became "how language functions externally in context" (Widdowson, 2009, p. 202), with Halliday's functional motivations of the language system left aside. Thus, in mainstream ELT, with some exceptions, such as the notions of 'coherence/ cohesion' and Theme-Rheme/ Given-New structures (Alonso Belmonte & McCabe, 2004), SFL descriptions have been virtually absent. At the same time, from the mid-1960s onwards, Halliday's own writings became more involved in mother tongue English (L1) education, moving away from L2 teaching.

Halliday perceived that problems in L1 educational achievement were often linked to social class, in that class differences were likely to result in differences in the literacy experiences of children, i.e. in differences with the functional uses of language (Halliday, 1978). This focus was taken up in Australia, during the 1980s, where researchers applied the tenets of SFL to notions of genre in the creation of genre-based pedagogy (Christie & Unsworth, 2005; Martin, 2006; Veel, 2006), which was introduced in Australia during the 1980s to advance literacy needs in English at school and the workplace, especially of learners whose backgrounds do not provide rich literacy opportunities. The pedagogy employs SFL-based descriptions of the genres of schooling and the workplace, along with a teaching-learning cycle designed to scaffold learners into reading and writing the genres

(Rothery, 1994). In addition to mother tongue education, genre-based pedagogy has been adapted for ESL teaching in a number of contexts, allowing SFL a way into ELT. For example, in Australia, through SFL-based descriptions, the ESL scope and scales (Polias, 2003; Polias & Dare, 2006) set out the scope of the language needs of English L2 learners in schooling contexts, with different scales marking the developmental needs at different ages. Numerous teacher practitioners have applied SFL to ESL teaching (for example, Burns & de Silva Joyce, 2007; Marshall, 2006; Gibbons, 1996, 2001, 2002; Burns, 2001; Jones, Gollin, Drury & Economou,1989). And it is important to mention that the genre-based approach has played a key role in the parallel development over many years of the 'learner corpus' as an advanced resource for teaching English and other languages (Gledhill, 1998, 2005).

Genre-based pedagogy has been taken up by education practitioners for L2 speakers in school settings in other English-dominated contexts. In North America, there are more and more professional development opportunities incorporating systemic functional linguistic approaches for teaching across content areas for L2 learners in schools (for example, de Oliveira & Iddings, 2014; Bunch & Willett, 2013; Schleppegrell, 2013; Brisk, 2012; Brisk & Zisselsberger, 2011; Gebhard & Harman, 2011; Gebhard, 2010; Slater & Mohan, 2010; Gebhard, Harman & Seger, 2007). The WIDA (World-Class Instructional Design and Assessment) consortium, a group of 33 U.S. state departments of education, designs and implements English language proficiency standards and assessment for linguistically diverse school learners. WIDA draws on SFL as its underlying linguistic theory to explicate features of academic language within its sociocultural contexts. The features can be specified for different content areas and levels, and the focus of instruction is placed on what learners are able to do with the language in terms of the appropriate register, genres and text types related to the subject matter, with increasing complexity in the ability to use language as the level of proficiency rises.

SFL is also found applicable to EFL school situations, in contexts where English is not the mother tongue, such as the bilingual schools project in Spain, which uses a Content-and-Language-Integrated-Learning (CLIL) approach; through SFL, teachers can provide learners with a focus on the language of the specific subjects in a meaningful way (Whittaker & McCabe, forthcoming 2015; Llinares, 2013; Llinares, Morton & Whittaker, 2012; Llinares, Whittaker & McCabe, 2011). Herazo Rivera (2012) also provides applications of genre-based pedagogy to EFL teaching in Colombia. Likewise, genre-based literacy pedagogy has been applied to English for school settings in Hong Kong (Maxwell-Reid, 2014; Firkins, Forey & Sengupta, 2007; Firkins & Forey, 2006) as well as to bilingual education (Walker, 2010). Lin (2003) explains how the Singapore national school syllabus for English language learning moved away from a norm-oriented, accuracy-based syllabus to one which focuses on the ability to use language purposefully in a given context, drawing on an SFL genre-based approach.

The next generation of genre-based pedagogy, Reading to Learn, (Rose & Martin, 2012; Acevedo & Rose, 2007), which, as its name implies, is focused more fully on reading, is designed to "improve student learning outcomes, particularly for those who are educationally disadvantaged, including second language learners" (http://tel4ele.eu/). It is being used in several European-funded projects, such as *European Core Curriculum for Inclusive Academic Language Teaching* (http://www.eucim-te.eu/32340) which centers on the needs of migrant and minority students in the EU, the *Teacher Learning for European Literacy Education* (http://tel4ele.eu/) project and the *Stockholm Education Administration Reading to Learn* literacy project (Acevedo, 2010). Beyond these school settings, SFL has also provided understandings of language in context for numerous English for Specific Purposes (ESP) teaching settings around the globe, especially English for Academic Purposes (EAP), such as thesis, dissertation and article writing, in both ESL and EFL environments (Coffin & Donahue, 2012; Gardner, 2012).

The above applications of SFL to ELT show its strong capability to map for learners the typical semantic and lexicogrammatical patterns of language for academic and other specific purposes. At the same time, SFL is making inroads into other contexts of language teaching beyond these specific purposes, in order to provide for learners of English a meaningful focus on grammar. The tenets of genre-based teaching have been adapted specifically for TESOL environments as text-based language teaching (Burns, 2012; Feez, 1998, 1999). In text-based language teaching, the text is the starting point for the pedagogy, which draws on descriptions provided by

SFL more specifically, and discourse analysis more broadly (Burns, 2012). SFL is put forth as beneficial to general EFL (Cirocki, 2012) and to EAL (English as an Additional Language) teaching/learning (Coffin, 2010). For example, it has been applied to general EFL teaching English in Thailand (Chappell, 2010; Kongpetch, 2006). Teacher education programs also incorporate SFL (Cirocki, 2012; Gehbard, 2010; Burns & Knox, 2005), and it also provides the linguistic underpinning for studies in second language development (Hasan & Perrett, 1994; Llinares, 2013; Praxedes Filho 2013; Perrett, 2000).

Furthering the Applications

All of the papers presented in this special issue of TESOL international were first presented at the 25th European Systemic Functional Conference/ Workshop (10-12 July 2014, Université Paris Diderot, Paris, France). The conference theme 'Change, Mutation, Transformation' was chosen in order to generate more interest among practitioners of SFL in diachronic studies (i.e. studies which use longitudinal data, or focus on changes in discourse over time, or even within the space of a single interaction). Although diachronic studies are usually thought of in terms of 'the past,' the following papers all deal with change and diachronicity in a variety of ways, and all in terms of 'the present'. As mentioned above, each of these papers represents several key strands of research activity which are particularly prevalent in SFL at the moment, namely 1) using SFL and new technologies for language learning and research on learning, 2) exploring how learners construct meaning through ideational resources such as grammatical metaphor, 3) exploring how learners use interpersonal resources such as appraisal, 4) looking at teaching and learning through multimodality and the interface between verbal and non-verbal interaction. This special issue of the *TESOL International Journal* thus hopes to augment the literature on these applications of SFL to ELT.

In the first paper, "The Contribution of Systemic Functional Grammar to the Error Analysis Framework," Clive Hamilton uses UAM CorpusTool (O'Donnell, 2010) to compare traditional sentence-level errors in French EFL academic writing with discrepancies analysed from an SFL perspective, namely: 1) errors in the expression of process, participant or circumstance, and 2) errors in theme/ rheme selection. Hamilton's findings, expressed in terms of progress across two semesters of work, suggest that there is considerable value in the traditional grammatical approach to error, but that this needs to be complemented by an approach that looks at discrepancies from the top-down, i.e. the level of discourse and the text.

While Hamilton's contribution provides insight into understandings of language from both the ideational and textual metafunctions, Cassi Liardét's article, "Academic literacy and grammatical metaphor: mapping development" takes an in-depth look at the use of grammatical metaphor, which refers to a kind of inter-stratal tension that can be created through language within the ideational metafunction. Grammatical metaphor is explained through the system of transitivity of the clause, which refers to configurations of processes and their attendant participants and circumstances. Our earlier examples help to illustrate grammatical metaphor:

-   *The kids ate pizza for dinner and they were ill later that evening.*
-   *The consumption of pizza led to subsequent food poisoning.*

In Example 1, there are two clauses which involve participants (expressed as nouns *the kids, pizza, they*); *the kids* carry out a material process (expressed through the verb *ate*) and then are involved in a relational process (*were*) with an adjective *ill* functioning as an attribute; all of this takes place under certain circumstances which are expressed through prepositional phrases or adverbs (*for dinner, later that evening*); the logico-semantic relationship between the eating of the pizza and the becoming ill is expressed through a coordinator *and*. In Example 2, the participants have been effectively removed, the process of *eating* has been nominalized into *consumption*, the attribute of *ill* has also been nominalized into *food poisoning*; references to time have been abstracted (*later that evening > subsequent*), and the logico-semantic relationship between the eating of the pizza and the becoming ill is now expressed through the verb *led to*. Liardét joins the small but growing number of researchers and educators focusing the spotlight on this ubiquitous feature of academic writing for L2 learners (Schleppegrell, 2004), by providing an in-depth view of Chinese learners' use of grammatical metaphor across four years of writing at

university level. Her study sketches out a developmental path in the ability to use this resource, and thus provides ways in which teachers can focus student attention on the variations in packaging experiential meanings through the nominal group (Musgrave & Parkinson, 2014; McCabe & Gallagher, 2008).

Sally Humphrey, in "Building a Critical Stance in Academic and Civic Discourse: Burnishing and Tarnishing", joins an increasing number of SFL analysts who explore Appraisal as a resource for expressing interpersonal meaning in text. For example, researchers (Liu, 2013; Liu & Thompson, 2009; Swain, 2007) have examined how English learners position their claims in argumentative essays through the use of resources within the three APPRAISAL systems of ATTITUDE (expressions related to feelings, judgements of behaviours, and appreciations of events), ENGAGEMENT (use of language to indicate subjectivities and to incorporate other voices), and GRADUATION (linguistic resources used to raise/lower the volume or blur/sharpen different types of evaluation). Humphrey demonstrates how young people can effectively align themselves in favour of or against stances by the kinds of Appraisal choices they make. Eric Cheung, in "Legitimising The Knower's Multiple Voices in Applied Linguistics Postgraduate Written Discourse," also contributes to understandings within the interpersonal metafunction, specifically demonstrating how a graduate student successfully creates an authorial voice through the choices made from within the system of ENGAGEMENT. He draws on the exciting synergy between SFL and Legitimation Code Theory, which takes Bernsteinian perspectives further into understandings of the construction of disciplinary knowledge (Maton, Hood & Shay, 2014; Martin & Maton, 2013; Martin, 2011), adding to the literature by focusing specifically on an English L2 academic writer. The linguistic choices the student makes serve also as indicators of how she effectively positions herself with respect to knowledge of her disciplinary field. The findings of these researchers point to ways in which teachers can raise second language learners' awareness of the kinds of lexico-grammatical choices which can more effectively interactive with their readers, and thus convey their meanings and intentions in academic writing in English (see also Ngo, Unsworth & Feez, 2012).

Moving on to the textual metafunction, in her article, "Secondary School Students' Use of Discourse Strategies in Two Languages: The Role of Hypertheme in Argumentative Writing," Corinne Maxwell-Reid shows the effects on the writing in Spanish of secondary school students from Spain who are learning English and school subjects through a CLIL approach. Similar to Liu and Furneaux (2015) for English and Chinese, Maxwell-Reid draws on SFL in carrying out a contrastive rhetoric analysis of English and Spanish discourse structures, demonstrating the ways in which the adolescent writers have adapted features of English into their writing in Spanish. She considers issues related to English as a global language, leading her to argue for explicit teaching of discourse structures in the L2 classroom, empowering student writers in their linguistic choices to make the kinds of meanings at the discourse level that they wish to make. In Peter Fries' contribution "Managing Information to Relate Sentences within a Text: Houston we Have a Problem," the author sets out a simple yet powerful model for the analysis of information gaps in text. For Fries, an 'information gap' sets out a term or some proposition which is underspecified and thus "begs a question" to which a following element in the text (the 'grounding') provides a specific response. As well as providing a typology of information gaps, Fries discusses the potential problems encountered by learners, who sometimes have to negotiate their way through "a complex pattern of claim, denial, counter-claim in text." Fries' contribution is reminiscent of classic papers in discourse analysis by such authors as Eugene Winter, John Sinclair, and Gill Francis, all of whom present a simple linguistic idea which is at the same time immensely rich, and of immediate importance to teaching / learning language.

In addition to the metafunctional focus which SFL provides to teachers and learners, a further advantage of SFL descriptions for L2 teaching is its applicability to other modes of meaning-making (Bezerra, 2011; Macken-Horarik, Love & Unsworth, 2011; Heberle, 2010; Unsworth, 2006, 2001; Royce, 2007); for example, Forey and Polias (forthcoming) use SFL-inspired concepts to describe a range of meaning-making resources, including images and gestures, for teaching subjects such as science in English; these resources can take on additional weight of meaning-making when the linguistic resources of an L2 are not fully available to the participants. The final three papers in this volume all examine ways of analysing multimodal and/or non-verbal interaction. First,

Anne Thwaite, in "Using the "Multimodal Analysis Video" Program for Register Analysis: A Preliminary Study" demonstrates a tool which allows for exploration with students of the contributions to understandings which are created through language as well as through paralinguistic features, such as intonation and gaze, in high-stakes communicative situations, such as a visit to the doctor. Mei-Ya Liang, in "Multiple Modes of Meaning in Expository Discourse" provides an analysis of university student oral presentations, highlighting the interplay between the linguistic and non-linguistic forms which students use to make their points, providing useful insights into differences between writing and speaking modes of academic presentation. Finally, in "New Media and English Language Teaching in China: A Case Study Based on Multiliteracies Pedagogy", Yu-Jie Qi, Yan San and De-Zheng Feng draw on SFL and other current approaches to literacy teaching / learning practices (Coffin & Donahue, 2012) in their analysis of the teaching of a unit involving a video, reframing the notion of authenticity in language teaching through the SFL concepts of genre and register, thus providing for novel ways of focusing on meaning using new technologies in the primary English language classroom.

Going Beyond to New Applications

It is our hope that readers of this special edition of the *TESOL International Journal* are inspired by these applications of SFL to ELT. At the same time, it is important to highlight that SFL is not without its drawbacks; it is a complex theory matching the complexities of language (McCabe, forthcoming 2015), and its terminology can seem daunting (Bourke, 2005; Burns & Knox, 2005). Thus, in addition to the references cited throughout the journal, below we provide some introductory texts and websites for those who would like to know more about SFL and join those who have found satisfaction in its pedagogical applications to their own language teaching.

Endnote

[1] Many SFG practitioners prefer the term "appliable" to "applicable."

SFL Introductory Texts

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Online Resources

Alan Hess: Stories4Learning: explanations of SFL, genre-pedagogy, Reading to Learn; applications and examples, and links to further resources.

Brett Laybutt: EFLFunc: explanations of SFL; experiences of applications to EFL classes.

Educational Semiotics: https://educationalsemiotics.wordpress.com.

Leong Ping Alvin: SFLsite: accessible SF grammar explanations with examples and quizzes.

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The Contribution of Systemic Functional Grammar to the Error Analysis Framework

Clive E. Hamilton*

Université Sorbonne Nouvelle, France

Abstract

This paper reports on a pilot study aimed at assessing the applicability and benefit of using two semantic metafunctions from Systemic Functional Grammar (SFG) to classify errors identified in a sample learner corpus of French university students writing in English. The study uses traditional functional categories at the first level of analysis, where the focus is on general morphosyntactic annotation before re-annotating the same occurrences using two metafunctions identified in systemic grammar. The results show that traditional error analysis proves to be extremely accurate in identifying isolated grammatical lacunas of learners, but that an informed complementary approach is needed if we are to go beyond syntax in identifying errors as part of a structural and textual whole.

Key words: English for Academic Purposes, Error analysis, Semantic metafunctions, Systemic Functional Grammar, UAM CorpusTool

Accuracy and Inaccuracy in English for Academic Purposes

The current global context and status of English in academia have given rise to an increasing number of studies in English for Academic Purposes (EAP). Some of these focus, whether in research or language teaching, on macro-textual features relating to cultural awareness and discourse specificities in terms of register and genre (Hyland, 2007; Johns, 2011; Swales, 2011). Others tend to favour a more bottom-up approach where language proficiency assessments constitute the starting point of most analysis associated with authentic second language production or use. In other words accuracy and inaccuracies in usage are seen as key elements in the comprehension of second language acquisition, notably where this is deemed central to further theorisation and improvement of language teaching.

However, what can be observed is that inaccuracies (hereafter *errors*) within the bottom-up approach are generally only explained in light of traditional or 'school' grammar – in both manual and computer-aided analysis (Dagneaux et al., 1998; Diaz-Negrillo & Fernandez-Dominguez, 2006). And in spite of being a burgeoning field in applied linguistics, over the last 40 years many error analysts continue to focus on local syntactic relations at the expense of the overall textual construction. This continued refusal to incorporate a solid theoretical linguistic framework to the traditional approach, which has evolved in a rather languid manner since the 1960s, means that error analysis (EA) does not take advantage of the many theoretical advances that linguistics as a science has put forward since then. One cannot help but wonder as a result if this refusal does not have a direct impact on the slow evolution or the state of general decline with which EA is currently faced. One may even argue that the decline could potentially be due in part to the actual analysis which remains predominantly manual; and that this onerous task of identifying a plethora of errors individually in lower level texts (i.e. beginner or intermediate) can prove daunting to any analyst working on large corpora.

*   Tel. ++33(0)984470627. Email: clive.hamilton@etud.sorbonne-nouvelle.fr. Laboratoire LaTTiCe - UMR 8094 (CNRS/ENS), Université Sorbonne Nouvelle, Paris 3, France*

Furthermore, the majority of past work done in error analysis has led to the creation of various error taxonomies which are predominantly aimed at categorizing erroneous elements in a traditional school grammar fashion: i.e. errors on general word classes. These classifications identify errors on the same linguistic level (though, with different names [cf. Anderson, 2011]) highlighting more often than not a failure in the linguistic performance of the second language learners' production rather than a failure in the actual communicative attempt. In other words, traditional EA boils down to identifying errors primarily in terms of correct or incorrect grammatical sentence constructions to the detriment of the overall text constructs. For those working in EAP, however, this may be cause for concern as "grammar" or linguistic knowledge is only part of what is considered important, given that respecting specific text genres and conventions are equally of prime significance.

This general trend should therefore be called into question. First, EAP has seemingly become an indispensable part of academia in many university level courses in countries where English is not the mother tongue. This is particularly the case in the French university where the current study was carried out. In addition, there has been a surge of English language programmes around the world, each one more specific than the other, with many differing approaches all geared towards a specific group: i.e. English for Aviation, English for Business, English for Engineers, etc. These specific programmes are on the rise and are often informed by general and applied linguistic research. For instance, my personal experience as a language instructor at the tertiary level has shown second language proficiency is accelerated when the curriculum is specifically designed for a particular target group – that is, taking into consideration both the macro-textual (genre specific) and the micro-textual (linguistic specific) features in the curriculum design. Therefore, if traditional error analysis continues to focus exclusively on grammatical correction, there will ultimately be little renewal in the language teaching approaches based on studies assessing language learners' weaknesses in contextual and more communicative second language use.

These initial concerns have led to the current pilot study in which I hope to provide answers to the following questions:

3. What and how can a Systemic Functional Grammar framework contribute to error analysis?
4. Can it provide a different way of conceptualising errors, without discarding the traditional notion of grammaticality as a solid criterion and focus?
5. Can it help to better distinguish between errors of grammaticality and acceptability on the one hand and those of unmastered communicative functions on the other?

General Evolution of Error Analysis

Error analysis as a methodological tool is often attributed to the work of S.P Corder (1967) who was among the first to propose a systematic model of classifying errors. However, prior to this, there were numerous attempts at language error classification – both in first and second language production. For example in 1909, George M. Wilson pioneered what was to become a series of systematic error analyses of first language production in a selected number of American elementary schools. To do so, Wilson worked with a group of teachers who were asked to collect and grade the oral and written work of their students over a two-week period. This small scale study continued over a 20-year period with different US states implementing Wilson's error test as a means of improving English language education in young learners. His classification focused on identifying errors in verbs, adverbs, preposition and a category termed miscellaneous. And in spite of the apparent simplicity of this taxonomy, Wilson's study succeeded in illustrating that error analysis was relevant not only to language teachers but general language enthusiasts as his results indicated that particular errors persisted from the initial entry years and throughout schooling even after 8 consecutive years of English language education.

Another example of error analysis in first language education can be pinpointed by the groundbreaking work of Henri Frei in 1929, Geneva, Switzerland. He can be considered one of the first linguists who looked

beyond grammaticality in explaining language errors. However, contrary to many of his successors, Frei did not propose a 'reusable model' of classifications, which meant that his in-depth analysis remained, for many, too abstract and irreproducible. This by no means implied that his work was to be discarded, but rather it was to be considered a stepping stone showing that error analysis was a worthwhile field of theoretical linguistic inquiry. It should also be noted here that his work was carried out on French adult mother tongue speakers, indicating as Wilson before him, that errors are to be considered a suitable domain for study in first language acquisition, both in young and adult subjects.

The approach to errors in second language acquisition, however, has always been more systematic. Harold E. Palmer (1917, 1931) saw errors as ways of questioning not only students' second language proficiency but more so the efficiency of a given language programme, the teaching methods and in some cases even the methods of evaluation. This led to a series of systematic exercises or drills that were devised and put in place to correct any identified errors. Consequently, this approach contributed to what is now known as the General Service List (GSL) which was first published in 1953. The GSL was a list of high frequency words compiled before the computer-aided corpus era arose. And this list was devised primarily to provide second language learners of English with a reliable source of useful vocabulary. It should be noted nonetheless that Palmer's take[1] on errors was not subsequently adopted. However, in spite of this, he is still considered the 'father' of applied linguistics and more precisely collocation studies, which today are progressively becoming paramount in EAP pedagogy.

It wasn't until the late 1960s and 1970s that error analysis was catapulted to the frontline of second language studies. This shift in perspective resulted to a great extent from Corder's 1967 article and his two follow-up papers in 1971. His first paper indicates that errors require more than a furtive analysis or simply labelling them « *as possible annoying, distracting but inevitable by-products of learning a language* » (1967, p. 162). In this light, he argues in favour of the study of errors as a significant area of scientific inquiry both for the theoretical linguist and the in-class language instructor:

> First to the teacher, in that they [i.e. learner errors] tell him, if he undertakes a systematic analysis, how far towards the goal the learner has progressed and, consequently, what remains for him to learn. Second, they provide to the researcher evidence of how language is learned or acquired, what strategies or procedures the learner is employing in his discovery of the language. (p. 167)

In addition to the progressive change of perspective concerning errors, Corder proposed a systematic model of error analysis that has proved to be easily adaptable both to language teachers wishing to carry out an evaluation of their own learners and to the language researcher undertaking error analysis on a larger scale. This systematic model is schematised in Table 1 where the erroneous elements are classified according to a pre-established grid. In this model, an error can be categorized in four different ways: *addition* of an unnecessary element; *omission* of a required element; *misordering* in terms of position in the sentence; and incorrect *selection*. This of course must be systematically cross-checked with the necessary linguistic level to provide a holistic view of the element under study.

Table 1
A Schematized Model Of Cordel's Error Analysis

	addition	omission	misordering	selection
morphology				
syntax				
lexicon				
...				

Since the introduction of this model, many others have surfaced; each one more complex and detailed than its predecessor. However, many remained in line with Corder's initial work, developing classification systems or taxonomies that are predominantly descriptive. For instance, Dulay, Burt and Krashen (1982) proposed the Surface Structure Taxonomy which in essence can be likened to an in-depth update of previous work. Here the principal error classifications fall under the following headings: (1) omission, (2) addition, (3) misformation, and (4) misordering. It should also be noted that others have opted for stricter linguistic categorisation using, for example, general word classes (verb, noun, determiner...), or a thorough breakdown of all grammatical notions (notably in terms of syntax and morphology). This is exemplified in Figure 1.

F	Form	M	Morphology
		S	Spelling
		PW	Punctuation wrong
		PM	Punctuation missing
G	Grammar	A	Articles
		ADJCS	Adjectives, comparative/superlative
		ADJN	Adjectives, number
		ADJO	Adjectives, order
		ADVO	Adverbs, order
		NC	Nouns, case
		NN	Nouns, number
		P	Pronouns
		VAUX	Verbs, auxiliaries
		VM	Verbs, morphology
		VN	Verbs, number
		VNF	Verbs, non-finite/finite
		VT	Verbs, tense
		VV	Verbs, voice
		WC	Word class
L	Lexis	CC	Conjunctions, coordinating
		CLC	Connectors, logical, complex
		CLS	Connectors, logical, single
		LC	Conjunctions, subordinating
		P	Phrase
		S	Single
		SF	Single, false friends

Figure 1. Part of the ICLE error taxonomy (adapted from Anderson 2011)

The research team behind the International Corpus of Learner English (ICLE) - which is one of the largest existing collections of second language texts composed by students – has developed an error annotation scheme based primarily on sentence grammar. What is signalled in this model as an erroneous occurrence is the linguistic function of a single or multiword unit in a given sentence. For example an 'article error' means that an identified problem occurs on the annotated article. A brief overview is provided in Table 2[2]. Further surface classification in

terms of specifying what exactly the problem may or may not be is not directly accounted for and therefore left to the analyst's discretion.

Table 2

Sample 'Article Errors'

1	Even if such *a* knowledge is indispensable […] (txt_007_sm2)	article not required
2	It is *a* MBA […] " (txt_016_sm2)	incorrect article selection
3	In fact, *the* motherhood is a big obstacle […] (txt_009_sm2)	article not required
4	[…] have been developed for Ø last 40 years. (txt_008_sm2)	omission of required article

A contrasting example of an error taxonomy combining both surface structure classification and general linguistic values or word classes can be found in the error annotation scheme used in the Cambridge Learner Corpus. The list of linguistic elements that are checked for accuracy are situated on the top right hand column in Figure 2, whilst the surface classifications are located on the vertical left hand column. While both these models offer a complementary analytical framework, they seem too limited in their linguistic categorisation of errors in so far as they offer little prospect of innovation in describing L2 errors.

	Unspecified part of speech	Verb	Noun	Adjective	Adverb	Preposition	Conjunction	Quantifier	Pronoun (anaphor)	Determiner	Punctuation
Wrong form used											
Something missing											
Word or phrase needs replacing											
Word or phrase is unnecessary											
Word is wrongly inflected											
Word is wrongly derived											
Verb is in the wrong tense											
Countability error											
Agreement error											
Wrong spelling											
Spelling confusion											
US spelling											
Collocation/tautology error											
Register error											
Negative formation error											
Complex error											
Idiom error											
Argument structure error											
Word order											

Figure 2. Cambridge Learner Corpus annotation scheme. (Adapted from Anderson, 2011)

The selected models of error analysis and their taxonomies covered so far in this paper are by no means meant to be exhaustive; they do, however, show that error analysis has progressed in a rather linear fashion. The surface description used today reflects the core of Corder's seminal paper and the linguistic categories have remained to a great extent based on sentence or traditional school grammar. In keeping therefore with the heritage of traditional error analysis, I have conducted this two-fold study using (i) a detailed error taxonomy developed by O'Donnell (2010) which I believe goes beyond the traditional sentence grammar and (ii) a linguistic level of analysis centered on two of Systemic Functional Grammar's semantic metafunctions (Halliday & Matthiessen, 2004): the experiential and textual metafunctions. The aim is to find out whether this kind of approach can help change the way language teachers and researchers analyze and interpret second language errors and transcend the limitations of the traditional morphosyntactic analysis.

The study

Learner Corpus and the Participants' Profiles

This paper reports on a pilot study and to this end uses a small sample of a larger collection of texts. These texts are student essays written by first-year French university students studying non-linguistic disciplines; i.e. they are all majoring in Economics or Management studies. The texts were collected in a semi-longitudinal manner during one academic year. Students were asked to give the researcher permission to consult and collect their first and second semester final exams, from their Business English course, in which they had to write an argumentative essay. Individual texts had an average of 500 words. This particular setting allowed for the controlling of two important variables: (1) the study of longitudinal acquisition of specific L2 language phenomena and (2) the guarantee that no external or secondary resources were used, thereby limiting individual or performance bias.

By way of questionnaires, differences in participants' linguistic profiles were filtered and kept to a minimum so as to have a well-balanced and representative corpus. Representativeness was considered essential as the university where the project took place has a diverse international student population. Therefore, only participants who considered themselves native French speakers were retained for the pilot study and those with multiple linguistic backgrounds and other significant differences were added to a larger separate study. The median age at the beginning of the study was 18 and the total number of participants retained amounted to 122. The sample population used for this paper corresponds to a total of 40 randomly chosen texts out of a total of 244 (2 x 122). It should be noted that the students were considered to have a B1/B2 English level (i.e. intermediate) according to the Common European Framework of Reference for Languages (CEFR) and as such were immersed into content-based language classes (cf. Brinton, 2003; Grabe & Stoller, 1997) – where formal English grammar instruction was not a major element.

Annotation Software, Annotation Schemes and Analysis

The sample corpus representing 40 texts, and therefore 20 second language English learners, was analyzed manually using the UAM CorpusTool software for annotating text (O'Donnell, 2010). The software was chosen for three practical reasons: it has an integrated error annotation scheme for English (see Figure 3), it is user-friendly in terms of creating and adapting one's own annotation layer and it is highly cost effective given it is also freeware. As a result, for the first part of the analysis, the integrated error annotation taxonomy was used. Following on from this, the error annotations obtained from the first level of analysis were re-annotated using the two preselected SFG metafunctions.
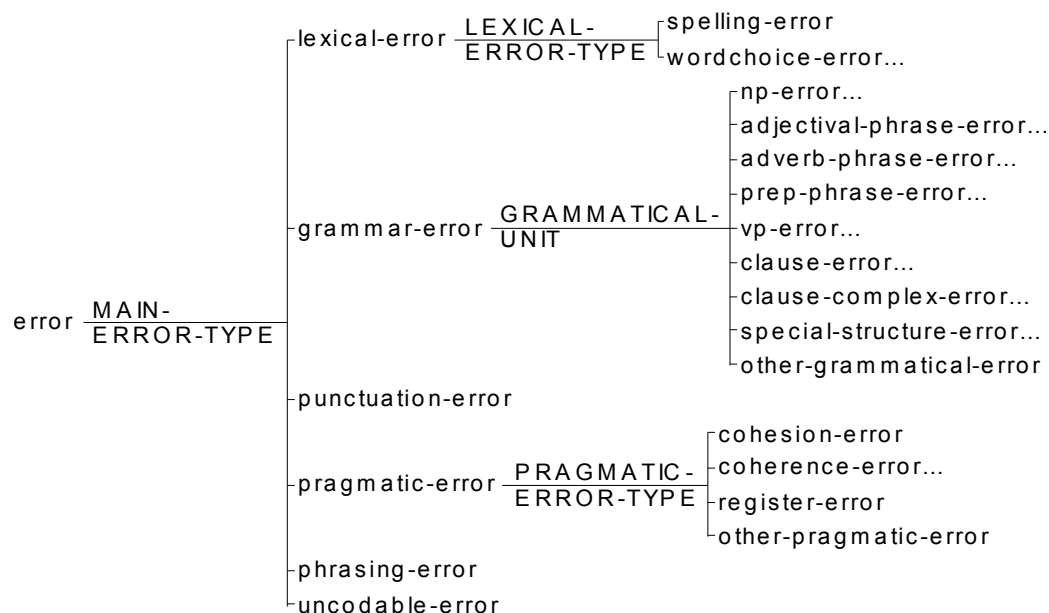
Figure 3. A partial view of the error taxonomy in the UAM CorpusTool.

As can be seen from Figure 3, the UAM error taxonomy has a readily-interpretable visual aspect. Erroneous elements are divided into six main types (cf. O'Donnell, 2010 for an exhaustive introduction).

1. *Lexical where 'grammar' or 'context' are not the source for a particular error*
2. *Grammatical where morphosyntactic elements are incorrect*
3. *Pragmatic where the situational context leads to an error*
4. *Phrasing where the stringing of a given sentence proves to be faulty*
5. *Uncodable where the erroneous occurrences do not fall into any of the first four categories*
6. *Punctuation*

As a reminder, one of the principal postulates in Systemic Functional Grammar is that language is a functional tool and as such one should be able to identify and analyse its functions individually. Among many of the different levels of functional analysis, SFG has put forward what are called metafunctions. These metafunctions refer to the intrinsic semantic functions that every language can be said to carry out in a given context. The two metafunctions used in the second level of analysis are briefly outlined below and are further exemplified in Figures 4 and 5 respectively.

The experiential metafunction is used to "name things, thus construing them into categories" and it can also be used for "representing some process – some doing or happening, saying or sensing, being or having—with various participants and circumstances" (Halliday & Matthiessen, 2004, p. 29). In other words, this function allows us to communicate using established categories in the language repertoires of both the speaker/writer and the addressee so as to ensure the information communicated is understood. For instance, in the second language classroom context, using the appropriate "lexical choices" is essential for good communication and can make the difference between a comprehensible and incomprehensible utterance, while on the other hand inappropriate choices can lead to a slow breakdown in communication.
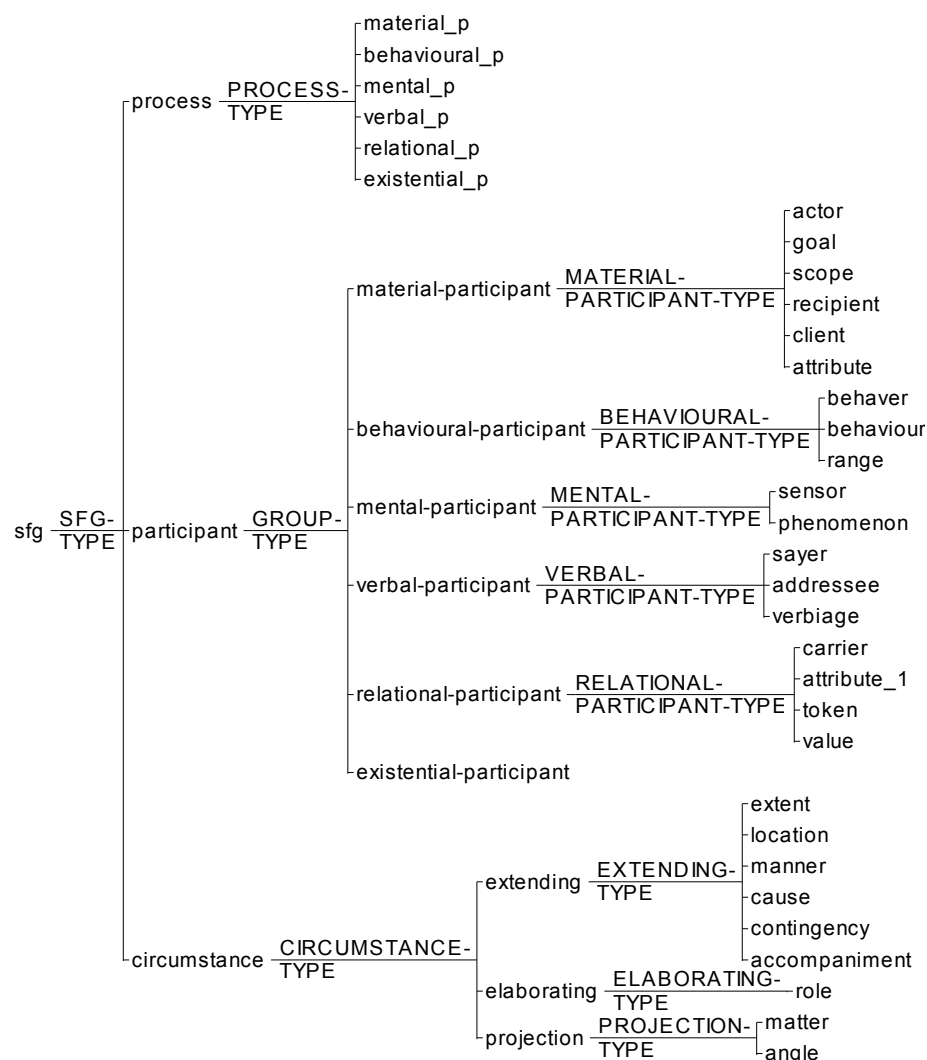
Figure 4. An adaptation of SFG's experiential metafunction

In the present study, the experiential level, which is divided into three main categories, was used to examine errors in terms of the experiential semantic values. This of course can be directly contrasted with their grammatical function identified through the UAM taxonomy: i.e. participants errors can be contrasted with errors identified in nominal groups in traditional grammar, process errors can be contrasted with errors in the verbal group and circumstance errors with those in prepositional phrases and adverbial groups. This type of analysis is not simply about changing the names of previous error annotation tags but rather it allows us to examine individual errors not only in terms of their immediate grammatical function but rather to look beyond and see if a particular meaning-making process has not been mastered. For example, the clines in Figure 3 indicating adverbial and prepositional errors in a grammatical analysis may be further explained through a closer experiential analysis. It may quite possibly be a particular type of adverb or preposition and therefore a particular type of meaning-creation that raises a problem which needs to be addressed specifically.

Given the strict differentiation provided by SFG's taxonomy, it is believed that a detailed breakdown of the main groups will help to identify any differences in specific typologies where error frequencies are significantly

higher than in others. That is to say, a particularly high number of errors in existential processes, for example in 'there is' or 'there are' constructions, may imply much more than simple verb conjugation problems. The same postulate holds true for other *process errors*, and errors identified traditionally in nominal and adjectival groups (*participants errors*), in adverbial groups and prepositional phrases (*circumstance errors*).

To illustrate further what is considered *process error* and why this can prove informative for language teachers, let us look briefly at the six process types.

- Material process refers to verbs depicting physically activity – in the sense of something that is happening or being done.
- Behavioural process as its name indicates refers to explicit (often observable) behaviour.
- Mental process has to do with verbs of cognition, perception, etc.
- Verbal process refers to the act of expressing, indicating, etc.
- Relational process establishes a relationship between two things.
- Existential process serves to show existential relation: e.g. *There +* (*be*)

These distinctions may provide language teachers with valuable insight beyond the cover term of what is commonly classified as verb errors. For example, recurrent errors in lexical verb choices might be more than just random occurrences. This is the particularly the case with the following sample verbal process errors when analysed comparatively with the overall corpus: the French students-writers' are attempting to transfer these processes which are not verbal in French, into their English verbal look-a-likes.

| 5 | We know that it will *ask* a lot to [...] but we are not able *to tell* what | (txt_017_sm2 |
| 6 | […] it's the only way *to answer* to the ecologic issue […] | (txt_009_sm1) |

A 'back-translation' of sentence 5 in French would be '*Nous savons que cela demanderait …'*, and from the structure it can assumed that it was a literal translation on the student's part which resulted in the present 'mistranslation'. The correct sentence, given the context, should read '*We know that this will require'*. One possible advantage of this type of analysis in second language texts is that it could provide a new angle of looking at false 'verbal' friends and an additional and detailed way of further classifying them.

The textual metafunction (Figure 5) is said "to build up sequences of discourse, organizing the discursive flow and creating cohesion and continuity as it moves along" (Halliday & Matthiessen, 2004, p. 30). Unlike the two previous layers of analysis, this metafunction looks at discourse as a coherent construction where theme and rheme components are considered building blocks upon which the clause and the overall textual ensemble are grounded. The aim of using the textual metafunction is to find out if errors can be further explained in terms of particular positions or textual/discourse specific components. Errors are categorized here in terms of their position and textual meaning in the clause. Theme errors are therefore those that occur at the starting point of a given clause, whether single or multi-word units. At this level when an error is identified in a nominal or adjectival group, it is considered a theme error if in the clause-initial position. Further classification depends on whether there is only one theme in the clause under study: if this is the case, the "single theme" option is chosen. If there is more than one theme, the "multiple themes" option is selected and the erroneous item is indicated according to its internal thematic function.
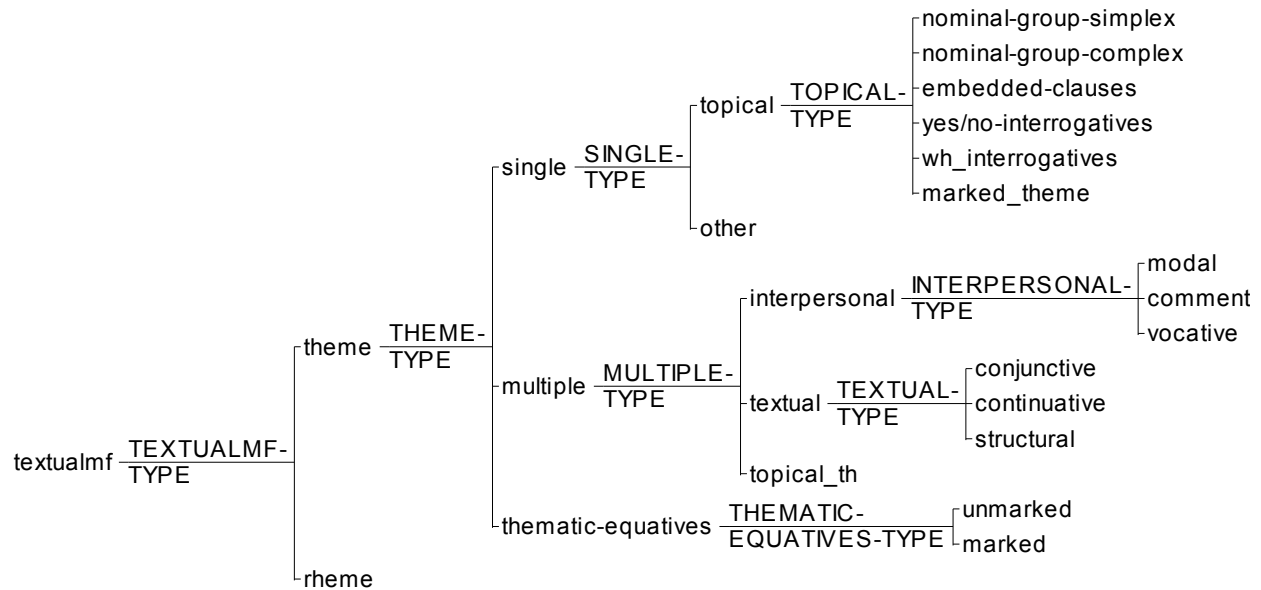
Figure 5. An adaptation of SFG's textual metafunction

Results

Results from the UAM CorpusTool

The results from the UAM error taxonomy are relatively straightforward and are depicted in the bar charts in Figure 6. The numbers given represent the raw count of total errors in the sample corpus. Although the graphs have a similar structure, a close look at the numerical value will confirm the differences in the number of errors per category and per semester. What should be noted here is that there was a decrease of about 20% in the overall number of errors in all categories, expect for those labeled punctuation errors. This could be explained in light of the fact that the English language classes were content-based and not focused on formal grammar, which may have led to a rapid reduction in specific grammatical error occurrences but not in others. This overall decrease therefore indicates a well-rounded improvement for the sample student population.
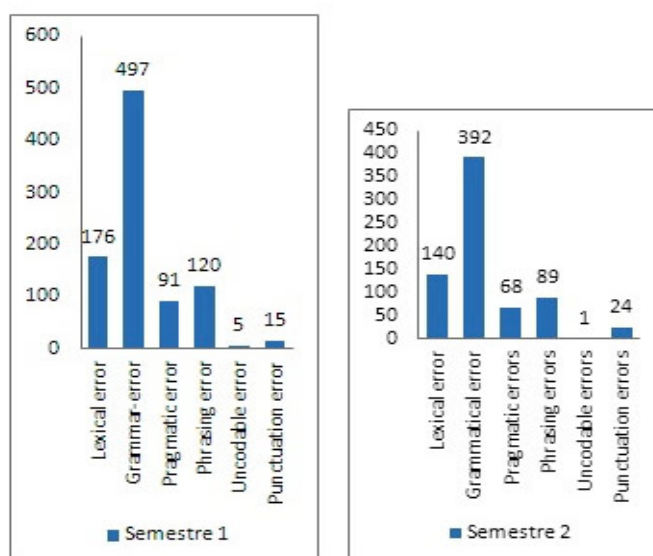
Figure 6. Comparative look at UAM error classifications in both semesters

A further breakdown of the UAM classification provides us with an in-depth and detailed analysis. The right hand sides of Figure 7 and 8 show the six main error categories and the left hand sides a further breakdown of the elements found under the grammar error classification. This type of analysis clearly identifies specific problematic function words in our sample learner corpus, making it a fundamental tool for language teachers and students. For language teachers, being able to pinpoint and explain a particular item as erroneous in regard to the target language system is central both to language evaluation and to monitoring teaching and learning progress. For the students, being told exactly where their problem areas lie could allow them to correctly and, where necessary, consciously readjust their internal grammar, thereby gradually updating their interlanguage.

MAIN-ERROR-TYPE	N=906	
lexical-error	19.43%	176
grammar-error	54.86%	497
pragmatic-error	10.04%	91
phrasing-error	13.25%	120
uncodable-error	0.55%	5
punctuation	1.66%	15

GRAMMATICAL-UNIT	N=906	
np-error	19.87%	180
adjectival-phrase-error	2.21%	20
adverb-phrase-error	1.32%	12
prep-phrase-error	6.40%	58
vp-error	9.93%	90
clause-error	7.40%	67
clause-complex-error	6.95%	63
special-structure-error	0.66%	6
other-grammatical-error	0.11%	1

Figure 7. Overview of results from semester 1

Feature	Percent	N
MAIN-ERROR-TYPE	N=718	
lexical-error	19.50%	140
grammar-error	54.60%	392
pragmatic-error	9.47%	68
phrasing-error	12.40%	89
uncodable-error	0.14%	1
punctuation	3.34%	24

GRAMMATICAL-UNIT	N=718	
np-error	21.17%	152
adjectival-phrase-error	2.23%	16
adverb-phrase-error	0.56%	4
prep-phrase-error	5.15%	37
vp-error	11.98%	86
clause-error	7.66%	55
clause-complex-error	4.32%	31
special-structure-error	1.39%	10
other-grammatical-error	0.14%	1

Figure 8. Overview of results from semester 2

As shown in Figures 7 and 8, grammar errors account for more than 50% of the total errors in both semesters. However, going beyond the surface label of 'grammar errors' shows that most erroneous occurrences are located in the noun phrase, of which 100 (in semester 1) and 70 (semester 2) are article/determiner errors. This prevalence of 'determiner errors'—that is, in their overall overuse and misuse—is not endemic to our native French learners of English, but rather a highly common error in many learners from various mother tongue backgrounds (Ekiert, 2004). The figures are nonetheless significant and in a grammar-oriented English language class these particularly thorny errors could become the focal point of subsequent lessons.

Table 3
Sample Errors from the Grammar Error Sub-Division

7	[…] and *the* winter is eventually showing up! (txt_016_sm1)	np-error
8	[...] the rhythm of *Ø* ecosystem would generate a chain reaction. (txt_10_sm1)	
9	The unemployment rate is very *highest* in the world than […] (txt_012_sm1)	adj.-error
10	*Very fastly* the world was impacted […] (txt_014_sm1)	adv.-error
11	It is a way to feel less responsible *of* damages [...] (txt_013_sm1)	prep.-error
12	The 2008 financial crisis *provocated* (and *provocate*) [...] (txt_012_sm1)	vp.- error
13	Their greenhouse gases *rejection* pollute *strongly* the ozone cover (txt_09_sm1)	(lex)+ adv

Results from the Experiential Metafunction

Let us keep in mind here that process errors refer to errors occurring in the verbal group, participant errors to those occurring in the nominal group, and circumstance errors to those in prepositional phrases and adverbial groups. Comparatively speaking, there was an overall decrease of approximately 20% at the rank of the process and participant groups. However, there was an unexpected 40% increase in the circumstance errors. The general decrease in process and participant groups could be explained in terms of learners' interlanguage progression or simply as a natural reaction to the content-based approach adopted throughout the academic year. The language classes and intensive contact with EAP specific materials provide a well-rounded source of English language input, which can also be used to account for the observed 20% decrease in five of the main UAM error classifications. The unexpected 40% increase, however, implies that circumstance errors cannot be treated as simple lexical or syntactic elements (because learners have learnt and are using them, but they are doing so incorrectly). The 40% could also be due in part to the increase in learners' trial and error strategy; i.e. in the second semester they attempt to write longer responses and use more complex clause constructions. These in turn require more precise circumstances so as to provide the necessary 'framing' of the perspectives and 'stance' the student-writers intended to create.
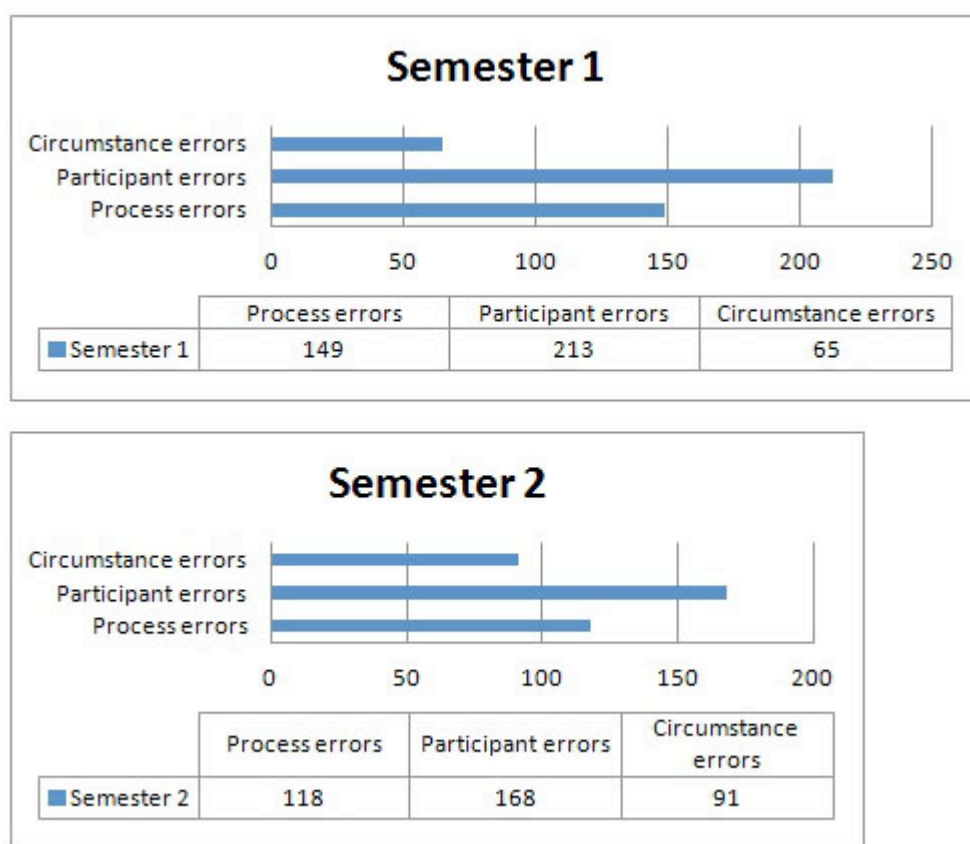

Figure 9. Error repartition in the SFG experiential level

Another unanticipated result in the experiential error analysis was that there were only one or two subcategories of each of the three groups which accounted for more than 60% of the overall erroneous elements. For example in the process group, 51% or all errors were identified as material processes in semester 1 compared with 66% in semester 2. Consequently in the participant groups, 51% were material participants in the first semester and 37% in the second. However, the most intriguing results were once again identified in the circumstance group with a 90% average occurring in what is called extending circumstances in SFG, in both semesters. The results show that circumstances (often interchangeable with 'adverbs') of location and manner constitute the most problematic issue for the sample population within this specific group. Errors here are due mainly to the position in the clause while others are more rooted in semantics. A few examples are provided in Table 4.

