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Preface to the 28th volume

Welcome to the 28th volume of the Working Papers of the Linguistics Circle!

This volume of WPLC continues the tradition to provide opportunities for linguistics students, both from UVic and from other universities, to publish their research. For the past few years, WPLC has been dedicated to the publication of specialized volumes, such as our volume on minority languages or the most recent conference proceedings of the North West Linguistics Conference.

This year we decided to open submissions to any area related to linguistics, while encouraging papers with a focus on interdisciplinary research (bridging linguistics and another field) or transdisciplinary research (bridging fields within linguistics). We are proud to present a collection of papers that exhibit the wide range of research areas that linguistics students pursue. We open this year's volume with a quantitative variationist study of local Victoria English, continue with a semantic discourse analysis of a Taiwanese family speaking Mandarin, followed by a semantic and syntactic analysis of semiotics used in English learners' Facebook posts, and finish with a sociolinguistic study of gender-biased descriptions in reproductive biology. While being grounded in linguistic theory and research methods, these papers prompt the reader to consider the relationships between various disciplines within linguistics (variationist sociolinguistics, semantics, syntax, language acquisition, corpus linguistics, and discourse analysis) and between linguistics and other fields (biology, sociology, and social media).

We hope that this variety of topics not only benefits our readers in their specific areas of interest, but that it also serves as an invitation to current and future students to publish their research and exchange ideas with a community of graduate students.

Editorial Committee,
WPLC 28

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Very jolly and really wild: Development in Victoria English intensifiers

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This paper quantitatively examines variable usage of intensifiers—adverbs that give force or emphasis—in a corpus of Victoria English. In this pilot study, intensifier tokens from speakers born between 1879 and 1990 were collected and analyzed. The data comprises of 510 adjectival heads, as in *It was a really interesting conversation* (CL41m/1970), of which 44.3 per cent were intensified. Overall distributions are presented for *very*, *really*, *pretty*, *quite*, and *so*. For the two most frequent intensifiers, *very* and *really*, multivariate analyses show that *very* is favored by the oldest speakers, while *really* shows an increase in preference among the middle aged and youngest speakers. The fact that, over time, *really* shows greater diffusion across semantic adjective types and syntactic structures seems to point at progression in its delexicalization process, confirming previous findings for this lexical intensifier (e.g. Ito & Tagliamonte, 2003).

Keywords: intensifiers; delexicalization; very; really; Victoria English

1 Introduction

Variationist sociolinguistic attention to the intensifier system in vernacular speech is increasing, as it is suggested that the fastest and most interesting developments in semantic change take place with intensifiers (Ito & Tagliamonte, 2003, p. 257; Peters, 1994, p. 269). Intensifiers are often described as degree words that scale a quality up (Bolinger, 1972, p. 17). As such, they are essential for “the social and emotional expression of speakers” (Ito & Tagliamonte, 2003, p. 258). Intensifying linguistic elements owe their capacity for rapid change to the fact that, in this part of grammar, meanings are in continuous development (Stoffel, 1901, p. 2), which is partly due to the speaker’s desire to increase emphasis or expressivity in order “to caption the attention of their audience” (Peters, 1994, p. 271). Examining speakers’ use of intensifiers over time thus provides valuable insights into processes of language and change within the speech community.

2 Theoretical background

2.1 Intensifiers

Previous literature describes different but oftentimes overlapping definitions for the linguistic category of intensifiers. Bolinger (1972, p. 17) describes an intensifier as an adverb of degree, or “any device that scales a quality, whether up or down or somewhere between the two”. However, within the category of degree words, a common distinction is typically made between intensifiers and downtoners. Whereas intensifiers scale a quality up, downtoners place the meaning of the clause element they modify at the lower end of the scale (Bolinger, 1972, p. 17). As a result, downtoners diminish or minimize the meaning of the modified adjective (Nevalainen & Rissanen, 2002, p. 360). The current study is concerned with intensifiers (1a-b) and excludes downtoners (1c-d) from the discussion.¹