Table 4
Sample Errors from Our Extending Circumstances Group

14	[…] every year *in the world*, five billion dollars […] (txt_005_sm1)
15	Globalisation caused many discussion […] thanks to its effect *in variety spheres* (txt_015_sm1)
16	[…] companies who […] reduce *totally* their emission of greenhouses gases (txt_011_sm1)
17	*Since* two centuries, problems of emission [...] (txt_011_sm1)
18	It has *alsoimmediately* consequences to the countries which import it.(txt_012_sm1)

Results from the Textual Metafunction

The textual level has also proved rich in new perspectives, as it helps us to accurately pinpoint errors according to both their textual function and location in a given clause. For example, the theme analysis below identifies errors that occur in the theme position: i.e. anything in the clause-initial position that precedes the process, or 'verbal group.' By contrast, the rheme analysis refers to errors occurring in the verbal group and onward. This part of the analysis implies looking at the complete clause or text not only in terms of grammatical correctness, but rather examining errors as a text-creating function that has not been mastered. This type of analysis can be particularly useful when looking at the thematic progression of an overall text.[3]

In Figure 10 the number of errors per semester and in the first subdivision of theme errors is shown to have decreased in number; however, this is below the general 20% seen with the other error classifications obtained from the UAM error scheme and the experiential process and participant groups. Results also show here that more than 70% of errors in both semesters appear in what is considered the rheme of a given clause.

TEXTUALMF-TYPE	N=562		TEXTUALMF-TYPE	N=474	
theme	24.38%	137	theme	23.42%	111
rheme	72.95%	410	rheme	73.84%	350
THEME-TYPE	N=562		THEME-TYPE	N=474	
single	15.48%	87	single	16.03%	76
multiple	6.05%	34	multiple	6.12%	29
thematic-equatives	2.85%	16	thematic-equatives	1.27%	6

Figure 10. Brief overview of the errors identified on the textual level

The most interesting findings from the textual layer of analysis were in the theme. One possible explanation

is simply because the theme analysis is carefully subdivided into different groups and the errors observed were highly recurrent in only 5 of the 15 subgroups. The rheme analysis on the other hand didn't allow for further classification, as SFG itself doesn't provide a clear breakdown of different possible rheme types and a more delicate quantitative analysis might be of greater interest in a subsequent study. A threshold of approximately 10% of the overall errors was used to classify elements that were considered statistically frequent. Let us now look at the three most problematic theme positions.

Table 5
Overview of Theme Analysis

Theme analysis (semester 1) *n=137*		Theme analysis (semester 2) *n=111*	
sg. n/group simplex	59	sg. n/group simplex	50
m. textual	13	m. textual	10
m.topical	17	m.topical	14

Table 6 can be best understood if contrasted with Figure 5. '*Sg. n/group simplex*' refers to errors occurring in *theme position* identified in a single nominal group. As a reminder, a single nominal group is generally composed of a noun phrase head and a determiner or pre-modifiers. 'M' in Table 5 means that the error occurs in theme position but that there were multiple themes: i.e. a nominal group and what is considered a textual theme. 'M.topical' is when the error is identified on the nominal group functioning as a subject in the clause.

In the *sg.n/group simplex* and the *m.topical*, the most frequent errors occurred before the noun phrase head: i.e. often on the 'article' or the chosen pre-modifier. Surprisingly, however, there were few observed errors in complex nominal groups: i.e. the coordination of two or more noun phrases functioning as a grammatical subject. Frequent textual errors re-occurred in a selected list of lexical choices including 'further, moreover, nevertheless, indeed,' which indicates that the semantics of these words may be at issue. In other words, the textual function of these words in terms of their roles as connector is known, but when and how exactly to use them pose a problem for the students.

Table 6
Examples of Errors Identified in Theme Position

19	*The globalisation* *weaks diversity but not only in books […] (txt_15_sm1)	sg. n/group simplex
20	*Some of sociologist* say that people with […](txt_002_sm2)	sg. n/group simplex
21	*Further*, the wage of a typical female worker is lower […] (txt_009_sm2)	m. textual
22	And *in a second time*, the same system […](txt_001_sm1)	m. textual
23	Moreover, *the oil* is getting more and more expensive[…] (txt011_sm1)	m. topical
24	Although *some trainings* *give a security[…] (txt_008_sm2)	m. topical

Table 7[4] provides additional examples of errors categorized at this level. It is assumed that a larger learner corpus, with increased numerical values or occurrences, will allow an analysis on this level to clearly pinpoint recurrent patterns in textual shortcomings that students may have; for example in the construction of complex nominal groups, i.e. where several coordinated noun phrases function as a single grammatical subject. All things considered, this textual level provides an interesting outlook on errors that has not been considered in past error analysis literature.

Table 7
Sample Errors Identified on the Textual Level

	Sample	Location of errors
25	So *the economy independence* *impplies to take ….	nominal gr. simplex
26	*Strategies, employment,* *investissement… have bonds with this perspective	nominal gr. complex
27	*In another side*, the economy *interdependance *have contributed to …	multiple themes
28	First [...] and *in a second time* the same system between all the *country [...]	textual (conjunctive)

Discussion and Conclusion

The main rationale behind this pilot study was to explore the possibility of offering language teachers a different way of identifying and analysing errors outside of the traditional grammatical approach. The first part of the analysis showed that the UAM CorpusTool is highly comprehensive and efficient in that the results obtained are exceedingly precise, in terms of identifying specific linguistic deviation from the target language. It should, however, be noted that the UAM CorpusTool proposes over 100 annotation tags (i.e. ways of classifying possible errors) taken primarily from general linguistics and the precision of the error categorisation means that the analyst should have a good grasp of English grammar and reasonable working knowledge of the tool.

However, once the corpus is completely annotated, it can be directly exploited by researchers or language teachers keen on formal grammar teaching or by those who want to accurately pinpoint problematic notions without the scary meta-linguistic jargon that learners may sometimes find uninteresting or complex in traditional grammar-oriented classes. It should also be borne in mind that, given the precision of the taxonomy used, the resulting analysis can prove to be time-consuming. This may explain to a certain extent why previous error taxonomies are shorter and simply list errors as grammatical function words, for example 'article errors' whereas the UAM CorpusTool attempts to go beyond the simple word class and introduces further categorisation. For example, it includes the possibility of labelling an erroneous 'article' as a problem concerning the article position, the article agreement (singular or plural, etc), the lexical choice, and so forth.

On the whole, the UAM error taxonomy showed that there was a significant 20% decrease in the total number of errors per semester: i.e. 904 in semester 1 and 718 in semester 2. The overall consistency in the reduction of errors would tend to suggest that the content-based approach, which implies intensive contact with the English language over a prolonged period without recourse to formal grammar instruction, has its merits. A language teacher confronted with such consistency would have the choice of simply pursuing his/her initial approach or opting to readapt the language curriculum and identify specific language points as being particularly thorny and requiring explicit attention.

The results from the experiential classification indicated that there was also a 20% decrease in the errors located in the participant and process groups. However, there was a notable 40% increase in erroneous occurrences labelled as circumstance errors. While this in itself was unexpected, further study on a larger population is needed to correctly interpret this counter-trend. It could, however, be assumed that learners have become more at ease in writing essays in English and are trying different strategies. Their sentences are now longer, containing embedded clauses illustrating the improved complexity of their writing. They are also no longer focusing on writing factual sentences and are now including their own perspective or analysis in their work.

This assumption is also applicable to the textual layer of our analysis, in which certain parts of the clause structure (viz, the rheme) accounted for over 70% of all errors. Here the rheme could be said to be the focal point of information in clauses and therefore the important number of errors attributed to this part of the clause may simply be a result of learners' attempts in using complex clause structures. However, the textual metafunction has also indicated that the clause-initial position of a sentence is not as straightforward as one might think: i.e. it is not simply a question of finding an appropriate grammatical subject to start the clause. As learners progress from A2, to B1 and B2 or from a lower to upper intermediate level, it is expected that their

written expression should reflect this improvement. What the theme analysis has shown is that 1) selecting an appropriate nominal group that functions as grammatical subject is not yet totally mastered; 2) textual themes also constitute a problem not in terms of lexical knowledge but in terms of their pragmatic or appropriate use in a text.

In conclusion, if we as language teachers are to create or improve an existing EAP language programme it is of prime importance that we know what the target population is capable of and, if possible, where their main difficulties lie. This is where error analysis becomes important. Whether a full-fledged error analysis is carried out where both the accuracy and inaccuracy levels are pinpointed or whether interest is paid to specific shortcomings that stand out during analysis, it can be agreed that a general analysis of a limited population of EAP learners' L2 production can play a defining role in the EAP setting. This 'assessment' or analysis allows course designers to feed constructive observations and contributions back into the EAP programme. And, as our analysis has shown, traditional error analysis offers a solid grammatical perspective on second language production whereas an integrated SFG approach offers multiple views on the same phenomena: ranging from syntax and functional experiential roles in the clause to the overall text structure. That said, the survival of error analysis may well lie in combining existing models with complementary approaches so as to guarantee the much needed renewal of the framework, thereby fostering fresh insight into a traditionally narrow perspective.

Endnotes

[1] Palmer (1917, p. 119) believed that errors were to be explained in two ways: either 1) what was required of a language learner was not appropriate or adapted to her real level or that 2) errors reflected a faulty teaching method.
[2] Errors are indicated in italics.
[3] Cf. Thomas (1999) for an example of thematic progression analysis in second language text.
[4] As in the previous sample sentences taken from the corpus, errors used for particular examples are indicated in italics. Other errors in the same sentences are marked with an asterisk.

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Academic Literacy and Grammatical Metaphor: Mapping Development

Cassi Liardét*

Macquarie University, Australia

Abstract

This study maps 130 Chinese EFL learners' development of academic literacy through a focused examination of *grammatical metaphor* (GM), the key linguistic resource for achieving the language valued in the academy (Christie, 2002a; Christie & Derewianka, 2008; Halliday, 1994). This corpus-assisted, longitudinal study of Chinese learners' exposition texts combines the delicate descriptions of Systemic Functional Linguistic (SFL) with the empirical resources of Corpus Linguistics, resulting in a detailed mapping of learners' development informed through a multi-dimensional framework of GM analysis. This close diachronic examination of learners' use of *experiential* GM reveals salient patterns of deployment and maps detailed pathways of development. These detailed pathways are informed by quantitative patterns of frequency and variation, and qualitative patterns of *metaphorical control*, or the degrees of completeness and control over a reconstrual, and *metaphorical enrichment*, the degrees of technicality, formality and meanings committed to the metaphor (Liardét, 2013, 2014a). The paper identifies the obstacles Chinese EFL learners most frequently face when developing the resources of incongruent language to cohesively structure their texts in nominally-oriented, lexically dense, cause and effect networks, providing insights into how an EFL classroom may better equip learners to develop these critical resources.

Key words: grammatical metaphor, nominalization, academic discourse, corpus linguistics, EFL learners

Academic Discourse

Academic discourse can be understood as the language of the 'academy', the diverse academic genres organized through specific linguistic patterns necessary and appropriate to varieties of institutionalized discourse (Gee, 1996; Halliday & Martin, 1993; Swales, 1990). In other words, it is the "institutional framework in which children are socialized into ways of formal learning in our society" (Schleppegrell, 2001, p. 437). As a discourse, it maintains certain characteristics that distinguish it from other discourses and requires those who use it to adapt to a set of particular conventions. Until learners or scholars can master these conventions, the insights they hold, no matter how integral and significant to the wider discourse community, cannot be disseminated (Christie, 1989; Hyland, 2009, p. 2). The requirement to become an effective interlocutor in the academic discourse community is further highlighted by the need to not only communicate and publish knowledge in appropriate academic registers, but specifically to do so in English (Adam & Artemeva, 2002; Hyland, 2009, p. 18). Mastery of the conventions of English academic discourse is integral for access to and successful transmission of knowledge in a globalized world.

Academic discourse is often described in contrast to the language of everyday social interactions (Candlin & Hyland, 1999; Christie, 2002b; Schleppegrell, 2001, p. 435). These dimensions of language are often mapped along continuums of spoken language and written language (Hyland, 2009). However, academic contexts often require the spoken mode and thus, these dimensions are limited in their aim of distinguishing a written academic

*   *Tel. +61 2 9850 6704; Email:* cassi.liardet@mq.edu.au*; Faculty of Human Sciences, Building C5A, Macquarie University, NSW 2109 Australia.*

discourse. In general, academic discourse is characterized as more 'formal', lexically dense and authoritative, foregrounding events rather than Actors and organizing these 'happenings' in cause and effect networks (Halliday, 1989; Hyland, 2009). It is a move away from dynamic language in which actions are realized through processes. This mostly 'written' discourse requires that dynamic, action-oriented language be reorganized into static, synoptic entities that can be systematically organized, compared, evaluated and commented on (Banks, 1996; Halliday & Martin, 1993; Schleppegrell, 2004).

As learners progress through the years of schooling, they encounter increasingly varied and demanding expectations to succeed in these contexts. Learners are required to select and deploy progressively technical and specialized lexico-grammatical resources to achieve the language deemed appropriate and valuable in the various disciplines. However, as Schleppegrell's (2001) research reveals, even when learners develop the complex and sophisticated understandings of their discipline or subject matter, the manner in which they present these ideas often "fails to conform to academic expectations" (p. 435).

Systemic Functional Linguistic (SFL) research provides significant insights into the diverse demands of academic discourse, focusing specifically on the linguistic descriptions of academic genres. For example, O'Halloran's (2005) work examines the linguistic regularity of mathematics genres, identifying its representation of relationships between phenomena in space and time in contrast to literary genres that seek to appreciate, explain and critique literature (e.g., Wignell, 2007). Similarly, Coffin's (1997; 2006) research investigates history genres and their focus on explanations and discussions while Unsworth's (2001) work distinguishes scientific genres' preference for experiment, explanation and report (see also Christie & Martin, 1997).

Across these varied genres, some commonalities emerge, particularly the use of "lexicalized and expanded noun phrases…and choosing grammatical features that project an authoritative stance" (Schleppegrell, 2001, p. 434). To understand the linguistic tools necessary to achieve these features, Halliday's (1985) early descriptions of children's language ontogenesis are important. In describing how children move from the concrete, congruent interactions of everyday language, Halliday (1993) identifies a shift toward abstract, incongruent expression, or that of *grammatical metaphor* (GM). The metaphorical realizations he describes represent a move away from grammatically intricate, dynamic language toward the lexically dense, static expression required when language needs to 'sit still' in the written mode (Halliday, 1993). This move toward stable phenomena reorganizes language systematically, promoting more cohesive information flow through the creation of "a new kind of knowledge: scientific knowledge; and a new way of learning" (Halliday 1993, p. 118).

Grammatical Metaphor

SFL conceives of language as a semiotic system mapped onto strata of expression and content. The content layer is further understood as the lexico-grammar (i.e., the layers of wordings) and the discourse semantics (i.e., meaning; Martin & Rose, 2008, p. 29). In other words, sounds or graphological symbols (expression) interact to make words that can be organized into structures (lexico-grammar) that in turn construe certain meanings (discourse semantics). Martin and Rose (2008) describe this stratified system as essentially a hierarchy of abstraction, and the 're-coding' of the language across the strata among these language levels is one of *realization* (Halliday & Matthiessen, 2004, p. 26; Martin, 2008, p. 30; Martin & Rose, 2003, pp. 4-6). These realization patterns and understandings of language as a stratified system are critical for understanding the unexpected, incongruent 're-mapping' of meaning onto the lexico-grammar central to the deployment of GM. GM is understood as a 'tension' between the lexico-grammar and discourse semantics, enabling language users to mean more than one thing at once, effectively expanding the language's meaning potential (Martin, 1993; 2008, p. 829).

To illustrate this 're-coding' of the expression onto the lexico-grammar, the following congruent, hypotactic clause complex can be analyzed: *Because the world is more globally connected, people all over the world are communicating more often and in improved ways*. In this sequence, two clauses are realized congruently and linked through the congruent relator, *because*. In other words, the participants (i.e., *the world* and *people all over the world*) are realized as expected,

as nominal groups; the processes (i.e., *is connected* and *are communicating*) are realized as verbal groups; and the circumstances (i.e., *more globally* and *in improved ways*) are realized congruently as an adverbial group and a prepositional phrase, as mapped in Figure 1.
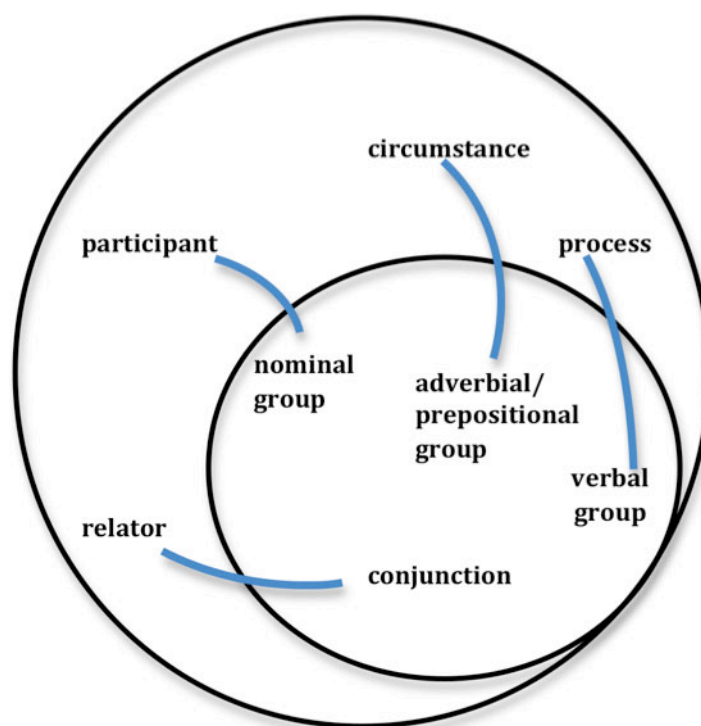
Figure 1. Congruent relationships across the Lexicogrammar and Discourse Semantics Strata
(Liardét, 2014a, p. 37)

However, as Martin (2008) argues, GM "is a resource for scrambling, within limits, the realization relationship between semantics and grammar and so indefinitely extending a language's meaning potential" (p. 829). There is room here to play with the language and reconstrue meanings incongruently or, in an unnatural, 'unexpected' stratal relationship. Returning to the example above, one or both of the congruent clauses could be reconstrued as static nominal groups (e.g., GLOBALIZATION, COMMUNICATION[1]) and the circumstances could be reconstrued as group elements (i.e., Epithets, Classifiers; e.g., *increased, improved, international*). Depending on these choices, the relator may be reconstrued into a clause element such as a circumstance (e.g., *because of, due to*; Excerpt 1), a process (e.g., *lead to, cause*; Excerpt 2) or as the Head of a nominal group (e.g., *the cause of, the result of*; Excerpt 3).

1. *Because of* GLOBALIZATION, people are communicating more often and in improved ways. (i)[2]
2. GLOBALIZATION has *led to* increased and improved international COMMUNICATION. (i)
3. The *result* of GLOBALIZATION is the INCREASE and IMPROVEMENT of international COMMUNICATION. (i)

This incongruent remapping of the discourse semantics onto the lexico-grammar is illustrated through the dotted lines in Figure 2.
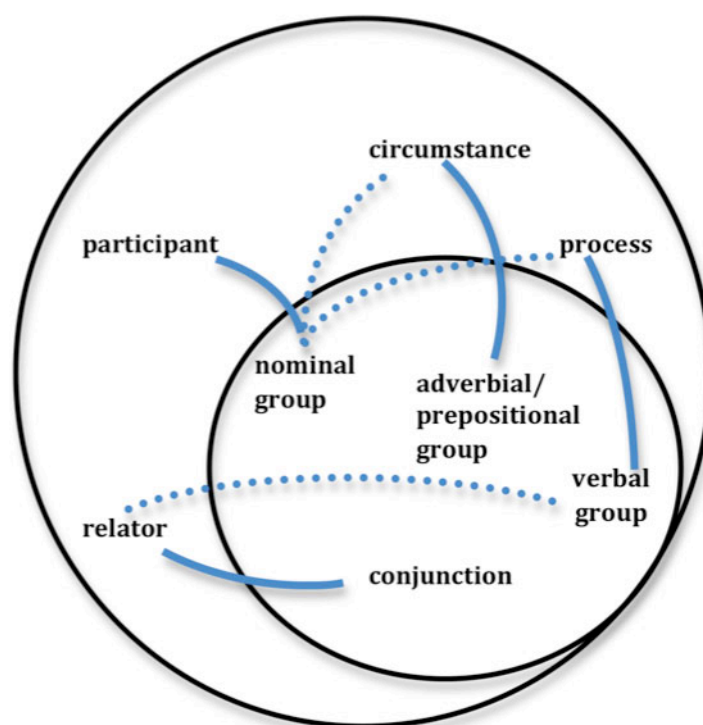
Figure 2. Incongruent, metaphorical 'stratal tension' across the Discourse Semantics and Lexico-Grammar (Liardét, 2014a, p. 39)

Halliday (1998, p. 192) further describes this incongruent relationship as "a realignment between a pair of strata" and argues that the deployment of derivational alternatives scrambles the relationship of realization between the strata, thereby extending the lexical resources of a language (Halliday, 2004). Martin (2008) elaborates:

> This is much more than a vocabulary-building exercise. It allows writers, and people who learn to speak writing, to mean more than one thing at once. Because of the tension between the semantics and grammar there are two levels of meaning involved, not one, with one symbolizing the other…Stratal tension of this kind is something we all have to learn to manage, if we are to become functionally literate members of post-colonial societies. And this comes from a successful apprenticeship into disciplinary and administrative discourses in institutionalized education—typically secondary school. (p. 829)

To further understand these extended possibilities of language, SFL maps language along three types of meanings or 'metafunctions.' The *ideational* metafunction construes and organizes human experience to express 'meanings about the world' through experiential representations and logical relations (Eggins, 2004, p. 254). The *interpersonal* metafunction enacts social relationships, using language to 'encode interaction' and the *textual* metafunction is concerned with enabling "the clause to be packaged in ways which make it effective given its purpose and its context" (Butt, Fahey, Feez, Spinks & Yallop, 2000; Eggins, 2004, p. 298; Halliday, 1974, p. 95; Martin & Rose, 2003; Taverniers, 2006). Notably, GM can be mapped within each of the three metafunctions; however, for purposes of scope, the present study will focus only on the reconstrual of experience within the ideational metafunction: experiential grammatical metaphor.[3]

The Study

Many researchers argue that first language users develop the resources of GM through extensive exposure to written English texts in their secondary years of schooling (Christie & Derewianka, 2008; Foley, 1994; Halliday 1993). However, there are few studies examining how English as a second language (ESL) or foreign language (EFL) learners develop this resource over time (e.g., Chen & Foley, 2004; Wang, 2010).[4] One such study is Schleppegrell's (2004) examination of ESL users' development of academic writing contrasted with their native English-speaking classmates. Schleppegrell (2004) identified the critical role GM plays in allowing learners to effectively communicate in university assignments, noting that the primary distinction between the ESL learners and the native users was the text organization and condensation that GM enables (p.127).

The present study seeks to expand on these explorations of learner language to identify how Chinese EFL learners develop the resources of GM across their years of tertiary study. With as many as four hundred million English language learners, China is now considered to have the largest concentration of EFL learners in the world (Lam, 2002; Wang & Gao, 2008) and Chinese international students are increasingly enrolling in western institutions (DEEWR, 2009). Therefore, a study into Chinese learners' development of academic literacy may reveal nuanced pathways of development that could inform wide-reaching curriculum and pedagogical revisions.

This study examines a specialized learner corpus of Chinese university EFL students' texts called the *Chinese Longitudinal Learner Corpus* (CLLC). The CLLC comprises four subcorpora of exposition essays written by one hundred thirty university students across four consecutive semesters of university study, representing the first two years of university enrollment. As illustrated in Table 1, the learners' texts varied significantly in length across the four semesters; thus, all quantitative analyses are normalized per 100 words.

Table 1
CLLC Number and of Words (Tokens) and Average Text Length per Semester (Liardét, 2014a, p.115)

Sub-corpora (Semester)	Total Number of Words	Average Length per text
Semester 1—CLLC 1	18,814	145
Semester 2—CLLC 2	37,634	290
Semester 3—CLLC 3	33,581	258
Semester 4—CLLC 4	34,708	267

Although the 124,737 word corpus does not claim to be representative of all Chinese EFL learners, it does allow for a more focused investigation of participants' ontogenetic development. In short, all subsequent references to 'Chinese EFL learners' here serve as an abbreviated reference to the participants in this study and do not assume representation of all Chinese English language learners.

The CLLC provides a specialized sampling of persuasive texts written for a simulated examination 'practice' test to emulate the writing requirement of the *Test for English Majors, Band 4* (i.e., TEM-4; Cheng, 2008; Zou, 2003), a compulsory English exam English majors take during their second year of university. These texts respond to the following prompt modeled after a TEM writing task, eliciting discussion on the effects of globalization on China (Liardét, 2014a):

As international communication and transportation increase and improve, the world is becoming more connected. As a result, languages and cultures have crossed national boundaries to influence people around the world. Write a composition of about 300 words to discuss the advantages and disadvantages of globalization and its influence on China. (p. 100)

The four subcorpora are separately analyzed using a corpus-assisted, SFL integrated methodology involving a manual clausal analysis of a sample corpus, a concordance analysis of the entire subcorpora and a focused 'logogenetic' whole text analysis of five learner texts (see Liardét, 2013). Each instance of experiential meanings functioning metaphorically is included in the analysis, even if the expression is not readily recognizable as a GM.[5] For example, Excerpts 4-6 illustrate varying patterns of incongruent expression, yet the constructions are incomplete or imprecise. In other words, the metaphor PROVE (Excerpt 4) demonstrates an incomplete shift toward full reconstrual (i.e., PROOF) and the deployment of the metaphors BANKRUPTION and UNSTABLEMENT (Excerpts 5 and 6) involve a misapplication of the appropriate affix (i.e., BANKRUPTCY and DESTABILIZATION).

4. Economic crisis is the best PROVE (A4013)
5. The domestic companies came under THREAT of BANKRUPTION as they're not very COMPETITIVE. (C4151)
6. It may lead to the UNSTABLEMENT of economic (A2178)

While such examples may be overlooked or dismissed as 'mistakes' or even 'forerunners' of GM (Christie & Derewianka, 2008; Derewianka, 1995, 2003; Ravelli, 2003), the present study focuses on learners' development of incongruent resources and thus accounts for such occurrences as a possible step along the learners' overall pathway of development.[6]

The elaborated theoretical framework for mapping ideational GM development examines each incidence of GM both qualitatively and quantitatively, providing a multi-dimensional characterization of each GM. This framework allows for a more nuanced understanding of how Chinese EFL learners develop the resources of incongruent experiential expression and the areas in which they demonstrate the most intermediacy. While these nuanced characterizations of GM in isolation are helpful for understanding learner development, a further layer of analysis is necessary to examine how these GMs function across larger stretches of text to achieve the lexical density, clause condensation, cohesion and cause and effect networks valued in academic registers. The larger analysis of the CLLC includes this second layer of whole text logogenetic analysis; however, for purposes of scope, the present study will focus on the four-pronged quantitative (i.e., frequency and variation) and qualitative (i.e., metaphorical control and metaphorical enrichment) characterizations of isolated GM deployment (see Liardét, 2013, 2014b for a more detailed review of the whole text analysis). The following sections detail the findings from these systematic examinations of experiential GM deployment to map detailed pathways of development these Chinese EFL learners typically follow.

Findings
Quantitative Frequency & Variation Analysis

The first characterization of GM development is mapped quantitatively through both frequency and variation analysis. Experiential GMs are categorized by pattern of construal (e.g., process as Thing) to examine which patterns the Chinese EFL learners most typically rely upon to construe meanings metaphorically. These *frequency* calculations are complemented through *variation* analyses to determine the extent of the learners' paradigmatic repertoire for deploying GM (i.e., the different forms; e.g., *achievement*, *achiever*). In other words, as the learners are increasingly exposed to English texts and presumably expand their vocabulary, they will similarly expand their options for construing language incongruently in their English writing.

As outlined in Table 2, three patterns of experiential GM are found in the CLLC. Although the Chinese learners deploy all three patterns of reconstrual in each of the four semesters, they consistently rely on the process as Thing pattern to express experiential meanings metaphorically.

Table 2
Experiential GM Patterns of Reconstrual

Pattern of Reconstrual			Congruent → Incongruent examples		
process	→	Thing	achieve	→	achievement
quality	→	Thing	secure	→	security
process	→	Quality of Thing	compete	→	competitive

Proportionately, 81% of all experiential GMs in the first semester follow the process as Thing pattern of reconstrual, 87% in the second semester, 84% in the third semester and 81% in the fourth semester. Figure 3 illustrates this preference for the process as Thing pattern of reconstrual.
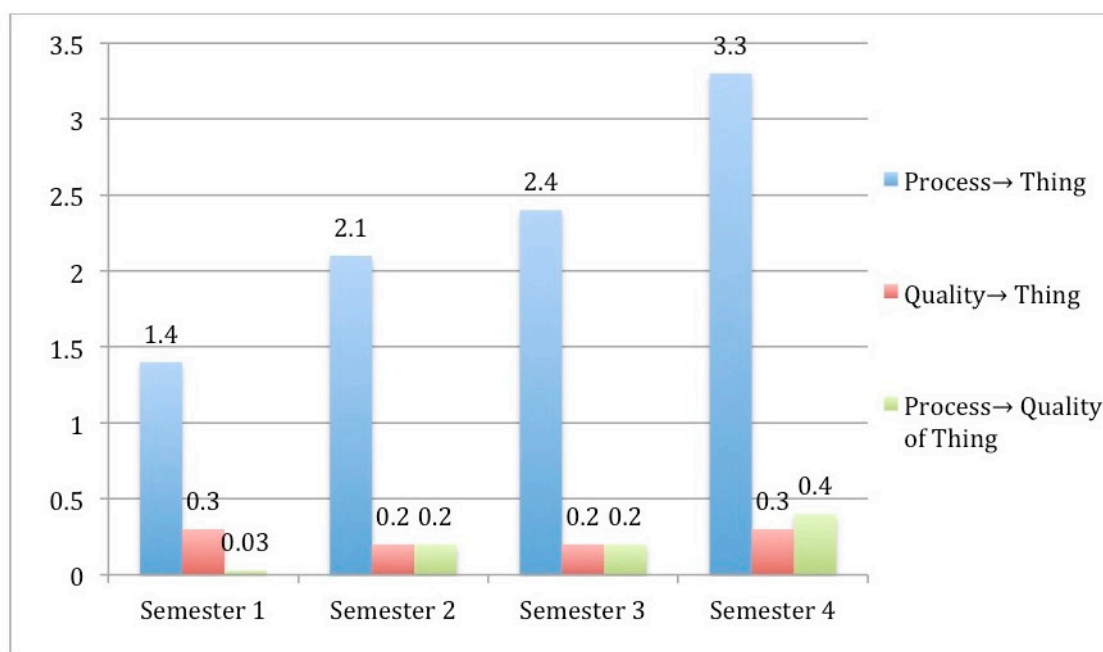
Figure 3. Experiential GM frequency of deployment (per 100 words;[7] Liardét, 2014a, p. 136)

Figure 3 further illustrates the Chinese EFL learners' shift toward increased incongruent expression in the latter semesters. The variation findings similarly reveal that the Chinese learners deploy process as Thing experiential GMs with greater variation than the other two patterns of reconstrual.

The variation analysis identifies how many different forms or 'types' of experiential GM were deployed according to the pattern of construal. For example, in the first semester, the learners deploy forty-six different forms of process as Thing realizations (e.g., ARGUMENT, COMPETITION, DEVOTION, INVENTION), fifteen forms of Quality as Thing reconstruals (e.g., AWARENESS, DANGER, IMPORTANCE) and four different forms of process as Quality of thing realizations (i.e., BENEFICIAL, COMPETITIVE, CREATIVE, ENDANGERED). A comparison of the degree of variation across the four semesters reveals that the Chinese EFL learners consistently expand their

paradigmatic resources for construing experiential GM, increasing from sixty-five different forms in the first semester to two-hundred seventeen in the fourth semester, as illustrated in Figure 4.
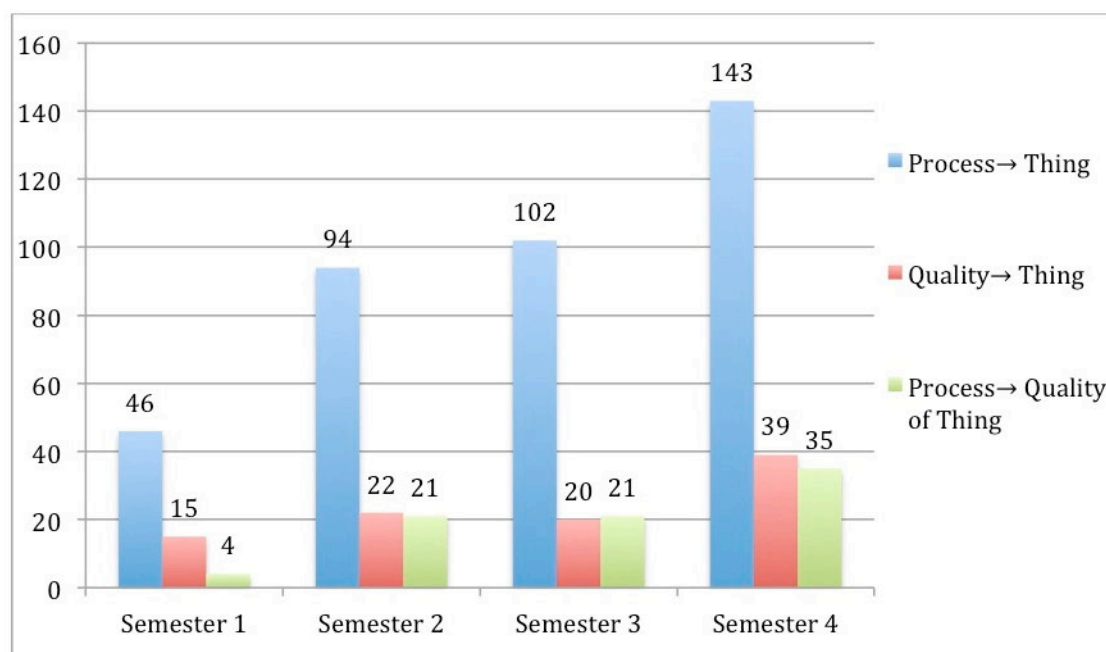
Figure 4. Variation of experiential GM (Liardét, 2014a, p. 132)

These quantitative calculations of frequency and variation provide some insight into the overall incidence and expansion of experiential GM deployment. However, the nuanced qualitative descriptions of *metaphorical control* and *enrichment* reveal more delicate distinctions of GM intermediacy and proficiency.

Metaphorical Control
As previewed earlier, the Chinese EFL learners often express language incongruently, but fail to achieve the proper morphological or grammatical inflection. To describe this intermediacy and account for these occurrences as developmental instances of GM, nuanced descriptors of *metaphorical control* are identified. Metaphorical control refers to the 'degree of completeness and control' over the incongruent reconstrual (Liardét, 2014a, p. 71). In mapping learners' development of experiential GM, six key characterizations of intermediate deployment are identified: gerund nouns, gerundive nominalizations, incomplete reconstruals, non-word reconstruals, infelicitous pluralization and co-text intermediacy (Liardét, 2014a, p. 80).

In brief, *gerund nouns* maintain their morphological gerund verbal form (-*ing*) yet function metaphorically as the Head of a nominal group (e.g., original THINKING, people's EXCHANGING). Gerund nouns demonstrate intermediate metaphorical control due to the incomplete variation of their derivational or agnate nominal forms (e.g., original THOUGHT, people's EXCHANGE). Similarly, *gerundive nominalizations* involve a gerund noun as the Head of a nominal group following the '*the* + gerund + *of*' pattern (e.g., the SPREADING of, the WIDENING of, rather than the SPREAD of, the EXPANSION of; see also Heyvaert, 2003, 2008). *Incomplete reconstruals* refer to processes or Qualities that function metaphorically (i.e., as Things or Qualities) yet fail to take on the appropriate morphological form, demonstrating derivational intermediacy (e.g., the UNDERSTAND between countries, the DIFFERENT of the culture, rather than the UNDERSTANDING, the DIFFERENCE). A similar pattern of intermediate

metaphorical control is found in the deployment of *non-word reconstruals*. These metaphors also fail to take on the full morphological form of the newly reconstrued metaphor; however, instead of omitting the affix, these metaphors involve a misapplied affix (e.g., BANKRUPTION for BANKRUPTCY, UNSTABILIZATION for DESTABILIZATION). Even when experiential metaphors are reconstrued with their appropriate derivational and morphological structures, learners may deploy *infelicitous pluralizations* of the metaphor, inappropriately marking it as a *countable* or *mass* noun (e.g., *a* KNOWLEDGE, *many* EVIDENCES). Learners may also correctly deploy the metaphor yet fail to modify the co-occurring reconstruals (e.g., economy DEVELOPMENT for *economic* DEVELOPMENT). This final characterisation of intermediate metaphorical control is referred to as *co-text intermediacy*.

Significantly, in the CLLC, most occurrences of experiential GM are deployed with full metaphorical control (i.e., 87.5%). However, these intermediate patterns of control allow for a more comprehensive understanding of the salient obstacles learners face when developing the resources of experiential GM. Figure 5 illustrates the frequency of each characterization of intermediate metaphorical control and reveals the most prevalent patterns of intermediacy: gerund nouns, incomplete reconstruals, co-text intermediacy and infelicitous pluralization.
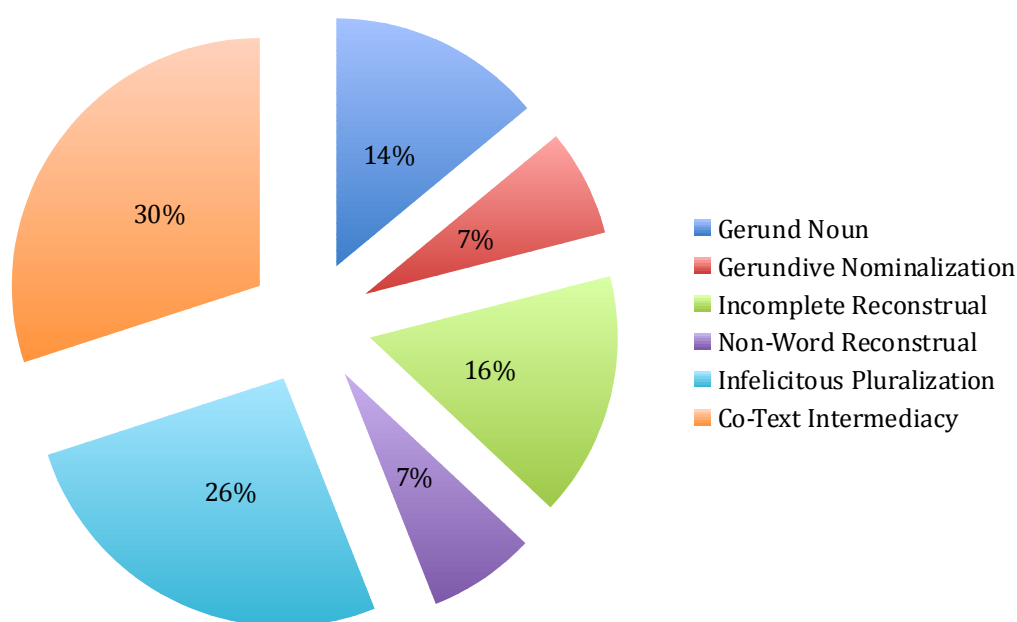
Figure 5. Proportion of intermediate metaphorical control per characterization
(Liardét, 2014a, pp. 121, 129, 132)

In terms of intermediacy in the reconstrual of the experiential GM itself, incomplete reconstruals are the most frequently deployed form found in the CLLC, representing 16% of all instances of intermediate metaphorical control. These GMs fail to take on the full morphological characteristics of the intended form (e.g., DIFFERENT for DIFFERENCE, ARGUE for ARGUMENT, UNDERSTAND for UNDERSTANDING, see Excerpts 7-8).

7. The DIFFERENT of the culture sometimes make ARGUE with us and other bad INFLUENCE (A5159).
8. It not only promote our languages COMMUNICATION but also improve the UNDERSTAND between different

countries (B1042)

Notably, incomplete reconstruals are found in similar examinations of Chinese learners' deployment of GM. For example, Chen (2003) identifies a grammatical transcategorization problem in which the learners fail to apply appropriate suffixation (i.e., *equal* for EQUALITY) and sometimes, both appropriate suffixation and prefixation (i.e., *no equal* for INEQUALITY).

The second most prevalent pattern of intermediacy in the reconstrual itself is the deployment of gerund nouns. Drawing from Fawcett's (1980) network of congruency, gerund nouns are identified as an intermediate realization as they maintain their morphological verbal -*ing* form, but function metaphorically as the Head of a nominal group (p. 93; Abney, 1987; Siegel, 1998). In the CLLC, the Chinese EFL learners often pre-modify the gerund nouns with an Epithet or Classifier (e.g., *original* THINKING, *information* SHARING) or a possessive noun or pronoun (e.g., *people's* EXCHANGING, *its* JOINING). As illustrated in Excerpts 9-11, although these gerund nouns function metaphorically, they demonstrate incompleteness and could be more fully reconstrued if their appropriate nominal derivational or agnate forms were deployed in their place (i.e., INNOVATION, EXCHANGE, COMPETITION and STRATEGY).

9. As is known to all, original THINKING is very important for a nation to stand in the front rows. (D1040)
10. It's a result for people's EXCHANGING (C5037)
11. It is an era of COMPETING and STRATEGIZING (C5043)

The third and fourth most prevalent patterns of intermediate metaphorical control involve full and appropriately deployed experiential GMs. Often the deployment of an experiential GM requires several layers of concurrent reconstrual of its pre-modifying Qualities. For example, in Excerpt 12, the metaphor 'science ACCOMPLISHMENT' can presumably be unpacked to the clause: *China accomplishes many things in the field of science.* Therefore, in addition to the reconstrual of the process *accomplish* into the metaphorical Thing, ACCOMPLISHMENT, the participant 'science' needs to be reconstrued into the pre-modifying Classifier *scientific*. At times this intermediate co-text reconstrual is incomplete, as in the case of *science* rather than *scientific* (see also *environment* for *environmental*; Excerpt 13); however, the Chinese EFL learners also deploy pseudo, non-word alternatives of the co-text as in the deployment of SPEEDFUL for SPEEDY in Excerpt 14.

12. This offers a lot of chance to bring in a lot of advanced technics and *science* ACCOMPLISHMENT (C1006)
13. Too many factories producing waste lead to *environment* POLLUTION (A4177)
14. In another hand, your economy can have *SPEEDFUL* DEVELOPMENT. (C5071)

Finally, once the experiential GM is fully reconstrued, it often needs to be deployed in its plural form. However, the Chinese EFL learners in the CLLC often mistreat mass nouns (e.g. KNOWLEDGE, INFORMATION) as countable nouns (i.e., KNOWLEDGE<u>S</u> or INFORMATION<u>S</u>). The reverse is also true but much less prevalent. Such occurrences are illustrated in the pre-modifying elements of Excerpt 15 (i.e., *an*) and the misapplication of the plural suffix in Excerpt 16 (i.e., −*s*).

15. GLOBALIZATION brings in cutting-edge technology and offer the developing countries *an* ACCESS to the international market. (D4151)
16. As for China, everyone can easily find the obvious EVIDENCE<u>S</u> of China's DEVELOPMENT (C3076)

Of the four most common patterns of intermediacy found in the CLLC, three involve derivational limitations while the remaining pattern (i.e., infelicitous pluralization) involves an inflectional infelicity. Although the Chinese EFL learners often deploy the remaining two characterizations of intermediate metaphorical control

(i.e., gerundive nominalizations and non-word realizations), these four patterns are the most frequently occurring across the CLLC and reveal a significant pathway of development that these Chinese EFL learners tend to follow.
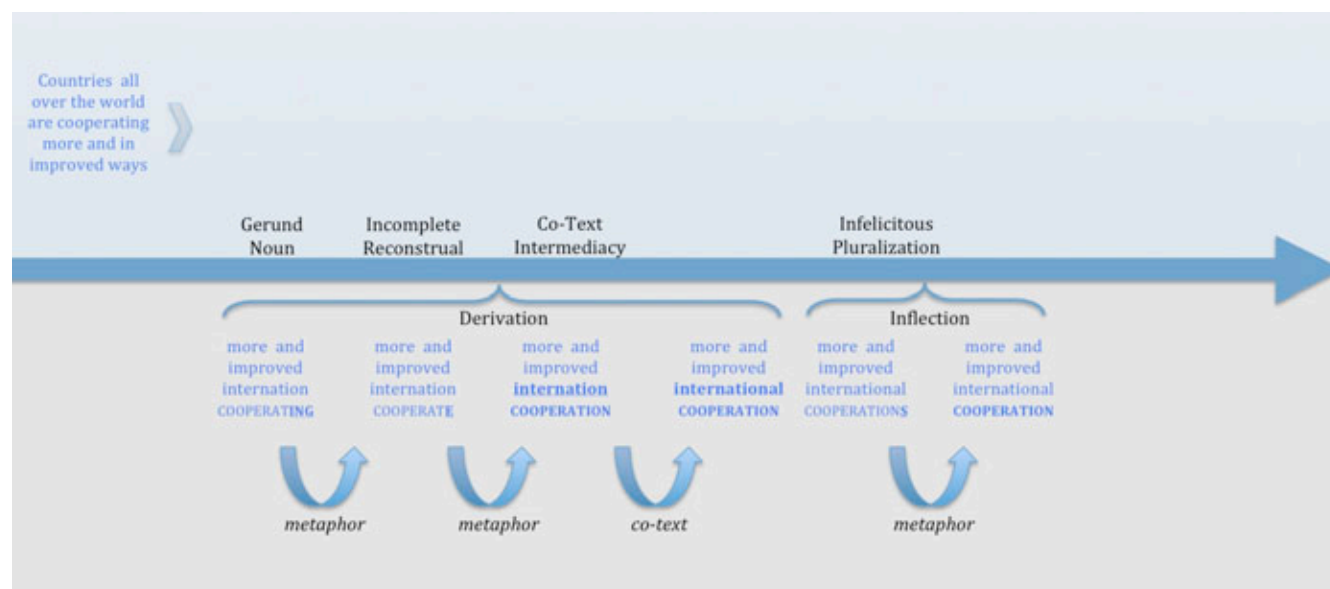
Figure 6. Experiential GM pathway of metaphorical control development
(adapted from Liardét, 2014a, p. 361)[8]

As Figure 6 illustrates, on a cline towards increased control over the reconstrual of experiential meanings, the Chinese learners appear to first struggle with the derivational reconstrual of the experiential metaphor itself. Initially, the students may reorganize the gerund so that it is functioning metaphorically (e.g., COOPERATING); however, they fail to apply any morphological modifications. Similarly, the students may reconstrue the meanings to function incongruently, but only deploy the derivational process form (e.g., COOPERATE), demonstrating incompleteness. Third, the students may achieve full derivational metaphorical control over the metaphor but fail to fully reconstrue the co-occurring meanings (e.g., *countries all over the world* as *internation* rather than *international*). Finally, once the experiential metaphor and its co-text are fully and appropriately deployed, the Chinese EFL learners often mistreat the newly formed mass noun as a count noun (or vice versa), as illustrated through the infelicitous pluralization of COOPERATIONS. Significantly, not all Chinese EFL learners follow this progression from derivational control to inflectional control and individual learners may only deploy one or two patterns of intermediacy without ever stumbling over the other patterns. However, this detailed pathway encapsulates the most typical obstacles the Chinese learners stumble upon when gaining control over experiential GM.

Metaphorical Enrichment

The second layer of qualitative experiential GM analysis involves the increasing degrees of *metaphorical enrichment*. Metaphorical enrichment refers to the degree of commitment and nuanced meaning instantiated into the metaphor (see Hood, 2008; Martin, 2008). To some extent, all experiential GM demonstrate increased commitment through the compounding of the congruent and metaphorical layered meanings. In addition to this established degree of enrichment, experiential GM can be examined for layers of instantiated meanings, often compacted through additional circumstantial and specialized meanings. To illustrate this descriptor, increasing degrees of enrichment can be mapped from the congruent process *change* to the GM CHANGE,

identifying increasing degrees of circumstantial meaning infused into the metaphors MODIFICATION (change + minor or partial), AMENDMENT (change + minor for accuracy), TRANSFORMATION (change + thorough, dramatic), VARIATION (change + alternative), FLUCTUATION (change + irregularity + rise/fall) and MUTATION (change + full transformation + genetic structure), as illustrated in Table 3. These metaphors are semantically linked through synonymy but are also varied along a cline of generic and specific lexis, thus demonstrating increased *metaphorical enrichment.*

Table 3
Metaphorical Enrichment Map for 'Change' (Liardét, 2014a., p. 84)

Metaphor	Degree of Enrichment	Denotation	Enrichment markers
CHANGE		*make or become different*	= process meaning *change* + nominal meaning CHANGE
MODIFICATION	(+)	*a partial or minor change*	= *make or become different* + *minor/partial*
AMENDMENT	(+)	*a minor change for accuracy*	= *make or become different* + *for accuracy*
TRANSFORMATION	(+)	*Dramatic, thorough change*	= *make or become different* + *dramatic*
VARIATION	(+)	*alternative change*	= *make or become different* + *as an alternative*
FLUCTUATION	(++)	*irregular rise/fall change*	= *make or become different* + *irregularly* + *rise/fall*
MUTATION	(++)	*Change in form or nature*	= *make or become different* + *full transformation* + *genetic structure*

Metaphorical enrichment can also be discerned through technicality and abstraction. Technicality is most commonly expressed through abstract entities in scientific disciplines and is used to accumulate or alter the nature of the meanings into specialized academic fields (Martin, 1993; Martin & Rose, 2003; Schleppegrell, 2001). Technicality and experiential metaphor often co-exist in their preference for static entities construed in abstract Things; however, not all metaphorical Things necessarily demonstrate technicality and thus it can be used to further distinguish increasing degrees of metaphorical enrichment.

In the CLLC, the Chinese EFL learners tend to deploy less enriched experiential GM alongside more enriched alternatives across all four semesters, demonstrating only minor or anecdotal development across the study. For example, in Excerpts 17-19, the Chinese EFL learners deploy oblique, less enriched forms such as HIT, BOOMING and PAY. While these experiential GM demonstrate some commitment, the Chinese learners also begin to deploy more enriched alternatives such as UTILIZATION, CONSUMPTION and FLUCTUATION (see Excerpts 20-22).

17. The GLOBALIZATION also cause a HIT to our traditional culture (B2067)
18. According to this aspect, GLOBALIZATION will contribute to THE BOOMING OF cultures. (C1106)
19. We ask ourself whether it is worth developing our country on the PAY of environment. (C4177)
20. it's the IMPROVEMENT in efficient UTILIZATION of natural resources (B5007)
21. developed countries transport the industries with high energy CONSUMPTION and EMISSION to China

(B4177)
22. we have a bigger possibility to be affected by financial crisis and economic FLUCTUATION. (D5164)

A second descriptor of metaphorical enrichment distinguishes between conscious *human* (e.g., COMPETITOR, Excerpt 23) and semiotic, *non-human* entities (e.g., COMPETITION, see Excerpt 24). In academic registers, texts that foreground events and obscure or background Actors tend to be highly valued (Halliday & Matthiessen, 1999, p. 102; Hyland, 2009, p. 7). Therefore, the deployment of conscious, human experiential metaphors are less valued than their non-human alternatives. Human GMs are more prevalent in the early semesters of the CLLC and as the Chinese EFL learners progress through the study, they increasingly deploy the non-human alternatives of these metaphors. For example, Excerpt 25 from a second semester text reconstrues the process *invade* as the human GM INVADER. However, in Excerpt 26 from a fourth semester text, the meanings are further reconstrued into the non-human GM, INVASION.

23. more and more countries unkindly treat us as their COMPETITOR. (B3003)
24. the oversea COMPETITION enable China's companies to develop. (D4078)
25. Nowadays, however, the INVADOR of culture seems more horrible (B4072)
26. We've experienced the cultural INVASION with the development of globalization. (D5095)

Despite these minor indicators of improvement, conscious, human experiential metaphors continue to be deployed in all four semesters. Therefore, while many of the learners successfully move toward these entities' semiotic, non-human alternatives, further instruction may be required to guide learners away from these less enriched realizations.

Similar to the descriptions of metaphorical control, the third aspect of metaphorical enrichment expands the gaze to examine the metaphors' co-occurring meanings. By their very nature, experiential metaphors that require a compacting of their co-texts achieve additional degrees of enrichment through the condensation of various meanings into the newly deployed metaphorical nominal group. For example, in Excerpt 27, the metaphorical nominal group SUSTAINABLE DEVELOPMENT represents two co-occurring reconstruals: first, the process *develop* is realized as the Thing DEVELOPMENT (i.e., the presumed congruent agnate might be *China should focus on developing more*) and second, the process *sustain* is realized as the Quality (i.e., Epithet), SUSTAINABLE (i.e., the presumed congruent clause might be *China needs to focus on sustaining this DEVELOPMENT*).

27. China as a developing country should focus on SUSTAINABLE DEVELOPMENT (D4102)
28. This is a mutual BENEFICIAL EXCHANGE (D1031)
29. We must behave brave and courageous to confront with the IRRESISTIBLE CHALLENGE. (D4097)

The co-occurring reconstruals of *develop* and *sustain* into SUSTAINABLE DEVELOPMENT, *benefit* and *exchange* into BENEFICIAL EXCHANGE (see Excerpt 28), and *unable to resist* and *challenge* into IRRESISTIBLE CHALLENGE (see Excerpt 29) demonstrate increased degrees of metaphorical enrichment through the condensation of multiple congruent clauses into single metaphorical entities. Significantly, this third descriptor of metaphorical enrichment has further implications for describing the impact and effect of GM for the clear reorganization of meanings in condensed, relationally-oriented structures privileged in academic discourse (see Liardét, 2013 for further discussion).

These three descriptors of metaphorical enrichment provide additional insight into the pathways of development Chinese EFL learners typically follow when deploying experiential meanings metaphorically. Figure 7 extends the pathway of metaphorical control development outlined in Figure 6, mapping these delicate degrees of increased metaphorical enrichment.
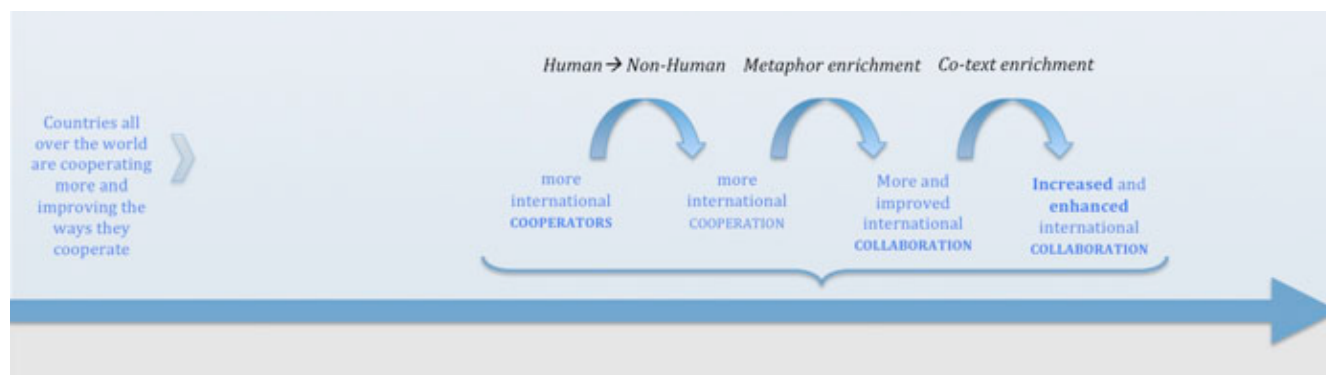
Figure 7. Experiential GM pathway of metaphorical enrichment development
(adapted from Liardét, 2014a. p. 361)

On this cline towards increased enrichment, the Chinese EFL learners often deploy experiential meanings metaphorically as conscious, human entities such as COOPERATORS rather than the more valued semiotic, non-human alternative, COOPERATION. As the learners progress toward more valued, non-human GM, they begin to deploy more enriched alternatives that instantiate additional circumstantial and specialized meanings. For example, the deployment of COLLABORATION infuses additional meanings of synergistic teamwork than the less enriched alternative COOPERATION. Finally, as the Chinese EFL learners continue toward more enriched realizations, they simultaneously reconstrue multiple congruent meanings (i.e., the additional clause *improving the ways they cooperate*) and begin to enrich the co-occurring metaphorical meanings (i.e., the generic descriptors *more* and *improved*) into a single condensed metaphorically enriched nominal group: INCREASED and ENHANCED *international* COLLABORATION.

Conclusion

Grammatical metaphor is often regarded as a key linguistic resource for achieving academic texts, with researchers identifying its presence in successful texts as foundational for constructing language features such as lexical density, cohesion and argument development (Byrnes, 2012; Hyland, 2009; Schleppegrell, 2001, 2004). Research into learner development of these resources is limited, with most studies examining the emergence of GM in first language users' adolescence (e.g., Christie & Derewianka, 2008; Halliday, 1993).   Furthermore, examinations of GM tend to focus on full and appropriate realizations, relegating incomplete or atypical reconstruals as errors or at most, 'forerunners' of GM (Derewianka, 1995, 2003; Ravelli, 2003). The present study has sought to elaborate these understandings by examining all instances of language functioning metaphorically and systematically accounting for salient patterns of intermediacy.

This study has applied Liardét's (2014a, 2014b) nuanced descriptions of metaphorical control and metaphorical enrichment to examine how Chinese EFL learners deploy experiential meanings metaphorically. It has revealed detailed pathways that highlight the key obstacles Chinese EFL learners encounter when developing the resources of experiential GM. Namely, it has highlighted the learners' tendency to deploy experiential GM incompletely (e.g., *AGREE* for AGREEMENT) or with infelicitous pluralization (e.g., many KNOWLEDGES) and their preference for human entities over non-human entities (e.g., COMPETITOR rather than COMPETITION). These understandings contribute to pedagogical EFL practices by identifying how learners are successfully deploying experiential meanings metaphorically and beginning to achieve the lexically dense and relationally-oriented language valued in academic texts. Without these elaborated descriptions, many occurrences of GM may be overlooked or disregarded as errors rather than considered for their text-building effects. Equally important, without further instruction and remediation of these intermediate realizations, EFL learners will likely achieve

limited success in academic contexts.

In short, GM is a powerful linguistic resource for developing clear text cohesion, highlighting technicality, enabling reasoning within the clause and reorganizing grammatically intricate structures into lexically dense, static entities (Halliday, 1998; Martin, 1992; Schleppegrell, 2004). Although GM typically emerges naturally in first language English users' writing, EFL learners may face additional obstacles when developing these resources. Therefore, the detailed mapping of Chinese EFL learners' pathways of development outlined in this study aims to influence EFL instruction and equip EFL learners to more efficiently and effectively sojourn these typical pathways of development toward full and proficient control over the resources of metaphorical expression and, in turn, advanced academic literacy.

Endnotes

[1] Experiential GMs are annotated throughout using small capital letters.

[2] All example illustrations are from the data unless explicitly identified as invented [i]. Excerpts taken from the CLLC are identified first by a letter indicating the subcorpus in which the text was written (i.e. *A* represents the first semester of the CLLC, *B* represents the second semester, etc.) and a four-digit number assigned to the author to protect anonymity.

[3] Within the ideational metafunction, meanings interact to construe human experience (experiential) and organize it (logical). Experiential metaphors involve a reconstrual of the group and clause elements (i.e., process as Thing, Quality as Thing, process as Quality of Thing and Quality of process as Quality of Thing; e.g., *achieve* as ACHIEVEMENT, *secure* as SECURITY, *innovate* as INNOVATIVE, *develop quickly* as RAPID DEVELOPMENT), logical metaphors involve a reconstrual of the logical meanings between the clause into clause elements (i.e., circumstance, process or participant; e.g., *due to, leads to, the result of*). Interpersonal metaphors can be mapped as metaphors of mood and modality (Halliday, 1985; e.g., *close the door!* as *do you mind closing the door?* and *possibly* as *it is possible that*) and textual metaphors operate to obscure personal or subjective invocation by referencing non-human 'scientific' participants as Actors (e.g., *these results show*; Martin, 1992).

[4] Notably, several studies examine GM development in learners of German (Byrnes, 2009; Byrnes, Maxim & Norris, 2010; Ryshina-Pankova, 2010) and Spanish (Colombi, 2006) as a foreign language.

[5] Ravelli (1988, p. 141) outlines two tests widely used to determine if an expression is functioning metaphorically. The tools of *derivation* (i.e., the morphological unpacking of a word; e.g., *information* derivationally unpacked as *to inform*) and *agnation* (i.e., the etymological evolution of a word; e.g., *perception* unpacked as the agnate *to think; the murder* unpacked as the agnate *to kill*) are employed here to determine if the expression qualifies as an incongruent realization (see also Gleason, 1965; Ravelli, 1999, p. 77).

[6] Arguably, some of these GM could be characterized as 'dead' or 'faded' metaphors (Derewianka 2003, p. 192; Halliday 1985, p. 327). For example, Halliday (1998) argues that all GM begin as *alive* or *instantial* realizations of their congruent derivations or agnates, while some proceed to become technicalised, no longer requiring the process of being 'packed' (e.g., the quality *hot* as the metaphorical Thing *heat*; pp. 38-39; Martin, 2008, p. 834). However, the distinction between *systemic* and *instantial* metaphors is often determined by context-specific, subjective interpretation, especially when examining learner texts (Ryshina-Pankova, 2010, p. 186). Therefore, in this study, all instances of incongruent expression will be analyzed with no further categorization of its possible status as *systemic, faded* or *dead*.

[7] Although the prompt directs the students to write 300-word compositions, the average text length varies from semester to semester. Therefore, the frequency calculations are normalized according to the number of instances per 100 words to standardize the findings.

[8] The examples in Figures 6 and 7 are glossed from the data and do not specifically represent one individual's pathway of development.

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Building a critical stance in academic and civic discourse: Burnishing and tarnishing

Sally Humphrey*

Australian Catholic University, Australia

Abstract

This paper describes key discourse patterns that contribute to establishing a critical stance in academic and civic discourse. The paper draws on SFL theorising of interactions at the discourse semantic level of language, which have been termed 'burnishing and tarnishing' (Hao & Humphrey, 2012b). The paper describes how Burnish and Tarnish couplings and steps are instantiated in Critique phases of texts in two academic disciplines and in three texts composed by adolescents, including ELL refugees, to achieve their civic goals. While in both domains resources from systems of Ideation and Appraisal are deployed to form evaluative couplings of sources, genres in the civic domain show considerably more variability than those in the academic domain. This knowledge may inform the ongoing work of TESOL teachers in providing students with access to academically valued critique and may also allow teachers to recognise and celebrate the diverse ways young people, including English Language Learners, are already empowered to critique in their civic lives.

Key words: Appraisal, academic writing, civic discourse, Systemic Functional Linguistics

Introduction

Within SFL educational linguistics, the analysis of language systems 'above the clause', at the level of discourse semantics (Martin, 1992, Martin & Rose, 2007; Martin & White, 2005), has provided valuable resources for understanding the work of language for learning in secondary and tertiary contexts (Coffin, 2006; Hao & Humphrey, 2012a; Hood, 2006, 2010; Rose, 2007). Descriptions of systems such as Ideation and Periodicity are increasingly used to explore texts that build specialised knowledge (Martin & Maton, 2013; Rose, 2015), while Appraisal has emerged as a powerful theory for analysing texts which debate and challenge theoretical and civic views (Coffin, 2006; Hood, 2010; Humphrey, 2010, 2013; Martin, 1985, 1995, 2004). An emerging interest in interactions or 'couplings' (Martin & Bednarek, 2010) across discourse semantic systems has allowed analysts in both academic and civic contexts to make visible ways in which "communities are formed around attitudes to things" (Martin, 2004, p. 188). Such understandings are particularly vital for supporting adolescents to participate in, critique and transform their communities.

Much valuable work has been done by researchers in the English for Specific Purposes (ESP) tradition (e.g. Swales, 2004) in identifying critical moves and steps in academic writing. However, the ESP tradition does not focus on the linguistic patterns which construe such moves and is thus limited in pedagogic value, particularly in school and undergraduate contexts. The perspective offered in this paper takes as its starting point the discourse semantic patterns and interactions that construe these moves. I draw on SFL theorising of interactions which have been termed 'burnishing and tarnishing' (Hao & Humphrey, 2012b) and in media contexts, 'favouring and disfavouring' (White, 2013), to examine how these resources contribute to forming a critical stance in academic and civic texts. The paper thus aims to support the ongoing work of TESOL teachers in providing

*   *Tel. +61 2 94659086; Email: Sally.Humphrey@acu.edu.au; Learning Sciences Institute, Australian Catholic University, PO Box 968, North Sydney, NSW 2059, AUSTRALIA*

students with access to academically valued critique and also celebrates the diverse ways young people, including English Language Learners, are already empowered to critique in their civic lives. Such a focus draws attention to the discursive possibilities available to particular social identities, even those whose lexico-grammatical repertoire may be limited and/or not valued in mainstream educational contexts. In an environment strongly influenced by high stakes testing, it is vital to bring diverse transformative literacies to the centre stage in TESOL pedagogy.

Following a brief overview of the theoretical foundations and research on which the perspectives in this paper are based, the paper describes how burnishing and tarnishing[1] is instantiated in Critique phases of texts in two academic disciplines. In the second section I explore how such interactions are used in three diverse critical texts of adolescents, including ELL refugees, to achieve their civic goals.

Theoretical Foundations and Methodology

The emergence of Appraisal (Martin & White, 2005), which includes systems of ATTITUDE,[2] GRADUATION and ENGAGEMENT, has provided particularly valuable resources for understanding how speakers and writers build an evaluative stance and position audiences in a range of contexts. Expressions of ATTITUDE are concerned with the negative or positive expressions of feelings (Affect) evaluations of character (Judgement) and of things (Appreciation), and can be directly inscribed or invoked through a range of co-textual or contextual triggers. The system of GRADUATION, used to adjust the intensity or focus of evaluation, is also helpful for invoking implicit evaluation through its systems of force and focus. ENGAGEMENT is associated with the management of voices in discourse, with systems organised according to their function in expanding or contracting space for such voices. Figure 1 shows the basic choices within the three systems of Appraisal.
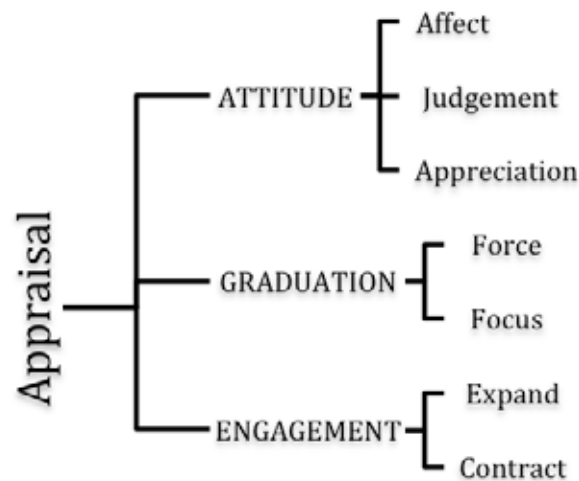
Figure 1. Systems of appraisal and basic choices (based on Martin & White, 2005)

Cutting across the two sub-systems of ENGAGEMENT are resources termed extra-vocalisation (Martin & White, 2005), which includes three resources for incorporating external voices into the text. These include the contracting resource of endorsing and the expanding resources of distance and acknowledge. These resources and their location within ENGAGEMENT are shown on Figure 2.
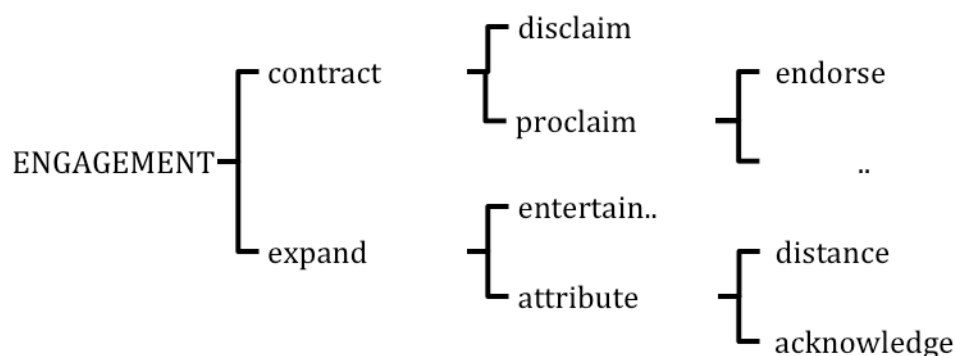
Figure 2. Categories of ENGAGEMENT (based on Martin & White, 2005)

While studies focusing on one or more systems of Appraisal have been widely used in educational contexts, there is increasing recognition that a perspective on analysis that is restricted to Appraisal systems does not enable interpretations about the rhetorical work of combinations of resources across a number of texts. The emerging perspective of coupling (Martin, 2010) allows for modeling of relatively regular interactions of meanings across strata, metafunctions and simultaneous systems. Analysis of texts has revealed that an important component of instantiating evaluation is "what texts are about – the experiences, activities and entities" (Martin, 2004, p. 337). In a research article literature review in the academic domain, for example, evaluations need to be distinguished according to whether they are targeted at the researcher's work or prior research of others.

Burnishing and tarnishing is a general gloss for particular sets of these discourse semantic interactions, referred to as Burnish and Tarnish couplings, which are used to evaluate sources and source material. The focus in academic writing has been on how choices from systems of Ideation and one or more systems of Appraisal are instantiated to form critically-oriented phases which position readers vis-à-vis sources (Hao & Humphrey, 2012b). Taking the example of a research article literature review once more, evaluations of both the researcher's current work and the prior work of others need to be grouped and sequenced in steps so that the reader is positioned across the phase to see the need for the current work. These understandings have informed a metalanguage for classroom use and the design of a literacy pathway to scaffold ELL's critical writing across units of undergraduate Biology (Humphrey, 2013). Such a pathway recognizes that apprenticeship into undergraduate study necessitates students "building solidarity with the academic discourse community while at the same time constructing differences that provide space for their own research in their academic writing" (Hood, 2004, p. 18).

In their analysis of critical phases of student texts in undergraduate Biology and Performance Studies, Hao and Humphrey (2012b) drew on Hood's (2010) identification of two fields, the 'object of study' and the 'study', which are involved in opening a gap for the writer's own research in the genre known as 'research warrant'. The authors were thus able to identify recurrent combinations of ideational and interpersonal meanings which form evaluative steps and larger critical phases. However, to provide more delicate descriptions of the rhetorical work involved in creating an evaluative stance in Biology, the researchers further classified Hood's field of 'study' as 'others' study' and 'writer's study' and developed field-sensitive evaluative categories within the Appreciation system of ATTITUDE (Hao & Humphrey, 2012a). In this article, accumulations of these evaluative couplings are referred to as Burnish and Tarnish steps, which, in the particular text types explored, interact to form Critique phases. Also relevant to TESOL teachers is explication of types of entities used to realise field choices

(Martin & Rose, 2007), including abstract semiotic entities such as texts named by the composer, (e.g. *Ho, 2012)*. These entities may be either generalised (e.g. *studies have found*) or particularised (*Ho's study found*).

In the following section I report on key findings of Burnish and Tarnish couplings in the academic domain. I then examine how different realisations of these couplings are used to align audiences to a critical stance in the digital and non-digital civic discourse of adolescents. The descriptions are informed by close analysis of two sets of texts (approximately thirty texts in total), which have been selected from wider data sets collected to inform educational semiotic research projects (Mahboob, Dreyfus, Humphrey & Martin, 2010; Hao & Humphrey, 2012b; Humphrey, 2010, 2013; Humphrey & Hao, 2013). The particular texts were selected for analysis because they include critical comment of external sources, either as their primary social purpose or as phases within persuasive genres.

Burnishing and Tarnishing in Academic Contexts

The texts examined in academic contexts were produced by students in undergraduate Biology and Performance Studies as responses to high stakes assessment of curriculum learning and have been used as exemplars to inform genre-based literacy interventions. Text 1 and Text 2 below are excerpts of representative Critique phases from two high stakes academic genres in this corpus, a research warrant (Hood, 2010), which forms the introduction to a Biology research report written in the final unit of an undergraduate program (Text 1), and a critical response essay, written in a final year of a Performance Studies unit (Text 2). Both phases illustrate key ways in which Burnish and Tarnish couplings are instantiated to create either Burnish or Tarnish steps. The phases have been annotated to show the shifting focus of both the evaluative stances relative to the particular field. Fields are identified in terms of external and internal sources, with the latter referring to both the writer's (proposed) study and announced position (Tables 1 and 2).

Table 1
Burnish and Tarnish Steps in Text 1

Text 1: Biology Critique phase	Steps
It has been reported that the frequency of occurrence, severity and spatial scale of hypoxia has been increasing due to pollution and global warming effect (Wu, 2002)... For example, recent studies have shown that the bottom of the northern Gulf of Mexico is regularly hypoxic or anoxic and the problem has been deteriorating due to the introduction of anthropogenic nutrients (Justic et al. 1997).	Burnish step External source (others' studies)
Although these studies have demonstrated the general adverse effects of chronic aquatic hypoxia on the heart, little is known about the underlying molecular mechanisms of the M2 mAChR under chronic hypoxic condition.	Tarnish step External source (others' studies)
… In order to have a better understanding of the adverse impact of aquatic hypoxia in fish, it is necessary to study the impact of hypoxia at the molecular level... The purpose of this research is to find out the role of .. as M2 muscarinic receptor may play an essential role in hypoxic bradycardia. The result may allow us to understand the mechanism of the cardiovascular defect in aquatic lives and may have a significant impact on mammalian cardiovascular studies.	Burnish step Internal source (writer's proposed study)

Table 2
Burnish and Tarnish Steps in Text 2

Text 2: Performance Studies Critique phase	Steps
McAuley suggests ..that a performance could, and most probably should, be viewed more than once prior to analysis; and that this is a method of avoiding a subjective interpretation ..	Burnish step External source 1
I find this a problematic idea as a performance maker creates a work that is intended to function on a single viewing… The tangibility and organic nature of a production is something of theatre's attraction, and 'one-off' shows offer no further viewings.	Tarnish step External source 1
There is really no room in McAuley's schema to discuss the experiential side of a performance such as this,	
perhaps better analysed through a framework of phenomenology	Burnish step External source 2
or through Victor Turner's theories of the liminal phase	Burnish step External source 3

Burnish and Tarnish Steps in Academic Critique Phases

As can be seen from the analysis of these excerpts, both texts move through both Burnish and Tarnish steps to develop Critique phases within their respective genres. In the research warrant the evaluated external sources refer to previous studies in the field and are typically burnished through the writer's acceptance of their findings. Burnishing of published research in the field is expected at undergraduate level and allows the student writer to demonstrate knowledge of the field and affiliate with the discourse community. Tarnishing of external sources is also important as it establishes a research gap for the student researcher's own study and/or individuates the writer's position in relation to established knowledge. When targeted towards internal source as in Biology, burnishing anticipates the value of the writer's proposed contribution.

However, in order to establish a gap for the student writer's own study, these previous studies need to be negatively appraised, i.e. tarnished. In Biology, research is frequently tarnished as incomplete and the student writer's own proposed study (i.e. the internal source) is burnished in terms of its necessity. The student's study may be alluded to (e.g. *it is necessary to study*) or explicitly announced through a proposal for further research (e.g. *The proposed study is needed).*

As is evident in Text 2, interactions of Burnish and Tarnish couplings are also found in critical response essays in Performance Studies. However, in these texts the targets of evaluation are external sources, which, in the case of Text 2, are statements and interpretive frames proposed to examine performance. The Critique phase is completed in this text through complex steps of reiterating the tarnishing of the external source and then burnishing a second external source, rather than opening space for the student writer's own research as in the introduction of the Biology research report. This difference can be attributed to the different expectations of the genres but is likely also to be influenced by the different knowledge structures and evaluative discipline traditions.

While the writer is explicitly written in as a source of evaluation in Text 2, (i.e. *I find this a problematic area*), it is not the student writer's statements or opinions which are the targets of evaluations. Certainly there is potential for the student writer's opinion or position to be evaluated (e.g. *After careful consideration of the evidence, it is my opinion that…; The scope of this essay is limited to…*); however, no examples of burnishing or tarnishing of internal sources were found in the Performance Studies texts.

Despite differences in the fields evaluated, however, the main target of evaluation in both disciplines (i.e. *previous research / McAuley's schema*) is burnished before being tarnished. Such a pattern is typical of the 'balanced' critical writing privileged in the academic domain. In the next section I will focus on the contributions of choices from Ideation and Appraisal systems to burnishing and tarnishing and present an overview of the main resources.

Discourse Semantic Resources for Academic Burnishing And Tarnishing

Table 3
Analysis of Evaluated Sources in Text 1 (Ideation and Appraisal Choices)

Text 1 Text excerpt	Ideation Target of evaluation	Entity type	ENGAGEMENT	Appraisal ATTITUDE +/- (ins / Inv)	GRADUATION
It has been reported that …(Wu, 2002). .. recent studies have shown that .. (Justic et al. 1997).	(Wu, 2002)...	Semiotic: named partic	*It has been reported* Acknowledge		
	recent studies…..	Semiotic: generalised	*have shown* Endorse	*Recent* +ve Val (Inv)	*Recent -* + Focus
	(Justic et al. 1997)	Semiotic named partic			
Although these studies have demonstrated the general adverse effects…,	*these studies*	Semiotic generalised	*Although these studies ..* Contract (counter). *have demonstrated* Endorse	*general adverse effects ..* +ve Val (Inv)	
..little is known about the..mechanisms	*(studies not done)*	Semiotic generalised		*little is known* -ve Comp (Inv)	*Little* - Force
… In order to have a better understanding .. it is necessary to study ..	*(studies needed)*	Semiotic generalised	*In order to …* Contract: justify	*Necessary* +ve Val (Ins) *better understanding* +ve Val (ins)	*Necessary* + Force *Better* + Force
The purpose of this research is to find out the role of ..	*This research*	Semiotic particular		*find out the role* +ve Val (Inv)	
The result may allow us to understand.. and may have a significant impact on..	*The result (of the study)*	Semiotic particular	*may* Expand: entertain	*may allow us to understand …* +ve Val (Ins) *may have a significant impact* +ve Val (Ins)	*may x2* - Force *Significant* + Force

Recognising and distinguishing the Burnish and Tarnish steps in Text 1 and Text 2 is relatively straightforward to the trained analyst or TESOL teacher. However, unless the linguistic patterns that construe

these phases are made visible, ELL students may struggle to compose the steps. To identify the patterns of couplings we may recognise as recurrent across these phases, it is necessary to elaborate on the choices made from ideational and interpersonal systems. While the scope of this paper does not allow for a full examination of discourse semantic and lexico-grammatical resources that may combine to form these couplings, the analysis shown in Tables 3 and 4 draws attention to the relevant contributing ideation and appraisal choices as well as the ways in which they unfold across highly-valued Critique phases. A key contributing resource from the appraisal system of attitude is Valuation (coded as 'Val' in the tables), which in academic discourse has been found to evaluate phenomena in terms of relevance, significance and benefit; and Composition (coded as 'Comp'), which includes the evaluative category of completeness. Both inscribed (Ins) and invoked (Inv) choices of these evaluative resources are shown in the tables and instantiations from Texts 1 and 2 are provided in italics.

Table 4
Analysis of Evaluated Sources In Text 2 (ideation And Appraisal Choices)

Text 2	Field / Ideation		ENGAGEMENT	Appraisal ATTITUDE +/- (Ins / Inv)	GRADUATION
Text excerpt	Target of evaluation	Entity type			
McAuley suggests .. a method of avoiding a subjective interpretation ..	*McAuley*	Semiotic named: partic	*suggests* Acknowledge	*…a way of avoiding subjective interpretation* +ve Val (Inv)	
I find this a problematic idea as …	*This .. (McAuley's idea*	Semiotic named: partic	*Idea* Acknowledge	*Problematic* −ve Val (Ins)	
There is really no room in McAuley's schema to discuss	*McAuley's schema*	Semiotic named: partic	*Schema* Acknowledge	*no room..* −ve Comp (Inv)	*really* + Force
perhaps better analysed through a framework of phenomenology	*a framework ..*	Semiotic partic	*Framework* Acknowledge	*better* +ve Val (Ins)	*Perhaps* - Force
or through Victor Turner's theories	*Victor Turner's theories*	Semiotic named: partic	*Theories* Acknowledge	*(better)* +ve Val (Ins)	*Perhaps* - Force

By distinguishing the contributions of resources from across and within Ideation and Appraisal systems as is shown in Tables 3 and 4, it is possible to make visible to students the particular combining resources which contribute to the couplings in each discipline and to identify similarities and differences in the way burnishing and tarnishing is instantiated in these academic disciplines.

Ideational Resources: Entities
A clear similarity in the ideational choices evaluated in both disciplines is the choice of semiotic entities, typically specifying the 'academic' nature of the field. These include:
- generalised (*e.g. studies, evidence*)
- unnamed particular (*This essay, This argument, the proposed research..*)
- named particular (e.g. *McAuley, Justic et al. 1997; Victor Turner's theories..*).

These entities, even when named as human entities, are semiotic because they name not only the text or person but also the content of the text produced, i.e. 'what is said'. This double loading, with the specificity of field discussed above, contributes to what has been termed a high level of commitment of ideational meaning (Hood, 2010). Developing a lexical repertoire to name semiotic sources in this committed way is an important way that students establish an identity as an academic.

Evaluating Resources: **Ideation + Appraisal**

Once ideational meanings have been committed through semiotic entities, Burnish or Tarnish couplings can be used in a number of ways to align audiences to a particular critical stance towards the sources. As is evident in Tables 3 and 4, one or more choices from across Appraisal systems contribute to the process. Mechanisms which are included in the overview below are those most evident in the corpus of academic texts examined.

ATTITUDE and GRADUATION

In terms of meaning, ATTITUDE choices which are most commonly used in the academic disciplines explored here are values of Appreciation: Valuation. In both disciplines, the evaluation is directed towards the semiotic 'content' of the source – 'what is said' (e.g. *results, evidence, idea, arguments, theory*). In Performance Studies essays, positive evaluation of the named source may be achieved through choices from Judgement systems (e.g. *McAuley's insights…*), however, in most cases, even if the name of the author is named, the appraisal is targeted at the semiotic 'thing' produced by the author, rather than at the author's behaviour or character. Inscribed choices are used to evaluate external sources in Performance Studies, (e.g. *McAuley's framework is useful; I find this idea problematic*) and internal sources (the author's proposed study), in Biology (e.g. *The result may have a significant impact).*

Choices from GRADUATION (e.g. *a number of..*) may also contribute to burnishing by intensifying positive values which have already been created (e.g. *A number of significant studies..*). As in Hood's research (2010), GRADUATION values in these academic disciplines tended to be quantification rather than intensification.

More frequent than inscribed values of ATTITUDE in both disciplines, are Burnish or Tarnish couplings which are invoked. ATTITUDE values are often flagged through GRADUATION (e.g. *A number of studies have found ..…),* through selections of ideational meanings which afford positive evaluation (e.g. *The result* (of the authors own study) *may allow us to understand ..*). A range of ENGAGEMENT values, as will be discussed further below, invoke ATTITUDE, themselves, and interact with other Appraisal and Ideation values to create Burnish and Tarnish couplings.

Burnishing of sources may also be achieved through charging entities with evaluative meaning in a process known as iconisation (Martin & Zappavigna, 2013), which will be discussed more fully in relation to civic evaluation. The pressure for objectivity in academic discourse makes such couplings rare, however, 'institutionalized feelings', such as Judgements of the prominence or capability of a particular researcher or Assessments of credibility or reliability may be invoked from a source name. In the Performance Studies texts, for example the representation of the semiotic entities (i.e. theories and schemas) as 'belonging' to a named source (e.g. *McAuley's schema, Victor Turner's theories*) suggests that these are people recognised in the field as experts. Such burnishing may also occur in relation to unnamed sources, such as 'evidence', which can be seen as fusing positive values of Valuation: credibility.

ATTITUDE and ENGAGEMENT

Central to the evaluation of sources are couplings of inscribed or invoked ATTITUDE with extra-vocalising choices from ENGAGEMENT systems. These include contracting values of endorsing and expanding values of acknowledging and distancing. These formulations cannot alone complete a Burnish or Tarnish coupling; however, their dialogic function of either contracting or expanding space for the sources brought into the text does provide the potential for an evaluative stance to be taken.

In both Biology and Performance Studies, endorsing and acknowledging values (underlined in the examples)

are coupled with positive values of ATTITUDE: appreciation (highlighted). While in many contexts these are typically realised through verbal processes (e.g. *recent studies have shown*), ENGAGEMENT choices which are involved in Burnish couplings in both disciplines are more frequently realised as abstract nouns (*McAuley's framework is useful*). Tarnishing of external sources typically occurs through couplings of ENGAGEMENT distance choices with negative attitude values (*This argument is limited; Gay McAuley's scheme…is problematic*) and, like Burnish couplings, can further interact with resources of GRADUATION to amplify the negative evaluation. (e.g. *There is really (GRAD) no room in McAuley's schema*).

As is shown in the Table 3, other contracting categories of ENGAGEMENT, such as counter-expectancy, have also been found to contribute particularly to Tarnish couplings as they position the reader to discount a particular proposition in favour of another. One common grammatical mechanism for construing counter-expectancy is through a concessive clause (underlined in the example below) expressing a proposition that might be expected, followed by a clause expressing an alternative 'counter' proposition, which is also typically evaluated through attitude, underlined in the example below.

> *Although these studies have demonstrated the general adverse effects of chronic aquatic hypoxia on the heart, little is known about the underlying molecular mechanisms of the M2 mAChR under chronic hypoxic condition.*

Burnishing and Tarnishing in Civic Contexts

Burnishing and tarnishing in civic contexts is a response to a core discursive impetus of contemporary social movements (Melucci, 1996), to agitate for social change (Eyerman, 2006, p. 42). From a rhetorical perspective, McCormack (1995, p. 1) includes in this domain the functions of "continually questioning, resisting, proposing and counter-proposing our communal activities, policies and ways of life." Martin (1985, p. 34) argues that, as activists typically have few powerful friends, there is increased pressure on interpersonal resources to align audiences around common values. For adolescent activists, who are further marginalized from mainstream political participation such as voting, semiotic resources for negotiating positions, mobilizing action and nurturing community have been found to be central to the achievement of their social goals (Humphrey, 2010, 2013).

The descriptions of 'civic' burnishing and tarnishing draws on analysis of Critique phases within 20 texts across three contemporary adolescent activist communities. The three excerpts below (Text 3, Text 4 and Text 5) are representative of the texts produced in these communities. As adolescent discursive politics is often conducted in "submerged networks" (Melucci, 1996), away from adult scrutiny, it is necessary to provide a more extensive contextualisation than was necessary for situating the discourse patterns of academic critical writing. A summary of relevant co-text is also provided in italics before each excerpt.

The first of the civic texts (Text 3) is an excerpt from a Blog produced over five years by a young affiliate of the international organization, MakePovertyHistory. The blog, though personal, is a space within an international online affiliation called TakingITGlobal (TIG), which was set up to connect youth and encourage civic participation (www.tigweb.org). Interestingly, this blog post was also published in the online magazine within the TIG website, providing greater prominence to the text.

Text 4, though also produced in an online environment, differs markedly from Text 3 in that it is an excerpt from one thread within a social network 'profile', i.e. Facebook. Facebook is typically used by the particular adolescent, JB, to negotiate her friendships and everyday activities of the social domain (Humphrey, 2010). While the Critique phase shown here is not representative of these social uses, it is illustrative of the 'border crossing' which is increasingly evident between the social and civic domains of adolescents' lives. The posts included in the excerpt are written in response to a statement made by a popular culture celebrity, Shalene Woodley, on the topic of Feminism, which was reported in a *Huffington Post* media article. Additional contextual information needed to interpret this thread includes knowledge of the TV sit com *That's so Raven* (2003-2007), which contained strong women role models. Knowledge is needed also of the singer Beyonce's 2013 *Flawless*, which contained a strong feminist message, including a definition of feminism spoken by activist Chimamanda Ngozi Adichie.

Text 5 is an excerpt from an interview on a youth-oriented national radio program with two young refugee

activists and an adult affiliate of a grassroots organization, Chilout (Children out of Detention). This affiliation was formed in the early years of the 21ˢᵗ century to lobby the Australian government to free refugees and their children from Immigration Detention Centres (www.chilout.org). A crucial factor mediating the linguistic choices of the young speakers in this interview is their status as English Language Learners, who have been formally learning English for only two or three years and who had experienced severely disrupted schooling in their first language.

Text 3 (Table 5): Bonofan TIG Blog post - The Politics of a New Generation: The post from which this excerpt is taken is one of over three hundred posts contributed by the adolescent, Bonofan, over five years (From age 13-17). Of these, a significant proportion were concerned with the issue of global poverty and promoting the activities and resources of MakePovertyHistory.

Table 5
Burnish and Tarnish steps in Critique phase of Text 3

Text	Steps
I am personally very passionate about the global campaign to end poverty, and I see the Millennium Development Goals as the definitive document on how to halve global poverty by 2015.	Burnish step External source 1 (social movement responses)
Yet time is running out, fast. There is less than 10 years left, and the OECD nations, as a whole, haven't even pledged to give 0.5% of their GNI, let alone 0.7%. Political correct dealings often lead to inadequate responses to pressing problems, and in the 21st century, this needs to stop. Is it really that hard for a government to pledge 0.7% of its GNI to international aid and development programs? ….	Tarnish step External source 2 (political responses)
For the global movement against poverty, 2005 was a year in which many pledges were made. Many were incredible and much-appreciated,	Burnish step External source 2 (political responses)
while others were less than what was expected.	Tarnish step External source 2 (political responses)
Nelson Mandela said that "it sometimes falls upon a generation to be great." He also said that that generation can be us…The world saw the beginnings of such a movement in 2005,	Burnish step External source 1 (social movement responses)
but for the movement to continue, it must go beyond the celebrities, and fall into the back pockets of the average citizen worldwide.	Tarnish step External source 1 (social movement responses)

Text 4 (Table 6): Facebook thread – Feminism: Thread begins with a link, posted by 18 year old JB on her Facebook wall, to Huffington Post article reporting on actress Shalene Woodley's response to the question 'Are you a Feminist?'. The actress replied 'No, because I love men..'

Text 5 (Table 7): Chilout Interview on JJJ: The two adolescents (identified as Z and T below) interviewed in this excerpt, are 'Ambassadors' of the grassroots lobby group, Chilout. The interview follows a decision by the High Court of Australia, which overturned a previous Family Court decision to release children from Immigration Detention Centres. The question posed by the interviewer follows questions seeking the opinion of the two

adolescents and their adult Chilout affiliate on why children should be released from detention.

Table 6
Burnish and Tarnish steps in Critique phase of Text 4

Text	Steps
JB: For the last time ppl – misandrist = people who hate/want dominance over men. Feminist = people who want the sexes to be equally valued in all aspects of life. It would be muchly appreciated if people in the public domain could take 5 seconds to read a dictionary before opening their misinformed mouths. ….	Tarnish step External source 1 (celebrities who misrepresent feminism)
JB. What she said was just so not Raven.	Tarnish/Burnish step Tarnish external source 1 / Burnish external source 2 (TV series chs)
JB: These people dissociating themselves from the concept of feminism' is just perpetuating these 'bad connotations. These basic bitches just need to stop	Tarnish step External source 1
and let Beyonce speak….	Burnish step External source 3 (celebrity understanding/celebrating feminism)

Table 7
Burnish and Tarnish steps in Critique phase of Text 5

Text	Steps
I: Z and T you both went to Parliament House in Canberra to lobby the government to change their policy and to release children. …. you both got to put your arguments to the Minister for Immigration that children should be out of detention centres. What did she say back to you?	
N: Mmmm she didn't say an exact answer for us	Tarnish step
Z: Nothing	External source 1
I: She dodged it, did she?	(political responses)
N: She just tried to put us like somewhere else. When we started from somewhere she just ended up with somewhere else that is differently, so opposite	
I: You were going to say something Z.	
Z: Yeah, like when we were saying that children don't belong in Detention Centres, she just like said 'When they come here, like, they have plans, like, they choose to come here and like they know what they're doing". I think she means like that they are not so innocent. And also she said people who are in TPV, they can, .. (giggling).. she didn't even say get married..well it is a bit embarrassing but I'll say it, like, have babies and you will automatically get accepted in Australia, like you will be Australian if you marry an Australian.	
I: Z..What do you think about the idea of calling people who come here seeking asylum by boat queue jumpers?	Tarnish step External source 2 (those who call asylum seekers 'queue jumpers')
Z: I don't think it is appropriate to call them queue jumpers 'cos they just seek asylum and that's not wrong, like we should give right to any one who seek asylum and give them a go.	

Burnish and Tarnish Steps and Couplings

A top-down analysis of the Burnish and Tarnish steps of the Critique phases in the three civic texts reveals coupling patterns which are both similar to and different from the formation of the academic domain critique phases. However, it is difficult to generalise the evaluative structure across the three civic texts. Even though each of the three phases shares the function of challenging discourses which are considered powerful in the particular socio-political context (institutional politics/ politicians/ popular culture celebrities), the diverse register configurations have a great influence on the evaluative couplings. Therefore, I analyse both the evaluative structure (i.e. Burnish and Target steps) and the coupling resources of the three texts separately, focussing only on those which are distinctive to the activist's civic goal.

Burnishing and Tarnishing in Text 3

The unfolding of a critical stance in Text 3 is undoubtedly close to the patterns found in the Critique phase of the academic essay (Text 1), with targeted fields being external rather than internal sources (i.e. mainstream political discourse and social movement discourse). Interestingly, while mainstream political sources are consistently tarnished across the phase, social movement discourse is both burnished and tarnished. In fact the final Tarnish step is targeted at the social movements with which the young activist affiliates with an exhortation to overcome the limitations of the movement. This suggests that, for this particular activist, the TIG civic space is one used for debate and deliberation.

Ideation + Appraisal Couplings

Entity choices of Text 3 build a field of political institutions and activity, and, like the two academic texts, substantial ideational meaning is committed to construe this field. Unlike the two academic texts, however, only two of the sources in Text 3 are semiotic entities (i.e. *document, responses*), with other sources represented in the text as people—either generalised institutions (e.g. *nations, government*) or individualised humans (e.g. *Nelson Mandela*). In these cases semiotic activity is achieved through processes (e.g. *pledged, said*).

In common with the two academic texts, abstract semiotic entities in Text 3 are evaluated only through inscribed appreciation values (e.g *definitive <u>document</u>; inadequate <u>responses</u>*). However, an important distinction in this and other civic texts is the use of iconisation to burnish sources—and particularly the use of culturally-valued identity icons (Tann, 2010, p. 88). Identity icons are defined as couplings which form a 'relatively stable syndrome that is recognized by the discourse community as an 'identity' (88). In Text 3 the named human entity, Nelson Mandela, who is a prominent source in MakePovertyHistory affiliation and in the broader public sphere, is charged with positive evaluative meaning, and the quote attributed to him ("*it sometimes fall upon a generation to be great"..)* acts as a rallying cry to align the audience around the values expressed or symbolised (Humphrey, 2013).

Resources for burnishing and tarnishing in Text 3 also differ significantly from those in the academic Critique phases. These include Tarnish couplings created through invoked ATTITUDE and the contracting ENGAGEMENT choice of rhetorical question (e.g. *Is it really that hard for a government to pledge 0.7% of its GNI to international aid and development programs?)*, which presents the requested action (and evaluations of those actions) as so apparent that compliance can be taken for granted (Martin & White 2005, p. 148). Questions such as these are repeated across Bonofan's posts – in this text coupled with deny (e.g. *Are these demands too much? No.*), to complete Tarnish steps and thereby close off negotiation of particular issues. The repetition creates a form of grammatical parallelism, which is a highly-valued feature used to rally audiences in political discourse (Partington, 2003) but of limited value in academic writing.

Burnishing and Tarnishing in Text 4

The critical stance developed in Text 4 also unfolds through a regular interplay of Burnish and Tarnish steps, directed at external sources. Unlike the Critique phases in both other civic texts, however, the external evaluated

sources are within the broad popular culture field rather than political/social movement institutions. A further distinguishing feature is that the targeted subfield of tarnishing remains constant across the phase, referring to celebrities who have expressed the perspective on feminism that is challenged in the thread. The target of evaluation also remains constant, referring to celebrities who express feminist views promoted in the thread. This suggests that in this affiliation there is less pressure for any one individual writer to present a balanced evaluation. However, there are several mechanisms for alternate perspectives to be brought into these overtly dialogic social media threads.

Ideation + Appraisal Couplings

An analysis of the couplings that form Burnish and Tarnish steps and Critique phases reveals that the target sources of all evaluation are human entities with semiotic activity expressed relatively congruently through processes. The tarnished entities are generalised (e.g. *people*) but the specific group referred to is retrievable within the text (*These people dissociating themselves from the concept of feminism*). Iconisation is also used in this Critique phase to negatively charge entities in terms recognised within youth culture (i.e. *basic bitches*). Swearing and slang have been interpreted by Eggins (2000, p. 144) as instantiations of involvement used to display affiliation in restricted communities. Further tarnishing is achieved through coupling these entities with distancing options of ENGAGEMENT (disassociating; *bad connotations*), counter-expectancy (*just*) and highly amplified GRADUATION (*so not* raven; *for the last time*). Iconisation is also used to burnish sources in this Critique phase, in Text 4 as popular culture feminist Icons, Beyonce and Raven-Symoné, star of the TV sitcom, *That's so Raven (*2003-2007). However, a great deal of further work is needed to account for the role of Iconisation and Involvement in building civic affiliation within social spaces such as Facebook.

Burnishing and Tarnishing in Text 5

The Critique phase of Text 5, the interview, is notable due to the lack of burnishing of any external source. Two external sources are negatively evaluated by the adolescent activists, the politician with whom the activists met and those who call asylum seekers queue jumpers. Tarnishing of the politician source accumulates across the phase with additional specificity. Interestingly, the interviewer not only directs the activists to the targets of evaluation but also contributes to the tarnishing of the first external source (e.g. *She dodged it, did she?).* While it is highly likely that these activists have not developed the linguistic resources to develop a critical stance through more complex burnishing and tarnish steps, the focus on tarnishing in this Critique phase can be related to the function of the Chilout affiliation as agitating for particular social change rather than negotiating perspectives.

Ideation + Appraisal Couplings

Looking more closely at the linguistic mechanisms involved in the tarnishing couplings, there is little explicit evaluation of either the source or of what is said. The entity is named by the Interviewer as a high status politician, known to be relatively unsympathetic to the goals of the Chilout lobby group (The Minister for Immigration). The activists themselves use only the pronominal referent 'she'; however, the repetition of this referent in relation to the entities that name the internal sources (i.e. *we*) does serve to emphasise the lack of affinity of the young speakers towards this source. ENGAGEMENT values are likewise relatively uncommitted evaluatively – these are largely expressed through neutral choices of attribution (e.g. *said*). Despite this however, negative Judgements of the source are afforded throughout the phase in a number of ways. Most distinctive is the selection of experiential meanings included in 'what is said', which call on shared values of the affiliation towards the rights of refugees and particularly children.

The limited commitment evident in the Critique phase of Text 5 can be partly explained by the status of the speakers as ELL's with developing control of either Ideational or Appraisal resources and little experience in an interview situation. However, as refugees and children themselves, the two speakers are 'insiders' in the lobby group. It is the sharing of personal experience and affinity built with the group represented which is rhetorically powerful for the young people in this affiliation, rather than the consideration of alternative perspectives or

debate. Within Chilout forums such as interviews and rallies, their adult mentors frequently play a role in co-constructing texts to provide more specialised information. While these mentors and the teachers of the young activists take seriously the support they offer to these learners to expand their rhetorical and academic literacy repertoires, they also recognise the rhetorical power of the repertoire they already possess.

Conclusion

As is evident in the above analysis of Critique phases and their couplings, burnishing and tarnishing is achieved through different resources in different domains of young people's lives. While in both domains resources from systems of Ideation and Appraisal are deployed to form evaluative couplings of sources, genres in the civic domain show considerably more variability than those in the academic domain. The particular goals of the broad discursive domain and the particular affiliation and/or discipline are found to create opportunities and constraints for certain couplings to be preferred and to pattern across Critique phases. Likewise, Alvermann, (2002) found that adolescents beyond schooling engage in diverse and multilayered literacies. Findings of the use of resources such as iconisation in civic discourse supports the findings of New Social Movement theorists, who argue that contemporary social movements tend to be oriented towards building solidarity and mobilising action within civic affiliations (Nash, 2000).

It is important for teachers to be aware of the variability in constructing these highly valued Critique phases. This knowledge may inform explicit pedagogical practices to support high stakes persuasive and critical writing in the academic domain and may also allow teachers to recognise and celebrate the transformative literacies made possible beyond school contexts.

Endnotes

[1] Terms such as burnishing, tarnishing and critique are used in lower case to refer to the evaluative process or effect and capitalized when naming the discourse semantic interaction or unit (e.g. Burnish coupling, Critique phase).

[2] Systems in Systemic Functional linguistics are written in all capital letters.

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Legitimising the Knower's Multiple Voices in Applied Linguistics Postgraduate Written Discourse

Cheung Lok Ming Eric*

Hong Kong Polytechnic University, Hong Kong SAR

Abstract

Postgraduate student writers often find negotiating a space for their own authorial voices challenging. It may be difficult for them to demonstrate and evaluate knowledge through displaying their own voices and "gazes" (Maton, 2014). Adopting an appraisal analysis approach (Martin & White, 2005), and focusing on engagement in particular, the present study investigates the writing of an applied linguistics postgraduate student to identify the discourse strategies she uses to project her authorial voice as well as other authors' voices. The strategically deployed projected voices facilitate the author's engagement with the readers, allowing her to present herself as a legitimate knower of the field. The findings of the present study propose that a knower's voice is multi-faceted with respect to the changing contexts in a single text instance. The effective knower's voice also constantly maintains a balance between authorial voices, critical insights and literacy practices in the discourse community. The successful case presented provides implications for scaffolding the knower's voice, enabling postgraduate writers to source, balance and evaluate their own and other authorial voices.

Key words: Postgraduate writing, voice, SFL, APPRAISAL, ENGAGEMENT, Legitimation Code Theory (LCT)

Introduction

The struggles of postgraduate students to find an appropriate voice as members of the academic community have been identified as a common problem (e.g. Flowerdew, 1999; Hood, 2004, 2010; Ivanič, 1998). The students need to adapt to discourse practices different from those in their undergraduate schooling and other professional fields. Encountering a wide range of assignment genres, the students are often required to incorporate their critical voices in their independent research studies, while remaining objective and depersonalised. However, certain academic discourse conventions are seldom made explicit for the students, and these conventions thus may remain invisible to them (Coffin et al., 2005; Hyland, 2005). As a result, with limited support for academic writing, student writers often display a lack of confidence in expressing their perspectives. It is thus paramount for postgraduate programmes to scaffold the learners into acquiring the discourse strategies that allow them to display their critical voices, in addition to highlighting their awareness of the conventions when constructing academic knowledge.

Voice, according to Clark and Ivanič (1998, p.31), is regarded as the "discoursal construction of identity." Academic writers constantly select language resources that express their ideas and beliefs while observing long established academic conventions. They construct impressions of their identities with linguistic resources that convey the "voice types" that align writers and readers in a social group (Ivanič & Camps, 2001). In addition to the voices representing the writers' identities, other voice sources are drawn upon to position the writers' perspectives with respect to those of other authors. Academic writers often employ other voices that offer

* *Tel.: +852 9050 6434, Email: eric.lm.cheung@connect.polyu.hk Department of English, 11 Yuk Choi Road, Hung Hom, Hong Kong SAR*

alternative perspectives "construed as being in play in the current communicative context." (Martin & White, 2005, p. 94). For effective communication in an academic context, writers are required to manage and balance voices for various rhetorical purposes.