- (1) a. And you’re like I’m *pretty* sure that didn’t happen. (CA21f/1990)
- b. He just laid it over me and he gave me a *damn* good licking. (Joseph Douglas Hunter/1881)
- c. It’s also just *kind of* terrifying to write a letter in German. (VM23m/1988)
- d. Your bed had to be made every day and so I grew up in a *fairly* strict household. (GK52m/1959)

Quirk, Greenbaum, Leech, and Svartvik (1985, p. 591) describe an overarching category of *amplifiers*, and distinguish within this category *boosters*, placing an adjective higher on a scale (2a) from *maximizers*, denoting the upper end of a scale (2b).

- (2) a. We had some *very* famous single scullers in our day too. (WLB Young/1873)
- b. The buildings are *completely* restored so it’ll feel like you’re in like Paris or somewhere. (VM23m/1988)

Consistent with previous variationist literature (Ito & Tagliamonte, 2003; Tagliamonte, 2008; D’Arcy, 2015), the current project regards both boosters and maximizers as intensifiers, as they both scale up the meaning of an adjective.

2.2 Delexicalization

In informal conversation, speakers use intensifiers to express their evaluative and emotional remarks on events in order to capture and hold the attention of their audience (Peters, 1994, p. 271). McCarthy and Carter (2004, p. 15) argue that

¹ Examples were collected from the Diachronic Corpus of Victoria English (DCVE) and the Synchronic Corpus of Victoria English (SCVE); see §3.1 for details.

intensification, which can also function to (over)emphasize or exaggerate, is a fundamental characteristic of informal conversation. Labov (1985, p. 43) defines the intensity signaled by degree adverbs as “the emotional expression or social orientation toward the linguistic proposition” of the speaker (Labov, 1985, p. 43). Intensifier development is a continuous, ongoing process, in which new forms are constantly needed, because the older words do not adequately express speakers’ ideas (Stoffel, 1901, p. 2). If a certain intensifier is used for a longer time by more and more speakers, it becomes too familiar to speakers and they feel that the strength of the intensifying element decreases. Speakers will then look for other intensifying words that have a stronger meaning and are therefore more able to express their emotions (Ito & Tagliamonte, 2003, p. 258). The constant development of degree words can therefore be explained by the speaker’s need to “achieve expressivity” (Lorenz, 2002, p. 143). Over time, intensifiers become less original and new incoming forms that are better capable of expressing speakers’ emotions will be preferred (González-Díaz, 2008, p. 221).

The development of expressive newcomers in the intensifier system, as lexical forms develop adverbial properties, can be understood in terms of delexicalization, a common process of grammaticalization (Ito & Tagliamonte, 2003, p. 261). Partington (1993, p. 183) describes delexicalization as “the reduction of the independent lexical content of a word, or group of words, so that it comes to fulfil a particular function but has no meaning apart from this to contribute to the phrase in which it occurs”. Thus, through this process, the original meaning of the word weakens as speakers use it increasingly frequently as a linguistic element that marks intensification (Tagliamonte & Roberts, 2005).

Delexicalization generally occurs in four steps. The process starts out with a word with ‘semantic context’. Oftentimes, this lexical item has a modal use, reporting speakers’ opinion about the truth conditions and sincerity of their words, like *really* in (3a) (Ito & Tagliamonte, 2003, p. 261; Partington, 1993, p. 181). The original meaning of the word may weaken over time, so that the word is also used for emphasis while still maintaining its modal use, such as the sentence adverb in (3b) (Ito & Tagliamonte, 2003, p. 261). Finally, when the lexical item is used increasingly frequently in the attributive position, in the last step it comes to be used as an adverb that conveys intensification of predicate adjectives, having lost its original lexical meaning and context (Ito & Tagliamonte, 2003, p. 261), (3c).