In response to the issues of appropriating voice in academic writing, the present study aims to offer a comprehensive description of the discursive practices and strategies that balance voice effectively in high-grade postgraduate writing. It focuses on two written assignments by an applied linguistics postgraduate student from an English L2 background. The two assignments are compared with respect to the balance of the voice of the author and of the alternative sources, as viewed through the lens of ENGAGEMENT within the APPRAISAL system paradigm (Martin & White, 2005; Hood, 2010, 2012).[1] The ENGAGEMENT analysis identifying the student's voice strategies will be discussed in reference to notions of *gaze* under Maton's (2009) Legitimation Code Theory (LCT). LCT provides the tools to observe the ways in which knowers claim legitimacy when constructing knowledge through discourse practices, and gaze in LCT underlies the knower's dispositions, insights and evaluation in relation to the object of study (Maton, 2014; Maton & Moore, 2010). The text analysis is supported by student and teacher interviews. The interview data justifies the appropriation of gaze by the student to adjust her voice in the assignments, and offers insights into the alignment of gazes of both the student and the teacher. Through the findings, the present study seeks to identify the discourse and lexicogrammatical features that legitimately display the interacting voices in effective academic writing, and provide the basis for explicit resources for voice teaching.

Conceptual frameworks

APPRAISAL: ENGAGEMENT as Positioning of Voice

The discourse features that negotiate positions for evaluation in postgraduate assignment texts can be categorised as interpersonal semantic resources under Martin and White's (2005) APPRAISAL framework. The APPRAISAL framework is divided into three subsystems (Figure 1). ATTITUDE represents the valuations of emotions, people or things coded in texts; attitudinal meanings are sourced in voices as the ENGAGEMENT resources, which open up or close down the dialogic space. Both ATTITUDE and ENGAGEMENT resources can be adjusted by degree in terms of GRADUATION. As the degree of delicacy increases, each of the subsystems has its finer categorisation of semantic options. These semantic options realise the evaluative meaning explicitly (inscription) or implicitly (invocation). Employing the APPRAISAL system as the analytical framework facilitates the identification of the evaluative resources for discourse analysis of academic writing.

The ENGAGEMENT system, further differentiated in Figure 2, provides the means for authors to position themselves to engage readers with alternative voices available in a given context (Martin & White, 2005, p.94). The ENGAGEMENT system classifies single-voiced assertions as MONOGLOSSIC, realised through positive unmodalised declarative clauses (e.g. *Sentence fragments and run-on sentences break the structural rule of forming a correct sentence*). Meanwhile, the introduction of alternative voices into the text as HETEROGLOSSIC resources is further extended into the network of options for dialogic CONTRACTION (to "PROCLAIM" a proposition or "DISCLAIM" other voices) and EXPANSION (to "ATTRIBUTE" or "ENTERTAIN" alternative voices). These HETEROGLOSSIC resources are realised across grammatical categories, including comment adjuncts (e.g. *hopefully, obviously, naturally*), adversative conjunctions (e.g. *however, but*), negation (e.g. Recent studies *did not* show…), modality (e.g. The approach *may*…) and projection (e.g. This study *suggests* that…). The ENGAGEMENT resources, using examples from the two assignments extracted from the present study,[2] are summarised in Table 1.
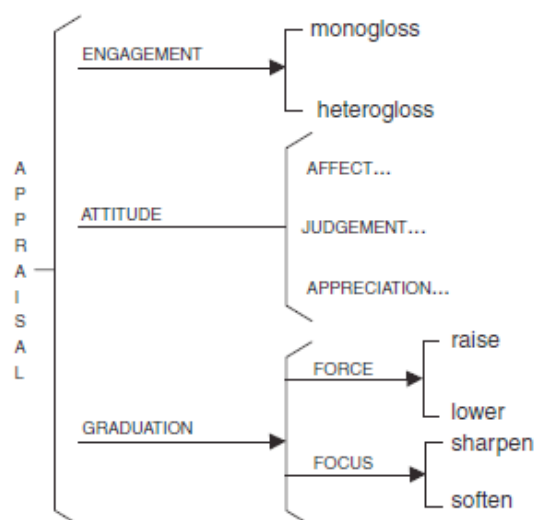
Figure 1. Overview of APPRAISAL framework (Martin & White, 2005, p. 38)

In summary, postgraduate student writers are required to negotiate their evaluative positions in order to legitimise their objects of study and fields of research (Hood, 2010). The next section discusses how APPRAISAL analyses in academic writing can be used alongside Legitimation Code Theory (LCT) (e.g. Maton, 2009, 2014). In this way, the voice shifts in the postgraduate assignment texts can be observed and understood through the notions of *knower structures* and *gaze* within the LCT framework.

Figure 2. ENGAGEMENT system (Martin & White, 2005, p. 134)

Table 1
Functions and Realisations of Engagement

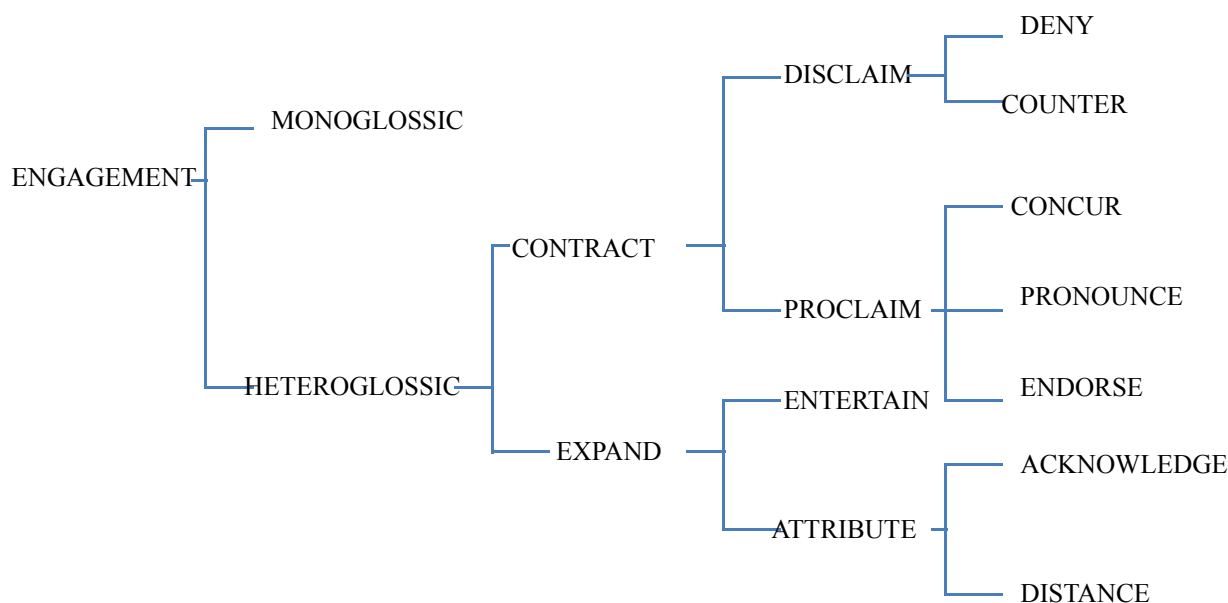| ENGAGEMENT features	Functions	Examples
MONOGLOSSIC	*Single voiced; no other voices introduced; dialogically inert*	In the section of TOEFL speaking, many academic terms and scientific phenomena are incorporated in the listening materials.
HETEROGLOSSIC	*Multi-voiced; introduction of alternative positions*	
CONTRACTION	*Fending off the scope of voices*	
DISCLAIM	*Rejection of dialogic alternatives*	
DENY	*Negation of proposition*	Teaching speaking is <u>not</u> just the matter of teaching how to speak fluently and accurately.
COUNTER	*Counter-expectancy of a proposition*	This approach sounds adoptable, <u>but</u> in the practice of question 6…
PROCLAIM	*Limiting scopes of alternatives*	
CONCUR	*Overt agreement with the projected dialogic partner*	Contextual guesswork in top-down model is <u>commonly</u> used in real life…
PRONOUNCE	*Explicit intervention of authorial presence*	<u>It is clear that</u> the emergence of both fragments and run-ons…
ENDORSE	*Portrayal of the authorial voice or the sourced voice is valid and thus warrantable*	<u>This research indicates</u> the strong relationship between writing and grammar
EXPANSION	*Allowing dialogic alternatives*	
ENTERTAIN	*Modalisation of proposition*	They <u>might</u> misunderstand sentence variety as complicated sentences.
ATTRIBUTE	*Attribution of voice of external sources*	
ACKNOWLEDGE	*Sourcing external voices to associate with the proposition*	<u>Fitzpatrick and Ruscica (2000) once pointed out</u> that by recognising…
DISTANCE	*No specification of the positioning of the voice with regards to the proposition*	<u>Chomsky claimed</u> to have shown that…

Linguistics/Sociology Dialogues: SFL Meeting LCT

Legitimation Code Theory (LCT), as Maton and Moore (2010) summarise, offers a sociological perspective on the structures of knowledge and knowers in different social fields. LCT is based on Bernstein's code theory (1971, 2000), and is integrated with inspirations and insights from sources such as Bourdieu (1977, 1990), Foucault (e.g. 1982) and systemic functional linguistics (SFL) (Halliday & Matthiessen, 2013). The constant dialogue between SFL and LCT has significance for academic writing research (Bernstein, 1995; Coffin & Donohue, 2012; Hasan, 2009; Hood, 2010, 2012; Martin, 2011; Maton, 2014). SFL and LCT often work in a complementary relationship as SFL provides the linguistic tools to analyse LCT, while LCT offers insights into the discoveries that emerge from SFL analyses. For instance, a TRANSITIVITY analysis (choices within the clause of processes and their accompanying participants and circumstances) can examine the knowers' perspectives on the processes

expressed in academic writing (Martin, 2012). Also, APPRAISAL analysis allows for an exploration of how the academic writers' gazes, which represent the perspectives from which they make claims about their objects of study and research fields, are enacted through linguistic resources (Hood, 2010, 2011; Martin, 2012). The interdisciplinary partnership of linguistics and sociology seeks understanding of knowledge-building through discourse practices (Coffin & Donohue, 2012), and of the principles for classifying knowers' dispositions and attributes reflected through their language choices.

Knower structures and gaze, two important LCT concepts, aim to uncover the positioning of student writers as knowers with respect to the demonstration and evaluation of knowledge. Knower structures represent a spectrum of knowers whose legitimacy is determined based on their dispositions and experience. The basis of knowers' insights is referred to as gaze, which has to be acquired, and is a particular mode of recognising and realising what counts as an "'authentic'… reality" (Bernstein, 2000, p. 164). Maton (2014) defines four types of gaze; knowers with a born gaze belong to a privileged group of knowers regarded as "geniuses" having "natural talent," or as the ones whose "genetic inheritance and biological explanations of practice" are privileged (Maton and Moore, 2010, p. 166). Those with a social gaze determine their knowers' legitimacy through their social status, affected by notions such as class, gender and race. Knowers possessing a cultivated gaze legitimise their knowledge claims through immersion in culture or education. The trained gaze suggests that the legitimate insights result from prolonged training with specific sets of methods and procedures instead of the knowers' socialised dispositions or social positions. In other words, "the trained gaze emphasises possession of specialist knowledge as the criteria for membership of a field and the means of inculcation into its principles of organisation" (Maton & Moore, 2010, p. 178). Maton and Moore (2010, p. 167) summarise that "knower structures may affect knowledge structure." The study reported on here focuses on one particular knower's dispositions to investigate how her gaze interacts with her voice in constructing knowledge through written discourse in a specific academic field.

The SFL and LCT concepts introduced above provide a useful and complementary analytical framework for investigating how evaluation in academic written discourse can be understood from a social realist perspective. As the interdisciplinary dialogue between SFL and LCT proceeds to the discussion of voice, the focus shifts towards the language users, as well as towards the "distribution of meaning repertoires in socially stratified communities" (Martin, 2011, p.54). This focus is used here to observe a postgraduate student writer who effectively manipulated the discourse strategies that displayed her voice (and gaze) with respect to her objects of study.

Data and Methods

Research Site And The Selected Case Study

The study was conducted during the first semester in the Department of English at a university in Hong Kong. 167 postgraduate students were enrolled in the Department in the 2013-2014 time period within which the study was conducted. Among the 167 students, 30 volunteers participated in the study. One student from the volunteers, given the pseudonym "Flo", was selected as a case study to investigate the balance of voice in the selected written assignments as expressing a knower of the fields of teaching and linguistics. The following sections provide details of the case study and analyses.

Case Study: Background of The Postgraduate Writer

Flo was selected among other volunteers because of her proactive participation and outstanding performance in the courses. She was a Mainland Chinese student in the postgraduate programme of English language teaching. Throughout the first semester of her postgraduate study, she frequently interacted with the researcher to share perspectives and seek advice. She actively participated in interviews, discussions and consultation sessions. She was also cooperative in providing all her written assignments for analyses, and thus considered an eligible participant for the case study.

Flo has a background as a cultivated English user and an experienced teaching practitioner. Prior to her

postgraduate study in Hong Kong, Flo had earned her undergraduate degree in English of International Commerce in Guangzhou, China. She also scored 7.5 overall in the IELTS exam. In addition, her experience in assisting foreign teachers in adapting to life in China during her undergraduate study allowed her to be acculturated in one form of proficient English-speaking culture. After graduation, Flo worked at an overseas study agency, and gained TOEFL teaching experience. Flo's qualifications, as well as her life and working experience, had thus helped her establish and enhance her English proficiency for both everyday and academic purposes.

Regarding gaze, Flo possesses a cultivated gaze through prolonged immersion in the academic field. She can integrate knowledge from the canonical literature of applied linguistics and English language teaching into her academic discourse. For example, Flo understood that the functions of citation practices are beyond mere attribution (Harwood, 2009; Petrić, 2007). As shown in her writing, she established her argument claims as justified by insights from acknowledged authors. In addition, she would usually summarise and paraphrase knowledge claims from the literature based on her understanding and perspectives, instead of frequently citing or quoting them. These writing practices suggest that Flo could legitimise her claims through a cultivated gaze resulting from inculcated education (Maton, 2010, p.166). Meanwhile, she has also acquired a social gaze, owing to her qualifications in English language use, tertiary education and teaching experience. Her social gaze thus legitimised the evaluative claims made as a member of the teaching community. In light of developing a deeper understanding of Flo's social and cultivated gazes, the study examines the linguistic resources that foreground these two gazes in the two selected assignments.

Assignment Selection

In the first semester, Flo was awarded high grades in two assignments, a classroom-based research report (henceforth "FLO_582_RR" in the examples) and a literature review (henceforth "FLO_582_LR"), for the core subject Second Language Teaching ("SLT" hereafter). In addition to the two assignments, Flo also wrote one essay and one research proposal in two other subjects during the first semester. The two SLT assignments were selected for analysis owing to their distinction grades and close relevance between the two assignment topics (Petrić & Harwood, 2013).

The two SLT assignments differed in terms of the guidelines and direction provided: the research paper was an "open task," and the literature review a "directed task" (Petrić & Harwood, 2013, p. 112). The research-based assignment allowed students to select any topic relating to reading or writing teaching practice in the English classroom. The assignment also included a solution-oriented investigation (Freebody, 2003, p. 86) and the relation of the findings to the literature. In the research paper, Flo conducted action research to help students avoid sentence fragments and run-on sentences. The literature review required students to summarise, synthesise and evaluate recent literature on spoken language pedagogical approaches. The review would also need to link the theories to the teaching contexts in Hong Kong, or to those which the students found relevant. For both of the assignments, guidance and consultation were given on conducting the research and writing up the texts.

ENGAGEMENT Analysis of The Selected Assignments

The analysis I report on here adopted discourse-based qualitative approaches with computer-assisted methods, as well as close discourse analysis. The analysis involved identifying the ENGAGEMENT features in the two written assignments, and supplementing the textual data with the student and teacher interviews and the assignment feedback from the course instructor.

The lexicogrammatical and semantic features identified in Flo's research paper and the literature review were coded according to ENGAGEMENT features. Both assignment texts were divided to the level of ranking clauses before being coded with UAM CorpusTool, a corpus annotation software (O'Donnell, 2008). The clauses were then either annotated as MONOGLOSSIC or HETEROGLOSSIC. The HETEROGLOSSIC CONTRACTION or EXPANSION values were further labelled according to their subtypes. The distribution of the ENGAGEMENT

resources in both texts were calculated and tabulated automatically by the software. The analysis investigated the distribution of the ENGAGEMENT resources in the two assignments to describe how the voices of the student writer and other authors were balanced. In addition, the analysis described the strategies contributing to the balancing of voice across phases of text (as represented in paragraphing).

In addition to text analysis, the identified ENGAGEMENT features in the text instances were discussed in relation to the interview data and the course instructor's feedback. The examination of the student and the teacher's responses aimed to understand (1) the motivation behind the student's lexicogrammatical and discoursal strategies; (2) the authorial positioning of the student when she deployed the strategies, and (3) acceptable ways to represent student writers' voices in the academic context from the teacher's perspective.

Results and Discussion
Overview of the Assignments
Flo received outstanding grades in both of her assignments. The research paper was awarded B+/A (the interim grade between B+ and A), and the literature review was graded B+. The originality of her assignments was also acclaimed, as reflected in the high grades and the comments from her course instructor. According to the teacher's feedback, Flo was highly appraised for her sound knowledge of the field, and her industrious work conducted in her research site. She effectively used academic language to generalise her topics to the broader academic context. She also fulfilled the criteria of the assignment requirements with clear organisation and presentation. The assessment criteria indicated that the assignments demonstrated originality as well as a clear understanding of the topic and the teaching context, and so were awarded distinction grades. The high grades reflected Flo's sophisticated control of an academic voice to demonstrate her understanding of the teaching field and practices. Flo's voice from an insider perspective as a TOEFL teacher was recognised and valued.

The course instructor's grading and feedback provided clear evidence that Flo was acknowledged as a member of the teaching practitioner community. Such acknowledgement was shown by legitimising Flo's insights in the fields of both teaching and applied linguistics. Moreover, owing to the extended experience in English language use, teaching and applied linguistics, Flo could be regarded as a knower with a cultivated gaze. However, a more delicate shift of gaze, and voice as a result, in her written discourse would have to be further examined.

To explicate the findings, I will first focus on a single text instance, the literature review, to explicate how voice (and gaze) shifts traversing phases of discourse. Then I will offer an overview of the ENGAGEMENT resources the writer deployed in the two selected assignments to (dis-)engage the readership according to her intended evaluative positions.

Voice (And Gaze) Shifts in Phases of Discourse
In this section the literature review assignment (FLO_582_LR) is selected to examine the delicate voice shifts over phases of discourse. The selection of the literature review is justified by its overt requirement for reflecting the writers' own "voices" and "opinions" on the topic. Therefore, the assignment is expected to contain discoursal features to balance different sources of voice. Through the examination of subtle voice shifts, this section discusses the dynamics of gazes which the writer might adopt to legitimise her voice, further enacted through language.

After finishing the first assignment (FLO_582_RR) for the SLT subject, Flo proceeded to write the second assignment (FLO_582_LR) with her raised awareness of the academic discourse conventions. She recounted during the interview:

> [A]fter I finished my first assignment and learned something, I know how to find the references… I know how to make my academic writing more coherent. [FLO_GP_2_03042014]

The positive feedback from the course instructor (Grade B+) showed that Flo had managed to demonstrate her

thorough understanding of the field of study. The course instructor's feedback also stated that the review was well written and clearly organised. The meticulous organisation of the literature review assignment facilitated the voice shift across the text. In Flo's literature review, each phase of the text exhibited a similar voice patterning. She first discussed the reviewed studies through generalising voices from other authors. As she commented on each pedagogic approach, her authorial voice became more explicit. She then justified her evaluation with cases from her teaching practices, and generalised the reviewed literature and the evaluation at the end of the phase. The dynamic variation of voice within a phase of discourse in Flo's literature review assignment is demonstrated in Table 2, with the ATTITUDE resources bolded, and the ENGAGEMENT resources underlined and glossed in brackets.

As shown in Table 2, Flo established her voice as an *academic writer* through a monoglossic, generalised statement with an overall evaluation of the teaching strategy (*the top-down model*) to be discussed in the phase. As the statement was elaborated in the subsequent clauses, the significance and feasibility of the strategy was positively evaluated (e.g. *important*, *ideal pattern*) through acknowledging other authors (*Nunan [2002]* and *Wilson [2003]*). Through attribution, Flo's voice shifted to become that of an *academic reader*, whose evaluation had to seek support from other sources. The evaluation was hedged with an ENTERTAIN value in Clause 7 (*It seems feasible in classrooms…*), achieving overall concurrence with a higher degree of reluctance (Martin & White, 2005, p.125) that forecast the upcoming counter-expectancy. Owing to her TOEFL iBT teaching experience, she provided an insider's perspective relating the circumstances which might be an impediment to the top-down teaching model. She adopted the voice of an *experienced teacher*, first aligning the readership with a concurred perspective, and then repositioning the readers in a different evaluative viewpoint through counter-expectancy (*however*). This strategy provided grounds for Flo to propose plausible solutions that resolved the challenge mentioned through the summary of the readings and her teaching experience. The last clause summarised the whole phase of discourse with the voice also of a *teacher*, but with an additional role as an *advisor*. As Flo proposed a solution from the teacher's perspective, she performed what the topic statement suggests – to consider what would encourage students' learning when preparing teaching materials.

The shift of voice that affirmed the argument and consolidated readership engagement showed a similar patterning, as explicated in Table 3. A slight variation lies in the ENGAGEMENT resources deployed to emphasise the agreement as the phase unfolded. The voice as an *academic writer* again prevailed as Flo started the phase with a generalised overview of the teaching approach (*use of authentic materials*). She put forward a number of major research studies (*many* researchers such as *Nunan [2002], Field [2002], and Tavil [2010]*), implicitly suggesting the significance of the topic under discussion (Hood, 2010). Flo then proceeded to demonstrate her understanding of the topic through elaborating her argumentation with the support of the mentioned authors. Her voice as an *academic reader* blended with the attributed voices to downplay the monoglossic assertions that positively evaluated the teaching approaches. As the discussion moved towards her own teaching context, Flo's voice as an *experienced teacher* emerged to be highly visible with the pronouncement of her presence in the discourse (*I find*) to evaluate the teaching approach explicitly (*the real-life dialogues helpful*). In the conclusion of the phase, she further commented on the advantages of the discussed teaching approach, summarising the content in the phase in the voice of a *teaching advisor*.

The close text analysis in this section has provided evidence that the writer's voice is multi-faceted within a single text instance. The writer's multi-faceted voice dynamically interacts with other sources of voice even within the smaller discourse phases. The dynamics of voice and the corresponding evaluation serve the varying rhetorical purposes within the phases of the discourse.

The changes of Flo's voice in the literature review also indicate the evident shifts of gaze. The analysis of these particular phases in the literature review assignment has demonstrated that Flo's gazes held different responsibilities in the different phases of this discourse. Her cultivated gaze, for instance, enhanced her awareness of finding sources from notable researchers in support of her perspective. When her cultivated gaze was prominent, her visibility as the author of the text diminished; instead, the theoretical knowledge informing her

study was given priority. Meanwhile, her social gaze as a teaching practitioner granted her privileges to assert her voice in the phase as a legitimate knower for overt evaluations. In all, this successful example shows how student academic writers can strategically deploy the discourse features that readily adjust their voices to claim legitimacy for their argumentation.

Table 2

The Dynamic Variation of Voice Rejecting A Perspective Within A Phase of The Literature Review (FLO_852_LR)

Clause	Text and the APPRAISAL resources marked	Remarks
1	Teachers adopting the top-down model are **encouraged** to think about whether the teaching materials **help learners to focus** on top-down listening skills. *[monoglossic]*	Explicit ATTITUDE values (in bold) establish evaluative overtone for the phase – awaiting elaboration (voice as *academic writer*)
2	In developing materials for top-down processing, it is **important** to teach students to use context and situation as prior knowledge of the topic to comprehend the upcoming listening task <u>(Nunan, 2002)</u> *[monoglossic + acknowledge]*	The writer's voice and commentary is exemplified and justified through acknowledging other research studies (voice as *academic reader*)
3	One of the **ideal** patterns of making use of previous knowledge is to personalize the listening content. *[monoglossic]*	
4	The learner-centered dimension has been **promoted** in the teaching of listening in recent years. *[monoglossic]*	
5	<u>Nunan (2002), for example, suggested that</u> teachers can use students' speech which includes their own background knowledge and personal experience as listening materials. *[acknowledge]*	
6	<u>He also mentioned that</u> the activities which involve students' listening to one's speech and writing down their responses, may evoke speaking tasks of discussing about their different responses <u>(p.240).</u> *[acknowledge]*	
7	It <u>seems</u> *[entertain]* **feasible** in classrooms where students' level are relatively similar, supported by <u>Wilson (2003)</u> *[acknowledge]* while choosing listening text.	The writer uses elaborate engagement strategies to disalign readers from the previous evaluative position, drawing upon her own teaching experience. (voice as *experienced teacher*)
8	In my present TOEFL training course, *however [counter]*, **advanced-level** students <u>may</u> *[entertain]* find it **so easy** to respond speech from **less-advanced** students.	
9	*Thus*, the teaching and learning becomes **inefficient**.	
10	One <u>possible</u> *[entertain]* **solution** is that teachers can select speech from students **of higher level**, which <u>may</u> *[entertain]* **benefit** students of different levels.	Distillation of information from literature and evaluation of her experience to become a solution to improve teaching (voice as *teaching advisor*)

Table 3
The Dynamic Variation of Voice Supporting A Perspective Across A Phase of The Literature Review (FLO_852_LR)

Clause	Text and the appraisal resources marked	Remarks
1	Another fashion of teaching materials in top-down model is the use of **authentic** materials which has been suggested by <u>*many* researchers such as *Nunan (2002), Field (2002), and Tavil (2010).* [acknowledge]</u>	An overview of the unfolding of the phase of text, implicitly suggesting the significance of the teaching approach by mentioning several important research studies - Voice as *academic writer*
2	<u>It is advocated by Field (2002)</u> *[acknowledge]* that **authentic** texts should be introduced in a language course *as early as possible*.	Incorporating experts' voices through subsuming other research studies (voice as *academic reader*)
3	<u>He *argued* that</u> *[acknowledge]* the **essence** of using authentic materials is to demand shallow comprehension--	
4	students are <u>not</u> *[deny]* expected to understand everything.	
5	Bearing this in mind, students are **more motivated** *[monoglossic]*	
6	and they <u>may</u> *[entertain]* try to apply the listening strategies to the **authentic** text.	
7	It is **worth** pointing out that listening and speaking *tend to [entertain]* be integrated in *real* life (<u>Tavil, 2010</u>). *[acknowledge]*	
8	By using **authentic** conversations, teachers *can raise* students' awareness of the features of **real-life** communication. *[monoglossic]*	Affirming the positive commentaries according to the writer's own teaching context (voice as *experienced teacher*)
9	When students **are aware of** these characteristics, they *can predict* what the *whole* listening is talking about. *[monoglossic]*	
10	<u>I find</u> *[pronounce]* the use of **real-life** dialogues helpful in training the TOEFL speaking parts with conversational listening.	
11	Being familiar with these characteristics, students' comprehension does <u>not</u> *[deny]* necessarily need to be **impeded** by *the smallest* block of language.	Distillation of information from literature and evaluation of her experience as the final comment on the teaching approach (voice as *teaching advisor*)

The following section proceeds to the investigation of the ENGAGEMENT resource distribution in the two selected assignments with the notions of voice and gaze. The potential differences in the balance of voice between the two assignments will also be discussed.

Voice Balance in The Two Selected Assignments
Comparing the two assignments, Flo was more assertive with her own voice in her first research paper (FLO_582_RR) than the literature review assignment (FLO_582_LR) (Table 4). She used more MONOGLOSSIC resources in the first assignment (60.4%) than the second written task (27.6%). The MONOGLOSSIC voice served the following functions in the assignments:

(1) Indicating the structure, the purposes and the methods of the paper
   E.g In the first section, <u>I</u> shall discuss the listening activities…[FLO_582_LR]

(2) Reflecting writer's own experience and perspectives
     E.g. As the training proceeded, based on <u>my</u> own teaching experience, the first task… [FLO_582_RR]
(3) Sharing the responsibility of the argument with other sources cited outside the grammatical structuring of a clause (Hood, 2010, pp. 55-56), especially when the clause is unmodalised
     E.g. Knowledge of previous texts (spoken or written) aids in negotiating subsequent texts (Flowerdew and Miller, 2005, p.26). [FLO_582_LR]
(4) Demonstrating assumed shared field knowledge or "fact"
     E.g. Sentence fragments and run-on sentences break the structural rule of forming a correct sentence. [FLO_582_RR]

    The MONOGLOSSIC assertions in the above examples thus not only foregrounded the authorial voice as incontestable, but also legitimised Flo's social gaze as the owner of the text and the knower of the teaching field, as exemplified in (1) and (2) respectively. Owing to her prolonged experience in the field of teaching and English language, her cultivated gaze tends to privilege other authors' insights or the field knowledge assumed by language teachers, as reflected in (3) and (4). As Martin and White (2005, p.99) explain, monoglossic statements as "bare assertions" are often considered "intersubjectively neutral, objective or even 'factual'." However, the seemingly factual proposition in (4) was mildly criticised by the course instructor, suggesting that Flo's cultivated gaze did not remain unchallenged. The instructor did not agree with the structuralist approach to grammar as rules but instead as a system of choice (Halliday & Matthiessen, 2013). The criticism from the instructor reflects that her gaze regarding "grammar as rules" as problematic claimed more legitimacy than Flo's gaze.

    In the meantime, the choice of HETEROGLOSSIC resources showed wide variation. According to Table 4, there was a substantial shift to more HETEROGLOSSIC features being deployed in the research paper than in the literature review (39.6% to 72.4%, respectively). Meanwhile, the features of CONTRACTION (20% approximately) and EXPANSION (80% approximately) were distributed similarly between the two texts, as seen in Table 5, with the distribution of these HETEROGLOSSIC features in detail. In dialogic CONTRACTION, the resources for DISCLAIM included negation for DENY (Example [5]) and comment adjunct for COUNTER (Example [6]). The PROCLAIM features included CONCUR to align readers with the authorial proposition (Example [7]); PRONOUNCE resources were used to display explicit authorial presence (Example [8]), and ENDORSE values placed emphasis on the validity of the propositions as correct and warrantable (Example [9]) (Martin and White, 2005).

(5) *Syntactic variety can <u>hardly</u>* (DENY) *be achieved.* [FLO_582_RR]
(6) *This approach may help… <u>However</u>* (COUNTER)*, the focus was on the form…* [FLO_582_RR]
(7) *This evaluation is, <u>of course</u>* (CONCUR)*, based on individual teaching context.* [FLO_582_LR]
(8) *<u>I find</u>* (PRONOUNCE) *the use of real-life dialogues helpful in training the TOEFL speaking parts with conversational listening.* [FLO_582_LR]
(9) *<u>This research indicates</u>* (ENDORSE) *the strong relationship between writing and grammar, and the inner relationship of grammar.* [FLO_582_RR]

    The HETEROGLOSSIC resources that expanded the dialogic space included ENTERTAIN realised as modality (Example [10]), while ATTRIBUTE resources served as either ACKNOWLEDGEMENT of (Example [11]) or DISTANCING from the propositions by the sourced projection. DISTANCE resources, however, were absent from the two assignment texts.

(10) *This <u>suggests</u>* (ENTERTAIN) *that prior knowledge helps to predict what is likely to happen.* [FLO_582_LR]
(11) *<u>Fitzpatrick and Ruscica (2000) once pointed out</u>* (ATTRIBUTE: ACKNOWLEDGEMENT) *that by recognising…* [FLO_ 582_RR]

Table 4
Comparison of MONOGLOSSIC and HETEROGLOSSIC Voices in the Two Writing Assignments

Features	Research Report (FLO_582_RR)		Literature Review (FLO_582_LR)	
	N	%	N	%
MONOGLOSSIC	119	60.4	37	27.6
HETEROGLOSSIC	78	39.6	97	72.4
Total	197	100.0	134	100.0

Table 5
HETEROGLOSSIC Features across the Research Paper and Literature Review Assignments

Features	Research Report (FLO_582_RR)		Literature Review (FLO_582_LR)	
	N	%	N	%
CONTRACTION	13	16.7	20	20.6
DISCLAIM DENY	1	7.7	5	25.0
COUNTER	7	53.8	6	30.0
PROCLAIM CONCUR	0	0	3	15.0
PRONOUNCE	1	7.7	3	15.0
ENDORSE	4	30.8	3	15.0
EXPANSION*	65	83.3	77	79.4
ENTERTAIN	42	64.6	43	55.8
ATTRIBUTE	23	35.4	34	44.2

Note. DISTANCE values were absent from both texts and thus omitted from the table.

The findings from Table 4 showed a drastic shift of the voice balance from the MONOGLOSSIC-dominant research paper towards a seemingly more attributive literature review. However, as seen in Table 5, such shift was not solely contributed through the use of ATTRIBUTE values. The ENGAGEMENT resources were more variably deployed in the literature review than the research paper. ENTERTAIN values are the major resources that open up the dialogic space for alternative voices. More PROCLAIM values were also identified in the literature review for a more overt authorial presence to align the reader with the intended evaluative positions. In addition, other features such as DENY and COUNTER also play an important role to realign the readership with contrasting propositions. This kind of voice shift with a wider variety of HETEROGLOSSIC resources deployed could be due to the additional support for the second assignment from the course instructor. In the interview, the course instructor mentioned that her students might have learnt from the comments on the first assignment (the research paper), so they were probably more prepared to fulfil the requirement of the literature review assignment as they displayed and evaluated their objects of study and the relevant research fields. As the students coped with the academic discourse conventions during the semester, they might have learnt to strategically manipulate various sources of voices to be integrated in their own studies. Flo noted the change of her reading tactics as she proceeded to write the literature review, as mentioned in the interview: her dependence on the recommended readings gradually shifted towards searching for the articles suitable for her purposes. Given the voluminous amount of readings but limited time for each assignment, she learnt to skim through the abstracts and introductions of the articles for the information she needed. Having selected the readings for her studies, she took notes to show her comprehension of the main ideas. Then, she would summarise and integrate the similarities of

the readings into her writing. This suggested that the knowledge from the literature was readily absorbed and integrated. As the absorbed knowledge was condensed with Flo's voice, the knowledge expressed in the written discourse reflected the perspectives that she adopted to engage readership. Her social gaze as a teacher was prominent when required to relate her experience to the object of study; however, the change of reading strategy and the immersion in the field of research enhanced her cultivated gaze for a more sophisticated choice of strategies to balance voice in her writing.

Conclusion

The present study has first investigated how Flo as a successful postgraduate student writer manipulated ENGAGEMENT resources to maintain balance of different voices in her high-graded literature review assignment. In addition to the close investigation of (dis-)alignment strategies within phases of discourse, this article has examined and compared the ENGAGEMENT patterning of two successful written assignments. The balance of ENGAGEMENT resources shifts from predominantly MONOGLOSSIC in the research paper towards highly HETEROGLOSSIC in the literature review. The findings from the selected written assignments indicate Flo's capability to generalise her teaching experience as knowledge, as well as to resolve problems in the practice of teaching with appropriate evaluation and solutions. The interview data has suggested that Flo was gradually acculturated in the academic community through immersion in the scholarly literature and the extended apprenticeship in the postgraduate programme. Moreover, Flo could shift her voice and gaze strategically to negotiate spaces for legitimate alternative perspectives. With her cultivated gaze, Flo managed to incorporate her maturing insight in the teaching field into her teaching experience. Her social gaze contributed to her legitimacy of evaluating the objects of study as an insider of the teaching field. The findings presented in this article thus suggest the key importance of developing evaluative positions to interact with readers through linguistic strategies in academic written discourse. In other words, the knowledge practice of criticality goes beyond cognitive thinking skills (e.g. Ennis, 1985; Kuhn, 1999) and extends to discoursal and lexicogrammatical choices which are strategically deployed in writing (Hood, 2010; Luckett et al., 2013).

The descriptive analysis presented here, however, does not primarily aim to arrive at a representative conclusion of knower structures and gaze in the field of applied linguistics. As Martin (2011) and Maton (2014) emphasise, the collaboration between SFL and LCT is on-going. The direction of future studies will include the comparison of voice and gaze shifts across different postgraduate academic written assignments. From a pedagogical point of view, studying the dynamics of voice and gaze in successful writing aims to provide good models for teaching voice and fostering critical gazes. While the ENGAGEMENT resources that allow students to position their research strategically have been well explicated (e.g. Hood, 2004, 2007, 2010), this article hopes to shed light upon the distribution of ENGAGEMENT resources across assignment types, and the strategies to balance the voices of the writer and other authors at the level of discourse phase.

Endnotes

[1] The system names in the SFL system networks are highlighted in SMALL CAPS to distinguish them from their common usage (Matthiessen, Teruya & Lam, 2010, p. 212).

[2] DISTANCE values were absent from the selected assignments. The example of DISTANCE in Table 1 was extracted from Martin and White (2005, p. 134).

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Secondary School Students' Use of Discourse Strategies in Two Languages: The Role of HyperTheme in Argumentative Writing

Corinne Maxwell-Reid*

The Chinese University of Hong Kong, Hong Kong SAR

Abstract

This article considers one aspect of studying through foreign language English in secondary school: its effect on the discourse strategies of students' written Spanish and English. Beliefs about the differences between Spanish and English discourse norms for argumentative writing are discussed. These beliefs are then operationalised in terms of genre structure and use of hyperTheme in order to analyse the writing of Spanish secondary school students following two different curricula. The Spanish and English texts of two students who study part of the school curriculum in English are found to use a hierarchical structure more associated with English discourse. In contrast, the corresponding texts of their two peers studying through Spanish are less hierarchically structured. The article considers whether this type of impact from global English should be cause for concern, and discusses essentialist and relativist positions that surround such debates. Suggestions are made for increasing student awareness of options in discourse.

Key words: CLIL; written discourse; genre; hyperTheme; contrastive rhetoric

Introduction

The increase in bilingual education across Europe and elsewhere has been discussed from many different angles (Hu & McKay, 2012; Pérez-Cañado, 2012). The current study considers a relatively neglected aspect: the impact of studying school subjects through English on students' first language (L1)[1] written discourse in addition to the impact on their L2 English writing. Language contact studies have tended to concentrate on the impact on L1 vocabulary use, and, to a lesser extent, grammar (Jarvis & Pavlenko, 2007), but discourse is of particular importance as it is through text that we make meanings and achieve our purposes (Halliday & Hasan, 1985). At the discourse level, it has been more usual to focus on the effect of students' L1 on foreign or second language English. However, more recently attention has turned to the reverse direction of influence: the impact of L2 English on L1 discourse (Arcay Hands & Cossé, 2004; Maxwell-Reid, 2010, 2011). Maxwell-Reid (2010, 2011) compared the written Spanish of students studying through foreign language English on a Content and Language Integrated Learning (CLIL) programme with the Spanish of peers studying through Spanish. Differences between the two groups were found to align with previous contrasts between English and Spanish discourse, suggesting that the students studying through English might be making more English-oriented choices in their Spanish discourse. However, to date no study has investigated whether students on CLIL programmes are making similar discourse choices in their two languages. This study therefore takes two CLIL students and two non-CLIL students from a secondary school in Spain, and examines their written discourse in both Spanish and English. It should be emphasised that this study does not examine the effect of bilingual education on language *proficiency*, but on the choices that individuals make in their construction of discourse in two languages, and how these choices align with accepted notions of Spanish and English argumentative writing. These notions will be considered next.

* *Tel. +852 3943 1117, Email:* <u>cmaxwellreid@cuhk.edu.hk</u>, *The Chinese University of Hong Kong, Shatin, Hong Kong SAR*

Comparing Spanish and English Discourse Norms:
Contrastive/Intercultural Rhetoric

Differences between discourse norms of various groups are most obviously investigated within the field of Contrastive Rhetoric (CR), now termed Intercultural Rhetoric (IR) (Connor, Nagelhout & Rozycki, 2008). CR/IR has moved far from its clumsy if well-intentioned origins, but continues to encounter methodological and ideological difficulties (Kubota, 2010). Most importantly, discussions of rhetorical differences are frequently attempted without the use of a theory of language to help explain and make connections between these differences. Partly as a consequence of this lack, some CR/IR work seems to suggest greater stability in languages and language use than actually exists, an area that will be further explored in the Discussion section. The field's relationship with and origin in the teaching of English as a foreign or second language (EFL/ESL) can also unintentionally work to privilege the English perspective. On a separate point, much CR/IR work may be of less relevance to the current study, which focuses on secondary school texts rather than the genres from professional or tertiary academic fields more usually found within CR/IR studies.

However, despite these caveats, CR/IR work reveals a remarkably constant view of the differences between Spanish and English discourse norms. The following section will review some of the most enduring beliefs, presenting them first in the more traditional English-oriented manner, before giving an alternative perspective on some of the contrasts. The studies cited involve argumentative writing, in common with the writing of this study, but from adult or undergraduate writers rather than secondary students.

Spanish and English Discourse: Traditional Beliefs and Alternative Perspectives

Perhaps the most long-lived belief concerning discourse differences between Spanish and English is that Spanish is elaborate, ornate and digressive in comparison with concise, direct and linear English (Bernárdez, 2008; Maddalena & Belmonte, 2011; Taft, Kacanas, Huen & Chan, 2011). This set of contrasts continues to underpin much research. A common approach is to measure grammatical units, with Spanish generally found to use longer sentences and more grammatical 'subordination' than English (Neff, Dafouz, Díez, Prieto, & Chaudron, 2004; Pak & Acevedo, 2008). One problem with such lines of enquiry is that concepts such as subordination conflate very different types of language use (Matthiessen, 2002), leading to differing interpretations as to what constitutes elaborate discourse.

Another framework for investigating relative linearity and directness is that of 'writer-responsible' versus 'reader-responsible' text. Writer-responsible discourse cultures place the responsibility for the understanding of a written text on the writer, while reader-responsible cultures place the responsibility on the reader. This typology was developed by Hinds (1987), comparing reader-responsible Japanese with writer-responsible English. A reader-responsible approach to discourse assumes a more active reader, with text structure and transitions in the text marked less explicitly. Conversely, a writer-responsible tendency assumes the writer will guide the reader through the text. The typology has been used to compare aspects of argumentative texts in Spanish and English. Mur-Dueñas (2011) argues that the Spanish research articles (RAs) of her study are more reader-responsible than the English RAs as they have fewer metadiscourse features signalling organisation, are more elaborated, and guide the reader less. Conversely, the writer-responsible English RAs are seen as linear in their progression from introduction of arguments to expansion of those arguments. Maddalena and Alonso Belmonte (2011) also describe their Spanish editorials as more reader-responsible than corresponding English examples, with the English editorials using more "hierarchical layers" of meaning (Maddalena & Alonso Belmonte, 2011, p. 897). The nature of hierarchical text, and how it differs from flatter structures, will be discussed further below.

A more recent area of research compares educational traditions and their effect on student writers. A key difference found between language education in Spain and the United States is the Spanish emphasis on intensive reading at micro level, termed *comentario de texto* (textual commentary) as the main focus of literacy work (Cassany, 2006). Writing instruction at the rhetorical level is much less common in Spain, where writing is

traditionally seen as too personal to be taught (Newman, Trenchs-Parera, & Pujol, 2003).

Contrasts between Spanish and English writing such as these tend to present the English side of the comparison in the more positive terms. However, it has been pointed out that not all readers will have the same needs or preferences (Hinds, 1987; Maddalena & Alonso Belmonte, 2011). Bernárdez (2008) complains about the opposition to long sentences and paragraphs in reviews of Spanish academics' writing. Carrió-Pastor (2013, p. 200) also suggests not everyone will appreciate the emphasis on signalling implied by the writer-responsible culture: "The Spanish writer may be more concerned with the ideas being expressed than with the rhetorical devices needed to guide the reader." Bennet (2014, p. 40) questions the supposed superiority of the hierarchical, deductive text structure more explicitly: "English insistence that the main referential information be presented directly and unadorned in first position at all ranks reflects its positivist orientation and (ostensible) rejection of rhetorical 'manipulation'."

While placing differing value on issues such as linearity, all of these studies agree in recognising contrasts between English and Spanish written discourse. Previous work has found related differences in the Spanish of CLIL students in comparison with the Spanish of their non-CLIL peers (Maxwell-Reid, 2010, 2011). The concept of hierarchical text may now be useful in explicating some of these differences, and for investigating the organisation of students' texts in both Spanish and English. The discussion of hierarchical text will focus on genre-based work from what is known as the 'Sydney school' of systemic functional linguistics (SFL) (Rose & Martin, 2012). This body of work has a number of advantages for the current study: as a "multiperspectival model of language" (Martin, 2013, p. 24), SFL offers analytical tools at text as well as more micro levels, and the genre-based work in particular has a long history of intervention in language teaching and learning at secondary level (Martin, 2013).

Investigating Discourse through Genre

Argumentative writing has been described to a greater extent for English than for Spanish, as would be expected given the educational traditions discussed above. Using Sydney school terms, *exposition* and *discussion* are the most familiar text types (or genres), although writers may employ a range of genres to make an argument or support their opinion. Exposition argues in favour of one viewpoint, and is structured Thesis-Arguments-Reiteration. Discussion presents two or more sides to an issue and is structured Issue-Sides-Resolution (Rose & Martin, 2012). These structures each represent a basic hierarchy, as they move from more general to more specific and back again. Signalling the structures can increase the hierarchical layers.

The Signalling of Text Structure in Argumentative Writing

An important strategy in the organisation of written text is the use of Theme (capitalised in SFL to avoid confusion with other uses of the term). At clause level, Theme indicates the starting point of the message, and so orients the reader to what is to come (Rose & Martin, 2012). In both Spanish and English, although not all other languages, Theme comes at the beginning[2] of the clause (Caffarel, Martin & Matthiessen, 2004). The role of Theme within the clause is then mirrored at higher levels of text, with hyperTheme providing the starting point for a phase or section of the text, and MacroTheme orienting the reader towards the entire text. In this way hyperTheme provides what is commonly called a 'topic sentence' for a phase of discourse: it orients the reader to the next phase of text and "establishes expectations about how the text will unfold" (Martin & Rose, 2007, p. 194). Similarly macroTheme, at the beginning of the text, gives an indication of the hyperThemes to follow. The relationship of Theme, hyperTheme and macroTheme to increasingly large stretches of text is reflected in their structure: whereas Theme is an element *within* a clause, hyperTheme and macroTheme are constructed *of* clauses. HyperThemes and macroThemes can each be a single clause or a group of clauses, with macroTheme even extending to a paragraph in longer texts. The general to specific organisation signalled by macroTheme and hyperTheme can also extend beyond these two layers (Martin, 1992), with, for example, one more general hyperTheme leading to a second more specific hyperTheme. Extracts from the student text in Table 1 are

presented in (1) to illustrate the main layers. The clause at a. is the macroTheme of the text, b. and e. are hyperThemes, and c. and d. expand on b. The clauses are indented to represent the hierarchy.

(1)   a. Hay muchos tipos de padres.   [There are many types of parents.]
                    b. Algunos son muy estrictos   [Some are very strict]
                            c. y quieren tenerte todo el día vigilado. [and want to keep an eye on you all day.]
                            d. Tampoco le deja quedar, […] [Neither do they let you go out, …]
                    e. Otros, son demasiado liberales, [Others, they are too liberal]

Considering text in terms of hyperThemes as opposed to topic sentences brings two, connected, advantages. First, topic sentence only looks *forward* to the rest of the paragraph, whereas hyperTheme both predicts what is to come, and also connects back to earlier text (Ravelli 2004). Thus, in (1), line b. elaborates on line a. by introducing one type of parent. At the same time, line b. sets up the expectation of further details on this type of parent, which indeed come in c. and d. A second, related, advantage is that hyperTheme forms part of a larger system, and can be looked at from above and from below. From above, hyperTheme, along with Theme and macroTheme, can help explain how texts are structured and how that structure is signalled. From below, hyperThemes can be described in terms of lexicogrammatical characteristics (Martin, 1992; Ravelli, 2004).

Themes, hyperThemes and macroThemes are then complemented by New, hyperNew and macroNew[3]. Less common in English than hyperTheme (Martin, 1993), the hyperNew is the final clause or sentence to a phase of discourse and distills the accumulation of new information in that phase; the macroNew distills the preceeding hyperNews. The last sentence of the text in Table 3, reproduced as (2), illustrates some of the possibilities of this distillation as it sums up arguments from earlier in the text: the reasons for parental control (from lines 2-6), plus the disadvantages of parental control (lines 6-11;15-20).

(2)   Entiendo que los quieran controlarnos para protegernos, pero también tendrían que saber que eso no es lo mejor par nosotros.
            [*I understand that they want to control us in order to protect us, but they also have to know that this is not the best for us.*]

MacroTheme and hyperTheme play an important part in signalling text structure and presenting text as addressing an issue directly by managing the information flow, or 'periodicity'. As Martin and Rose (2007, p. 199) explain: "The strategy of predicting phases of discourse with macroThemes and hyperThemes constructs a 'hierarchy' of periodicity of smaller units of discourse 'scaffolded' within larger units." However, this layering strategy is not the only option for the construction of written text. It contrasts with the chaining strategy of 'serial expansion', in which each subsequent section of discourse is linked on to the previous section, and there is no hyperTheme to indicate connections to an overall text structure. Indeed, with serial expansion the message may not become clear until several chains of discourse later. Texts may use both strategies, and other resources such as cohesion also contribute to textual coherence. Lexical cohesion has been discussed in terms of "lexical strings", with the lexical items within each string depending semantically upon each other (Martin, 1992, p. 331). In (1) above, part of such a string can be seen: *estrictos* (strict) and *liberales* (liberal) are in a contrastive relation to each other and also relate to *tipos de padres* (types of parents) in the classifying taxonomy of the text. Lexical strings are illustrated further in Table 7.

This Study

This study thus investigates the impact of studying through English on secondary school Spanish students' use of Spanish and English discourse norms. It looks at the writing of two Secondary 3 (S3; 14 years old) students studying through Spanish, and two S3 students studying partially through English at the same school. A Spanish and English text for each student is considered in terms of text structure and signalling of that structure using the

hierarchy of periodicity as discussed above. The study asks whether the CLIL students are using hierarchical strategies more commonly associated with English discourse in their English and Spanish texts in comparison to the texts of the non-CLIL students.

Methodology

The CLIL students study a third of the curriculum through English; most of them have been part of the CLIL programme since the beginning of primary school. Text structure was not part of the syllabus in Spanish or English for either the CLIL or the non-CLIL students. However, an American Teaching Assistant attached to the CLIL programme reported that she had introduced CLIL students to the conventions of what is known as the 'five paragraph essay'.

The texts used in this study were selected from a larger data set, collected from one class of CLIL students and one class of non-CLIL peers. Each class was divided into two groups, with one group (i.e. twelve CLIL students and twelve non-CLIL students) writing on school uniform in English and parental control in Spanish, and one group doing the reverse: writing on parental control in English and school uniform in Spanish. In each case the students were given five minutes to discuss the topic, and then 40 minutes for writing. For the current study, one student whose Spanish text was representative of their group (i.e. CLIL or non-CLIL) was chosen for each prompt. The English texts of these four students were then also analysed for text frameworks (genre), and additionally all eight texts were analysed for their use of hierarchical layering. The following prompts were given to the students:

School Uniform
At the moment, only students at private schools wear a uniform. However, some politicians also want public schools to have a uniform for their students. Do you think it is a good idea for public schools to have school uniform?
Write a page for your school magazine on this question, explaining your opinion on the topic. Include examples to help make your explanations clear.

Parental control
Teenagers often complain that their parents are always telling them what to do. Parents say that they know what is best for their children, and that teenagers are too young to make their own decisions. Do you think parents control their teenage children too much?
Write a page for your school magazine on this question, explaining your opinion on the topic. Include examples to help make your explanations clear.

In an earlier study working with the complete set of texts written in Spanish, distinctions between the CLIL and the non-CLIL group were found to be clearer for the school uniform prompt than for the parental control prompt (Maxwell-Reid, 2011). One reason for less clear patterns for the parental control prompt is that the prompt itself was found to be rather ambiguous. The explicit question is whether parents do or do not control children too much. The implicit question asks whether parents should control their children less, which could lead to a more hortatory text. Some students focused on the first of these interpretations, some the second, and some addressed both aspects.

Findings

Leila and Irina
Leila (CLIL) and Irina (non-CLIL) wrote on parental control in Spanish, and on school uniforms in English. (All student names are pseudonyms. All texts are produced as originally written, with orthographic and other errors.)

Leila (CLIL)

Leila organises her text on parental control (Table 1) as a classifying report, with parents as the general class, subclassified in terms of how strict they are.

Table 1

Leila (CLIL student): Spanish text, Padres (Parents), with English translation and analysis

	English translation	Original Spanish text	
1	There are many types of parents. Some are very strict and want to keep an eye on you all day. Neither do they let you go out, nor talk on the phone almost and for a little argument, they make you stay in finally you end up hating them, you don't want to see them, and it is worse for them, as is the case of a friend of mine.	Hay muchos tipos de padres. Algunos son muy estrictos y quieren tenerte todo el día vigilado. Tampoco le deja quedar, ni ablar casi por teléfono y por una pequeña discusión, ya te deja sin quedar al final acabas odiandoles, no quieres verlos y es peor para ellos, como es el caso de una amiga mía.	macroTheme (classification of parents) hyperTheme: first group of parents
10	Others, they are too liberal, and they children end up doing what they want, they don't study and get bad grades in school, since their parents don't care about them and they are never at home. They don't have any control, nor limits.	Otros, son demasiado liberales, y los hijos acaban haciendo lo que quieren, no estudian y sacan malas notas en el colegio, ya que sus padres no se preocupan por ellos y nunca están en casa. No tienen ningún control, ni limites.	hyperTheme: second group of parents
20 25	Nevertheless, there are others which are in the middle they let you go out, but they call you to see where you are and they care, but neither are they suffocating you all the time. They are always there when you need them. What you have to do is give them confidence, so that they know that they can trust you and they will let you do a lot of things. This is the case with my parents.	Sin embargo, hay otros que son intermedios que te dejan quedar, pero que te llaman para ver donde estas y se preocupan, pero que tampoco están agobiandote todo el tiempo. Siempre están hay cuando los necesitas. Lo que tienes que hacer es darles confianza, que sepan que pueden confiar en ti y te dejaran hacer muchas cosas. Este es el caso de mis padres.	hyperTheme: third group of parents shift to hortatory exposition (signalled in Theme)

5 (line markers within first cell) and 15 appear in margin.

Note. In this and subsequent tables, MacroTheme is double underlined; hyperTheme is underlined; signalling in the Theme has dashed underlining; the macroNew is in *italics*.

Classifying reports are usually associated with systematic fields of knowledge, particularly in the sciences, and the taxonomic divisions and subdivisions produce a hierarchical structure (Martin, 1993). In Leila's text, macroTheme and hyperTheme are used to signal the structure of the text to the reader, although towards the end (lines 25-28) the text moves into a somewhat different purpose as she turns to giving advice on parent management. Her text finishes by introducing her own parents rather than distilling the whole text in a macroNew (for example by summing up the types of parents).

Leila's English text on school uniform (Table 2) also uses hierarchical organisation with macro and

hyperThemes. This time the text is a discussion, using the structure Issue-Sides-Resolution. The hierarchical layering is not used consistently, with side one of the argument not signalled, and the switch to side two signalled mid-sentence. The final sentence provides a resolution to the discussion, but without distilling the arguments of the text. However, overall the text is recognisably structured as a discussion, with this structure signalled to some extent using the hierarchy of periodicity.

Table 2
Leila (CLIL): English text, Uniform, with analysis

Original English text	
1 <u>I think that uniform is good for some reasons, and bad for others.</u> If you wear uniform, people would wear all the same clothes, and they won't critize you for the way of dressing. It is also more economical, because if you have a uniform, you don't 5 need clothes for everyday, and your parent's only have to spend money for weekend clothes or for parties... <u>Also another advantage</u> is that they won't know your econmical class through clothes, because all people are wearing the same, <u>but it has got also disadvantages</u>. You can not wear what you want and the 10 type of clothes you like. They make the school wore strict and you can not show your style. *In my opinion, they should let us dress how we like, having not uniform...*	<u>macroTheme</u> (Issue: gives two sides) Side one: advantages (not signalled); Continuing side one (signalled in the <u>Theme</u>) <u>hyperTheme</u>: switch to disadvantages signalled (mid-sentence) (Resolution)

Irina (non-CLIL)

The next two texts are written by non-CLIL student Irina, starting with an expository text in Spanish on parental control (Table 3). As with Leila's parental control text, there is a little drift in the focus, here in terms of arguing whether parents do overcontrol versus arguing whether the control is beneficial or not. Another similarity with Leila's text is in Irina's middle section (lines 12-15), where she considers a different type of parent. This is the only section signalled with a hyperTheme. However, it does not reflect the overall thrust or organisational structure of her text, which is not about different groups of parents, but rather on why it is not good for parents to control as much as they do. This main message, along with discussions of why parents act as they do, evolves clause by clause, with elements of the argument signalled more locally by Theme rather than hyperTheme, if at all. However, although not structured through hierarchical layering, the text is quite sophisticated in its reasoning. Instead of using the classificatory approach of Leila, Irina considers the issue from a range of angles, with macroNew drawing these points together at the end. The text is therefore 'back-loaded' in that previous points are consolidated at the end of the text, rather than 'front-loaded', where points to come are predicted (Martin, 2013).

Like Leila, Irina considers advantages and disadvantages to school uniform in her English text (Table 4). However, unlike Leila, she does not signal to the reader that this is what she will do, nor does she signal the switch between sides. In fact, the departure point for the text (lines 1-2) seems to indicate a one-sided exposition.

Table 3
Irina (non-CLIL student): Spanish text, Padres (Parents), with English translation and analysis

	English translation	Original Spanish text	
1	<u>I believe that on many occasions parents do control their children too much</u>. <u>Sometimes</u> because they think that we are not responsible enough to	<u>Creo que en muchas ocasiones los padres si que controlan demasiado a los hijos</u>. <u>A veces</u> porque piensan que no somos lo suficientemente responsables para asumir	macroTheme (Thesis: parents do overcontrol)
5	take on or do some things or because they want to protect us, <u>but in some cases</u> this attitude can make the adolescent want to do what they have forbidden even more in order to	o hacer algunas cosas o por querer protegernos, <u>pero en algunos casos</u> esa actitud puede producir que el adolescente quiera hacer con mas ganas aquello que le prohíben para demostrar	Argument 1 (opposing view, and rebuttal/ consequence; signalled by <u>Theme</u>)
10	demonstrate that they are capable and responsible enough to do it. <u>Some parents, on the other hand, don't care what their children do</u>, they don't put any kind of restrictions on them	que si es capaz y responsable para hacerlo. <u>Algunos padres, por el contrario, les da igual lo que los hijos hagan</u>, no les ponen ningún tipo de límites, y eso tampoco es	hyperTheme (limitation to Thesis)
15	and this isn't good either. <u>Having more freedom to do things and feeling freer</u> makes us realise and see for ourselves what is around us and also to value ourselves and to be more independent,	bueno. <u>El tener más libertad para hacer cosas y el sentirnos mas libres</u> nos deja que por nosotros mismos nos demos cuenta y veamos lo que hay a nuestro alrededor, así como a valernos por	Argument 2 (signalled in the <u>Theme</u>)
20	although to a certain extent being independent also depends a lot on each person.	nosotros mismos y a ser mas independientes, aunque en cierto modo, lo de ser independiente depende también mucho de cada persona.	
25	*I understand that they want to control us in order to protect us, but they also have to know that this is not the best for us.*	*Entiendo que los quieran controlarnos para protegernos, pero también tendrían que saber que eso no es lo mejor par nosotros.*	*macroNew* (Restatement of Thesis, distilling previous arguments)

Table 4
Irina (non-CLIL): English text, Uniform, with analysis

	Original English text	
1	<u>I think that wear a uniform in public schools isn't a good idea,</u> because the uniform is very expensive. There are uniforms very ugly but there're also uniforms beautifuls.	macroTheme (Thesis: against school uniform) Issue with 2 sides (not signalled)
5	<u>To wear a uniform is also a good idea</u> because you don't think every day what wear for go to school.	hyperTheme (benefits of uniform)
	I like wear to school the clothes that I like.	Drawbacks to uniform
	Every year you must buy the same uniform. I prefer wear my clothes.	(unsignalled)
	Definitely I think it's a bad idea.	(Restatement of Thesis)

Alonso and Magda
Alonso (CLIL) and Magda (non-CLIL) wrote on school uniforms in Spanish, and parental control in English.

Alonso (CLIL)
Alonso's Spanish text on school uniform (Table 5) shares many structural characteristics with Leila's English discussion on the same subject, although they come to opposite conclusions over school uniform itself. Alonso's text uses the hierarchy of periodicity more regularly: he introduces the issue as having two sides in his macroTheme (lines 1-3), then uses a hyperTheme to introduce the advantages in general (lines 3-4) and subsequently the disadvantages (line 13). He also uses a secondary, more specific, level of hyperTheme to introduce one particular advantage (lines 4-5), and one disadvantage (lines 14-15). Finally the macroNew (lines 25 onwards) distills points from throughout the text.

Table 5
Alonso (CLIL): Spanish text, Uniforme *(Uniform), with English translation and analysis*

	English translation	Original Spanish text	
1	My opinion is that wearing a uniform has advantages and inconveniences, its advantages are the following: All the school will dress the same so there	Mi opinión es que llevar uniforme tiene sus ventajas y sus inconvenientes, sus ventajas son las siguientes: Todo el colegio vestirá igual por lo que no	MacroTheme: 2-sided issue hyperTheme: advantages;
5	won't be any type of discrimination as regards the subject of clothing, since many people are discriminated against because of clothing; another	había ningún tipo de discriminación en cuanto al tema de la vestimenta, ya que a muchas personas se les discrimina por culpa de la vestimenta;	hyperTheme: advantage 1
10	advantage is that thanks to the uniform it is more difficult that they classify you socially, that is to say, by the buying power of your family. The	otra ventaja es que gracias al uniforme es más dificil que te clasifiquen socialmente, es decir, por el poder adquisitivo de tu familia.	Theme: advantage 2
	inconveniences are the following: People can't show their personality,	Los inconvenientes son los siguientes: Las personas no pueden mostrar su	hyperTheme: disadvantages
15	since, your clothing reflects quite a lot your personality, and wearing the uniform everyone looks the same so you can't show it. *All in all my opinion is*	personalidad, ya que, tu vestimenta refleja bastante tu personalidad, y al llevar el uniforme todo el mundo va igual por lo que no la puedes mostrar.	hyperTheme: disadvantage 1
20	*that schools, be they public or private, should use a uniform, and in this way avoid a lot of conflicts among the students.*	*En defenitiva mi opinión es que los colegios, ya sean públicos o privados, deberían incorporar el uniforme y así evitar muchos conflictos entre los estudiantes.*	*macroNew* (Resolution, accumulating the arguments)

The first thing to note about Alonso's parental control text (Table 6) is that it is much shorter than the other students' English texts. It is therefore more difficult to say as much about the text structure or strategies. However, his general approach seems to be to consider different types of control, and as such the text is similar to Leila's Spanish version with its categories and hierarchical structure. The relationship between the macroTheme and hyperThemes is less obvious than in Leila's text.

Table 6
Alonso (CLIL student): English text - Parents

Original English text	
1 <u>I think this control from the parents is ok</u>, because if not all would be a disaster, well with the exception of the responsable kids.	<u>macroTheme</u> (Thesis: parental control acceptable)
<u>Sometimes this control is to strong</u> and the parents are to severe, and I think this is not good for us because we can't do social life,	<u>hyperTheme</u> (one situation: too much control)
5 and <u>on the other hand kid's without any control</u> normally are conflictic people and they wouldn't be anything in life.	<u>Theme</u> (another situation: no control)

Magda (non-CLIL)

Magda's Spanish text, on school uniform, will be considered from two points of view in Table 7. The text is analysed in terms of a two-sided discussion as used by Alonso (Table 5). Additionally, some of the work of lexical strings in contributing to textual coherence is also highlighted.

Analysed in terms of the two sides to the argument, Magda's text (Table 7) seems somewhat disorganised, moving back and forth between benefits and drawbacks to school uniform. It is possible to identify clauses operating at higher levels of generality, but, unlike Alonso's use of hyperTheme in Table 5, the examples in Table 7 only predict forward, and are not themselves predicted at a higher level. In this sense they are not part of an overall organisational structure.

However, a brief look at lexical strings reveals other means of constructing text. Of course, other strings such as 'school' or 'uniform'; 'obligation' and 'groups of people' have been chosen as they are central to the construction of Magda's argument. The first string, obligation-freedom (boxed), is given prominence by its position in both the initial and the final sentences of the text, indicating how resources for coherence interact. The second string (in bold) highlights the different groups of people whose opinions are considered. These are largely introduced in the Theme. Seen in this light, the text appears more structured than when focusing solely on hierarchical layers and the use of macroTheme and hyperTheme. Obviously the CLIL texts also use lexical strings, as illustrated in (1), and there would be other resources to consider as well for a full understanding of a text, for example conjunction (Martin, 1992). However, the, admittedly selective, analysis here is intended to suggest the possibilities for text construction.

Magda's English text (Table 8), although longer than Alonso's, also reveals limitations in language proficiency. It is written as an exposition which starts by considering the question of whether parents are too controlling, but switches to hortatory reasoning in lines 5-7. Overall, she does not approach the topic as Alonso and Leila (but not Irina) do, with categories of parents and control and, in Leila's case, hierarchical organisation. Magda, like Irina, is attempting quite a sophisticated argument in favour of greater parental trust. This argument is indicated in the macroTheme, but most of her points are not predicted at hyperTheme level.

Table 7
Magda (non-CLIL student): Spanish text, Uniforme *(Uniform), with English translation and analysis*

	English translation	Original Spanish text	
1	<u>I believe that the best thing is not to make uniform obligatory in the public schools</u> because it is thought that in a public school one has more freedom than in a	<u>Yo creo que la mejor es no poner uniforme obligatorio en las escuelas públicas</u> porque se supone que en una escuela publica se tiene más libertad	macroTheme (Thesis: against obligatory school uniform)
5	private. <u>On many occasions the uniform is good</u> because in this way you don't have to choose the clothes the day before and waste time. <u>But it would be good for the uniform to be optional</u> because **a lot of mothers** prefer their children to wear street clothes because they like them more and **other mothers** do prefer them to wear it because that way they save time and money. <u>But **for children under 12 years old**</u> it's good, **for those over 12**	que en una privada. *En muchas ocasiones es bueno el uniforme* porque así no tienes que elegir la ropa el día anterior y perder tiempo. <u>Pero estaría bien que el uniforme fuera optativo</u> porque **muchas madres** prefieren que sus hijos lleven ropa de calle porque les gusta más y **otras madres** prefieren que sí lo lleven porque así se ahorran tiempo y dinero.	hyperTheme: positives of uniform hyperTheme: for choice
10			
15	no because at 12 years old is when you start to change and to see the world in another way and you like to wear clothes you like and not always the uniform. <u>But on the other hand it is good that people wear uniform</u> because, if each uniform of each school is different, in this way is everything more ordered. <u>But for me, to be honest, I don't like uniforms</u> and prefer	**Pero para los niños menos de 12 años** está bien, **para los que superan los 12 años** no porque a los 12 años es cuando empiezas a cambiar y a ver el mundo de otra forma y le gusta vestirte con ropa que te guste. y no siempre con el uniforme. <u>Pero por otra parte está bien que la gente lleve uniforme porque</u>, suponiendo que cada uniforme de cada colegio sea distinto, así seria todo mas ordenado.	Argument in favour of/against uniform depending on student age (signalled in <u>Theme</u>)
20			hyperTheme Argument in favour of uniform,
25	to wear my clothes, the clothes I like. *If you wear uniform you feel forced and less free than if you don't wear it and I think that since it is obligatory to go to school, that they should let us choose and a bit of freedom would be good.*	<u>Pero a mi, sinceramente</u>, no me gusta el uniforme y prefiero llevar mi ropa; la ropa que me gusta. *Si llevas uniforme te sientes obligado y menos libre que si no lo llevases y yo pienso, que ya que es obligatorio ir a la escuela, que nos dejen elegir y un poco de libertad estaría bien*.	hyperTheme: (personal view against uniform)
30			*macroNew* (Reiterating, against uniform)
35			

Note. Freedom-obligation are boxed; groups of people are in bold.

Table 8
Magda (non-CLIL): English text - Parents

Original English text	
1 <u>I think the parents control too much the children</u> <u>because, sometimes the</u> <u>children are more responable than the parents think</u>. The children knows a lot of dangerous of the life, and the paents don't know that their sons know. And that can be the cause of the control of the parents to the	macroTheme (Thesis: parents overcontrol and reason for statement)
5 children. <u>But the parents have to trust more with their children</u>. Because the children are very intelligent and the parents have to control but only a bit, because when they control a lot it can result bad for the life of the children. For example: when you went late to have your parents worried of you but usually it cause you have meet with new friends and you talk a	hyperTheme (hortatory: parents should trust more)
10 lot with them, and the an example of the parents don't trust with the children. *I like when my parents trust in me. because I have more free and I don't worried of my parents.*	(Personal view)

Discussion

It is difficult to consider all eight student texts together as there are differences in language proficiency, length and genre to take into account. Nevertheless, the two students following the CLIL programme, Leila and Alonso, seem to use discourse norms associated with English to a greater extent than their non-CLIL peers. The similarities of approach are most noticeable when comparing texts by prompt, despite the difference in language and proficiency, and are particularly striking in the school uniform texts of Alonso (in Spanish) and Leila (in English). The two students signal text structure with macroTheme and hyperTheme. They thereby predict the content of their texts for their readers, producing hierarchical writing, elsewhere seen as more writer-responsible and more linear (Maddalena & Alonso Belmonte, 2011; Mur-Dueñas, 2011). The parental control texts are less similar, largely because Alonso has written so little in English. However, his text still shows a proto-hierachical organisation along the same lines as Leila's more developed Spanish version. All of these aspects align the CLIL students' texts in both their languages with descriptions of English as opposed to Spanish written discourse.

In contrast, the two non-CLIL students, Irina and Magda, have less recognisable text frameworks in each language and a less hierarchical, more serial, structure. They do, however, employ other resources such as lexical cohesion for textual coherence, and at times their arguments seem more elaborated and conceptually richer than the CLIL student versions. Irina and Magda make less use of hyperTheme, both in terms of frequency and also in terms of its possibilities for structuring text. On the other hand, slightly more use is made of macroNew to draw together their arguments (at least in Spanish). Such a preference for a 'back-loaded' writing style, in contrast to the 'front-loaded' CLIL students' writing (Martin, 2013, p.33) would align with Bennett's (2014) view of Romance discourse as more typically inductive, with English discourse as typically deductive.

Only eight texts have been discussed here, but the contrasts suggest an effect from CLIL on L1 discourse, as well as L2, should be further explored. Also to be considered is whether such an effect would be a cause for concern or not. That is, would it represent a neutral change, a negative mutation, or even a positive transformation? The response to this question can be seen in terms of essentialist and relativist representations of language and of the relationship between language and culture, as well as in terms of the dominating role of global English (Canagarajah, 1999; Risager, 2006).

Language, Culture and Global English
Language is central to our experience of the world: "the construal of reality is inseparable from the construal of

the semantic system in which the reality is encoded" (Halliday 1978, p. 2). This relationship does not, though, imply a one-way process either from language to culture or vice versa, nor is the language-culture relationship fixed or static (Bernárdez, 2008; Risager, 2006). One important aspect of the fluid language-culture relationship is that language is itself a complex system that constantly changes as it interacts with its environment (Halliday 2003). Furthermore, focusing on 'Spanish' or 'English' can encourage an essentialist orientation: such languages are not themselves stable entities, but ideological constructs connected to, for example, nation building (Joseph 2004; Risager, 2006). Seen in this light, the protest against change in language represents romanticised notions of language purity, informed by sociocultural rather than linguistic concerns (Joseph, 2004; Risager, 2006).

However, while change in language or language use is not a problem in itself, some types of change may make an overly relativist position seem irresponsible (Canagarajah, 1999; Joseph, 2004). One potential threat from globalised English is that its unprecedented dominance will drive change overwhelmingly in one direction, towards the meanings of English and its dominant discourse. In this regard, many voices have expressed disquiet at the particular ideologies linked to global English and its discourses (Bennett, 2014; Bernárdez, 2008; Canagarajah, 1999; Hu & McKay, 2012).

Most criticisms of the effect of global English focus on the increased use of English itself, and the reduced vision that such uniformity brings (Bernárdez, 2008; Canagarajah, 1999; Siguan, 2001, 2005). An effect from English on L1 discourse would extend the homogeneity further. As Bennett (2014, p. 45) points out, discourse strategies are not necessarily language-specific, and so can be "exported from one culture to another through a process of 'calquing'" thereby reducing the ways of meaning available to humanity. However, to reject English and its norms could result in the marginalisation of those unable to use the dominant discourse. An alternative approach to this dilemma is to attempt to raise awareness of different discourse strategies and the meanings they carry, thereby giving students the tools to make an informed choice in their writing.[4] Such an approach would have implications for language curricula, and overall would require a more analytical, critical turn (Macken-Horarik, 1998).

Critical Discourse Awareness in Secondary Language Education

In most instances, to introduce critical discourse awareness would involve considerable change. Discourse or genre awareness, even in the more mainstream, less critical sense of how language is used to make meaning in text, is still not pervasive in secondary language education (Maxwell-Reid, 2014). The teaching and learning cycle as developed by the Sydney genre school provides one way of thinking about the various aspects of discourse awareness, and how to combine them (Macken-Horarik, 1998; Rose & Martin, 2012). The cycle moves through stages of context-building, deconstruction of sample texts, joint and independent construction. These stages can focus on more functional language awareness, emphasising control of resources necessary to understand and produce the texts that society values. They can also be approached more critically, leading to more subversive uses of text. The functional-critical distinction is not a matter of discrete options, but rather a continuum (Macken-Horarik, 1998). The original purpose of the Sydney school work was to assist disadvantaged students to access discourses of power, and this goal has perhaps led to an emphasis on the functional rather than critical end of this continuum. It also needs to be recognised that critical literacy depends on a certain level of literacy in its more basic sense: it is not reasonable to expect students to engage in critical analysis of discourse that they are not yet able to process, for example (Macken-Horarik, 1998; Rose & Martin, 2012). However, critical awareness of discourse strategies can be made compatible with more functional literacy work.

The Spanish secondary students of this study can explore their options in constructing written discourse both functionally and critically. An initial issue would be whether to examine discourse in Spanish or English or both. Ideally, both Spanish and English text would be the focus of attention, although this could be problematic both in terms of disciplinary boundaries in secondary schooling, and also in terms of students' English literacy. In which case, the work could be carried out with texts in Spanish, with the possibility of transferring the discourse skills to English classes for students who were able to carry out such work in English.

As has been pointed out (Macken-Horarik, 1998), students need to be given opportunities and guidance to analyse texts, and also to experiment with their own writing. For the current context, analysis would involve becoming aware of different discourse strategies and choices, and considering the implications of these choices. Students can consider text structured more hierarchically through the use of hyperTheme and macroTheme and compare it with less hierarchical text. They can discuss the effect of each approach, and their own preferences as readers (Taft et al., 2011). Currently, the focus on this construction of hierarchy tends to be restricted to, at most, topic sentences. However, looking at text in terms of layers of Theme, hyperTheme and macroTheme, and also macroNew, provides useful tools for thinking about text organisation and revealing the different strategies available. Such activities could also go some way to answering Cassany's (2006) call for a more varied approach to the *comentario de texto*, which has tended to become somewhat formulaic.

With their own writing, students can be given opportunities to move between various discourse norms and strategies. Again, for the current context, this may involve choosing to use the hierarchical strategies associated with English discourse, or the more flexible, inductive approaches associated with Spanish discourse. Students can rewrite texts, putting in and taking out hierarchical layers.

Conclusion

All EFL/ESL teaching contexts face the question of whether dominant discourse norms, i.e. those of English, should be actively taught or resisted or neither. The question is perhaps more urgent for bilingual situations such as CLIL, as the increased exposure to English facilitates an increased influence. The research reported in this article suggests that the question is also relevant to teaching of students' L1 in a bilingual education programme - in this case, for *Spanish* language education as well as English language education. This line of research, the effect of bilingual education on students' first language written discourse, is still in its infancy. Initial findings suggest there may be some impact on both students' L1 and L2 discourse strategies, with the hierarchy of periodicity helping to reveal different strategies used to build text. More work is needed to build up a picture of school students' use of discourse in their languages, and how the language of schooling impacts upon that discourse. However, whichever discourse strategies the students are currently using, they can benefit from an increased consciousness of the options available. The students have choices to make when writing, in first or second languages, and they need to understand that these choices can have implications for how a text is received in different contexts. For this, an explicit pedagogy is required, with opportunities for consciousness-raising work and experimentation.

Endnotes

[1] The terms 'first language' (L1) and 'second language' (L2) are used in this paper, although it is recognised that these terms oversimplify the realities of language use.

[2] There are different views as to how far Theme extends into the clause; an overview can be found in Thompson (2007). The distinctions do not apply in the same way to hyperTheme and macroTheme, and so will not be discussed in this article, which takes the more minimal, Hallidayan approach.

[3] Theme and New are the focus of this paper as they are the more prominent elements of their respective systems, Theme-Rheme and Given-New, providing the "crests" in the waves of information flow (Martin & Rose, 2007, p.189).

[4] It should be pointed out that what is being suggested is not really a version of English as a lingua franca (ELF), which can also tend towards homogenising essentialism (Joseph, 2004), but rather exploration of the resources for making meaning.

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Managing Information to Relate Sentences within a Text: "Houston we have a problem"

Peter H. Fries*

Central Michigan University, USA

Abstract

Texts contain internal sections that express semantic wholes—information chunks. This paper will address information chunks which consist of two internal functions: the first portion contains some non-specific phrase and thereby withholds relevant information and creates an information gap; the second portion provides specifics that may be used to fill in the missing information and provides a grounding for the gap. Each portion of the information chunk affects the understanding of the other. The grounding portion provides specifics and thus helps interpret the gap. The gap portion provides an interpretive framework to use when processing the specifics in the grounding. Since the sequential placement of the gap and grounding affect the interpretations of each other, the phenomena addressed here involve instantial meanings that arise from the juxtaposition of information in particular texts. They therefore form part of what Halliday (1995/2003, p. 412) calls "logogenetic history." Work on signaling nouns (Flowerdew & Forest, 2015), labeling (Francis, 1994), prospection and encapsulation (Sinclair, 2004), prediction in text (Tadros, 1994), and specific and non-specific (Winter, 1977a, 1977b, 1979, 1992) has identified many wordings that may signal information gaps. However, it is obvious that wordings that function as gap in one context may function as grounding in other contexts. Information gaps and their groundings are therefore best considered to be discourse functions rather than structures.

Key words: textual coherence, information gap, grounding, logogenetic history, sequential effects in text

Introduction

The sentence that serves as the second part of the title of this paper "Houston we have a problem," illustrates part of the phenomenon that will be addressed in this paper. It was said by Jim Lovell, Commander of the Apollo 13 mission to the moon, when an electrical short compromised two oxygen tanks on the command module (the vessel in which he and his crew had travelled from the earth to the moon). This sentence was clearly not intended as the last sentence of the conversation. In fact Lovell continued by describing exactly what the problem was, and eventually a fix was negotiated: the crew used the oxygen supply from the lunar lander as their source of air to breathe for the trip back to earth. However, had Lovell stopped speaking at the end of that first sentence, Houston would have come back with a sentence such as "what's wrong?" that probed for the missing information—the nature of the problem.

The juxtaposition of this conversational opener with the description of the problem that followed created an implicit relation between those two parts. Since these relations come into being because of their sequential positioning, their presence illustrates why it is important to investigate logogenetic history—what Halliday (1995/2003, p. 412) describes as "the unfolding of discourse, as particular texts."

Since the relations to be addressed in this paper arise from the sequential relations encountered in individual texts, it should be clear that they constitute instantial meanings that are imposed on the wordings of the text because they occur in some sequential relation to other language choices made in those same texts. A second characteristic emerges from this example: both the initial "We have a problem" statement and the following description of the nature of that problem are to be taken as a single two-part semantic unit, whether or not both are produced directly by the same person (as was the case with Jim Lovell's call to Houston) or are produced as the result of an exchange involving more than one person, as could have happened if Lovell had not continued with his description. That is, the relations which arise as a result of sequential positioning are relations among different parts of some text portion that expresses a semantic unity.

Since the text portions involved with these relations may be as short as two clauses or as long as entire chapters or even groups of chapters, I will refer to them with the intentionally vague term *chunks*. Further, since it is important that these chunks of text express some unified meaning, I will refer to them more specifically as *information chunks*. The information chunks under focus here consist of two parts. The first part includes some element of meaning that is unspecified in context. As a result of that lack of specificity it is difficult for readers to relate that element to experience, and thus it creates what I call an *information gap*. Since information gap portions are difficult to relate to particular experience, they beg questions on the part of the reader.[1] (For example, what the people in Houston were likely to say had Lovell stopped after his initial sentence.) The second part of the information chunk provides the missing specifics and so makes the gap portion more easily relatable to experience and answers the readers' (presumed) questions. I call this second part the *grounding* portion of the chunk. It is important to notice first that the gap and the grounding are both required for an information chunk of this sort to occur, and second that the interpretation of the gap is affected by the specifics that ground it and the interpretation of the specifics is affected by the gap that it relates to.

The non-specific (gap) and the specific (grounding) may appear in either order in texts; indeed Martin and Rose (2003, p.181-184) posit two textual functions HyperTheme and HyperNew which seem to correlate with the two orders of specific and non-specific. Considering those gap-grounding sequences in which the non-specific expresses a generalization or evaluation[2] and the grounding expresses details that support the generalization or evaluation, if the nonspecific precedes the specifics, it tends to function as HyperTheme. In sequences where the non-specific follows the specific, the non-specific seems to function as HyperNew. My choice of the gap-grounding terminology reflects my current focus on instances where the nonspecific precedes the specific.[3] In each case, the non-specific prospects (to use a term used by Sinclair [2004, pp.188-190]) and provides an interpretation for the specific which follows.

The previous discussion raises the issue of how we know that a gap-grounding sequence has occurred. Do signals exist in the semantics or the wordings of a text segment that might indicate that such a sequence is present? The next section compares three example text segments that seem to express similar causal relations using similar language. However, a closer look shows that two do not construe a gap-grounding relation while the third does. The following section illustrates four semantic relations that correlate with gap–grounding relations, together with sample wordings that often construe gap-grounding relations.

Cues to Relations among Text Segments

Examples A, B and C all construe some sort of causal relation among their parts. Further, they construe these relations[4] using grammatical metaphors for the causal relation (the nouns *reason* and *result*) rather than simple conjunctions. Examples A and B construe the causal relation without creating an information gap, while example C creates an information gap.

Ex A   The only qualification I would offer in the case of these play activities is that such play in the case of any elemental genre is best introduced when children or adolescents have a reasonable grasp of the canonical genre structures I have identified here. *The reason* is that you need to know what it is you might want to change, subvert or challenge before you go ahead and do that.

Ex B   He never let me know that my visit was about to terminate until the actual morning I was to leave for Lymington. *The result* was that I found myself in the ridiculous position of having made a formal engagement by letter for the next week, only two days before my departure from London.

Ex C   (1) Even before the political storm broke over Peking, China's economic reforms had run into trouble. (2) *The reason* is fairly simple. (3) The agricultural three-quarters of the economy is being gradually shaken free from the central planners grasp, …

The reason in example A and *the result* in example B each achieves two tasks at once. Each refers back to and is cohesive with the preceding sentence. In each case, if one asks *the reason for what*? or *the result of what*?, the answer will constitute a reference to the entire preceding sentence. In addition, the words *reason* and *result* tell the reader that the *that*-clause that follows is to be taken as a reason or result of the action described in the preceding sentence.

Example C demonstrates the same sort of process but with a twist. Just like examples A and B, the word *reason* refers back to and is cohesive with the preceding sentence. Further, it creates a causal relation between the preceding clause and the clause combination in the following sentence. But this example does something else in addition. It comments on and evaluates the reason with sentence 2: *the reason is fairly simple*. One consequence of this addition is that it complicates the relations among the sentences of the passage. Sentence 3 functions most immediately as an elaboration of sentence 2. It is only as a result of that elaboration, combined with the fact that sentence 2 directly addresses a potential reason for sentence 1 that we interpret sentence 3 as the reason for sentence 1. Table 1 summarizes these relations.

Table 1
Relations among the Sentences of Example C

Sent #		Text
1.	Claim	*Even before the political storm broke over Peking, China's economic reforms had run into trouble.*
2.	Evaluation of reason for situation in (1)	*The reason is fairly simple.*
3.	Elaboration of (2): describes (simple) reason for situation in (1)	*The agricultural three-quarters of the economy is being gradually shaken free from the central planners grasp, …*

It is worth noting that this passage cannot end with sentence 2. In this context, readers would object that no information is provided concerning the nature of the reason. Sentence 2 in Example C creates an 'information gap.' In this context, although 2 raises the issue of why or how "China's economic reforms had run into trouble" and it describes the reason as being "fairly simple," it does not address the nature of the reason directly. The issue is only addressed in sentence 3, where the reason is described.

The discussion of example C illustrates that certain sentences in texts typically do not stand alone; they are regularly accompanied by some additional text portion that addresses related meanings. One can say that sentences like C2 call forth a question on the part of the reader that asks something such as, "Well what is the reason?" In other words, example C illustrates not only a causal relation (reason – result) among its parts, it also

illustrates a relation that stems from an implicit question–answer dialog between author and reader. Table 2 repeats Example C but adds an informal commentary to make this aspect more obvious.

Table 2
Commentary on Example C Emphasizing its Dialogic Nature

1.	*Even before the political storm broke over Peking, China's economic reforms had run into trouble.*	Claim
2.	*The reason is fairly simple.*	Evaluation of reason for the situation described in 1, but the nature of reason is withheld.
	[[Just what *is* the reason?]]	Putative question from reader that arises out of the previous sentence and that is answered by following sentence.
3.	*The agricultural three-quarters of the economy is being gradually shaken free from the central planners grasp, …*	Answers the putative question by providing the reason.

The discussion of the sentence "Houston we have a problem" at the beginning of this paper illustrates much the same situation. That sentence evaluates a situation but provides minimal experiential information about the nature of the situation itself. Because the two sentences ("Houston we have a problem" and "The reason is fairly simple") provide minimal contextually relevant experiential information, they both beg questions on the part of the listener/reader—they open up gaps in information that need to be filled.

It is important to realize that information gaps are not simply the absence of information. Rather, sentences that introduce information gaps function much like questions in that they specify the nature of the information that is missing and that readers should expect. In what follows I am going to use the similarity of information gaps and questions as a metaphor for talking about the ways that information gaps function in discourse. I am encouraged to take this view partly because Bakhtin (1986) demonstrated that all texts, including texts that seem to be monologs, exhibit traces of other texts within them. That is, all texts (whether explicitly dialogs or apparently monologs) involve dialog with others. In addition, several linguists (Hatcher, 1956 a, 1956b; Hoey, 1983; Sinclair, 2004; Winter, 1982) have integrated the dialogic nature of texts into their techniques of textual analysis. While I do not wish to assert, as Winter does, that *every* sentence of a text can be related to its context via a question which it answers, I do find that at least *some* sentences—gap sentences—specifically *encourage* such questions on the part of the readers.

Meanings and Wordings that Correlate with Information Gaps
Rhetorical Questions which Relate Text Segments via Dialogic Relations
Of course the most obvious way to create a gap in information is to ask a question. We usually refer to questions used in monologs as *rhetorical questions*. But not *every* rhetorical question functions to create a gap in a text. To create an information gap the question must arise out of and be cohesive with a previous text segment and be answered by a following text segment. Examples D – G illustrate questions (italicized here) that create gaps.

Ex D Alexander's triumph was, therefore, complete by the evening of October 1, 331. He was not materially to add to his extraordinary —in the truest sense unique—success. *How had he achieved what he had?*
…
His technique, though characterized above all by violent, impetuous and apparently unreflecting action, was by no means entirely impulsive. He was an incisive strategist—as his meticulous arrangements, now

reconstructed, and the consultative nature of his staff conferences, recorded by Arrian, demonstrate. In the management of his army he was materially practical and psychologically acute:…
(Kegan. 1987, 14)

Ex E   When people write, they appear to talk aloud about what they want to write. They often take notes or summarize the main points of lectures or articles. Some also keep diaries, journals, and weblogs to record these ideas. *Why?* The act of writing may help people clarify their thinking and remember things that would not otherwise remain in their memory. Furthermore, writing may complete people's thoughts or transform these thoughts into objects for further reflection. Because writing is so natural for us we rarely think of the role it plays in mediating our cognition.
(Suzuki 2012, 1111)

Ex F   Now, there's -- there's a reason for this. It turns out that advancing equal opportunity and economic empowerment is both morally right and good economics. *Why?* Because poverty, discrimination, and ignorance restrict growth.
(Clinton at 2012 Democratic Convention)

Ex G   And I'll tell you something else. The auto industry restructuring worked. It saved...
(APPLAUSE)
It saved more than a million jobs, and not just at G.M., Chrysler, and their dealerships, but in auto parts manufacturing all over the country. That's why even the automakers who weren't part of the deal supported it. They needed to save those parts suppliers, too. Like I said, we're all in this together.
(APPLAUSE)
So what's happened? There are now 250,000 more people working in the auto industry than on the day the companies were restructured.
(Clinton at 2012 Democratic National Convention)

The question in example D is a complete sentence, and is cohesive with the previous context. Examples E and F involve elliptical questions and we need to look to the previous sentences to locate the missing information. The question in Example G is less obvious in its dependence on the previous context but clearly "what's happened?" is to be interpreted in terms of the results of the actions described in the previous sentences.

Of course the nature of the questions asked (*why*, *how*, etc.) determines the logico-semantic relation (cause, means, etc.) between the gap segment and the grounding segment.

Evaluations of a Situation or Entity

Evaluations are often expanded either by describing the features of the entity or situation that led to that evaluation (e.g. what is the specific nature of the problem?) or by providing information that justifies the evaluation (e.g. why do I believe that's a problem?).

Supporting an Evaluation by Describing the Specific Nature of the Situation

Example H illustrates the first approach to supporting an evaluation.

Ex H
1.   Helicopters are very convenient for dropping freight by parachute but this system has its problems.
2.   Somehow the landing impact has to be cushioned to give a soft landing.

Sentence 1 ends with the clause *but this system has its problems*. The word *problems* is inherently unspecified. That is, it

simply evaluates the system, and provides neither the basis for that evaluation, nor the exact nature of those problems. Typically words like *problem* are accompanied by some explanation of the nature of the problem. Sentence 2 begins the required explanation by describing both what needs to take place ("the landing impact has to be cushioned") and the desired goal/result ("to give a soft landing").[5]

Supporting an Evaluation by Justifying the Evaluation

A second way that evaluations are often expanded is by providing the basis for the evaluation—why do I believe that? The italicized portion of example I provides the evaluation, and the underlined portion provides the basis for the evaluation.

Ex I   The Vulture

> The Vulture
> The vulture eats between his meals,
>   And that's the reason why
> *He very, very rarely feels*
>   *As well as you and I.*   Evaluation
> His eye is dull, his head is bald,   Justification of evaluation
>   His neck is growing thinner.
> Oh! What a lesson for us all
>   To only eat at dinner

The underlined sentences in Example I do not go into detail concerning how the vulture feels (compare the discussion of Example H), but describe evidence that is intended to persuade us that the evaluation is justified.

Generalizations

Very general statements are often accompanied by statements that provide details that support those statements.

Simple Generalizations

Example J illustrates the effects of making very general statements in the context of a larger discussion. Here we focus in particular on the underlined sentences 5 and 7.

Ex J
1   The English Constitution — that indescribable entity — is a living thing, growing with the growth of men, and assuming ever-varying forms in accordance with the subtle and complex laws of human character.
2   It is the child of wisdom and chance.
3   The wise men of 1688 molded it into the shape we know, but the chance that George I could not speak English gave it one of its essential peculiarities — the system of a Cabinet independent of the Crown and subordinate to the Prime Minister.
4   The wisdom of Lord Grey saved it from petrification and set it upon the path of democracy.
5   Then *chance* intervened *once more.*
6   A female sovereign happened to marry an able and pertinacious man, and it seemed likely that an element that had been quiescent within it for years — the element of irresponsible administrative power — was about to become its predominant characteristic and change completely the direction of its growth.
7   But *what chance gave chance* took away.

8   The Consort perished in his prime, and the English Constitution, dropping the dead limb with hardly a
         tremor, continued its mysterious life as if he had never been.

Sentences 5 and 7 convey very little experiential information. Sentence 5 merely says that chance did something, while 7 asserts only that chance removed something that it had given earlier. However, both of these vague sentences achieve two important tasks. Readers have already seen in the previous sentences of this extended metaphor that chance is presented as an actor. Therefore, in both sentences, the word *chance* acts as a cohesive tie to the preceding sentences. Similarly the phrase *once more* in sentence 5 also implies that chance has acted before. Thus sentence 5 both labels the previous sentences as instances of chance acting on the English constitution, and also implies (by the vague description of what is going on) that the following text portion is likely to provide an example of chance affecting the English constitution—even though the word *chance* does not appear in that sentence.

Sentence 7 has a similar function. *What chance gave* establishes a cohesive tie with sentence 6 even though the two sentences have no words in common, and in so doing it tells readers that sentence 6 describes chance giving something to the English Constitution. Further it tells readers to interpret sentence 8 as chance taking something away from the English constitution—again even though the word *chance* does not appear in sentence 8.[6]

Both sentences 5 and 7 tell readers how they are to interpret the preceding and the following sentences. The labeling of the preceding sentence is achieved through cohesive ties, while the labeling of the following sentence is achieved partly through cohesive ties and partly through the non-specific nature of the gap sentences. Their very vagueness encourages readers to ask (and expect an answer to) questions such as "what did chance do?" and "what did chance take away?" Articulating those questions provides a framework for readers to use as they interpret the sentences that follow.

General Statements that Involve Comparisons

General statements like Example J may be supported by specifics that extend over large sections of text, but generally such sections, even though long, address aspects of one entity, concept or proposition. However, some general statements, ones that involve comparisons, need to be supported by specifics that address two or more entities. The first sentence of Example K ("There's a fundamental difference between the President's approach to raising the incomes of hardworking American families and the Republicans' approach") cannot be supported by merely discussing the president's approach. The word *difference* establishes an information gap—one that can only be addressed by describing relevant aspects of both approaches. In this example, sentences 2 – 4 address the Republicans' approach while Sentences 5 – 7 address the President's approach. The specifics that support the claim expressed in the first sentence do not lie in any single sentence but rather in the comparison of what is said in the first text segment with what is said in the second text segment. That is, the two paragraphs of this passage are in what Winter (1977a and b) calls a 'matching relation', and since the paragraphs are introduced with a generalization that focuses on difference, the two approaches are being contrasted.

Ex K
1   There's a fundamental difference between the President's approach to raising the incomes of hardworking
      American families and the Republicans' approach.
2   The Republicans are talking about capital gains tax reductions, including capital gains tax reductions on
      assets already owned.
3   They are pushing what they call a neutral cost recovery tax break, which is a very rich depreciation
      allowance which will cost upwards of $160 billion over the next 10 years.
4   Those and a few other proposals form the core of their efforts to build jobs.
¶
5   The President's approach is very different.

6   The President is saying, in effect, look, the best way of rebuilding America's middle class, given that there has been a profound shift of demand in favor of skilled workers and against people who don't have the education and skills necessary for this new economy, is to give people the wherewithal to get the skills; to empower people directly.

7   Not empower the masters of physical and financial capital, but empower individuals to be their own masters in the next economy.

The generalization in sentence 5 involves a variant of the general rule that gaps that focus on difference must be expanded by specifics that mention two entities. Although it looks like only one entity is mentioned in the paragraph that follows 5, the passage that immediately precedes this paragraph has already described the Republicans' approach. Sentence 5 together with the remainder of the second paragraph assumes that readers have this information in mind as they process the second paragraph.

But even more problematic variants may occur in which one side of the contrast is never described explicitly. Rather, the side that is described is described in such a way that readers can reconstruct the other side of the contrast. The result is that even though the wording only describes one of the entities being compared, readers can recover the relevant features of both entities. Example L presents illustrates one such situation.

Example L

	Text	Summary
1	Although the spelling-pattern approach always gives attention to whole words rather than to individual isolated letters	Concession: spelling-pattern approach focuses on whole words (and by implication resembles word method approach)
	it *differs* fundamentally from any of the common "word-method" approaches	General statement creates gap: focus on difference
	in that there is no uncertainty in the identifying characteristics that mark off one written word from another.	Specifics re difference: denies uncertainty re identifying characteristics in spelling pattern approach (Implicit: whole word approach *is* unclear on identifying characteristics)
2	These are the identifying characteristics of the language itself as incorporated in the patterns of our alphabetic spelling.	Elaborate on the nature of the identifying characteristics

Sentence L1 begins with a concessive clause (although…) conceding that since both the common word method approaches and the spelling pattern approach focus on whole words, they seem to be similar, but then the main verb of the main clause is *differs* and thus shifts the emphasis from similarity to differences. But this clause does not describe exactly how they differ and so it creates an information gap. That gap prospects a sequence where comparable specifics are provided for each of the two methods of teaching reading and that the readers will be able to compare the features of the two methods to discover the difference. However, in this example, only the spelling pattern approach is described in the remainder of sentence 1 and sentence 2. In particular, the last portion of sentence 1 denies that the identifying characteristics that distinguish one word from

another are left uncertain in the spelling pattern approach. In general, denials are used in the presence of some expressed or implied positive assertion or belief. (See the discussion of denials below.) Particularly in this context where we have an already expressed focus on difference and a prior mention of two methods of teaching reading, readers are able to use that denial to infer that the whole word method *does* leave learners uncertain about the identifying characteristics of the words.

Example M, a joke recently told on late night TV, provides another example of a contrast being given specifics using only one clause. Again the word *difference* creates a gap that prospects a two-part expansion. However, only one part is actually expressed. But the non-final (marked) locations of the tonics in the two tone groups of that expansion (indicated here by italics) indicate a contrastive interpretation— *Maher* in contrast to *Limbaugh*, and *knows* in contrast to *doesn't know*. The words *audience* and *he's an asshole* are post tonic and are therefore presented as Given (that is, known or recoverable to the audience). All the audience needed to do was to fit the two pairs of contrasting phrases into the relevant points of the clause to discover both what was said and what was intended but not said.

Ex M
1. The difference between Bill Maher and Rush Limbaugh
2. //3 is that *Maher's* audience //1 *knows* he's an asshole.//

Withholding Full Commitment to the Truth of Statements
People are generally interested in what is real. However, discussing what could be (the hypothetical) is a means of gaining information that allows them to evaluate what is real. As a result, texts often discuss hypothetical situations—situations that *could* be but aren't. But of course for such discussions to work as a potential source of evaluation, readers must also be reminded of the real. The result is that many texts contain relations between a statement of some hypothetical situation and a statement that describes a related real situation. One way that authors may indicate such a relation is to distance themselves from fully committing to the truth of the text segment that describes the hypothetical situation. This type of signal is strongly associated with matching relations (Winter, 1977a) and more specifically with contrast—the hypothetical and the real are usually presented as *contrasting* values. A large variety of cues may indicate this sort of relation. They include the following four general types.

Denials
Denials occur when one portion of a text asserts a proposition (or group of propositions) that denies that a second assertion within the same text is true. The constructed conversation in example N illustrates this situation.

Ex N
Abe: John came early.
Betty: No John didn't come early.

What Betty says denies the validity of what Abe says. The fact that N is constructed as a conversation rather than a monolog is important because Abe cannot produce both assertions while constructing a single coherent text. (That issue will be addressed in the next section)

N also illustrates a further feature of denials. Denials are made relevant by being found in the presence of a corresponding positive assertion. In example N, Betty's denial is made relevant by Abe's immediately preceding corresponding positive statement. In N Abe's positive was explicitly worded, but explicit expression is not necessary. All that is necessary is a general assumption held by (at least) some members of the communicating group or the larger society to which the group belongs that the corresponding positive is potentially true. In the story of the three little pigs, we are told that the house of bricks did not fall down. That fact is made newsworthy

and relevant by two aspects of the context: a) the fact that the wolf tried to blow it down, and b) by the fact that the wolf had already successfully blown down the houses of two other pigs. Both of these facts raise the possibility that he would also succeed in blowing this house down. In other words, the corresponding positive was already at issue in the context.

Example O provides a real example of a denial, in which an implicit customary action is denied.

Ex O
I didn't go to school that day but <u>kept watch over his body as it lay in the bag</u>.

Since the "I" is a school-aged child, a normal activity would have been to go to school weekdays. That normal activity is denied by the italicized clause. Example O also illustrates a common feature of denials; they are often accompanied by a correction. The denial tells us what did not happen, and thereby creates an information gap and prospects that the text will tell us what did happen. And indeed the underlined clause complex tells us what did happen. We are left with the presumed set of propositions in O'

Example O'
Step 1	Assumed normal action	[I normally go to school weekdays]
Step 2	Normal action denied:	I didn't go to school that day
Step 3	Correction of assumption	I kept watch over his body…[that day]

This sequence (whether all three steps are fully expressed in a text, or the first step is left partially implicit as in O) presents an instance of contrast between the first and last steps in the sequence. That is, the combination of the first and last step jointly present contrasting alternatives. When there is a relation of contrast, the first assertion (step 1) is implicitly denied by the assertion in step 3 even if both propositions are positive.[7]

Example P provides a third example of a denial, but here the denial is repeated several times using different wording (a not uncommon occurence).

Ex P

1.	*We can skip the arguments that* <u>if the government doesn't get these powers the millionaires will get away with tax frauds amounting to millions</u>.	Denial + (<u>claim</u>)
2.	This is what the chancellor said last week.	Attribution of source
3.	It is a load of rubbish.	Evaluation of claim (effectively a denial)
4.	*Millionaires don't carry on like that.*	Direct denial
5.	a. If millionaires don't pay taxes,	Accepting part of claim
	b. they <u>pay their lawyers to get them out of taxes legally</u>.	Correction

Example P comes from a letter to the editor reacting to an editorial that previously appeared in the newspaper. Sentence 1 contains an indirect quotation of a statement that was advanced in a previous editorial "if the government doesn't get these powers the millionaires will get away with tax frauds amounting to millions." However, this statement is denied by the phrase "We can skip the arguments that….," which projects this assertion. Sentence 2 attributes the proposition to the chancellor—a critical aspect of this attribution is the

implication that the source of the proposition is not the author of this letter. Sentence 3 evaluates the proposition, an evaluation that essentially denies its validity. Since sentence 3 is an evaluation, it creates a gap. That gap is grounded by the sentence pair 4 and 5. Sentence 4 directly denies the proposition, 5a grants the truth of part of the original claim (i.e. that millionaires don't pay taxes) and 5b corrects the proposition in 1 by describing what is true.

Examples K, L and Q illustrate similar sequences of denial and affirmation.

Attributed Statement

Example Q illustrates a case in which the author introduces a claim ("language limits the possibilities of thought"), but assigns it to linguists and philosophers. In other words she does not commit to the truth of that claim, and thereby leaves herself room to return to the claim and contradict it. Indeed the initial claim is followed by two pairs of denials and corrections. The two clauses in sentence 2 deny two aspects of the claim in sentence 1. Sentence 3 states what is true (and corrects the original statement). The first clause of sentence 4 again denies the original claim using a wording that takes a different approach than the denial in the first clause of sentence 2. Then the second clause of sentence 4 again corrects the original statement.

This passage is quite typical in several ways. Attributing a claim to some other person allows an author to contradict it. Moreover, the probability that the initial claim will be contradicted is increased if we know that the author of the passage is citing members of a different group, rather than members of a group with which the author affiliates herself. The author of example Q is neither linguist nor philosopher, but a sociologist. Indeed knowing something of her background helps us to predict not only that she would contradict the claim, but also something about the nature of the correction she will propose.

Ex Q

1	Linguists and philosophers have long been saying that <u>language limits the possibilities of thought.</u>	Claim
2	a) But language is not an independent variable,	Denial
	b) nor is thought controlled and formed by it.	Denial
3	Both speech and thought are dependent parts of human communication.	Correction
4	a) The control is not in the speech form,	Denial – repeat
	b) but in the set of human relations which generate both thought and speech.	[Correction – repeat]

Of course statements that are ascribed to general sources (e.g. "The Chinese say that…," "It is said that…") are more likely to be corrected than those attributed to specific sources. Further, the verbs chosen to introduce a statement may cue the likelihood of correction. A sentence that begins with <u>Huddleston *claims* that</u>… suggests that the author is very likely to challenge the content of the quotation, while one that begins with <u>Biber *has shown* that</u>… indicates that the author is likely to affirm the quoted ideas in his work.

Statements Concerning Some Situation with a Likely Consequence
Logical Consequence of a Previously Mentioned Situation

The underlined portion of sentence 2 of example R is a nominal group that implies an assertion: "this hair spray makes people's hair fall out." That is clearly something hairsprays are not supposed to do, and therefore this proposition implies an evaluation. That evaluation is mirrored by the choice of the phrase *did an exposé of.*[8] Sentence 3 begins with a prepositional phrase that summarizes the situation described in 2 and evaluates it as *damage to their product* and the remainder of 3 suggests a probable result of that situation. The use of *thought* as the main verb that projects the remainder of that sentence, together with the two occurrences of *would have* jointly signal that the author is withholding commitment to the truth of that assertion. Sentence 3, therefore presents the hypothetical. The wording *what actually happened* at the beginning of sentence 4 indicates that the text is shifting to

describe the real, and in addition indicates that the real contrasts with the suggested hypothetical.

Ex R

1   If you think this is a load of crap, the maniacal ramblings of some sort of nut with a grudge, then get a
        load of this:
2   just recently some TV programme did an exposé of <u>a hair spray that made people's hair fall out</u>.
3   Now with that kind of damage to their product, you *would have thought* the manufacturers *would have gone*
        into liquidation the very next week.
4   Well, what *actually* happened is documented, so you can check up on it.
5   What happened was, the very next week their sales doubled.
6   Yes, doubled.

Intended/Promised Actions, or Purposes for Acting

Describing the intents that underlie a set of actions constitutes another way of indicating that the statements concern potential truths. The actions themselves are real, but the intended consequences that underlie them are not real events. They are hypothetical.

Example S illustrates a situation in which certain actions were introduced with a particular intent, and the question arises as to whether the desired result was actually achieved. Example S provides a relatively large sample of text so that readers can get a general feel for the larger text function of the portion under focus. This portion describes the goals of a project. The meat of what I will focus on begins in paragraph 3. Italics indicates cues that potentially operate to signal a hypothetical and real relation. Underlining indicates the claims that are being evaluated. Table 3 organizes these cues into those that indicate hypothetical (unreal) vs. those that indicate real.

Ex S

During the 1990s a number of federal research and demonstration workplace learning projects, developed through business and education partnerships, were funded across the United States. The primary focus of these projects was to conduct ongoing action research in work-based educational settings and, as a result, to demonstrate best practices for increasing workforce basic literacy skills, including proficiency in speaking and writing English as a second language. Raising basic skill levels was expected to result in greater worker productivity, primarily through the use of workplace materials and worker performance tasks as a basis for curriculum development (Hull, 1997).

In 1994, I served as project director for one of the largest federally funded workplace literacy projects in the U.S. The project goals included a significant research and curriculum development focus. One component was investigating the *issues* of empowerment and language learning for ESL workers making the transition from one type of workplace culture to another.

Literacy projects like ours were often situated in workplace cultures that supported the "new capitalism" in which <u>workers *were expected* to become active participants in the "quality culture of the organization and have (and take) full responsibility for all the organizational ramifications"</u> of their jobs (Gee, Hull, & Lankshear, 1996, p. xv). This trend toward a 'new work order' (p. xvi) usually took the shape of participatory work teams <u>*intended to* empower workers to become critical thinkers and problem solvers</u> while supporting the transition from traditional top-down structures into flatter, leaner "learning organizations" (Senge, 1990, p. 80). Of course, *the ultimate goal* was to increase the company's market productivity within a fast-growing, highly competitive global economy by <u>harnessing the collective knowledge and skills of all the workers</u> (Gee et al., 1996).

Ironically, the new demands of what *was intended to be* a more "meaningful, humane, and socially just" (Gee et al., 1996, p. 26) workplace culture <u>*suggested potentially* serious empowerment *issues* for all</u>

workers, but particularly those who were not proficient communicators in English. Many of these people had already established their identity and place within the existing work culture (Lankshear, Gee, Knobel, & Searle,1997). *Predictably*, and as a result of the often unrealistic expectations of the new work order, linguistic hierarchies sprang up—hierarchies that disempowered workers who were used to a traditional structure in which it was acceptable to rely heavily on performance skills not directly linked to English proficiency (Moore, 1996). *Indeed*, rapid organizational changes of the new workplace posed unique challenges for ESL worker-learners.

Table 3
Cues to Author Attitudes Toward Content: Hypothetical And Real in Example S

Hypothetical	Real
workers *were expected* to become active participants	*Ironically*
participatory work *teams intended to empower workers*	(suggested potentially) serious empowerment *issues*
the ultimate goal was to increase the company's market productivity	*Predictably*
what *was intended to be* a more "meaningful"	*Indeed*

The wordings in the left column raise the issue of whether these goals were achieved. *Ironically*, as the first word of its paragraph, signals a change in attitude from describing the intents to describing what actually happened—i.e. the move from hypothetical to real. *Predictably* and *indeed* indicate a continuation of the author's current attitude.

Example T combines statements concerning a future event that is dependent on a condition —thus combining the two features discussed last. The first clause in sentence 1 describes a promised action while the second clause places a condition on that action. This sentence therefore encourages two questions: one addressing the condition (Did the cabinet refuse the request?), and the other addressing the promised action (did he resign?) Sentence 2 answers the question "Did it refuse his request?" with 'yes', and the question "Did he resign?" with 'no'.

Ex T
1   Mr. Baldwin promised to resign if the Cabinet refused his request.
2   It did refuse and he did not resign.

Summary and Issues: Information Chunks, Information Gaps and Groundings

I am working with a model that includes three types of elements:
   a)   Exchange relations (from the description of conversations)
   b)   Conjunction and logical relations (from the lexicogrammar)
   c)   Information chunks, semantic elements (not to be confused with information units signaled by intonation of traditional SFL[9]), and the rhetorical relations which hold among these information chunks.

Of course, if readers (and listeners) agree, as they generally do, on which logical/ rhetorical relations hold among different portions of a text, that implies that something in the wording, the patterns of meaning of the text, or in the context cues readers to their presence. This paper suggests that one cue is a particular pattern of meaning expressed within certain two-part information chunks. The information chunks under focus in this paper consist of two functions: an Information Gap followed by a Grounding for the gap.

The text portion that creates the gap uses some term or terms that are inherently unspecified in context and thus the text portion begs a question on the part of the reader. This question is then answered by the following

text portion that provides the specifications missing from the gap and thus provides grounding for the passage.

I consider information gaps and their groundings to be semantic functions for three reasons: First, it is impossible to list all the words or structures that may be used to establish information gaps. All that is required to create a gap is a text portion that is less specific than the grounding that supports it. Compare examples U and V.

Ex U
We bought three plants last week: a lilac, a redbud and a spirea.

Ex V
We bought three lilacs last week: a white one, a deep purple one and one in between.

In example U *lilac* is one of the terms that provides grounding for the word *plants*, while in example V it is itself grounded by the description of the types of lilacs. In other words, the same concept may function sometimes to establish an information gap and at other times as a grounding in experience. One factor that contributes to the determination of whether a particular concept functions as gap or grounding is the relative specificity of the expression compared to the other related terms in the environment.

In addition, if we focus only on the gap sentence, the same sentence in a particular text may require grounding in experience for one audience (e.g. novices) and also be perfectly understandable for another audience (e.g. experts). I remember many years ago when I was first told by my brother-in-law that he had planted a double lilac. Although I was quite familiar with lilacs (I thought), I had never before heard of a double lilac and asked for an explanation.[10]

It is important to realize that the information gap and the grounding each influence the interpretation of the other. Compare the two sentence pairs (a and b) in Example W.

Ex W
a.   I have a problem. My wife loves Paris.

b.   I have a great asset. My wife loves Paris.

The first sentence in each of these pairs creates an information gap while the second sentence provides a grounding for that gap. In each of the pairs, the grounding provides specifics as to the nature of the problem / asset and helps readers to figure out the nature of the problem / asset. But of course the initial gap sentences in each sentence pair tell us how to interpret the specifics. In example a) we are told to look for something problematic about the fact that my wife loves Paris, while in b) we are told to look for something advantageous about that fact.

The discussion in this paper raises the question of how important[11] are the phenomena addressed. One approach to answering such a question addresses whether they affect the interpretations of the texts that include them. Since gap–grounding sequences directly constitute patterns of *meanings*, there is no question that they affect the interpretations of texts. But further, they are *patterns* of meanings—they are regularly repeated sequences of meaningful relations that hold between portions of individual texts. And because these sequences of meaningful relations are regularly repeated, they help readers—those readers who are familiar with the patterns they are processing—predict what they are about to encounter as they read. The ability to predict what will appear in a text is critical to the ability to comprehend that text. As Halliday (1975/2007, p.172) said, "From a sociolinguistic standpoint a text is meaningful not so much because the hearer does not know what the speaker is going to say, as in a mathematical model of communication, as because he does know." Also reading experts, even ones using radically different models of reading (e.g. Rayner, Pollatsek, Ashby & Clifton, 2012, p.233; Smith, 2012, p.25; Stanovich, 2000, p.36), all acknowledge the effects of the ability to predict (or the effect of

context, which entails the ability to predict) on comprehension. Indeed Smith (2012, pp.38-39) and Goodman (1996, chapter 7) regard prediction as a fundamental part of the reading/comprehension process.

The importance of the ability to process these gap-grounding sequences was brought home to me some years ago when I asked a group of students who were in the first or second year of their college education to comment on a few short passages that took conflicting positions on the Sapir-Whorf hypothesis. One of the passages included example Q. A number of the students approached me after the exam and commented that they found the passage self contradictory and incoherent. They clearly had not seen the significance of the fact that the first claim was ascribed to other people, and had missed the complex pattern of claim, denial and correction in the paragraph.

A second way to address the importance of gap–grounding sequences is to estimate how frequently readers encounter them in text. Flowerdew and Forest (2015, p.125) find that in their corpus of academic English, signaling nouns (including all types and contexts) occur roughly 1 per 38 words of text. Of that number roughly half are sequences of general–specifics provided either in the next clause or a more distant clause. But those figures only include nouns. Verbs and adjectives may also be unspecified and thus create gaps—I have no data to estimate how often verbs and adjectives contribute to the perception of information gaps.

The previous paragraph addresses overall frequency of these sequences. But frequency also relates to the range of genres or disciplines a form occurs in. While the data that Flowerdew and Forest examine differ fairly significantly from our concerns, they do provide information that suggest the sorts of results an investigation of gap-grounding sequences would be likely to obtain. They examined data taken from five natural sciences and five social sciences, and also from three genres in each discipline, journals, textbooks and lectures. Ignoring complications in their detailed analyses, they found that all disciplines and genres made use of signaling nouns, and that both the discipline and the genre affected both the frequency of use of signaling nouns as well as the semantic type of signaling noun. I can add that in examining texts written for children I have found gap–grounding sequences in texts written for children as young as eight years old. One story for eight-year old children contains 11 clear multi-sentence gap–grounding sequences (not counting question–answer sequences in the quotations of the various characters) in 146 sentences (1384 words).

Clearly readers of a wide range of ages and interests regularly encounter gap–grounding sequences as they read. Further, my experience with some of my students who had difficulty understanding example Q demonstrates that at least some students struggle to process texts that contain some of these sequences. How best to help these struggling students is an issue that all teachers must address.

Endnotes

[1] For ease of reference, I will simply refer to readers in this paper, however, what I have to say applies equally to spoken as well as written language.

[2] Other sequences of non-specific–specific such as those discussed on pages 103-105 seem to differ from the examples provided by Martin and Rose, and hence may not involve HyperThemes, or may require a complication of that analytical description.

[3] When the text portion that provides the specifics precedes the non-specific portion, no information gap is created, and so other terms such as *label* (from Francis, 1994) or *interpretation* are more appropriate.

[4] Admittedly, these words differ in their focus. If we say a causal relation entails positing some sort of cause and some sort of effect, then the words *reason* and *result* focus on the different aspects of that relation. *Reason* focuses on the cause, while *result* focuses on the effect.

[5] The use of the word *somehow* in sentence 2 specifically withholds information concerning the means by which that goal is to be achieved with the result that sentence 2 also creates an information gap, one that concerns the means by which the problem was solved—a gap which is filled by the text that follows. But that example does not belong to this point which focuses on gaps that are created using evaluations.

[6] Of course both sentence 6 and sentence 8 describe events that are compatible with chance events. Sentence 6 refers to *a female sovereign*, which in England was a very rare occurrence, and *marry*, which is usually thought of as an intentional act, is introduced by *happened to*, which indicates the operation of chance. Similarly in sentence 8 the consort is described as

perishing *in his prime* which suggests a rare, unforeseen event.

[7] Hoey and Winter (1981) and Winter (1977a, 1977b, 1979) provide extensive discussions of the roles of denial, correction and systematic repetition in the realization of matching relations that involve contrast.

[8] Sinclair (1995) defines *exposé* as "a film or piece of writing which reveals the truth about a situation or person, especially involving shocking facts."

[9] There may be a relation between information chunks and phonological or orthographic paragraphs. (See, for example discussions of sequences of tone groups (sometimes called paratones or paraphones) in Brazil (1997), Brown (1977 / 1990), Iwamoto (2013), Tench (1991, 1996), Yule (1980) and others.) However, any relation between the information chunks discussed in this paper and tone groups or paratones is likely to be complex.

[10] This example occurred as part of a dialog, but it could have appeared in a monologic text.

[11] Of course using the word *important* begs the question of important for whom or for what purpose. Because of my current interest in teaching reading and writing, I will briefly address the importance of this discussion for educational issues. However, I believe that this discussion is also important for other applications and for linguistic theory itself.

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Using the "Multimodal Analysis Video" Program for Register Analysis: A Preliminary Study

Anne Thwaite*
Edith Cowan University, Australia

Abstract

This paper describes an investigation using O'Halloran's *Multimodal Analysis Video* software to analyse video data collected for the author's *Language in Contexts* project. The study explores the affordances provided by the software in describing different registers and in developing a spoken discourse analysis to incorporate aspects of multimodality. While the video data in the *Language in Contexts* project includes seven different registers, a selection of three of these is presented here, including those which may be high stakes for learners, such as seeing a doctor and going on a dinner date. The spoken data is analysed using various Systemic Functional approaches, such as Speech Function, Exchange Structure and intonation. Some aspects of multimodal discourse analysis are also mentioned. Interactions of 'verbiage' (Martin & Rose, 2007, p. 262) with some of the other semiotic systems are outlined. The advantage of a multimodal interface is that learners can pinpoint non-linguistic features and see video examples of members of the target culture displaying these behaviours. This analysis has applications for TESOL, in that it can make learners aware of the features of different registers, which they can then apply to their own communicative behaviours.

Key words: Register, discourse analysis, multimodal video analysis

Introduction

This paper presents the results of an investigation into using the software *Multimodal Analysis Video* (O'Halloran, 2013) to analyse video data collected for the *Language in Contexts* project (Thwaite, Pinfold & Herrington, 1996). The aim of the study is to explore the affordances provided by the software in describing different registers and in developing a spoken discourse analysis to incorporate aspects of multimodality. This analysis could be described as Systemic Functional Multimodal Discourse Analysis (MMDA), following the work of Kress and van Leeuwen (2001).

Previously available software packages for spoken discourse analysis, such as *Systemics* (O'Halloran, 2011) and the *UAM Corpus Tool* (O'Donnell, 2011), were not designed to explore multimodality. More recently, various programs have been developed, including *Artichoke* (Fetherstone, 2011), produced in Western Australia, which is multimodal but not systemic, and *Semiomix* from the Multimodal Analysis Laboratory at the National University of Singapore (as described in O'Halloran, Tan, Smith & Podlasov, 2011), which is multimodal and systemic, but rather complex. As the simpler *Multimodal Analysis Video* is now available, it is a good opportunity to apply it to data from different registers; one of the aims of doing so is to help make multimodal features of discourse accessible to learners of English.

Background

Multimodal Analysis Video

The *Multimodal Analysis Video (*MMAV) program was developed at the National University of Singapore by Kay O'Halloran and her team. It is a commercially available program that is easily accessible to users who do not have a background in language analysis. The user can input video data from a wide range of file types into the program: .avi, .flv, .m4v, .mov, .mp4, .mpg and .wmv formats. A spectrogram of the audio data is automatically produced; the user creates a transcript, which is timestamped and aligned with the video. A catalogue of analyses is available in the program's library in the form of networks; these include both linguistic and multimodal analyses, for example processes, participant roles, pitch movement, gaze, social distance and camera movement. Users code the data using these analyses, or other analyses that they have added to the library themselves. Thus, while the default analyses are based on systemic functional linguistics, the program is not by any means limited to this.

Output from the program is produced in the form of visualisations (illustrated later in this paper) or in EXCEL spreadsheets. It is not the purpose of this paper to describe in detail how MMAV works. (For a brief description of the program, see http://multimodal-analysis.com/ products/multimodal-analysis-video.) Rather, here we describe how it can be used to analyse various registers in a way that may be useful to English learners.

Language in Contexts Project

The *Language in Contexts* project (Thwaite, Pinfold & Herrington, 1996) began as an internal project funded by Edith Cowan University, Australia. The initial aim was to produce video footage of different registers as a teaching tool for spoken discourse analysis. A side project was the *Accents* audiotape illustrating some different varieties of English in Australia. With the support of a national Committee for the Advancement of University Teaching grant, *Language in Contexts* was developed into a CD-ROM with interactive exercises to teach discourse analysis. The video data from this CD-ROM was taken up by Halliday and Greaves in their book *Intonation in the Grammar of English* (2008).

Speech Functions

Speech Function analysis is a widely-used analysis of discourse based on the notion of the exchange (see, for example, Rose & Martin, 2012, pp. 292-5; Halliday & Matthiessen, 2014, pp. 135-139). Two main types of exchange are defined: the exchange of 'goods and services' and the exchange of information. Interactants are involved in either giving or demanding each of these types.

The interplay between the two main types of exchange gives rise to the four basic Speech Functions, as displayed in Table 1.

Table 1
Four Basic Speech Function Initiations

	Giving	Demanding
Goods and services	Offer	Command
Information	Statement	Question

The four Speech Functions above are those produced by the speaker who initiates an interaction; there are also preferred responses to these speech functions, listed in Table 2. As shown in the table, the Speech Function analysis emphasizes pairs of initiations and responses, giving it a binary orientation. This is one of the limitations of Speech Function analysis, which Exchange Structure aims to address.

Table 2
Preferred Responses to Basic Speech Functions

	Giving	Demanding
Goods and services	Acknowledge Offer	Response Offer to Command
Information	Acknowledge Statement	Response Statement to Question

Exchange Structure

Exchange Structure analysis is based on the concept that interactions have more than two parts; it originally derived from the work of Sinclair and Coulthard (1975), and was further developed by Berry, Ventola and Martin (see, for example, Berry, 1981a, 1981b, 1981c; Ventola, 1987; Martin, 1992, pp. 46-50). The analysis also describes the unpredictable ('dynamic') as well as predictable ('synoptic') moves in the discourse. It makes use of Halliday's distinction between 'goods and services' and information, encoding both 'action' and 'knowledge' exchanges. It also distinguishes 'primary' and 'secondary' participants in the exchange.

According to the theory, any exchange can be described by the following formula:

$((dx1)\ x2)\ x1\ (x2f\ (x1f))$, where x = action (a) or knowledge (k)

    1 = primary participant
    2 = secondary participant
    d = delaying move
    f = follow-up move

Brackets indicate optional moves. Thus, the x1 move (giving information or performing an action) represents the core of the exchange; every exchange will have an x1 move, whether making a statement (k1) or doing an action such as handing someone something (a1).

The *primary participant* is the one taking on the role of primary actor in an action exchange, or primary knower in a knowledge exchange. That is, in an action exchange they are the participant mainly responsible for the action; in a knowledge exchange they assume the role of the expert. The *secondary participant* has a correspondingly secondary role in relation to the commodity exchanged. For example, in an action exchange they may ask someone else to do the action. In a knowledge exchange they may ask a question, indicating that they do not control the material.

While, as mentioned earlier, the x1 move is the core of the exchange, there are often other moves surrounding it. For instance, it may be preceded by an x2 move. In a knowledge exchange, this could be a question and answer sequence (k2^k1). In an action exchange, this could be a command followed by the primary actor carrying out this command (a2^a1). The x1 move may also be followed by an x2f move, which is one type of *follow-up move*. In a knowledge exchange, the x2f move acknowledges the information that has been given, for example: "It's a girl!" (k1)/ "Oh, that's great!" (k2f). In an action exchange, the x2f move may be a thanking move, for example: "Have a banana!" (a1)/ "Oh, thanks!" (a2f). If the x1 move is preceded by an x2 move, there may also be a dx1 move before that, a *delaying move*. In a knowledge exchange, this delaying move is the typical "teacher knows the answer" move, for example: "What's the capital of Lithuania?" (dk1)/ "Vilnius?" (k2)/ "That's right!" (k1). In an action exchange, the delaying move may be an offer of goods or services, for example: "Would you like a banana?" (da1)/ "Don't mind if I do." (a2)/ "There you go!" (a1). In a knowledge exchange, the social context and interpersonal roles may help interlocutors predict whether an initial question is a delaying move or a 'real question,' that is one where the asker is actually a secondary knower. This sometimes causes misunderstandings in young children at school, who may be puzzled as to why the teacher is asking a question to which she already knows the answer. It may not be clear until the follow-up move whether it was a 'real question' or not. In an action exchange, delaying moves are more obvious, although there can sometimes be confusion as to whether a move is a da1 (offer) or simply a demand for information. For example, the question, "Do you like Indian food?", if answered in the affirmative, could be followed by "There you are!" (da1/a2/a1) or "Me too!"

(k2/k1/k2f).

Finally, if the x1 move is followed by an x2f move, there may also be an x1f move after that. This is most common in action exchanges, for example "Have a banana!" (a1)/ "Oh, thanks!" (a2f)/ "Don't mention it!" (a1f). But it can also occur in knowledge exchanges, for example "It's a girl!" (k1)/ "Oh, that's great!" (k2f)/ "Yeah." (k1f). Of course, in any exchange there may be moves both before and after the core x1 move.

Systemic Functional Multimodal Discourse Analysis (SFMMDA)

Systemic Functional Multimodal Discourse Analysis grew out of the work of linguists such as Kress and van Leeuwen, who wanted to extend a functional description to include semiotic systems other than language. At first the analysis was applied to two-dimensional images (see, for example, O'Toole, 1994/2011; Kress & van Leeuwen, 1996). This initial application was soon developed to incorporate moving images and multimedia (see Kress & van Leeuwen, 2001/2006). The work has been applied in educational contexts by, for example Unsworth (2001) for multimodality and Painter, Martin and Unsworth (2013) for children's picture books.

The distinguishing feature of Systemic Functional MMDA is that it makes use of Halliday's notion of Register, with concepts in other semiotic systems paralleling those in the language system. Thus, *Field*, which in language refers to the content and the action (what is happening), relates to what is being *represented* in the other semiotic systems. *Tenor*, which in language describes the relationship between the speaker/writer and the listener/reader, similarly refers to how the multimodal text *engages* the audience. *Mode*, which in language refers to the medium of communication and how the text is constructed, likewise can be applied to how the multimodal text is *composed*.

Given the overall synergy between language and the other semiotic systems, it makes sense to examine individual systems, such as Speech Function, Exchange Structure, Intonation and Gaze, to see how they may work together to make meaning in particular situations.

Methodology

Data

The video data in the *Language in Contexts* project includes seven different registers: casual conversation, a maths activity, a wine-tasting session, legal discourse, interaction with a learning advisor, a hairdresser visit and a medical consultation. Key participants were selected from the contacts of the video production staff. All interactions were unscripted, with participants performing their normal roles, whether professionally (for example, the doctor and lawyer) or interpersonally (for example, the couple on a dinner date). None of the participants were actors. All of them gave written permission to be filmed, and were advised that the aim of the video was to show footage of situations that overseas students would encounter in Australia. To avoid making the participants self-conscious, before filming it was not mentioned that the project director was a linguist and had a particular interest in language. Thus, it is felt that the interactions are as natural as possible given the presence of cameras.

A selection of three of the *Language in Contexts* registers is presented in this paper: a doctor-patient interaction, a lawyer-client consultation and a dinner date.

Analytical Procedure

Multimodal Analysis Video comes with various Systemic Functional discourse and grammatical analyses already built-in. Much of the multimodal analysis uses the work of Kress and van Leeuwen (2001) as a base. It also allows the user to add their own analyses and adapt existing ones, for example by increasing the level of delicacy. Note, however, that the program is not an automatic discourse analyser; researchers can add categories to the analysis, but must do the coding manually themselves!

Results of the analysis can be exported to an EXCEL spreadsheet, where it is possible to conduct a search for particular items. Visualisation of the data is also possible using the 'State Machine' function. The State

Machine produces a dynamic diagram of the state of the data using units of time defined by the user (the default is one tenth of a second). Thus, for any particular analysis or combinations of analyses, the user can see a display of the proportion of each type of coded items used by the speakers, and the relationships between them. For example, the user can see combinations of Questions and Answers, who produces them and how they unfold during the discourse.

The spoken data has been analysed using the Systemic Functional discourse analyses of Speech Function and Exchange Structure (see Background section, above, for brief outlines of these two analyses). The Exchange Structure analysis was added to the MMAV Library, as it is not included in the standard catalogue. The analysis includes the synoptic (predictable) moves generated by the formula given in the Background section, above:

k1 = primary knower move
a1 = primary actor move
k2 = secondary knower move
a2 = secondary actor move
dk1 = delayed primary knower move
da1 = delayed primary actor move
k2f = secondary knower follow-up move
a2f = secondary actor follow-up move
k1f = primary knower follow-up move
a1f = primary actor follow-up move

In addition, the analysis includes the following 'dynamic' (unpredictable) moves, which can occur at any point in the exchange:

cf = confirmation
bch = backchannel
ch = challenge
rch = response to challenge
clrq = clarification request
cl = clarification
rcl = response to clarification
jst = justification

An intonation analysis of part of the data was performed by Halliday and Greaves (2008), and this is included in the description. However, the level of detail provided in the MMAV program is lower than in Halliday and Greaves' work, with only the five primary simple tones being coded (see Halliday & Matthiessen, 2014, pp.166-170, for a description of the tones and their meaning). The five tones are:

Tone 1   Falling
Tone 2   Rising
Tone 3   Level (but usually expressed with a slight rise at the end)
Tone 4   Falling - Rising
Tone 5   Rising - Falling

Note, however, that, as with all the analyses in MMAV, the user can add more detailed categories if required.

A basic analysis of gaze was also completed for part of the data (the Doctor-Patient interaction only). The default catalogue in the MMAV program includes 'direct' and 'indirect' address; these choices indicate whether participants are looking directly at each other or not. In my analysis I have elaborated 'indirect' address to include looking 'down' or looking 'sideways'. For a discussion of gaze, see Kress and van Leeuwen (2006, pp. 116-124).

Aspects of MMDA, such as gesture, posture, movement (see, for example, Martinec, 2000), and facial expression are also mentioned in passing in the present discussion. Additionally, the interaction of 'verbiage' (Martin & Rose, 2007, p. 262) with some of the other semiotic systems is described.

<div align="center">**Results**</div>

In this section I describe the results for the analysis of Speech Function, Exchange Structure, Intonation, Gaze and combinations of these analyses. Some various other multimodal analyses are also mentioned. While not all the analyses were performed for all of the data (as will be discussed), the results enable a comparison of the three selected registers along various dimensions.

Speech Functions

Doctor-Patient Interaction

The Doctor-Patient interaction, like the other interactions in the *Language in Contexts* video, was a genuine consultation; in this case the patient, who was known to the production team, wished to seek advice from a doctor (also known to the team) about some issues she was experiencing. The two participants were unknown to each other before the filming. The patient found the consultation helpful and visited the doctor again after this occasion.

Figure 1 shows a summary of the Doctor-Patient Speech Function analysis, which has been exported to an EXCEL spreadsheet.

	A	B	C	D
1	Analysis	Tab	Selected Syst	Time(in %)
2				
3	S5	Tab 2	Question	2.26
4	S6	Tab 1	Command	2.26
5	S3	Tab 2	Statement	21.05
6	S2	Tab 1	Question	23.31
7	S4	Tab 1	Statement	24.06
8	S1			27.07
9				

Figure 1. Results from the EXCEL spreadsheet for Doctor-Patient Speech Function
Tab 1 = doctor, Tab 2 = patient

An EXCEL spreadsheet can be generated for any of the MMAV analyses simply by pressing the Export button and following the instructions. The spreadsheet clearly displays the results for each variable in the analysis, and may be useful for those who wish to transfer the information to other databases, for example.

Another way of capturing the results is by using the visualisation tool called the State Machine, illustrated in Figure 2. Again, this is very easily done in the program by clicking on 'Visualisation' and selecting the analyses to be displayed. Figure 2 shows the proportion of each variable for each speaker, indicated by the size of the circle: where no one is using a Speech Function, the circle has been coloured green; the red and the blue are for the doctor and patient respectively. The grey lines indicate the context of each variable being produced. Here we can see that the red and the blue circles are most closely connected to the green one; that is, the Speech Functions are usually produced in the context of utterances that are not coded for Speech Function (for example, they may be silences or 'dynamic' moves which show up in the Exchange Structure analysis; see below).

The State Machine has the advantage of being dynamic as well as visual. That is, the user can play the video and the diagram will highlight the state of each variable at each point.

While it is of course possible to obtain both EXCEL spreadsheets and State diagrams for all the analyses discussed here, the information on the spreadsheet is included in the State Machine, so only the State diagrams will be presented.

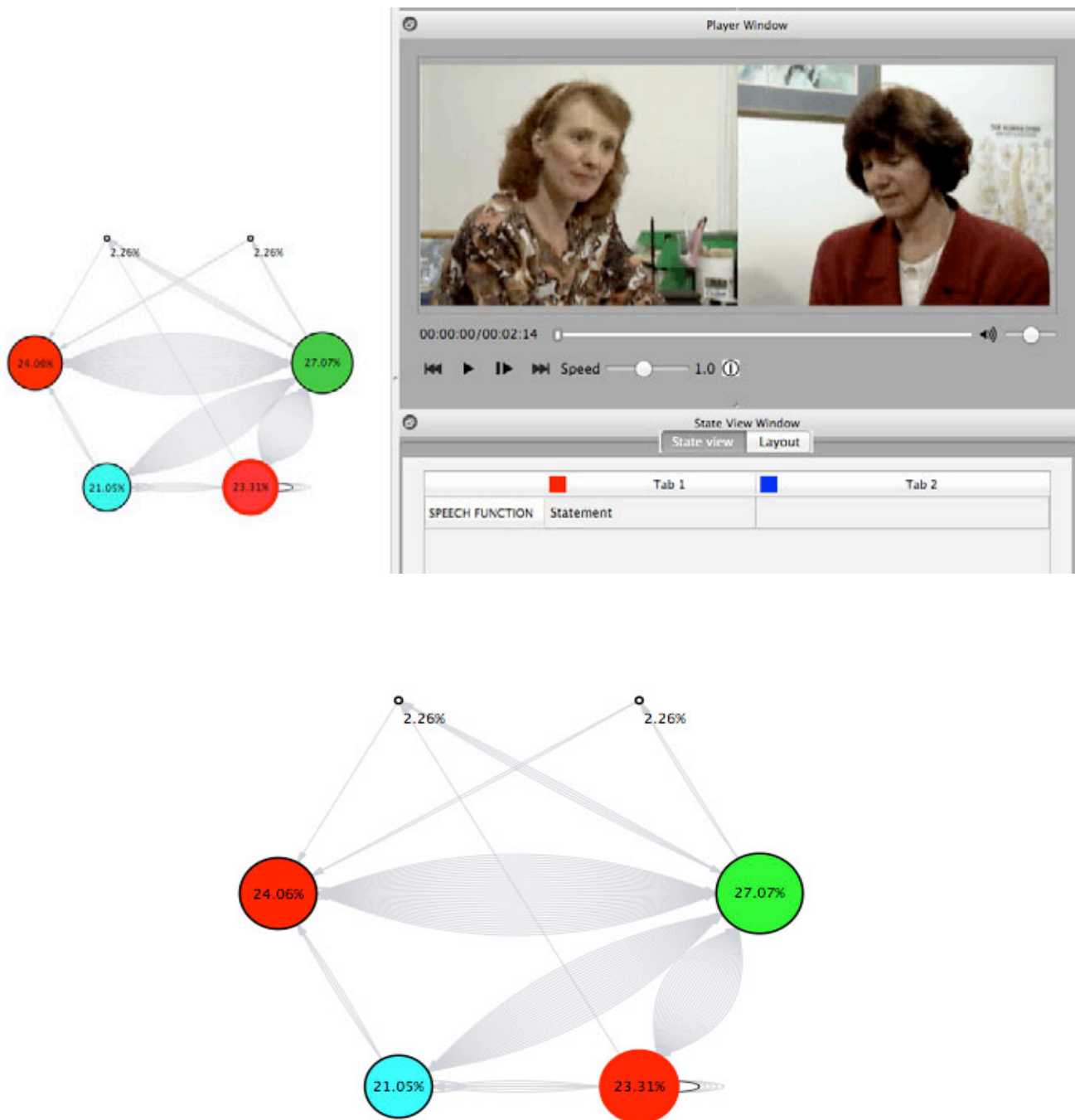Figure 2 shows Speech Function results for the Doctor-Patient interaction.

Figure 2. Results from the State Machine for Doctor-Patient Speech Function

The Doctor-Patient results (as displayed in both Figure 1 and Figure 2) show the speakers producing utterances for approximately 73% of the video time. (All percentages have been rounded to the nearest whole number.) Altogether the doctor speaks for almost half of the video time (49%), with the patient speaking for less than half

the time that the doctor does (23%). The doctor divides her speaking time almost equally between Statements (24%) and Questions (23%), with a small number of Commands (2%). The patient produces mainly Statements (21%), with a small number of Questions, (2%), and, unsurprisingly, does not give any Commands. Table 3 summarises the Speech Functions found in this register.

Table 3
Speech Functions found in Doctor-Patient Interactions

SPEECH FUNCTION	Doctor	Patient
Statement	✓	✓
Question	✓	✓
Command	✓	X

Lawyer-Client Consultation
A Lawyer-Client consultation was set up for the *Language in Contexts* project using a client known to the production team and a firm of lawyers who provided free consultations to members of the university's academic staff union. The client did not have a will, and the outcome of the consultation was that one was drawn up for him. For the filming the law firm chose a junior lawyer who did not specialise in this area; it is possible that this may have affected her confidence, although comparative data would be needed to demonstrate this. Figure 3 shows Speech Function results for the Lawyer-Client interaction.

The results for the Lawyer-Client interaction indicate that the speakers are talking for around 81% of the video time, in terms of utterances that can be coded with a Speech Function. (This is calculated by examining the green circle in Figure 3, which shows that for 19.25% of the time, the interlocutors are NOT speaking.) The lawyer speaks for 65% of the time, with the client speaking for approximately one quarter of the time that the lawyer does (16%). The lawyer talks almost equally in Statements (26%) and Commands (25%), with 12% of the time being made up of Offers and 2% of the time consisting of Questions. The client mainly produces Statements (11%), with a few Questions (4%) and one Offer (1%). Table 4 summarises the Speech Functions found in this register.

Table 4
Speech Functions found in Lawyer-Client Interactions

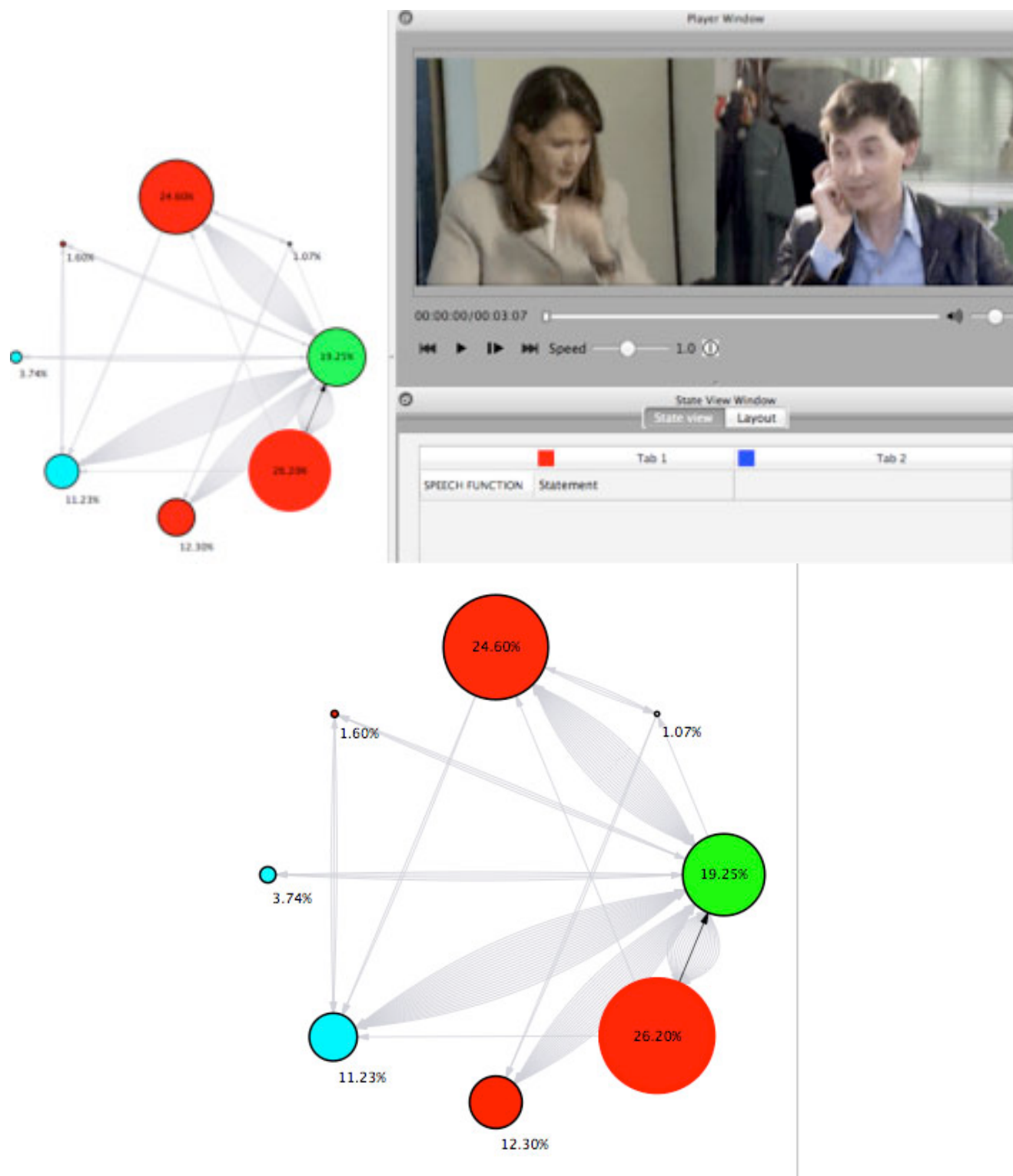| SPEECH FUNCTION	Lawyer	Client
Statement	✓	✓
Question	✓	✓
Command	✓	X
Offer	✓	✓

Figure 3. Results from the State Machine for Lawyer-Client Speech Function
Tab 1 = lawyer, Tab 2 = client

Dinner Date

This scenario from the *Language in Contexts* video involved two participants who were well known to each other before the event; the woman is the same one whom we met at the doctor's. The voice of a third participant, the waitress at the restaurant, appears very briefly in the video, but she was not filmed. The filming took place at the beginning of the meal. Figure 4 displays the Speech Function results for this interaction.
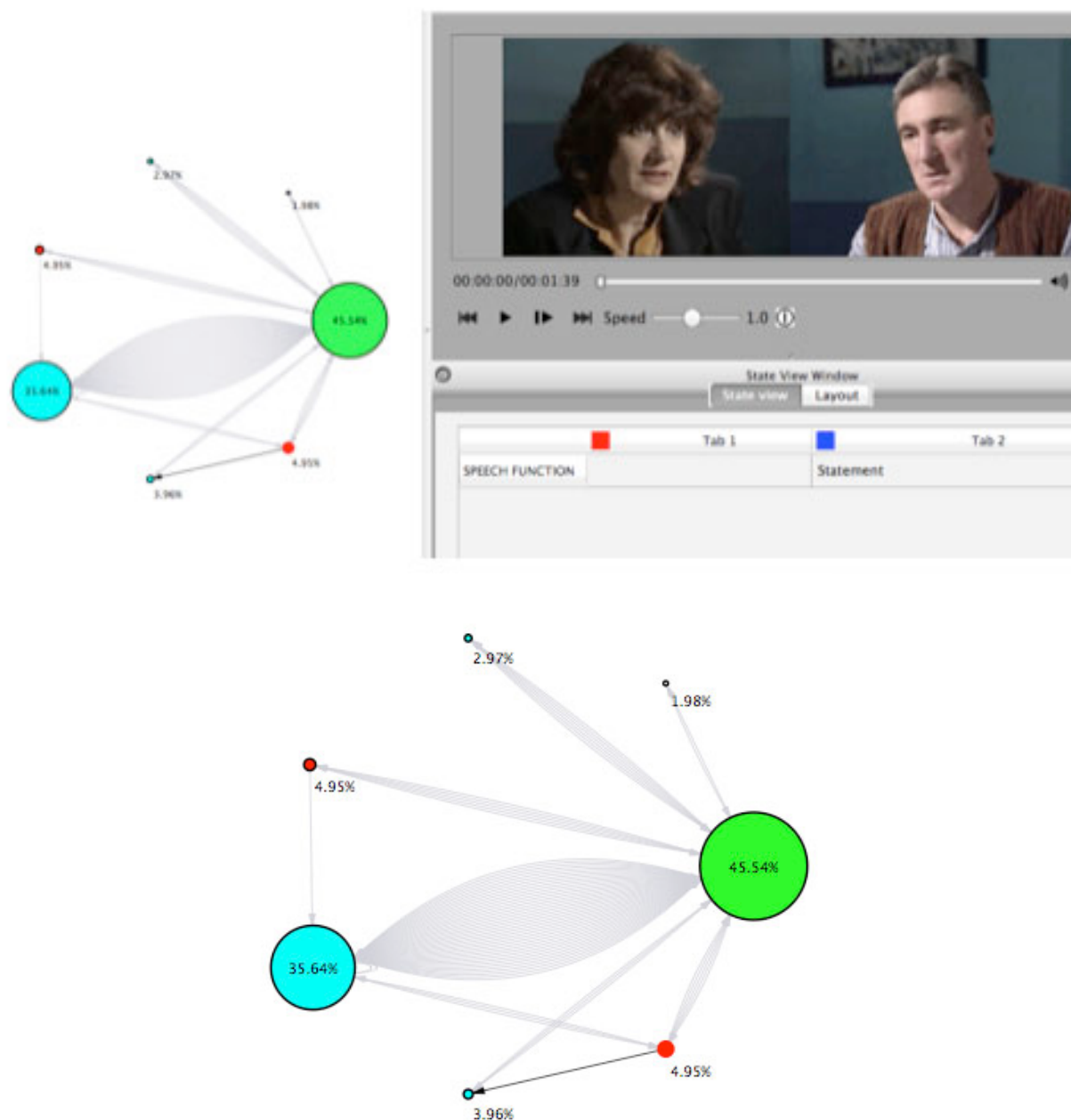
Figure 4. Results from the State Machine for Dinner Date Speech Function
Notes. Tab 1 = woman, Tab 2 = man

In the restaurant, the participants are only speaking for 54% of the video time: much of the rest of the time involves eating. The man is very dominant in terms of amount of speech: 45% of the time, with the woman speaking for less than one quarter of the time that he does (10%). The man produces mainly Statements (36%), and also Commands (4%), Questions (3%) and Offers (2%). The woman has an equal amount of Statements and Questions (5% each), perhaps following the advice of women's magazines to, "ask him about himself". Table 5 summarises the Speech Functions found in this register.

Table 5
Speech Functions found in Dinner Date Interactions

SPEECH FUNCTION	Man	Woman
Statement	✓	✓
Question	✓	✓
Command	✓	X
Offer	✓	X

Solely in terms of Speech Function, we can now compare the three registers along several dimensions, including total Speech Functions (both participants).

Table 6
Speech Functions across Three Registers

	Legal Consultation	Dinner	Medical Consultation
Amount of talk	81%	54%	73%
Variety of speech functions	7	6	5
Dominant participant	Lawyer 56/14	Man 45/11	Dr 50/24
Commands	Lawyer 25%	Man 4%	Dr 2%

Table 6 shows a clear difference in the amount of talk (as measured by utterances coded for Speech Function) in the three situations: the most talk occurs in the legal consultation and the least in the dinner date. This can be explained by the amount of action involved in each register: in the legal consultation nearly everything is transacted verbally, as would be typical of this register, while in the medical consultation activities such as the measurement of blood pressure occur; again, this would be typical of doctor-patient interaction. In the restaurant the participants spend much of the time eating, which makes it difficult to talk! The variety of Speech Functions is related to the number of roles the participants take on. The legal interaction has the most variety. Interestingly, this may reflect a tension in the relationship, where the client is attempting to make the interaction more informal, an attempt which the lawyer resists. What distinguishes this interaction from the other two is that the less powerful participant (in this case the client) is attempting to make Offers. The medical consultation has the least variety of Speech Functions, probably reflecting the constraints of the formal relationship, and the fact that the doctor does not make Offers, but simply proceeds with the required actions.

In terms of dominance, as measured by the amount of talk, the Dinner date relationship is the most skewed, with the man speaking more than four times as much as the woman. The Lawyer-Client interaction has a similar ratio, with the lawyer being dominant. The Doctor-Patient ratio is significantly different, but even here the doctor talks twice as much as the patient. Dominance is also displayed with respect to Commands, with one quarter of the lawyer's discourse being made up of this Speech Function. The man and the doctor are also dominant over the other interactant in this way, although they produce far fewer Commands than the lawyer.

Thus we can see that the Speech Function analysis provides valuable information about the nature of the different interactions and the relationships between the participants.

Exchange Structure

The Exchange Structure analysis gives a more detailed picture than the Speech Function one, as the inclusion of dynamic as well as synoptic moves increases the range of meanings covered. (Exchange Structure moves are explained in the previous section.)

Doctor-Patient Interaction

Results from the State Machine for the Doctor-Patient Exchange Structure are shown in Figure 5.
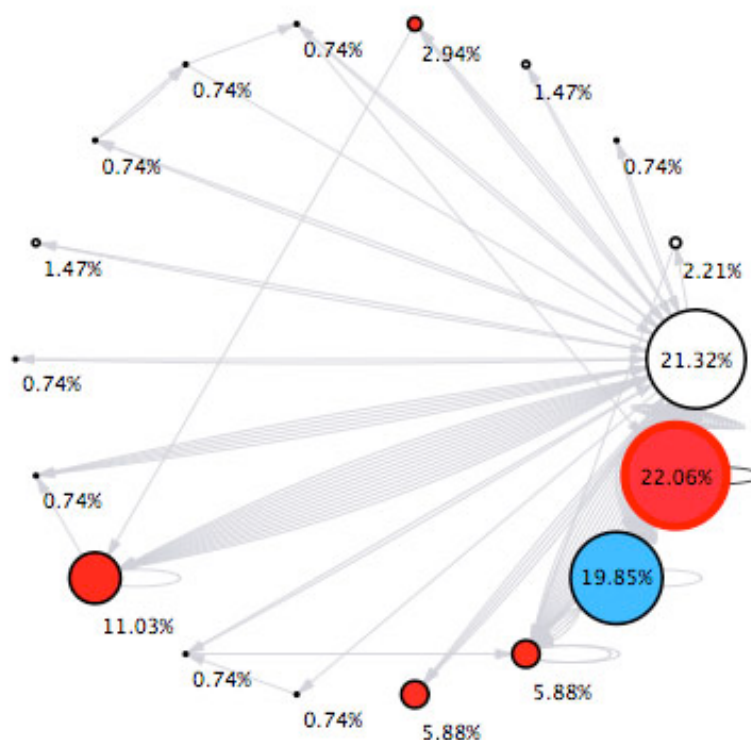

Figure 5. Results from the State Machinefor Doctor-Patient Exchange Structure

For the Doctor-Patient interaction, the interlocutors are shown to be producing moves for 79% of the video time. This compares with a 73% rate for Speech Function, so we can see that the Exchange Structure analysis captures more of the talk. This is because, as mentioned above, Exchange Structure codes dynamic (unpredictable) as well as synoptic (predictable) moves. The doctor speaks for 49% of the time and the patient for 21%. These figures are for the top eight Exchange Structure moves; there are others with insignificant frequency. The largest category of the doctor's moves is the k2 moves, Questions, to which she does not know the answer (22%). This is followed by k1 moves, which are giving information (11%). The next biggest category is the k2f moves (6%); these moves follow the patient's answer to the doctor's question, such as, "There've been quite a few things going on, have there?" Of equal importance are the da1 moves (6%), where the doctor announces her intention to do something for the patient. This is not the same thing as making an Offer, which was shown by the Speech Function analysis not to occur. The doctor also asks the patient to perform certain actions; these are a2 moves (3%). Finally, the doctor spends a small amount of the video time (approximately 1%) responding to a challenge from the patient; the patient's utterance itself does not figure in the main results as it is so short.

The patient's utterances are primarily k1 moves: giving information (20%). There is also one da1 move (1%), offering to do something for the doctor. It can be seen from the short description above that the Exchange Structure analysis does tell us more than the Speech Function, by taking into account the unpredictable moves. However, it is still worthwhile also performing a Speech Function analysis, for two main reasons. Firstly, Speech Function is a simpler analysis that is quickly grasped by students of English. Secondly, Speech Function is a standard and well-known analysis that makes use of the concept of adjacency pairs, popular in the field of Conversation Analysis as well as in Discourse Analysis.

Lawyer-Client Consultation

Results from the State Machine for the Lawyer-Client Exchange Structure are shown in Figure 6.
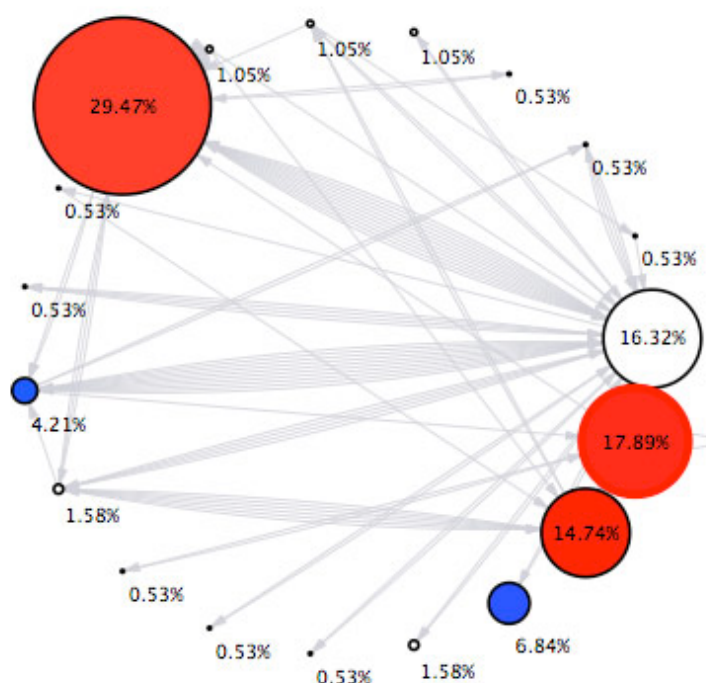

Figure 6. Results from the State Machine for Lawyer-Client Exchange Structure

The Exchange Structure analysis for the lawyer and her client also gives us more information than the Speech Function one. The speakers are producing Exchange Structure moves for 84% of the video time. This compares with 81% for Speech Function. The lawyer speaks 64% of the time and the client 13%, with the other types of moves being too few in number to be of any significance. The most common utterance from the lawyer is the a2 move, telling the client what to do (29%). The next most common of her moves is the k1, giving information (18%). She also has 15% da1 moves, telling the client what she is going to do for him. The final category of any importance is clarification requests, where she asks the client to be more specific in the information he is giving (2%). It is not surprising that these moves feature in a register like this, where clarity and detail are important.

The client produces a small range of moves, of which k2 moves (asking for information) are the most frequent (7%). This aligns with the purpose of the consultation, which is to have the lawyer draw up a will for the client; naturally he has questions about how this can be done. The client also gives information (k1 moves, 4%);

this is usually in response to the lawyer's questioning. Finally, backchannels from the client make up 2% of the video time; these are short indications that he is listening to the lawyer.

Dinner Date
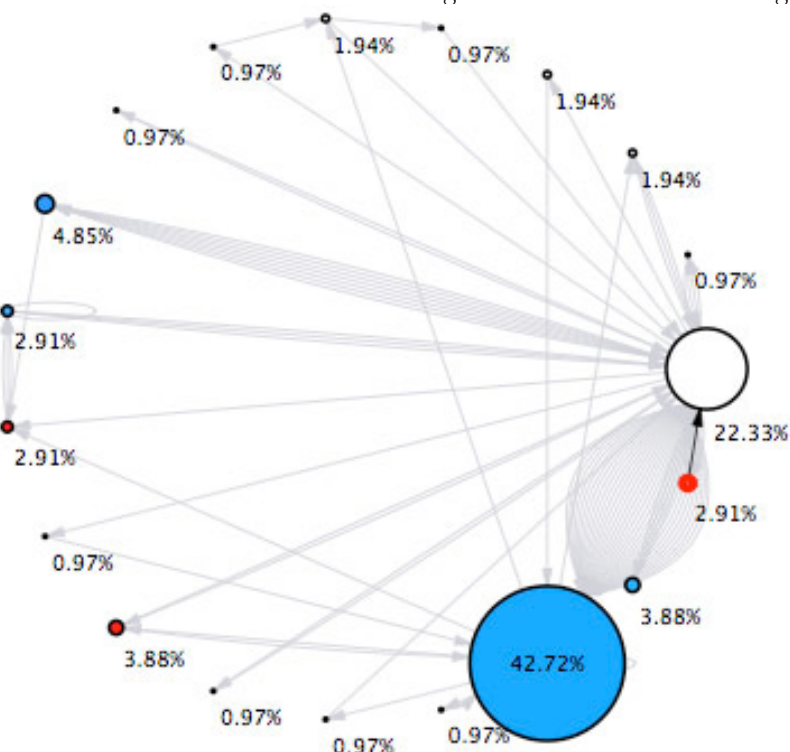Results from the State Machine for the Dinner date Exchange Structure are shown in Figure 7.

Figure 7. Results from the State Machine for Dinner Date Exchange Structure

For the restaurant scene, the Exchange Structure analysis is similarly informative. The speakers are producing moves for 78% of the video time. This is in strong contrast to the 54% figure for Speech Function moves. The interpretation is likely to be that the speakers are using a large number of dynamic moves, which do not feature in the Speech Function analysis. Many of these moves are also too few and too short to be presented in the main results discussed here. The reason for these short dynamic moves is again tied to the context: the speakers do not produce longer utterances as they are involved in eating their dinner.

As previously mentioned, the man is the dominant participant in this scenario: he spends 43% of the video time producing k1 moves (giving information). The next most common category, though far less frequent, is justification moves (5%). This relates to the nature of the discourse: while the man is very successful in holding the floor, the woman challenges him and criticises what he says, for example: "You're just identifying with Anne", and he is obliged to defend himself. Indeed, a significant category is his response to challenge (rch) moves, which make up three per cent of the video time. Slightly more frequent than these are his delayed primary knower (dk1) moves, such as, "I want to tell you MY bit of news", which come in at four per cent. This is one of the strategies he uses to get the floor.

The woman, as already discussed, takes up much less air time. Her most common moves are k2 moves, which register four per cent of the video time. This is a similar result to the Speech Function category Question (5%). If we look more closely at these moves, we see that they are closely related to the topics of the man's

conversation. The woman also produces an equal proportion of k1 moves (giving information) and challenges, both of which register at three per cent.

Intonation Results

As stated previously, an intonation analysis of part of the data was carried out by Halliday and Greaves (2008). They completed a computer-assisted analysis using spectrograms with pitch settings made specific for intonation analysis (2008, pp. 36-39). They give a detailed discussion of the Doctor-Patient text (pp. 80-94), which they describe as having the expected structure of a medical consultation, while noting, "the relaxed nature of the interview evident in the speakers' voice qualities and in their gesture on the video." (p. 92). The other two registers are analysed but not discussed.

As Halliday and Greaves did not analyse the full texts of these three registers, the length of video studied here is less than that analysed for Speech Function and Exchange Structure. Their analysis is also more delicate than the one presented here: I have used only the five main tones built into the library of analyses in the Multimodal Analysis Video program.

Doctor-Patient Interaction

Results for the Doctor-Patient Intonation analysis are presented in Figure 8.
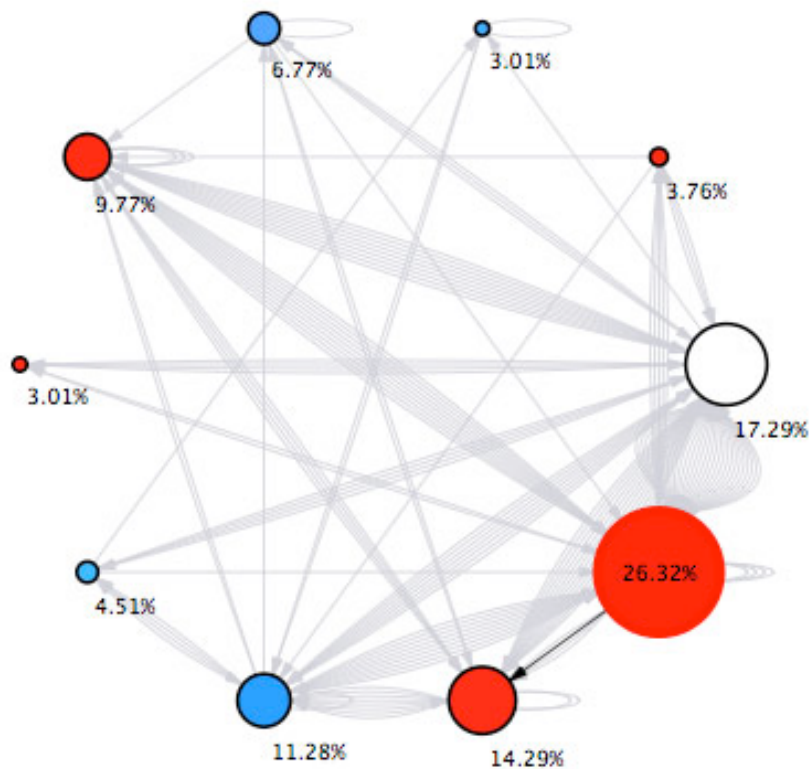

Figure 8. Results for Doctor-Patient intonation analysis

An intonation analysis was performed for 83% of the Doctor-Patient consultation; the remainder of the text consists of silences and non-verbals. Of this, the doctor's utterances make up 57% of the video time. She uses the full range of five tones, the majority of her utterances being on Tone 1 (falling tone – 26%); this is the tone we

would expect on Statements or k1 moves. The second most common tone is Tone 2 (rising tone – 14%), the tone we would expect on Questions or k2 moves. The next most frequent is Tone 3 (low rise – 10%). This tone is generally used for giving information, with the small rise on the end indicating that the speaker has not finished and there is more to come. The doctor uses Tone 5 (rise-fall) for four per cent of the video time. This tone has the meaning, "seems uncertain, but turns out to be certain" (Halliday, 1985, p. 282), or, in exclamative clauses: "'wow!' – something that is (presented as) contrary to expectation" (Halliday & Matthiessen, 2014, p. 168). In the context of the present data the doctor's meaning could be glossed as, "You may not realise this, but it turns out to be the case." Finally, the doctor uses Tone 4 (fall-rise) about three per cent of the time. This tone can be paraphrased as, "seems certain, but turns out not to be" (Halliday, 1985, p. 282). In the case of this doctor-patient interaction, the meaning is something like, "I would have assumed this (about the patient), but maybe it's not so?" Looking at the overall picture of the doctor's intonation patterns, we could say that the majority end in a falling tone (Tone 1 + Tone 5 = 30%), indicating that she is generally certain about what she says. This compares with 27% of video time for her utterances ending in a rising tone (Tone 2 + Tone 3 + Tone 4). If we add Tone 3 to the first category we get an even clearer picture: 40% of utterances end with either a mainly neutral or falling tone, and 17% with a rising tone. Even though Tone 3 ends in a slight rise, it makes sense to group Tone 3 in this way with those tones that do *not* indicate uncertainty, rather than with those that end in a rise. In fact, Halliday and Greaves' analysis of the meaning of the tones in this context glosses Tone 3 as 'non-committal' (p. 82); our interpretation is that while the doctor knows what she is talking about, she is not being too authoritative about it.

The patient's intonation patterns show a different picture. She speaks for 25% of the time and, unlike the doctor, does not use the full range of tones, omitting Tone 5 (glossed by Halliday and Greaves (p. 82) as 'strong'). The lack of Tone 5 is understandable in the context of the power relations in this dyad; it may not be appropriate for a patient to convey to a doctor the meaning generally expressed by this tone of, "You may not realise this, but it turns out to be the case." The most common tone for the patient is Tone 1, the tone we would expect when giving information (11%). The second most frequent is Tone 2, the rising one (7%). Tone 3 (low rise) represents five per cent of the video and Tone 4 (fall rise) three per cent. Overall, in contrast with the doctor, more of the patient's utterances end on a rising than a falling tone (14% to 11%), in keeping with the roles of the two participants in this professional context.

Lawyer-Client Consultation

Results for the Lawyer-Client intonation analysis are shown in Figure 9. An intonation analysis was carried out for 88% of the Lawyer-Client consultation. The most common tone used by the lawyer is Tone 4 (32% of the analysed interaction consists of the lawyer using this tone); this is not what would necessarily be expected from a dominant participant, as it ends in a rise, with a meaning which can be glossed as 'reserve'. It appears that the lawyer is not using the intonation system to express the authority that could be derived from her position. This result for intonation is consistent with the Speech Function findings, which show the lawyer using an approximately equal amount of Commands and Statements; Statements are commonly realised on Tone 1, with 22% of the interaction consisting of the lawyer using this tone.

The second most common tone the lawyer uses is Tone 3 (14%). This tone is used for giving information and, importantly, indicating that there is more to come. This is relevant in the context of the conflict over the 'floor' mentioned above, where the client is attempting to have more of a say and to make the interaction less formal. So the intonation analysis seems to show that the lawyer uses the system to maintain the floor and her professional distance, while not being overpowering.
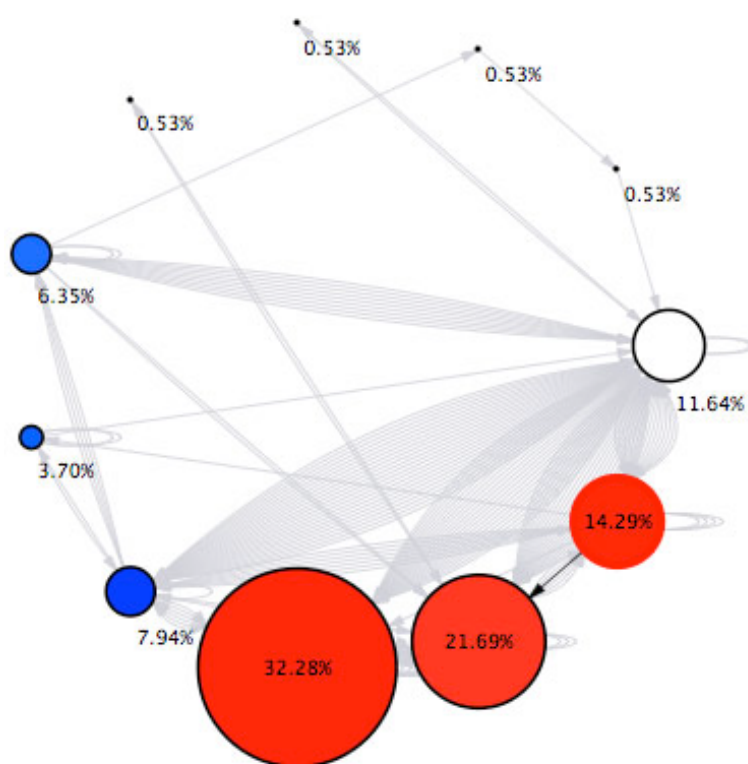
Figure 9. Results for Lawyer-Client intonation analysis

The client, on the other hand, produces significantly less talk, with the most common tones used being Tone 1 (8% of the analysed interaction) and Tone 3 (6%). This portrays his role as being certain of what he is saying (since it was personal information relating to the drawing up of his will) and of trying to say more, at which he was not very successful. The only other tone produced with any frequency was Tone 4 (4%), which could reflect some uncertainty, or checking his understanding with the lawyer. Thus we can see that the intonation patterns very much reflect the roles of the two participants in the encounter.

It is interesting that both the lawyer and the client use the same range of tones (1, 3 and 4 only) though in different proportions. The other two tones are insignificant, with less than 1% occurrence. The choice of tones may be a feature of this register or it may possibly indicate that the client is attempting to parallel the lawyer's speaking style; it is not possible to say from this data.

Dinner Date

Results for the Dinner date Intonation analysis are shown in Figure 10. While the speakers talked for 78% of the video, the intonation analysis was conducted for the last 42% of the conversation only, as this is the part analysed by Halliday and Greaves. Percentages given show the amount of the total text realised by that tone, so the figures are lower than for the previous two registers. The results show a predominance of Tone 1 (19%) used by the man; this is indicative of his role in the discourse, where he is holding the floor and giving information much of the time. He uses the full range of tones, but has much fewer of the others: Tone 4 (5%), Tones 2 and 3 (4% each) Tone 5 (3%).
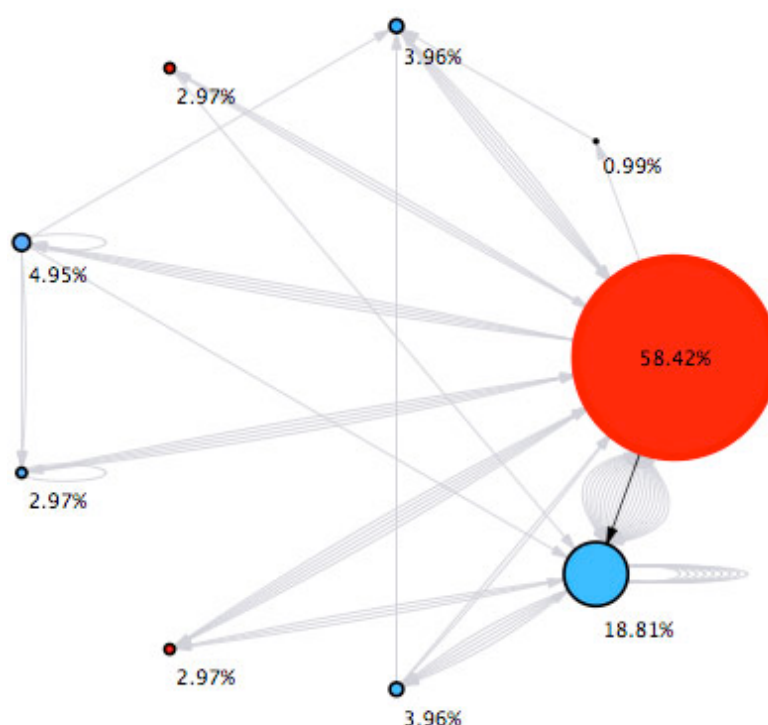
Figure 10. Results for Dinner Date intonation analysis

The woman uses mainly Tones 1 and 2 (both 3% of the analysed discourse). Thus, she spends equal time displaying certainty, although she does use a small amount of Tone 5 (1%); the meaning could be glossed as, "Although you don't know this, it's actually true." So we can see that the intonation analysis reflects the rather monologic nature of this interaction and the supportive role that the woman mainly takes up.

The intonation analysis shows some common patterns among the three registers, with tones ending on a fall, in particular Tone 1, being the most used. The Lawyer-Client interaction is, however, an exception to this, with the lawyer's distinctive use of Tone 4. This register is perhaps the most technical of the three examined here, and the intonation may reflect this, as well as the relationship between the participants. The pattern for the range of tones is also different in the Lawyer-Client consultation: while in the other two registers the dominant participant uses the full range of tones, at the lawyers both speakers have a restricted range (Tones 1, 3 and 4).

Hence we can see that the intonation analysis is central to describing the meaning of the interactions, both at the level of Register and in terms of the Tenor and discourse semantics.

Intonation is one of the most difficult aspects of learning English, especially for students whose first language is a tone language. This analysis could be useful to students in giving contextualised examples of English rhythm and melody and of how the intonation system is used to construct meaning in different situations. However, whether students would wish to model their linguistic behaviour on some of the interactants, such as the man in the restaurant scene, is debatable.

Gaze

For reasons of time, the Gaze analysis was completed for the Doctor-Patient interaction only. This register was chosen as it contains a balance of speech and actions that are intrinsic to the discourse. The Lawyer-Client consultation has very little action, while the Dinner Date contains a high proportion of non-verbals, but they

mainly consist of eating. The choices coded for the Gaze system are 'direct address' and 'indirect address' (either looking 'down' or looking 'sideways'). The Gaze analysis was performed only for the participant who was speaking at the time. Figure 11 displays the results for Gaze for the Doctor-Patient interaction.
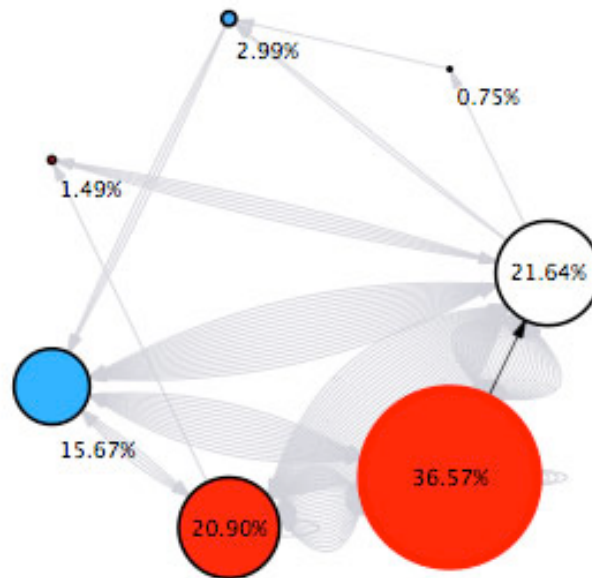

Figure 11. Results for Doctor-Patient analysis of gaze

As Gaze was coded only when the participants were speaking, 78% of the video was analysed. Results show the doctor using 'direct gaze' for 37% of the video time; due to the position of the cameras, this means that she was addressing the patient. For the remainder of the interaction she was mainly looking down (21% of the time); a lot of this involved writing in her notes. (As this was a new patient, she did not spend time reading her notes, as would often happen in follow-up consultations.) The doctor looked sideways approximately one per cent of the time; this was to retrieve an object that was not in front of her.

The patient also used direct address during most of her speaking time (16% of the video). She also looked down (3%) and sideways (1%), but I interpret this as indicating some embarrassment at what was being discussed rather than for practical reasons.

This is only a preliminary and basic analysis of gaze, but it certainly shows differences between the participants, with the doctor looking down comparatively more, but with different motivation.

Combinations of Analyses
Visualisation of results using the State Machine allows the user to see interactions between analyses. One simply chooses the Visualisation option and then selects any set of analyses. The diagram displayed shows the most frequent combinations of these analyses in the video. Examples of combinations of the discourse analyses with the semiotic analysis of Gaze are given here. Again, only the Doctor-Patient text is included, as this is the one that has been coded for Gaze.

Speech Function + Gaze: Doctor-Patient Interaction
Figure 12 shows the results for Speech Function + Gaze for the Doctor-Patient interaction.
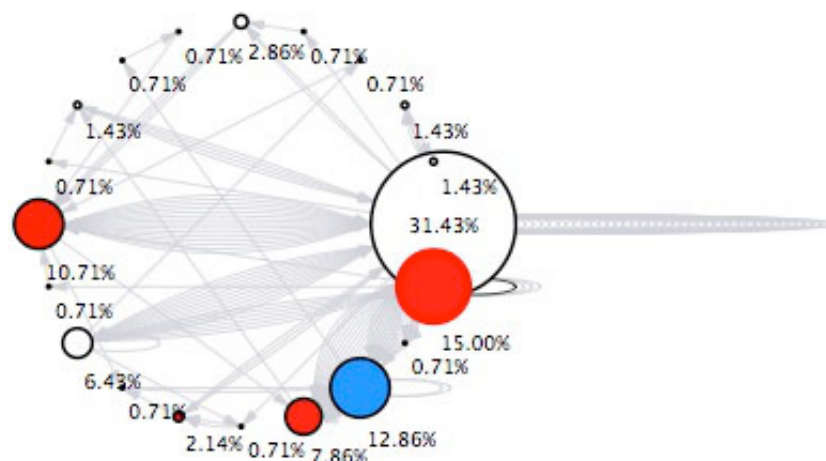

Figure 12. Results for Doctor-Patient analysis: Speech function + gaze

Results show that 85% of the Doctor-Patient video data has been coded in this way; this includes utterances that have a code for Gaze but not for Speech Function. The most common combination is a Question plus Direct address from the doctor (15% of video time). This is followed (in terms of frequency) by a Statement, also with Direct address, from the doctor (13%), and then a Statement with Direct address from the patient (11%). Thus, a large part of the consultation involves exchange of information (with the doctor asking the Questions) while the participants are looking directly at each other. The next most common combination (8%) consists of the patient making a Statement while looking down. As explained above, these involve the patient giving information that she seems to find difficult to talk about. While she mostly addresses the patient directly when asking Questions, the doctor also sometimes looks down (6%); at these points she is writing the answer to the previous Question in her notes. As well, the doctor spends some time looking down (5%) or looking at the patient (4%) without saying anything.

The analysis certainly shows a relationship between Speech Function and Gaze that can be explained by the nature of the discourse in this situation. While the findings relating to Direct address are not surprising in this context, they could help provide a model for students who are learning to engage in interactions such as these, especially those whose home cultures may have different rules about eye contact.

Exchange Structure + Gaze: Doctor-Patient Interaction
A similar analysis was performed for Exchange Structure; Figure 13 shows the results.
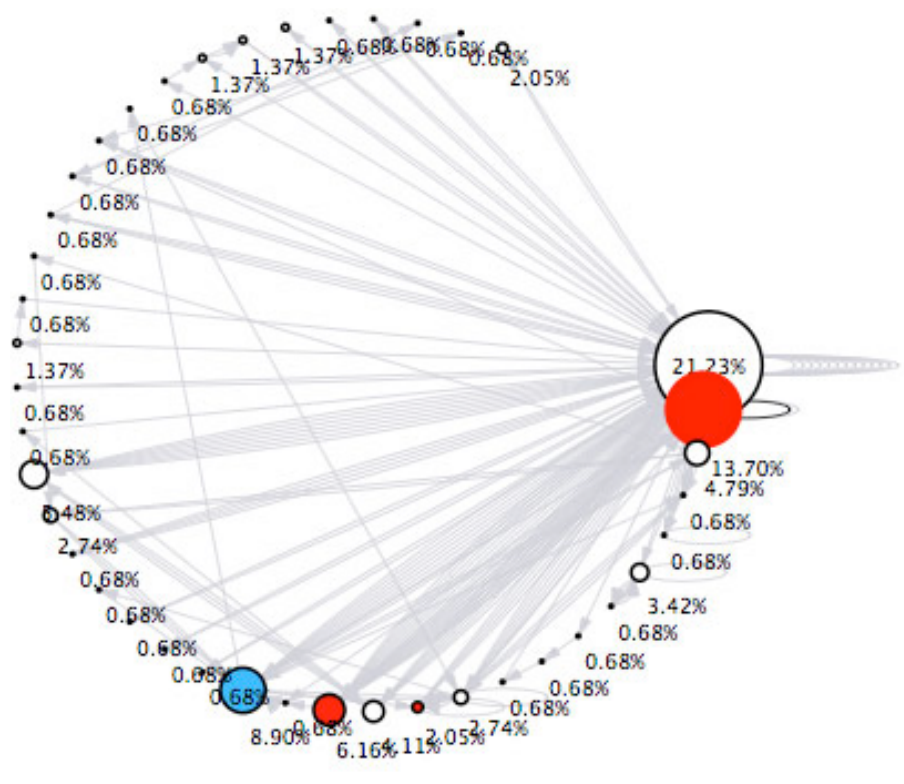
Figure 13. Results for Doctor-Patient analysis: Exchange structure+ gaze

The diagram shows the complexity the visualisation can display when more than one variable is included. Results indicate that 87% of the Doctor-Patient video data has been coded in this way (a little more than for Speech Function); this includes utterances that have a code for Gaze but not for Exchange Structure.

The most common combination is a k2 (secondary knower) move with Direct address from the doctor (13% of the video). The k2 move is used for genuine Questions to which the doctor does not know the answer. The next most common combination is a k1 (primary knower) move, again with Direct address, from the patient (7%). These results give a slightly different angle on the interaction to those for Speech Function plus Gaze. They emphasise that the main engagement by the participants is in the question and answer sequence, rather than the giving of information by the doctor. The doctor also uses some k2 moves with downward gaze (6%); these align with the Questions identified in the Speech Function analysis, where she is writing in her notes and perhaps checking on any incomplete aspects of the history she is taking. The doctor's k1 moves with Direct address make up 5% of the video; k1 moves while looking down are another 4%, while looking down without speaking makes up 3%. The doctor also produces 3% k2f (secondary knower follow-up) moves while looking directly at the patient; these are moves that acknowledge what the patient is saying. The patient spends 3% of the time giving k1 moves while looking down; these are the moves involving sensitive information mentioned earlier.

All in all, the analysis for the combination of Gaze and Exchange Structure has a slightly different emphasis to the one with Speech Function, although the results are not strikingly different.

The MMAV program has the potential to calculate results for any number of combinations of analyses; the ones given here serve as an illustration of what it can do.

Further Multimodal Analyses
There are many other interesting non-linguistic variables that have been identified in the data as carrying

multimodal meaning and provide potential for future research. Only a brief outline is given here.

In English, linguistic meaning is always produced by the outward movement of the airstream, unlike in some languages, where the direction of movement can make a difference in experiential meaning. In other languages, such as some of the languages of Scandinavia, utterances can be produced with indrawn breath to convey interpersonal meaning. In the present data, indrawn breath is used without any verbalisation to convey surprise. There are also combinations of sound that do not represent a recognised lexical item, such as the 'pff' used by the woman in the dinner date to communicate disbelief. Laughter is another item used in several contexts in the videos, relevant to English learners as it may have different meanings in different cultures.

Facial expressions, such as smiling, raising the eyebrows, closing the eyes and rolling the eyes (as the patient does in the medical scenario when alcohol is mentioned) all convey meaning. Moving the head and hands in various ways is communicative. Nodding or shaking the head has a clear meaning of 'yes' and 'no' respectively in English, but again, this varies in different cultures. In the Doctor-Patient consultation, the doctor moves her head from side to side as she hesitates to answer the patient's Question about alcohol: "Can I take it all at once at the weekend?" This movement illustrates the tension between the doctor's professional role, which would definitely require a "No" answer, and her kind persona, where she avoids being too overtly directive with the patient.

Hand gestures convey various meanings in this dataset. For example, the doctor uses a chest-patting gesture which mimics that of the patient. Verbal and gestural mimicry (on the part of the doctor) is not uncommon in medical encounters, and can function to create cohesion as well as rapport. The lawyer also uses meaningful hand gestures, for example a bold one with her two parallel hands moving strongly downwards; this seems to convey dominance. Both the patient in the medical consultation and the client in the legal encounter use an ear-scratching gesture; this appears to indicate uncertainty or hesitation, or, in the patient's case, embarrassment.

Goal-directed hand gestures can also occur. For example, the doctor reaches for objects to assist in the consultation. She also uses writing as an intrinsic part of the interaction. In a full multimodal analysis these types of actions would be incorporated into a description of the discourse.

Conclusion

This article has presented a short description of how the *Multimodal Analysis Video* program can be used to analyse some of the nuances of communication in three different registers. It enabled a comparison of the registers across the dimensions of Speech Function, Exchange Structure, Intonation and a description of Gaze in one of the registers. It also helped to show the interactions between some of the analyses and compared what the Speech Function and Exchange Structure could each tell us about the data.

The relationship between action and talk was quite different in each of the registers, and was related to the purpose of the discourse. The way in which the dominance of one participant over another was constructed also varied according to the register. For example, the Speech Function analysis showed the lawyer using a high percentage of Commands; however, the Intonation analysis demonstrated that a relatively large amount of her talk was on Tone 4, a tone ending on a rise that is not considered very assertive. The client's intonation patterns indicate that, as well as giving information, he is also attempting to say more, by using an unfinished tone contour. However, the overall amount of speech produced shows that he was not successful in this. Some of his gestures (observed but not quantified) also indicate uncertainty.

The Exchange Structure analysis illustrates the unpredictable moves in the interactions and, through the concept of primary and secondary knowers, gives a more detailed description of the types of Questions used. For example, the doctor is shown to use a large proportion of Questions to which she does not know the answer (in contrast to other registers, such as some examples of classroom discourse). The Gaze analysis (performed for the Doctor-Patient video only) indicates the importance of direct gaze in this close personal encounter, but also that indirect gaze from the patient is associated with certain topics. Investigation of the interaction of Gaze with Speech Function indicates that Questions are strongly associated with direct address, with the Exchange structure analysis emphasising that direct address co-occurs frequently with the exchange of information, rather than just

the giving of information. The analysis shows that interactions between variables are well worth investigating for other registers.

From the above discussion we can see that MMAV is definitely useful as an analytical tool. Its affordability, ease of use and well-written documentation all work in its favour. The fact that it has both grammatical, discourse and multimodal analyses already installed is an advantage, but it is also important that the program is entirely flexible in being able to extend existing analyses and incorporate new ones.

As a teaching tool, the program can be used to draw attention to models of linguistic and other meanings which learners may need to master when learning additional languages. The examples here are all in English, but obviously video in any language can be inserted and analysed. The videos and transcripts work together to enable learners' comprehension. They can search for a particular example and play it as many times as necessary. Some learners who have mastered grammatical aspects of the target language may still have difficulty with intonation, paralinguistic features and 'body language'. *Multimodal Analysis Video* can help students learn to interact appropriately in different situations; perhaps it could even improve their social life.

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Multiple Modes of Meaning in Expository Discourse

Mei-Ya Liang*

National Central University, Taiwan

Abstract

This study explores the meaning potentials of second language (L2) students' expository text presented orally to university community members, including their classmates and international students. Using Systemic Functional Linguistics as a pedagogical and analytic tool, this study involves (a) the instructional design of expository activities around broad social issues; and (b) the textual-visual analysis of videotaped PowerPoint-supported presentations of argument and discussion. The data is comprised of 13 presentations, each by a pair of English majors and produced as part of an expository writing project at a major university in Taiwan. The results showed that the L2 students used multiple text types and rhetorical strategies in organizing expository spoken text. Relational utterances were most frequently used in the spoken presentations to classify subject matters and to exemplify argumentative relations for foreigners. Deictic points and gazes towards the visuals, in addition to the verbal discourse, supported the interactive construction of expository oral text. This study suggests multiple resources to help contextualize L2 students' academic literary meanings in alternative modes of spoken and written communication.

Key words: exposition; multimodality; Systemic Functional Linguistics; text structure

Introduction

Successful academic text includes exposition and argument to convince the reader or listener (Coffin, 2004; Thompson, 2001), but second language (L2) writers may not be aware of associated interpersonal or rhetorical resources. As we know, effective exposition serves to not merely present facts or explain figures with positions and purposes but also to narrate experiences and emotions through multiple resources and specific details in particular cultural and institutional contexts. To help learners achieve various social purposes, a genre approach to L2 writing instruction should focus on common rhetorical patterns and strategies demanded by various modes of writing, such as exposition, argument, and narrative (Hyland, 2003, 2007).

Moreover, in the new media age, writing instructional practice should incorporate a range of context and resources to promote visual and computer literacy (Kress, 2003), but in most of the L2 college writing classes, the focus has been on features of written genres rather than on features of visual and oral presentations of expository texts. By blending genres and contexts in learning, multiple resources such as diverse audiences, teaching materials, and multimedia representations could be incorporated as distinct meaning-making modes and therefore specific situational and multimodal characteristics could be learned (Bezemer & Kress, 2008; Haneda & Wells, 2000; Kress, 2003; Miller, 1998; Montelongo, Herter, Ansaldo, & Hatter, 2010; Tardy, 2005; Wells, 2000; Young & Nguyen, 2002).

*   *Tel. +886-3-4267176, Email:* mliang@cc.ncu.edu.tw, *English Department, National Central University, Chung-li, Tao-yuan, Taiwan*

Adopting Halliday's (Halliday & Matthiessen, 2014) Systemic Functional Linguistics (SFL), this article provides a review of SFL-based studies on expository text and visual semiotics to inform the instructional design and analysis of L2 students' multimodal text. The distribution of textual-semantic patterns in the students' oral presentations of their written expository texts is then outlined. Several short extracts also illustrate the ensembles of textual-semantic and visual-graphic resources that L2 students draw upon to represent and enact semiotic reality. The final section provides discussions of the major findings to broaden our understanding of L2 students' rhetorical strategies and multimodal capabilities in presentations.

Systemic Functional Studies on Expository Text

SFL-based research has suggested that different textual-semantic resources are used for different purposes and stages of expository text. Analyzing experimental research articles, Martínez (2001) found that the semantic verbs of material processes were more frequently used in the method sections and that relational processes dominated the results and discussion sessions. That is, the writers tended to express agencies and actions in the act of carrying out the experiments while they employed impersonal constructions for evaluating and judging findings. Analyzing American spoken English, Scheibman (2002) found that relational utterances were most frequently used by speakers to project their evaluations or subjective stances about entities or events as parts of their meanings. Although the process types are not always easy to distinguish, they provide useful references for critical analyses of how meanings are negotiated in interactive discourse.

Analyzing short argumentative essays by candidates of the International English Language Testing System (IELTS), Coffin (2004) found four argument genres: (a) hortatory exposition: the presentation of a position with recommendation of action; (b) analytical exposition: a point of view with reinforcement of thesis; (c) hortatory discussion: two or more points of view with recommendation of action; and (d) analytical discussion: the evaluation of opposing positions. Among several low-scoring candidates, students preferred exposition to discussion because of a lack of control of certain linguistic features. For example, analytic texts often contained modals of possibility (e.g., *could, might*), whereas hortatory arguments contained modals of obligation (e.g., *should*). Coffin and Donahue (2012) showed that by incorporating dialogue and collaboration, academic writing moves beyond description and explanation into critical positioning. Their study focused on L2 students' use of textual-semantic resources, such as the processes types and modals, which thus become two essential dimensions by which different types of expository writing can be identified.

Another line of research focuses on rhetorical and dialectical strategies in the social activity of exposition and argumentation. While some SFL studies (e.g., Liu, 2005) prioritize comparing written products in carrying out genre analysis, other researchers (e.g., Hyland, 2003, 2007; Martin, 2002, 2009) emphasize linguistic resources in interactional processes and discursive contexts. On the one hand, L2 students' use of different argumentation strategies may be due to culture-specific rhetorical conventions or textual features. For instance, Chinese pedagogy on argumentative writing often highlights analogy and dialectical logic, whereas American writing instruction covers logical fallacies and counterargument as well as comparison and contrast, cause and effect, and so on (Liu, 2005). On the other hand, recent social semiotics takes a view of text from the perspective of discourse semantics and textual resources, tending to foreground temporal sequencing and causal reasoning rather than written logical relationships such as classification, description, and comparison (Martin, 2002, 2009). Despite different emphasis, genres are defined by socially recognized language use and rhetorical actions, which provide students with opportunities to engage with texts in typical moves and familiar contexts for different purposes, audiences, and messages (Hyland, 2003, 2007). Accordingly, logical, semantic, and participant relationships should be highlighted to enhance L2 students' awareness of context and audience in various modes of spoken and written communication.

Building on language and other semiotic modes, researchers (e.g., Chandrasegaran, 2013; Hyland, 2003, 2007; Macken-Horarik, Love, & Unsworth, 2011) have suggested explicit genre teaching to make sense of

particular texts. Investigating argument moves in an online forum, Chandrasegaran and Kong (2006), for example, identified certain stance-support strategies (e.g., facts and opinions, hypothesized outcomes, appeal to sources, opposing views, and analogy) and lexico-grammatical features (e.g., processes and modals) as resources for L2 high school students. Macken-Horarik et al. (2011) also suggested that applying SFL in the English curriculum can help students in sophomore composition classes (i.e. students in their first year of university) progress from spoken forms of discourse and common-sense knowledge to more abstract and metaphorical forms of expression in their senior years.

Language and Visual Communication in Multimodal Contexts

SFL has been specifically applied to the study of language and visual communication in multimodal contexts, such as academic presentations (Rowley-Jolivet, 2002), classroom discussions (Wells, 2000), the textbook and classroom instruction (Young & Nguyen, 2002), and academic text and the popular press (Miller, 1998). To conceptualize significant aspects of multimodal text and discourse organization, researchers (e.g., Bezemer & Kress, 2008; Kress, 2003; Kress & van Leeuwen, 1996; Rowley-Jolivet, 2002; Tardy, 2005) have also explored multiple writing resources in the complex interactions between verbal and nonverbal expressions of meanings. Academic discourse can be realized according to different affordances of modes, such as image, speech, genre. Its semiotic materials can be not just transformed within one mode but reshaped within the potential of the other modes (Kress, 2003). Bezemer and Kress (2008) suggested that the semiotic designs of resources are shaped by participants' interests and rhetorical intentions in the social, cultural, economic, political, and technological environments to show the transformation (i.e., changes within one mode) and transduction (i.e., changes from one mode to another). The process is rhetorical and persuasive (Rowley-Jolivet, 2002).

Concerning visual persuasion, one line of research (Miller, 1998; Rowley-Jolivet, 2002) has found that visual elements reflect not only genre conventions but also indexical relationships and purposeful arrangements. Miller (1998) found that a typical research article foregrounds argumentation through explicit reference to tables and figures for the informed reader, while a newspaper article highlights human interests with condensed visuals, details, proof, and clarification for diverse audiences. Rowley-Jolivet (2002) further proposed that the visuals specific to the spoken presentation genre can be classified into four types: (a) graphical (e.g., graphs, diagrams, maps, shapes, and texture), (b) figurative (e.g., images and photos), (c) scriptual (e.g., text), and (d) numerical (e.g., equations and tables). The visual presentations bring a mixture of semiotic and genre resources for making meaning and organizing logical or argumentative relations (e.g., general-particular, claim-evidence, problem-solving, and compare-contrast).

Another line of research (e.g., Wells, 2000; Young & Nguyen, 2002) has explored participants' experience in the organization of discourse to understand the ways in which different modes of meaning complement each other. Despite different emphases and styles, such nonverbal semiotic behaviors contribute to the mutual construction of meaning that moves beyond teacher instructions (Well, 2000). Young and Nguyen (2002) compared patterns between teacher talk in oral discourse and textbook presentation in written communication. They observed that the two modes of expository text contained a high frequency of material verbs, but that there were more diverse relational verbs and specific presentational styles (e.g., gesture, body movement, and active voice, and rhetorical questions) in teacher talk to unpack the technical terms and grammatical metaphors. While multimodal and interactive design can socialize students into content-specific thinking and meaning construction, the meanings of the text need to be re-interpreted in visual and gestural modalities.

Writing in knowledge building and sharing communities combines a variety of genres, audiences, purposes, and styles. While the available resources provided by the presentation of written text may impact the written genre and writers' rhetorical styles, the presenters can still make a range of verbal and visual choices in composing presentations and displaying identities (Tardy, 2005). One the one hand, learning different types of text structures and their visual representations through graphic organizers may help to capture linguistic concepts or logical relationships more easily (Montelongo et al., 2010). On the other hand, students should also

understand and develop the concurrent or complementary relationship between language and visual imagery (Daly & Unsworth, 2011). Therefore, PowerPoint presentations in the academic setting, as used for this study, provide new possibilities for L2 university students to explore these multiple modes of communication.

Research Questions

This study worked within the pedagogic and analytic framework of SFL (Halliday & Matthiessen, 2014) and practice-oriented approaches to writing (Coffin & Donohue, 2012; Young & Nguyen, 2002). The goal was to investigate L2 students' recurrent use of rhetorical tools and the dynamic arrangement of multimodal resources for communicating meanings in the discursive place of a university. Specific questions are as follows.

- What are the main organizational stages of the expository oral texts?
- How do L2 students use different semantic process types and modality in each stage?
- How do L2 students use multimodal rhetorical strategies in the body of presentations?

Material and Methods

This study was conducted in a sophomore expository writing class at a major university in Taiwan. The 18-week expository writing course was offered to English major second-year students. This course introduced expository writing strategies that were developed and refined over six semesters. The course design combined process-oriented and genre-informed methods to teach expository writing. The process-oriented practice engaged students in multiple drafts and revisions through peer feedback and writing conferences. Throughout the course, students experienced different phases of process writing, including (1) prewriting and drafting, (2) revising and editing, and (3) presentation and submission. Their writing assignments were evaluated based on traditional rhetorical criteria, including (a) title and thesis, (b) main and supporting ideas, (c) organization and style, (d) word choice and grammar, and (e) editing and revision (see Liang, 2010).

In this study, the writing process also incorporated genre-informed instructions as students worked toward the final paper and presentation. As part of a model of language in context informed by SFL, the concept of genre offers structures of text types and systems of semiotic resources for realizing meanings and achieving purposes. Specifically, SFL-based semiotic resources were used to meet new demands across modes. Drawing upon students' experiences in everyday life and situations, students were asked to employ culturally relevant source materials and multimodal resources (e.g., news, videos, graphics, charts, artworks, advertisements, online articles, etc.) to create argumentative texts and evaluate epistemic claims. To transform expository writing for diverse audiences, the instructor gave greater emphasis to larger social and pragmatic contexts through which students could interact with both real communities and imaginary readers in the process of communication. Finally, to explore the word-image ensembles in multimedia text, the instructor asked the students to prepare PowerPoint-supported oral presentations based on their written papers.

Using instructional materials and multimedia resources posted on the class blog, the instructor discussed with students the elements and processes involved in the following five aspects of expository writing:

- Reading-writing connections: engaging critically with texts and visuals to sketch key issues and supporting points for particular topics, purposes and audiences.
- Quoting, paraphrasing, and summarizing: noting the strengths and weaknesses of different source materials to support general statements or highlight relevant features.
- Text structures: using major textual patterns, signal words, and graphic organizers to structure written text and visual information in relations.
- Coherence and cohesion: expressing cultural meanings and thinking processes through effective linguistic patterns and creative visual resources to achieve a clear and persuasive style.
- Weak reasoning and errors of logic: rethinking unconvincing arguments and revising parts of text and tone of speech to create meanings in contexts and communities.

After class instruction, the students posted self-chosen school or community issues and four reading reports relevant to their topics and interests in their blogs. To enhance their counter-arguments, 26 students were placed in pairs to write about and discuss two sides of an issue in social and academic situations. The topics chosen were:

Section 1: Politics and Economics
    P1 "Should we consider social welfare while developing economy?"
    P2 "Are entrepreneurs responsible for Taiwan's society?"
    P3 "Should public interest build on individual sacrifice?"
    P4 "Is it appropriate to use showgirls as a commercial strategy?"
Section 2: Communication and Education
    P5 "Set menu or buffet: Do we need specialized disciplines?"
    P6 "Eagle vs. tiger: Which is better for children?"
    P7 "Uniforms: Take it off or not"
    P8 "Can human flesh search become a formal investigation method?"
    P9 "Should Facebook take full responsibility for privacy?"
Section 3: Relationship and Entertainment
    P10 "Should university students take abortion?"
    P11 "Should extramarital affairs be accepted?"
    P12 "Cohabitation"
    P13 "Delete his (d:) or not?"

Each pair was then assigned a 30-minute session to present their texts to classmates in four 3-hour face-to-face interactions. Peers posted written comments on blogs or gave oral feedback after the presentations. After the presentations and the receipt of peer feedback, the students posted revised texts. Two teacher-student conferences were also included to discuss certain linguistic and rhetorical choices in the student texts, after which students wrote reflective essays on their blogs. The students presented their final papers at the end of the semester. To share broader social purposes in the university discourse community, the students invited 4-5 international students on campus to attend each session of the final presentations. The students could thus develop an awareness of different purposes and audiences and thus particular rhetorical choices of the mode of writing and speaking could communicate important points in the written texts by using simple and engaging expressions for maintaining cohesive social relationships.

The data set comprised 13 presentations, each by a pair of students. The analysis focused on the communicative events of final oral presentations and the Question-and-Answer (Q & A) sessions. The presentations and discussions were transcribed by the students themselves and then checked by the research team. Nonverbal elements were then added. The unit of analysis was utterances with finite verbs. Based on Halliday's (Halliday & Matthiessen, 2014) SFL, the author analyzed the oral texts for (a) the ideational function (the semantic processes), (b) the interpersonal function (use of modal auxiliaries and modal lexical verbs), and (c) the textual function (thematic progression).

An analysis of the semantic processes in presentations and the Q & A sessions was conducted. Following Scheibman (2002), the analysis of the ideational function first identified the lexical verbs, with or without auxiliary or modal verbs, in all verb groups and highlighted them as belonging to one of the process types, namely (a) material processes of doing or happening (e.g., *do, get, give, make, take, use*), (b) relational processes of being or becoming (e.g., *be, become, get, have*), (c) mental processes of cognition (e.g., *know, think, understand*), affection (e.g., *want, love, like, care, need*), and perception (e.g., *see, hear, find, notice*), (d) verbal processes of saying and communication (e.g., *talk, say, mention, ask, introduce, mean, show, explain*), (e) existential processes of existence and rest (e.g., *there is, there are, stay, exist*), and (f) behavioral processes of bodily gestures and interaction (e.g., *watch, listen to,*

raise hands, stand, walk, dance). The interpersonal function or tenor is concerned with the speaker's and writer's attitudes with varying degrees of commitment (e.g., permission, obligation, requirement), and is expressed through modal auxiliaries (e.g., *should, must, ma*y) and modal lexical verbs (e.g., *think* and *believe*), which serve as discourse resources to interact with others. The textual function is related to resources for creating thematic progression and topical organization.

The analysis focused on the presenters' utterances only; processes from the audiences were not included. Given that the same form may represent different semantic types (e.g., *find, make, share, mean, show*) and serve different functions—auxiliary or main verbs (e.g., *get, keep, start*), this study separated main verbs from verbs of intermediate functions, such as marginal modals (e.g., *gotta, want to, need to, try to*), semi-auxiliaries (e.g., *be able to, be going to, be supposed to, used to*), catenatives (e.g., *keep V-ing, start V-ing, have (NP), make (NP), like to, afford to*), and pragmatic particles (*let, let's*). If there was more than one main verb in one locution (e.g., restarts and repetitions), only the final one was counted.

In order to include the full range of student texts (e.g., annotations, reflections, and transcriptions) and multimodal examples (e.g., graphic, gestural, and multimedia), this study investigated how the graphic-visual elements on the *PowerPoint* slides and corresponding texts were integrated into the oral presentations of the expository writing. To understand the interaction between the visual design of the PowerPoint slides and the video-recorded presentations as a form of embodied discourse, this study included qualitative analysis of the textual-visual interaction. Each pair of students' *PowerPoint* slides was organized in numbers with corresponding text segments (e.g., P1#1, P1#2, etc.). Specifically, Rowley-Jolivet's (2002) framework for visuals in spoken presentations was used to analyze L2 students' use of visuals and their semiotic mix of meaning-making strategies.

Although students' reflections and perceptions helped the researcher analyze the writers' presentations and form rich interpretations of their transformation and transduction (Bezemer & Kress, 2008; Kress, 2003) of multimodal meanings, certain multimodal features for audience interactions (e.g., facial expressions, body postures, head movements, and sound and music) are not included in this paper and gestural descriptions are limited to the pointing gestures. The participants' explicit references to the source materials through eye gaze and hand gestures are noted in double parentheses and marked in asterisks.

Results and Discussion

Figure 1 presents students' rhetorical strategies for organizing expositions and discussions in their presentations. All of the presentations began with the following obligatory moves: (a) greetings and self-introductions, (b) introducing topics and purposes, (c) announcing agendas and outlines, and (d) stating stances and positions. All of the thirteen presentations developed the body paragraphs by using the structures such as cause and effect, classification and partition, comparison and contrast, definition, exemplification, problem and solution, and sequence (cf. Montelongo et al., 2010). The detailed evidence consisted of different types of supporting sources, such as facts, opinions, statistic data, hypotheses and quotes. Of the 13 pairs of students, 10 discussed two sides of the issues point by point, and three pairs presented points side by side. The concluding section included the obligatory move of a summary, recommendation, call to action, acknowledgement, or coda. Twelve of the pairs provided summaries to reinforce their points and nine pairs made recommendations and calls to actions. Interactions with participants are optional moves; while all presentations had interactions with participants in the beginning, ten had them in the middle and only one pair added a final twist by asking the audience to take sides on the issue.

The data showed that the students tended to engage in two-sided arguments and discussion, which are more interpersonally charged than analytical texts (Coffin, 2004). To catch and maintain the audience's attention during presentations, all pairs used narrative and descriptive modes with multimodal resources, including various figures of speech and thought (e.g., anecdotes, dialogues, dramas, games, jokes, metaphors, questions, scenarios,

and stories) and sensory images (e.g., cartoons, pictures, photos, graphic organizers, clip arts, and video clips), to highlight their positions or support their arguments.
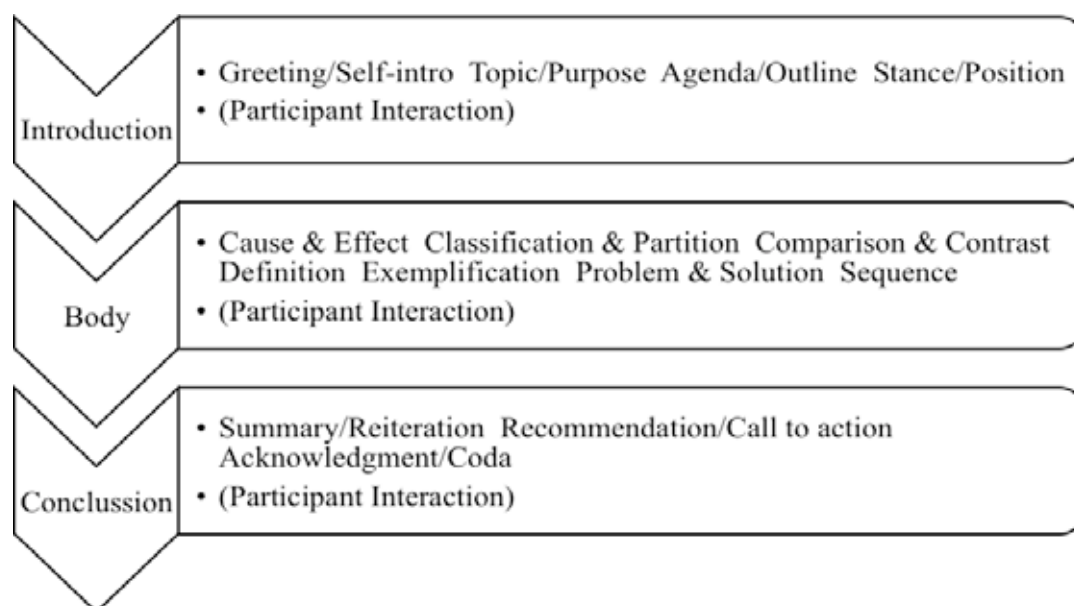

Figure 1. Students' rhetorical strategies and organizational stages

This general rhetorical pattern displays the L2 students' thinking and actions toward expository writing as class members within their social and cultural context. I now turn to the distribution of the semantic verbs and modals to give a sense of how the institutionalized textual strategies interact with the formal and semantic elements to express meanings.

Table 1 outlines the distribution of all semantic process types in the different sections of the oral presentations. Of the different verb types, the most frequently used were relational processes (43%) and the next most frequent types included mental (21%), material (20%), and verbal processes (12%). The less frequent types of processes were existential (3%) and behavioral (1%).

Table 1
Semantic Process Types in Different Sections

	Introduction	Body	Conclusion	Q & A	Total
Verbal	84(16%)	348(11%)	19(6%)	128(13%)	579(12%)
Mental	85(16%)	618(20%)	64(22%)	274(28%)	1041(21%)
Relational	239(45%)	1343(43%)	143(49%)	380(39%)	2105(43%)
Material	107(20%)	654(21%)	50(17%)	167(17%)	978(20%)
Existential	7(1%)	90(3%)	15(5%)	19(2%)	131(3%)
Behavioral	12(2%)	51(2%)	2(1%)	11(1%)	76(1%)
Total	534	3104	293	979	4910

As illustrated in Figure 2, similar ratios of major textual-semantic resources were used in the exposition and the discussion sessions. The L2 students used relational verbs, such as *be* and *have*, to express meanings and positions in interactive discourse throughout the sections. Students also showed a slightly higher degree of (inter)personal involvement in the Q & A session through mental verbs. The most frequent mental verbs were

think and *know*, which often appeared in conventionalized pragmatic expression, such as *I think* and *I don't know*. Presenters used recurrent verbal verbs such as *talk (about)* and *say,* in direct or indirect quotation. Despite their less-frequent occurrences, the presenters employed existential processes, such as *there is* and *there are*, to introduce new topics or concepts and behavioral processes, such as *watch* and *raise hands,* to encourage participant interaction with the presentational content or activity.
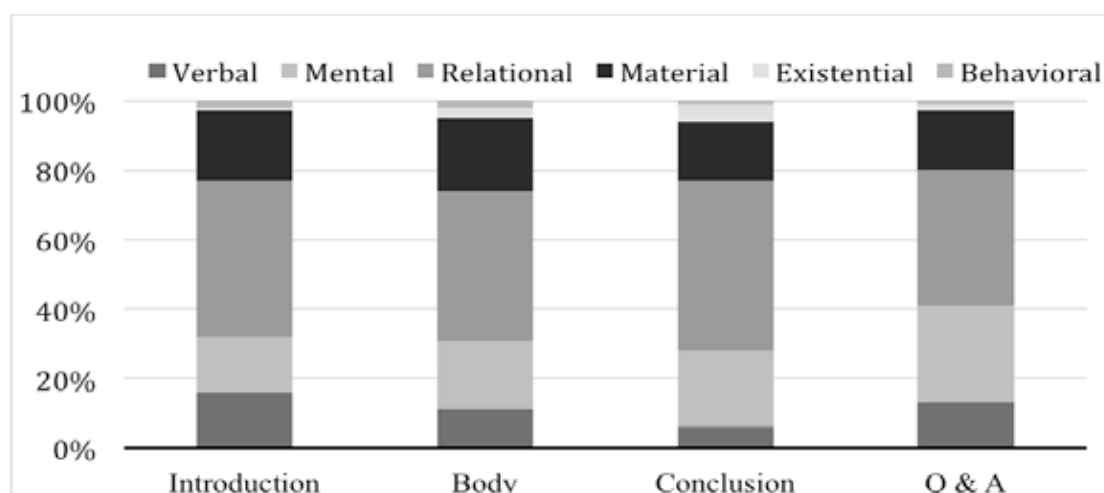

Figure 2. Major textual-semantic resources used in different sessions

The results showed that the L2 students used more relational verbs than material verbs. These results were slightly different from those in Martinez's (2001) study on expository text, although they corresponded with those in Scheibman (2002) and Thompson and Hopper's (2001) databases of American English conversation. Although academic discourse is less interactive than casual conversation, the local distributional patterns of the expository writing presentation reflected characteristics of more interactive discourse in spoken conversation.

Also note that the presentational processes involved mediating modal elements to express the speakers' opinions or attitudes toward the situations or events and their interpersonal orientations toward the reader. A quarter of the verb groups (i.e., 1273 out of 4950) contained modals of obligation (e.g., *should, must, have to, need to*) or possibility (*will/would, can/could, may/might*). As displayed in Table 2, students used modals of possibility more frequently than modals of obligation.

Table 2
The Frequency of Occurrence for Modal Auxiliaries

Should	Must	have to	need to	will/would	can/could	may/might
106	11	152	27	430	453	94

How did the students go about converting the written to the oral and visual presentations? While in their written texts, students used material processes that described the development of actions, these were not fully employed on the students' presentations. Although the systems of meaning may not necessarily be transferred from written text into oral presentation, the findings showed that the L2 students tended to favor the static kind of text in oral presentations which result from the more relational processes of written text than that of a more dynamic oral text (cf. Halliday, 1989, 1993).

Moreover, certain formal and functional elements also allow us to investigate further the ways in which the verbal and visual modes of meaning interact in their presentations. Students presented their expository text

through PowerPoint. Their use of slides ranged from 16 to 47 slides, with an average of 25 slides. Written texts and supporting graphics were used to present data in the slides. All of the students used figurative images: 13 pairs used photographs and 8 pairs also included screenshots or video clips of real people, places, and objects as factual evidence. In addition to the high-iconic, humanities-oriented figurative visuals, a broader range of alternative ideas and semiotic resources were also assembled and transformed into creative visual representations that pictures and videos cannot capture. To show conceptual objects, graphic visuals were constructed: 12 pairs incorporated images and clip art, and 10 pairs used cartoons and comics from the Internet. To organize text, 12 pairs used shapes or SmartArt to display relationships in a list, hierarchy, process, and so on. To show trends or changes at different points in time, 6 pairs used numerical visuals through charts and tables.

After presenting general distributions of textual structures and visual elements, the following sections focus on how the combinations of multiple resources create the pragmatic and rhetorical context of exposition and discussion. The analyses focus on the textual-visual meanings. Seven examples were selected based on text structures to illustrate how the textual-visual cohesion could be achieved to create multiple argumentative relations. *Cause-Effect* (Example 1) involves the conditions and the result through facts and statistics. The visual persuasion techniques, which combine the statistics chart and SmartArt, make the points for a common argument. However, the visual literacy acquired through Chinese right-left reading habits may contradict Western viewers' visual expectations (cf. Kress, 2003). That is, a claim-evidence relation was presented from right to left. On the right-hand side, the slide contains several grammatical metaphors (i.e., protection, isolation, restriction, ignorance, unemployment), showing a descending series of events with several variables at the top of the arrow and their possible consequence at the bottom. In speech, some of the grammatical metaphors were unpacked into verbs (e.g., *isolation* → *isolate*) and others were combined with a lexical verb (e.g., *took*, *lead to*) to form specific presentational styles (cf. Young & Nguyen, 2002). The presenter then pointed at the pop-up chart with previously established statistical data on the left through the deictic adverb *here* to support his causal reasoning. In addition to the use of past perfect (*had grown* and *gained*, and *had increased*) to discuss the effects or correlations of *signing ECFA*, his causal reasoning of the consequence was temporally ordered through the signal words *after* and expressed through material processes with inanimate actors *Taiwan GPD* and *the rate.* The *jobs* were then introduced through an existential verb, and the actor *the government* was removed completely. His accounts of a political and economic debate through the relational verb *lead to* warned against a negative outcome of unemployment and his mental processes were mediated by the first person plural inclusive *we can see* and the formulaic expressions *I think* in subjective language. However, instead of using more inclusive expressions (e.g., *I think we should…*) to call for action, he chose the relational verb (e.g., *I think it is necessary…*) for the international audience. Although the somewhat messy language gives an impression of formal fallacy, which seemed to be conditioned by certain contextual assumptions and ideologies, the pragmatic potential of modal constructions and a succession of visuals can help the audience distinguish opinions from facts and new from given themes.

Classification-Partition (Example 2) is the act of sorting and separating things into categories. The second example includes scriptural visuals and typographical elements, which are textual meta-discourse for communicating understandings and assumptions to the audience (cf. Rowley-Jolivet, 2002). The presenter first appealed to authority (i.e., A. B. Carroll) whose name was emphasized in a large size and special typeface. She then appropriated Carroll's language in her text by borrowing terms organized in a visual presentation of a pyramid on the right. The graphic visual indexed elements of corporate social responsibility (CSR) and prioritized *economic responsibilities*. Relational processes were used to classify a subject matter (i.e., CSR) into its particular attributes in a bottom-up hierarchy.

Example 1

On the other hand, if the government took too much protection, restriction, and more indirect international situation and isolate itself, it will eventually lead to an economic corruption and also unemployment rates. For we can see the statistics *here* ((pointing at a pop-up chart)) that it says that after signing the ECFA, the Taiwan GDP had grown um and gained millions of dollars. Also the rate had increased by one point sixty five to one point sixty two. Also there are millions *ten millions of jobs* ((gazing toward the chart)) to be satisfied. So, I think signing the ECFA is necessary. (P1#7)

Example 2
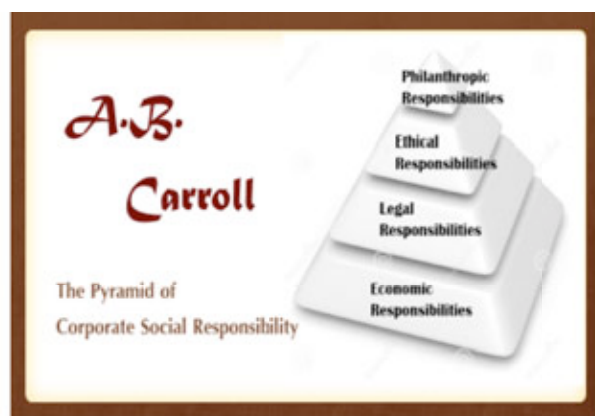
Carroll is a social social economist. According to his theory, CSR has *four four-level responsibility* ((pointing at the pyramid)). *Its form is like a pyramid. The basic one is economic responsibility, and the second one is legal responsibility, the third one is ethical responsibility, and the higher one is philanthropic responsibility* ((pointing at the words on the pyramid)). And we we will *combine these four responsibilities* ((pointing at the pyramid)) into our arguments. We will introduce these responsibilities first. (P2#4)

Compare-Contrast (Example 3) includes the mental process of juxtaposing ideas to make judgments or find a common ground. In Example 3, the slide shows the opposing cultures on opposite sides with vertical counterbalance arrows and then a pop-up text box. To show the critical similarities and differences in authoritative parenting practices, the presenter adopted general claims made by the author of *The Battle Hymn of the Tiger Mother*. The theme progression shifted between the quoted author and her conceptions of parents in different cultures. With modals (*will* and *would*), the mode of indirect speech through verbal and mental verbs (*mention, encourage, explain, ask*, and *reason*) was developed into a more cautious attitude toward the author's bilateral assertions. Even though the presenter's attitude may not be detected in the flow of speech, her use of eye gaze toward the pop-up text channeled the audience toward the common goal of both parties for achieving cohesion.

Example 3

Um the author of authoritative parenting, she mentioned that authoritative parents different from culture to culture. From western countries, the parents will often use democratic practices and they would encourage children to speak with uh speak opinions even they are different from the parents. Yet, parents from China and Russia the parents would not encourage children to speak out divergent opinions. Yet but um the author mentions that there is one key trait that the parents from both countries. Both cultures um um think of discipline, which is *"explaining the reasons for rules and talking with kids who misbehave." * ((gaze toward the pop-up bubble speech)). They both reason with children. (P6#13)

Definition-Description (Example 4) provides specific meanings and presents dramatized characteristics of times, places, people, and ideas. Example 4 displays a general-particular relation in which a graphic visual (i.e., a map) on the left locates and describes the idea of adultery as the context of the detailed text on the right. The presenter, with a rising tone and the deictic word *that*, called for the audience to attend to the absurdity of the word *woman*, which was circled in red. In this way, she conveyed moods by the color and tone of speech, which led to her commentary about the simple theme of *adultery*. The deeper meanings of *adultery* (i.e., *inequality in gender*) were carried out along with the relational verb *be*, and the verbal verbs *show* and *refer to*. The text was also furnished with a subtle blend of evaluative adjectives (i.e., *obvious*) and modal strategies (*should* and *be likely to*) co-occurring with speaker subjectivity.

Example 4

umm…ok! In Philippines, adultery is defined as "Adultery is committed by any married woman who shall have sexual intercourse with a man not her husband." You see that?! The subject only refers to females. It is obvious that this law shows inequality in gender. And the word adultery should not refer to specific sex. Everyone is likely to engage in adultery. (P11#10)

Exemplification (Example 5) is a strategy that clarifies and illustrates the points through research or popular sources and personal experiences. The fifth example involves a culture-specific photograph to attract the audience's attention. The presenter pointed at the verbal message and visual image to highlight the semantic and participant relationships. The scriptural visual with two arrows points to the meanings of student uniforms and the language of advertising in English. The modes of presentation involved pointing at the Chinese words on the leaflet of a cram school in Taiwan. The relational verbs, such as *is* and *have*, were to identify objects and illustrate the situation and association between the service of the cram school and success of the students. Then, the rapid question-answer sequence with pointers illustrates the points and word-picture connections in the leaflet.

Example 5

Does Uniform Make Equal?

高偉數學

Top public senior high school

To be number one!

http://www.brainsearch.com.tw/PartnerProductdx?mem=OHYA&detail=5884

and in my part to discuss about this question, I want to show you a leaflet. And *this is a leaflet* ((gaze toward the words)) from a very famous cram school in Taipei. And *this is the the teacher's name Kao Wei ((laughs)) and these two words mean math* ((pointing at the Chinese characters)) ((audience laughs)) *And this sentence over there* ((index finger slides over the sentence)) is is umm to tell the, the audience that *"they have the possibility to be number one"*((left hand slides over the sentence)). Yes. And in this in this leaflet um how can we know that in, how can, we get the idea of they can be the number one? It's all because of *the picture over there* ((pointing at the picture)). The students who wear the uniforms. ((several lines have been removed))(P7#6)

Problem-Solution (Example 6) presents a problem and specifies possible solutions or new insights. In the sixth example, the slide shows a logical link between a question with the evaluating adjective *correct* and a proposed solution in the imperative mood. Between the questions and the answer, the presenter elaborated on the meaning by comparing one communicative situation with another (the school, the hospital, the advertisers). The opinionated voice of the basic problem was expressed through analogies (e.g., *like you may*…and *imagine that*…) and rhetorical questions. The sequences of speech and thought expressed in conventionalized lexical collocations such as *I mean* and *I think,* created a dialectic, informal tone in the social and cognitive world. The actions were evaluated through the interrogative mood (e.g., *is it correct*…and *can you imagine*…) and modality (e.g., *they should have asked*…) in interpersonal contexts. In addition to scriptural visuals (e.g., bold face, a dot, and an arrow) and the screenshot of a Facebook page are computer-generated illustrations for the popular audience (cf. Rowley-Jolivet, 2002).

Example 6

Flaws:
Facebook misuses privacy during collection

• Is it correct to collect our privacy?
Trivial data may help us, but do we really like to be revealed our undiscovered side?

➡ Tell us before using it!

and another basic problem is that "is it correct to collect our privacy?" I mean it is easy that you left schools… scores in your school, and like you may left medical record in hospital. But it didn't mean that you allow others to collect them and reveal your un…and you don't want people to reveal this part of you. I mean can you imagine that one day the advertiser understanding you more that your best friend or something? It may happen some days. So I think, before Facebook collecting these, they may they should have asked our permission first. And let us know how they want to do with our privacy. ((P9#24))

Sequence (Example 7) is the arrangement of messages based on temporal and spatial relations. In the opening stage, the presenter gave directions for the college admission procedure in Taiwan in a cataphoric series: the

referring items—the first (*thing*), the second (*step*), and the third—refer to the text of exams, listing choices, and admission. The discourse incorporated scriptural visuals in the form of SmartArt. The interactive visual segments the discourse. The presenter elaborated on the meaning of the first visual, modular segment by explaining the effect of exams and sharing an anecdote-- *I screw up my math*-- as examples. Modal-like informal colloquial English, such as *wanna* and *gotta*, and other intermediate functions, such as *need to* and *try to* were frequently used to both mitigate and personalize the argument. The text segment was not included in the final paper, but showed in the presentation as audience-directed adjustment in the local discourse context. Here we also see the strong impact of social context on linguistic outcomes (cf. Hyland, 2003).

Example 7

So uh how do uh the first thing I wanna introduce you is the admission in Taiwan. And how do we get into this school? That's very important. And the first thing we need to do the first thing we need to get into college is to take the exams. So uh but the but the exams are so important because the result of the exam is gonna affect your um not only your school choices, but also your major choices. Because, for example, like, I've always wanted to study business when I was a high school student. But unfortunately I screw up my math, so which probably means I have to um major in something that has nothing to do with math. So here I am in English Department. ((audience laughs)) And the second step is listing choices. ((several lines have been removed to save space)) ((P5#4))

Conclusion

Adopting functional and rhetorical approaches to composition, the instructor engaged L2 students in constructing and sharing meanings with the broader university community. This study defined and operationalized multimodal text and practices within this particular activity of presentation and discussion. As an alternative to written text as a sole resource for expository writing, multiple resources provided L2 students with academic support to express their literary meanings in alternative modes of writing and oral communication. The results of this study showed that these L2 writers and presenters blended multiple text types and rhetorical strategies in organizing their expository texts and that they used both humanities-oriented figurative and scriptural visuals and science-oriented numerical and graphical visuals to align themselves with diverse audiences.

Incorporating spoken, visual, digital, and interpersonal resources in the writing practice has impacts on the L2 students' expressions of expository text. Despite "agency concealment" (Martínez, 2001, p. 242) or "covert subjectivity" (Scheibman, 2002, p. 170), relational utterances were most frequently used to classify subject matters and identify argumentative relationships in the university discourse community. While the L2 students' common organizational stages may signal their dialectical interactions with genre-based instruction, the semantic processes and visual representations could reflect their rhetorical communication with international students whose identities, values, and practices could be more diverse and less conventionalized than those within the same speech communities or disciplinary fields.

The results of the analysis have implications for using multimodal resources in L2 university expository communication. To improve audience comprehension and emphasize speaker argument, the students should pay

attention to different resources in distinct modes of communication (e.g., temporal and linear progression of oral presentations versus spatial and nonlinear relationships in visual representations) for achieving textual and visual cohesion (cf. Daly & Unsworth, 2011; Rowley-Jolivet, 2002). To interact with their immediate peers, they should unpack or repack the cultural-specific meanings of the technical terms and visual allusions by using a style of spoken conversation in the disciplinary and individual processes of academic socialization (cf. Tardy, 2005; Young & Nguyen, 2002), which may also bridge academic literacies and social language. To direct the audience's attention to argument, the students' persuasive strategies could be intensified through indexical uses of hand gestures and eye gaze along with discourse conventions of direct address and questions (*you see that?!*, *we can see…*, *how do we get…*, and *can you imagine…*) in the construction of multimodal and interactive meanings (cf. Wells, 2000).

More broadly, the data have provided support for interactive discourse in expository writing. L2 writers were able to communicate their worldviews with diverse community members to accomplish their interpersonal and rhetorical goals. However, the L2 students did not express events and actions as frequently as did the participants in previous studies of expository text in practices (e.g., Martínez, 2001; Young & Nguyen, 2002), and certain students' underuse of recommendation and modals of obligations did not seem geared to hortatory arguments (cf., Coffin, 2004). L2 writing teachers and students can further develop new sets of rhetorical criteria and explore alternative forms of argumentative activities. Nevertheless, although the study focused on only a few modes of communication, it should stimulate innovative and interactive ways to L2 academic discourse.

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New Media and English Language Teaching in China:
A Case Study based on Multiliteracies Pedagogy

Yu-Jie Qi
University of Hong Kong, Hong Kong SAR
Yan Sun
Shenzhen Futian Education and Research Center, China
De-Zheng Feng*
Hong Kong Polytechnic University, Hong Kong SAR

Abstract

With the increasing use of film, animation, software and the internet in English language teaching in China, investigating classroom teaching in the new media context has become an urgent task. As a collaboration among a linguist, an education researcher and a government official supervising primary school English language education, this paper reports a case study of a new media English lesson, taught by an experienced 'model' teacher, within the frameworks of systemic functional linguistics and multiliteracies pedagogy. It is found that while the use of native produced animation facilitated situated practice and overt instruction, the teaching needs improvement in terms of critical framing and transformed practice. The overall pedagogy still seems to be audiolingual, prioritizing the imitation of pronunciation and the drilling of grammar over the explanation of meaning and language use. We argue that new media should not become fancy tools for the old pedagogy; instead, teachers should change their teaching methods to enhance students' competence in meaning making in various social contexts.

Key words: new media; English language education; systemic functional linguistics; multiliteracies pedagogy; China

Introduction

In the digital age, new ways of making meaning and emerging modes of communication demand fresh thinking about how we work with children and young people in formal educational settings (Merchant, 2013, p. 145). Challenges and opportunities brought by this change are being investigated within the fast growing field of study in education under the term 'multiliteracies pedagogy' (e.g. New London Group, 1996; Cope & Kalantzis, 2000; Jewitt & Kress, 2003; Kress, 2003; Lankshear & Knobel, 2011; Unsworth, 2006; Mills, 2011). These theorists contend that digital technologies have decisively changed antiquated notions of language, curriculum, and literacy research. Texts are increasingly multimodal, combining visual, audio, linguistic, gestural, and spatial modes to convey meaning in much richer ways (Mills, 2010, p. 15). Researchers have developed theoretical frameworks to model the multiliteracies classroom on the one hand, and provide practical strategies for new media teaching on the other. However, "claims that are made about new media and new media literacy are heavy

on rhetoric and decidedly light on empirical evidence" (Merchant, 2013, p. 145). This is even more apparent in China, where there is very little investigation of classroom teaching, let alone applying the multiliteracies principles in teaching. In light of this, collaborating with primary schools in Shenzhen, China, this project conducts a systematic analysis of a new media class, with the aim of informing the design and assessment of this new teaching practice.

Our focus in the project is on English teaching, where multimedia resources are very frequently used on class. In response to the rapid development of digital media, the new English Curriculum Standard suggests that English language teaching at the primary and secondary levels should "expand the channel of learning and using English by actively employing resources from videos, broadcasts, television, magazines and the internet" (Ministry of Education, People's Republic of China, 2011, p. 4). The guide also prescribes that schools should reserve at least 20-25 minutes for video/audio lessons per week. It is a common practice for many schools to have one lesson with film or animation each week, alongside the four lessons of normal textbook teaching. The questions that immediately arise from this new policy are how to teach a movie lesson effectively and how to evaluate the movie teaching practice. The government, who has invested billions of dollars on multimedia equipment, and the parents, who prefer their children to learn 'decent' knowledge from 'proper' sources of traditional textbooks, are eager to know the answer. Meanwhile, this concern is related to an important argument in new literacy studies, which claims that schools are failing in teaching students because they are unable to provide curricular experiences that take proper account of the new media landscape (e.g. Lankshear & Knobel, 2011; Merchant, 2013).

Therefore, the authors of this paper, an education theorist, an official from Shenzhen Education Research Center, and a linguist, collaboratively carried out this research at a primary school in Shenzhen. For the current analysis, we selected two animation movies and observed how these two movies were used in classroom teaching during one semester in 2013, one by an experienced 'model' teacher, Jane, and the other by a novice teacher, Tom (both are pseudonyms). Both lessons are for grade 4 students in a primary school in Shenzhen, China. In this paper, we mainly focus on Jane's class, and draw upon Tom's class for comparison where relevant. The theme of Jane's class is friendship and the main teaching material is an animation video which is about different animals trying to make a grumpy elephant happy. Jane first asks several warm-up questions, and then she plays the video, asks students about their understanding of the story, and teaches some new words. After that, the students play the character in groups and some groups perform the play before class. Finally, Jane transforms the story event to real life situations by asking for the students' opinions when their friends are unhappy. The whole class was videotaped and their interaction was transcribed sentence by sentence. In what follows, we shall first introduce the frameworks of systemic functional linguistics and multiliteracies pedagogy and then elucidate how the lesson reflects the pedagogical principles.

Systemic Functional Linguistics and Multiliteracies Pedagogy

In this section, we set out the framework of analysis, namely, the major principles of systemic functional linguistics (SFL) and multiliteracies pedagogy. SFL is a theory that regards grammar as social semiotic resources for making meaning, rather than a code or a set of rules for producing correct sentences (Halliday, 1978, p. 192; Halliday & Matthiessen, 2004). As such, it entails some fundamental principles that distinguish it from other linguistic theories. First, it prioritizes paradigmatic relations. It views language as systems, and meaning is created through making and combining choices from the systems. Second, prioritizing paradigmatic relations enabled Halliday (cf. Halliday & Matthiessen, 2004) to identify the abstract metafunctions of language, which are the ideational, interpersonal and textual functions. The ideational metafunction is concerned with construing experience; the interpersonal metafunction is concerned with enacting interpersonal relations; and the textual metafunction is concerned with organizing ideational and interpersonal meaning as discourse (Halliday & Matthiessen, 2004). In this way, a class is considered as a multimodal discourse which involves the construction of knowledge (ideational meaning), the enactment of teacher-student relations (interpersonal meaning) and the

organization of the class (textual meaning). Third, SFL is centrally concerned with how the organization of language is related to its use, and this concern is pursued by modeling both language and social context as semiotic systems in a relationship of *realization* with one another (Martin, 1997, p. 4). In this model, context is bi-stratified as genre and register (Martin, 1997) and language is tri-stratified as phonology/graphology, lexicogrammar and discourse semantics (Halliday, 1978), as represented in Figure 1. All these notions are quite straightforward, except register which requires some explanation. Register is used to refer to variation of language use according to the context of situation, and includes the variables of field (what is going on), tenor (who the interactants are), and mode (what the channel of communication is) (Martin, 1992, p. 502). The model of semiotic strata and metafunction is illustrated in Figure 1.
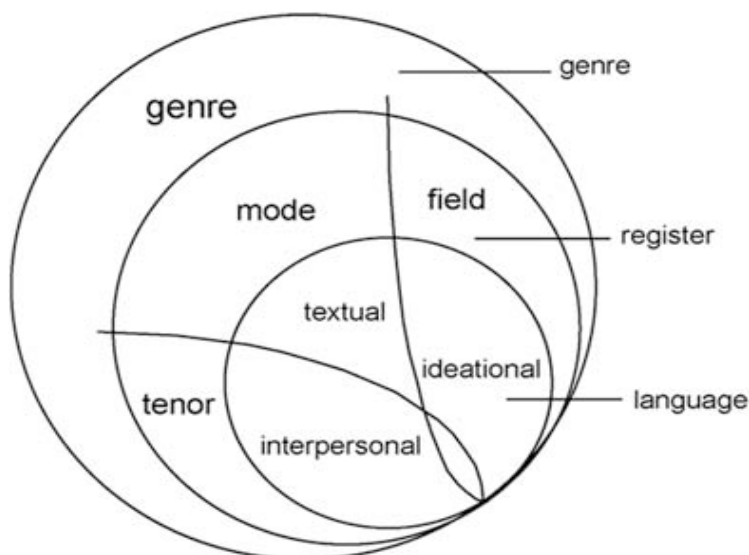

Figure 1. The Systemic Functional Model of strata and metafunction (Martin, 1997, p. 12)

Social semioticians argue that these principles apply also to semiotic resources other than language, for example, visual images (Feng & O'Halloran, 2012; Kress & van Leeuwen, 2006; O'Toole, 2010), websites (Djonov, 2005) and film (Bateman & Schmidt, 2012; Feng & O'Halloran, 2013). Among them, classroom discourse is a key area of investigation for multimodal studies. Aside from the systemic functional principle of metafunctions, another major theory used for multimodal classroom analysis is the "multiliteracies pedagogy" proposed by New London Group (1996).

As a new literacy pedagogy in response to the changes of the global communicative environment, the multiliteracies pedagogy has been advocated to incorporate multimodal textual practices including linguistic, visual, auditory, gestural and spatial modes and literacies with inclusive cultural connotations into the classroom (cf. Cope & Kalantzis, 2000). There are four major principles in this pedagogy: situated practice, overt instruction, critical framing and transformed practice. Situated practice involves building on the life-world experiences of students and situating language learning in real-world contexts; overt instruction guides students to use an explicit metalanguage of design; critical framing encourages students to interpret the social context and purpose of designs of meaning; transformed practice occurs when students transform existing meanings to design new meanings (Mills, 2011; New London Group, 1996). These four components also correspond to four knowledge processes in the framework *Learning by Design*, namely "experiencing", "conceptualizing", "analyzing" and "applying" respectively (Kalantzis & Cope, 2005, p. 72). It should be pointed out that these components of the pedagogy do not constitute a linear hierarchy, but may occur simultaneously, randomly or be "... related in complex ways ... each may occur simultaneously, while at different times one or the other will predominate, and

all of them are repeatedly revisited at different levels" (Cope & Kalantzis, 2000, p. 32). In the following sections, we will further elaborate these principles and examine how, or to what extent, these principles are observed in Jane's animation lesson.

Situated Practice: Learning through Experiencing

According to the multiliteracies pedagogy, knowledge is principally situated in socio-cultural settings and fundamentally contextualized in specific practices and domains (New London Group, 1996; Mills, 2011). These ideas are similar to the notion of authenticity in the influential Task Based Language Teaching framework (TBLT), which argues that students should be engaged in real-world language use (e.g. Guariento & Morley; 2001; Ellis, 2003; Willis & Willis, 2007). Ellis (2003), for example, identified two types of authenticity, namely situational authenticity and interactional authenticity. The former refers to whether the situation can be found in the real world and the latter refers to patterns of interaction similar to those found in the real world. However, as Butler (2011, p. 40) observes, the concept of authenticity is merely "ambiguously understood" and how authenticity can be achieved in teaching materials remains a challenge because of various practical constraints. In this section, we will reframe 'authenticity' in terms of situated practice and elucidate how it is realized in Jane's class.

Jane starts the lesson with a friendly greeting towards the students, by asking the question "How are you today?" and putting them at ease in the classroom. This is in accordance with the 'situated' principle of the multiliteracies pedagogy. To better apply the principle at this stage, the teacher can replace the autonomous routine questions such as "How are you today?" with questions that link the learning topic of the day to their familiar life-world experiences such as "Do you have pets?", "Do animals have emotions?", "What should we do when they are unhappy?" and so on. In this way, the students can experience the known and anticipate the upcoming new knowledge (i.e. the animation narrative).

Jane then plays the animation clip, which tells a story about how different animals try to make a grumpy elephant happy. The animation, produced and dubbed by native speakers, provides 'authentic' content from western child literature. As previously mentioned, authenticity faces several challenges in EFL contexts, which makes it almost impossible at the primary level in China. On the one hand, textbook writers might find it difficult to identify local English-speaking situations owing to the limited use of English in the local society (Chan, 2013, p. 304); on the other hand, at the school level, many texts might need to be modified, restructured, recreated and/or contextualized so as to serve certain pedagogical needs or simply to cater for students' language proficiency (Chan, 2013, p. 305). As a result, this 'utopian' principle is seldom practiced in China, rendering the notion of 'situated practice' more relevant.

Drawing upon the systemic functional notion of context of culture and context of situation, we can distinguish between generic authenticity and situational authenticity. The former refers to whether the genre of the teaching material can be found in a real world context. In this sense, Jane's lesson is authentic because the teaching material is authentic child fiction that is used in English speaking countries. Genre awareness has attracted an increasing attention in pedagogy (e.g. Hyland, 2003; Martin & Rose, 2008). Researchers argue that students should be exposed to a range of different genres (e.g. stories, recounts, reports, arguments) and be provided with explicit and systematic explanations of the ways language functions in each genre. The latter refers to the authenticity of field (whether the situation can be found in real life), tenor (the nature of teacher-student and student-student interactions), and mode (whether the mode of communication is the same as real life situations). Jane's lesson provides situated practice for the students through various activities after showing the animation. First, she elicits students' reactions to the story by asking how they feel about the emotions of the main actors. This is an attempt to let the students experience 'the new' (cf. Kalantzis & Cope, 2005), and the questions require their attention and memory of not only the language (emotive vocabulary), but also the narrated events that elicit the emotions and the facial expressions of the characters. The teacher asks several questions about the story, which constitutes a key method in overt instruction, as elaborated in Section 4 below.

Second, the 'experiencing' takes place when the students play the characters and videotape their performance. This is a hallmark of the lesson and will be discussed in detail in terms of transformed experience in Section 6. Third, at the end of the class, Jane takes the scenario out of the story and asks students "I am also feeling sad, can you help me?" This requires students to link what they have learned about "how to make the elephant happy" with the real-world context, which is "how to make a person happy", so the new language knowledge students learned will help them in dealing with a real life problem. This aspect of transformed experience will be explained in Section 6.

Summarizing this section, we can argue that Jane's lesson is adequately situated with the native-produced animation as teaching material and with the kinds of activities designed in the new media environment. The discussion above also suggests that situated practice is not an isolated stage of the class, but a principle that should be observed in overt instruction, critical framing and transformed experience.

Overt Instruction: Student-Teacher Interaction and Knowledge Construction

In this section, we investigate the construction of knowledge about the story (i.e. at the level of discourse semantics) and vocabulary (i.e. at the level of lexicogrammar) during Jane's lesson. Corresponding to the framework in Section 2, overt instruction involves the explicit construction of knowledge, the exchange of information, and the coherent organization of information, corresponding to ideational, interpersonal and textual meanings in systemic functional linguistics. We will focus on two aspects of overt instruction: the involvement of students for understanding the story, and the use of multimodal resources in teaching vocabulary.

Teacher-Student Interaction

Interpersonal meaning is concerned with the enactment of social relations through exchanging information or goods/services. Halliday (cf. Halliday & Matthiessen, 2004) identifies the two most fundamental types of speech role, (i) giving and (ii) demanding. Cutting across this basic distinction between giving and demanding is another distinction that relates to the nature of the commodity being exchanged: (a) goods-and-services or (b) information. These speech functions are realized by different *mood* choices in grammar, resulting in indicative, interrogative and imperative clauses, as illustrated in Table 1. In the act of speaking, "the speaker adopts for himself a particular speech role, and in so doing assigns to the listener a complementary role which he wishes him to adopt in his turn" (Halliday & Matthiessen, 2004, p. 106). For example, in asking a question, a speaker is taking on the role of seeker of information and requiring the listener to take on the role of supplier of the information demanded (ibid). In classroom teaching, the teacher can involve the students by assigning different speech roles to them. In what follows, we analyze how Jane involves her students through mood choices and makes her instruction overt by asking questions.

First, we compared Jane and Tom's utterances in terms of *mood*, as illustrated in Figure 2. It can be seen that there is a balanced distribution among the three moods in Jane's lesson, which suggests that she is able to involve the students by demanding their interaction. The most salient feature of her class is the frequent use of questions, which we elaborate further below. The indicative is normally used before questions to give instructions or after the questions to provide answers. Imperatives are also frequently used when she walks among the students and appoints different students to answer her questions. In terms of the degree of involvement, the imperative is the highest as it directly commands individual students to speak. Despite its imposing nature (i.e. face-threatening-act), the students seem to be comfortable with it in the context, which also indicates teacher-student rapport. In contrast, the novice teacher Tom relies mostly on indicatives. He places excessive emphasis on explaining the vocabulary and grammar in the story, with little effort to ask questions or give commands. Consequently, the degree of involvement in his class is lower than that of Jane's, and the class is dominantly teacher-centered transmission. In what follows, we go into further details of Jane's class and examine how she uses questions and follow-ups to provide overt instruction.

Table 1
Giving or Demanding, Goods-&-Services or Information (Halliday & Matthiessen, 2004, p. 107)

Role in exchange	Commodity exchanged	
	(a) goods-&-services	(b) information
(i) giving	'offer' *Any of the three*	'statement' *Indicative*
(ii) demanding	'command' *Imperative*	'question' *Interrogative*

As an experienced teacher, Jane uses appropriate questions to guide the students in understanding the story. Before showing the video, she asks three questions: "Who feels grumpy? Who will come to help? What will they do for the old animal?" These questions bring out the main plot of the story. However, as "grumpy" is a keyword in the story, the teacher may have first asked "How does the elephant feel?" to guide students' attention to the character's emotion. As Mills (2011) points out, in explicit instruction, the type and the quantity of questions are of vital importance in effective teaching (cf. Cullen, 1998 on the quantity and quality of teacher talk). After watching the video, the teacher uses a three-part IRF discourse (teacher Initiation, student Response and teacher Follow-up/Feedback) to assist students in recounting the series of complications in the plot of the animation, as illustrated in Table 2. Since Sinclair and Coulthard (1975) put forward the structure, numerous researchers have investigated the value of IRF for learning (e.g., Hall, 1997; Seedhouse, 1996; Waring, 2009). It is used as a basic strategy of student engagement and knowledge construction in Jane's class.
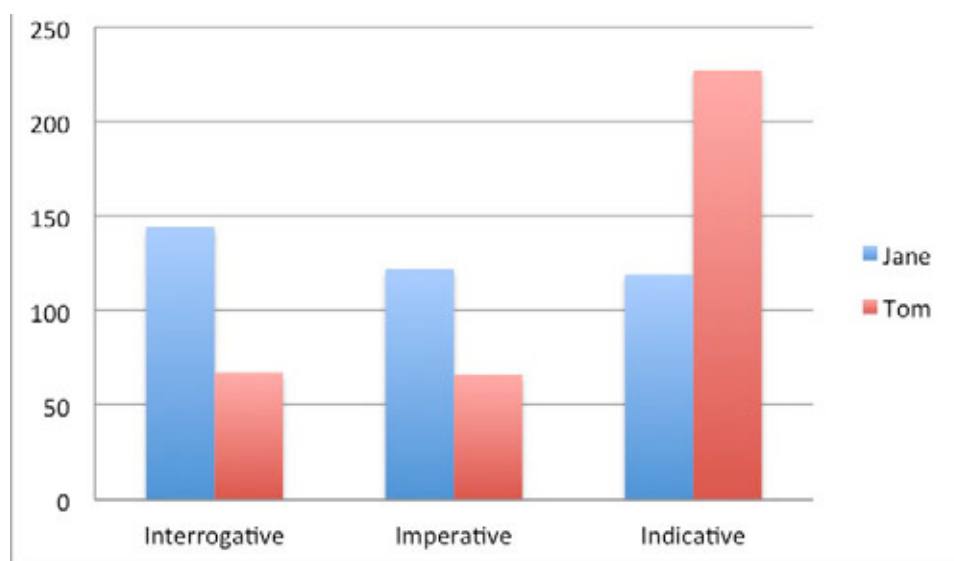

Figure 2. The distribution of mood choice in Jane's and Tom's classes

Table 2
Excerpt of Teacher-Student Interaction in Jane's Class

Jane (1)	I want to know who feels very very grumpy. Who? Okay, you please.
Student (1):	The elephant.

Jane (2):	The elephant feels…The elephant, the whole sentence.
Student (2):	Very very grumpy.
Jane (3):	<u>The old elephant feels very very grumpy.</u>
	Who will come to help?
	Who will come to help?
	Okay, you, please.
Student (3):	A monkey <u>is want</u> to help elephant.
Jane (4):	Oh, the monkey <u>wants to</u> help the old elephant, right?

The F-move is worth some special attention. As Cullen (2002, p. 118) argues, it is this move that "distinguishes classroom talk most obviously from speech events outside the classroom." Sinclair and Coulthard (1975, p. 51) also claim that "so important is feedback that if it does not occur we feel confident in saying that the teacher has deliberately withheld it for some strategic purpose". Figure 3 shows Jane's follow-up to the students' answers. The first three types belong to Cullen's (2002) "comment" in his typology of effective follow-ups, which are about whether the response was acceptable or not. It can be seen that "support" accounts for almost half of all follow-ups (e.g., very good, right, etc.), which is very important for building teacher-student rapport at the primary level. Jane also uses "check" (e.g., *really?*, *are you sure?*, etc.) to let the students rethink their answers, and on very few occasions to directly deny their answers.
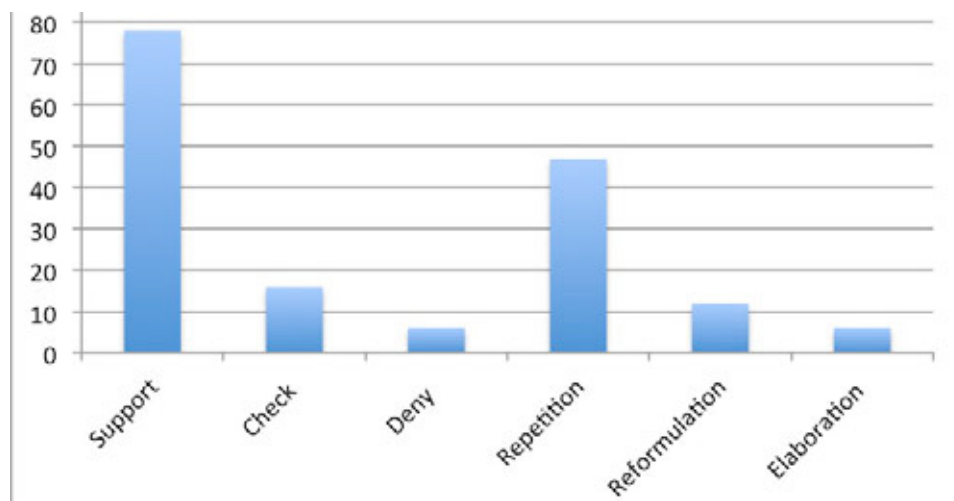

Figure 3. Types of follow-up in Jane's lesson

The other three types Cullen (2002) identifies are "reformulation", "elaboration", and "repetition". It can be seen that the most frequent type in Jane's class is repetition, which reiterates students' answers in a louder voice. There is a relatively small amount of reformulation (e.g. paraphrasing), which normally follows a denial. This may be due to the students' narrow vocabulary range which limits the teacher's vocabulary choice for reformulation. Meanwhile, the lack of reformulation also reflects the fact that most of the questions are closed ones to which there is a standard answer (see example above). However, there are cases where the students make grammatical mistakes and the teacher corrects them. A typical example is shown in Table 2, student (3) uses "is want" and Jane (4) reformulates it as "wants". Finally, there are only six cases of elaboration, in which the teacher builds new knowledge on students' answers. A typical example is the utterance of Jane (3) in Table 2, in which she provides the whole sentence based on the students' incomplete answers. However, Jane could use elaborations

to build new knowledge based on students' answers to make the connection between the known and the new more explicit. For example, in Jane (4), after making the correction, she could have elaborated on the correct use of verbs.

The Multimodal Construction of Vocabulary Knowledge

In the lesson, the story *Grumpy Elephant* is the source for encountering new vocabulary. Overt instruction requires a clear framework for the explanation of knowledge. In this section, we briefly examine how Jane teaches vocabulary using multimodal resources, within the framework of Hatch and Brown (1995, p. 372), who describe five essential steps in vocabulary learning:

    A) having sources for encountering new words;
    B) getting a clear image, whether visual or auditory or both, for the forms of new words;
    C) learning the meaning of the words;
    D) making a strong memory connection between the form and meaning of the words;
    E) using the words.

To illustrate how Jane uses the essential steps to teach vocabulary, we take the word *grumpy* as an example. Before teaching the word, Jane shows students a video clip which is part of the whole story, and pauses at the image where the elephant's face is covered by a question mark. Then she shows the students three faces (emoticons) with different emotions, and lets them judge which one is a grumpy face. After confirming the grumpy face, she shows the spelling of *grumpy*. These teaching procedures correspond to the first three steps in the framework. She not only explains the meaning of the word verbally, but lets the students understand its meaning through the video and pictures. Related to the fourth step, she leads the students to repeat the word several times in order to let them connect the form to its pronunciation. Furthermore, she provides several words they have already learned, like *jump* and *pump* to familiarize students with the construction, and then focuses on *grump* before pronouncing *grumpy*. In the last step, she asks the students to make a grumpy face, and in the following teaching she mentions the word and uses it in new contexts several times to enhance students' understanding and reinforce their memory. It is important to note that through the process of teaching this word, which lasts for approximately three minutes, Jane maintains a high degree of interaction with students by asking questions and giving commands (e.g., asking them to pronounce the word, to make a grumpy face, etc.)

Critical Literacy and Moral Education

In this section, we move beyond the transfer of linguistic knowledge to investigate the social values incorporated in the classroom. We are concerned with how students should be taught the skills to think critically on the one hand, and how they should be educated with positive values and attitudes on the other. These two aspects are discussed under themes of critical literacy and moral education respectively.

The awareness that literacy may become a tool of ideological control echoes the position of New Literacy Theories (Gee, 2005, 2008; Perez, 2004; Street, 2003) that literacy practice is a set of sociocultural practices that reflect the dominant values and beliefs of a society. From this perspective, teaching material can be seen as ideological message systems which serve to "support the performance of social activities and social identities" (Gee, 2005, p. 1). This position of pedagogy gave rise to numerous critical analyses of textbooks and curriculum materials over the last two decades on issues such as gender bias, racial discrimination, and so on (e.g. Liu, 2005; Mahboob, 2009). Under the term "critical framing" (New London Group, 1996) or "analyzing critically" (Kalantzis & Cope, 2005), critical literacy aims to guide students to view the underlying meaning of learning contents critically in relation to their specific social, cultural and ideological contexts, to discerningly analyze, evaluate and challenge assumptions about gender and race that are either implicit or explicit in the texts and media they consume (Mills, 2011, p. 49).

Since young learners are not able to interpret the underlying purposes of the texts, teachers are encouraged to provide constant scaffolding to elicit students' thinking. Unfortunately, in Jane's lesson, she does not use any

careful questioning to prompt the students to discuss the underlying values embedded in the animation. The most obvious problem is that the teacher fails to interpret the resolution about the story critically. In the story, the elephant finally becomes happy because he sees "the parrot got a fright and fell over the giraffe, the giraffe got a fright and fell over the monkey, the monkey got a fright and fell over his drum". Acknowledging the humorous effect attempted by the story, we may need to think "Is this how we should do to those who try to help us?" and "Can we take pleasure out of other people's trouble?". It could be dangerous if the kids think this is fun and appropriate. The teacher should be critical about the material, and she could ask 'Why did the elephant become happy finally?", "Is that a good way to make ourselves happy?", "What should we do if our friends fall over?", and so on.

Table 3
Excerpt of Moral Education in Jane's Lesson

Jane (1):	So, we are so happy to help the old elephant today. Are you happy?
Student (1):	Yes.
Jane (2):	The old elephant gets very grumpy today. We help the old elephant, and a lot of animals help, right? So, we are very happy today. Because...because what? Roses given, fragrance left. Follow me. ... (repeat)
Jane (3):	Are you happy to help others?
Student (3):	Yes.

An important outcome of thinking critically about the teaching material is to foster socially desirable values and attitudes in students. As Curdt-Christiansen (2008, p. 97) points out, "through learning to read and through reading itself, children acquire socio-culturally appropriate information, values and ways of thinking and doing that authors of texts or textbooks assume children should have". Emotion and attitude education has been articulated as one of the five crucial aspects of the overall curriculum standards for primary and secondary EFL education in China (Ministry of Education, People's Republic of China, 2011). In this respect, the teacher does make some conscious effort, which is exceptional among the classes we observed. At the end of the class, the teacher says "We are so happy today", "We are so happy to help others", and teaches the idiom "roses given, fragrance left", as shown in Table 3. However, it might be better if she lets the students perceive these values themselves by answering questions like "What did you learn from the story?" or "What does the story tell us?".

To summarize this section, we analyzed practices of critical thinking and moral education in Jane's class. While she makes conscious efforts for the latter, she fails to provide a deeper critical reading of the value hidden in the narrative. As most children and youth today have ready access to a host of consumer-driven media, print and online texts from a much wider range of sources than previous generations, "teachers should provide necessary tools to facilitate critical thinking" (Mills, 2011, p. 50). These 'tools' for analyzing the explicit and implicit values have been well theorized in fields such as systemic functional linguistics, new literacy studies, and critical discourse analysis. One objective of the collaboration among the authors of this paper is precisely to train practicing teachers with explicit linguistic theories, so that they can adapt and use them in their teaching.

Transformed Practice: Independent Construction of Meaning

Transformed practice refers to meaning-making practice which engages students in applying their knowledge to

other social and cultural contexts (New London Group, 1996). As Kalantzis and Cope (2008) claim, transformed practice is the climax of multiliteracies pedagogy, which indicates that students can transfer their knowledge to work successfully in new context (Kalantzis & Cope, 2008). It means the students could apply their knowledge both "creatively" and "appropriately" (Kalantzis & Cope, 2008, p. 202). In the class observed and analyzed by Mills (2011), she explains that "the students engaged in transformed practice as they redesigned meaning, transferring their ideas from one cultural situation – a television road safety campaign – to their own social context and purpose" (Mills, 2011, p. 44). In what follows, we evaluate the degree to which the students demonstrate the application of knowledge and skills creatively and appropriately in Jane's class.

There are two activities that are intended as transformed practice in Jane's class. First, the students play the characters and make their own video, which is the 'selling point' of the lesson. Students work in groups to act out the story, which is video recorded and can be shown on class immediately. This is supposed to be a brand new way of learning, in which the school invested heavily. The teacher is also proud of this activity as transformed practice. However, with the exclusive focus on imitating the video source, rather than making creative use of the new language knowledge, it becomes just a fancy form of audio-lingual teaching. This activity, which takes about fifteen minutes of the forty-minute lesson, is not a meaningful task and does not constitute transformed practice. This is because it does not involve applying knowledge "creatively", nor even "appropriately", as it only involves the reproduction of the linguistic forms. At the end of the class, Jane designs another activity which is closer to transformed practice: she creates a context in which she is getting fatter and fatter on cold days; therefore, she feels grumpy, and then asks students to form groups and work together to figure out how to make her happy. In this practice, Jane does create a new context that someone in real life is grumpy. However, the students' work is not really successful in this new context, because compared with the previous activity, it takes less than five minutes and the students only provide simple utterance without serious creative thinking (e.g. *I give you candy*, *I sing for you*). Also due to the limited time for this activity, the teacher does not provide enough scaffolding to help students work successfully in this new context with sufficient detail. A better way for the realization of transformed practice is to combine this activity with the previous one. Students could be divided into groups to create a story in the new context, which allows them to use new language knowledge in more flexible ways (i.e. to design their own story by making choices at the levels of lexicogrammar and discourse semantics). Additionally, they would also be required to decide on the multimodal resources (e.g. intonation, facial expression, etc.) to cultivate multiliteracies competence.

We can conclude from the analysis that no transformed practice is designed, mainly due to the preoccupation with form imitation and drilling. According to the experience of one of the authors whose job is supervising primary school teaching, many teachers still prioritize pronunciation and linguistic forms over meaning and use. Consequently, very often, digital media, such as animations, the internet, and software, merely provide new tools for imitation and drilling, rather than facilitating a new pedagogy.

Conclusion

With the development of digital technology, films, animations, software, and the internet are now common in English classrooms in many parts of China. Therefore, it is important to investigate the changes brought by these new media and their effectiveness. In this paper, we have brought together our knowledge from linguistics and education in the analysis of a primary school English language lesson, using the frameworks of systemic functional linguistics and multiliteracies pedagogy. We have seen that, while the use of native speaking animation facilitated situated practice and overt instruction, the teaching could have benefitted from critical framing and transformed practice. It seems the overall pedagogy is still audiolingual, prioritizing the imitation of pronunciation and the drilling of grammar over the explanation of meaning and the use of language in new contexts, echoing Cope and Kalantzis' (2010, p. 87) observation of "new media, old literacy".

We conclude with a call for the collaboration between education theorists and practicing teachers in new media teaching. On the one hand, we need to provide training of up-to-date teaching methods, such as TBLT

and multiliteracies pedagogy, so that teachers can teach more effectively in new media contexts; on the other hand, authentic classroom teaching practice provides researchers with valuable data to test and improve the pedagogical theories in new media teaching environments. In the second phase of the collaboration, we have co-designed lesson plans, which will be implemented in 2015. It is hoped that the collaboration will enrich both English Language Teaching in China and the theory of multiliteracies pedagogy.

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