- (3) a. *Really*, I could hear her thinking. (Partington, 1993:182)
 b. Aw, don’t rub it in. Ah fell awfu’. I do *really*. (Partington, 1993:182)
 c. When the horsetail is *really* hot, wrap it up... (Partington, 1993:182)

Partington (1993, p. 182) explains that delexicalization is “a synchronic as well as a diachronic phenomenon”. Thus, the three stages of delexicalization are attestable by the same speaker in the same conversation, reflecting the rapid and dynamic process of delexicalization. Furthermore, lexical variability within a speaker is a signal of language change: when different lexical intensifiers are found in the same

stretch of discourse, this reflects “the coexistence of older and newer layers in the process” (Ito & Tagliamonte, 2003, p. 261).

Lorenz (2002, p. 144) explains that the more delexicalized an intensifier becomes, the less it will be limited by lexical restrictions, and thus the more it will increase in frequency. The occurrence of an intensifier is restricted by the syntactic structure in which the modified adjective is embedded and the semantic type of the modified adjective (Ito & Tagliamonte, 2003, p. 261). Following this, the more delexicalized an intensifier becomes, the more it will collocate with a wider spread of semantic adjective types and in various syntactic structures. The linguistic predictors of semantic type and syntactic function thus serve as indicators of the range in which speakers use a particular intensifier: if it occurs with a wide range of semantic adjective categories and syntactic types, it is versatile and generally accepted, while less accepted intensifiers only collocate with a limited number of syntactic structures and adjectival categories.

From the moment that a lexical item has undergone delexicalization and takes on intensifying readings, its expressivity weakens over time and it will have to compete with other established as well as incoming forms in the intensifier system. In this competition, an intensifier can be iterated (e.g. *very very* tall) or co-occur with another intensifier (e.g. *very really* careful), resulting in increased expressivity or hyperboles (Méndez-Naya, 2017, p. 252).² These two instances of double intensification can be viewed as manifestations of the linguistic process of accretion. In this process, combinations of seemingly redundant linguistic elements compensate for the loss of expressivity of individual lexical items (Méndez-Naya, 2017, p. 268). While iteration has emphasis as its main function, co-occurrence also plays a role in grammaticalization and is “particularly salient in periods of instability when the competition of intensifiers is at its height” (Méndez-Naya, 2017, p. 249). Thus, iteration and co-occurrence are related to different processes of change within the intensifier system. An example of one such change in meaning within the English intensifier system is the grammaticalization of the lexical items in the co-occurrence *all the whole*, which preceded and supported the development of the noun-intensifier *whole* (Ghesquière, 2014, p. 165). Méndez-Naya (2017, p. 268) concludes that accretion manifested by co-occurrence plays an important role in the development of new grammatical structures in and the attraction of new lexical forms to the intensifier system.

2.3 Social factors correlating with intensifier use

Previous studies have demonstrated various correlations of social variables such as gender and age with both the frequency of intensification and the frequency of individual forms. Intensifier use has long been associated with women (Stoffel, 1901, p. 101; Jespersen, 1922, p. 249). Stoffel (1901, p. 101) calls expressions such as *It is so lovely* “purely feminine expressions” and claims that *so* was typical for

² While well-established intensifiers such as *very* are commonly used in iterations (e.g. *very very happy*), repetition of less grammaticalized intensifiers (e.g. *?crazily crazily happy*) appears unacceptable (Méndez-Naya, 2017, p. 252).

women's language. Stoffel (1901, p. 101) argues that women "are notoriously fond of hyperbole" and that, as a result, it was women who developed the frequent use of intensifiers. However, intensifier use is also thought to correlate with women's tendency to discuss emotional topics, in which intensifiers serve to increase expressivity (Tagliamonte & Roberts, 2005, p. 284). Jespersen (1922, p. 249) goes so far as to suggest that women's preference for hyperbole makes them leaders of the change of intensifier forms over time. Furthermore, the need for hyperbole and intensification is often associated with teenagers and young speakers (Paradis, 2000, p. 157; Tagliamonte, 2008, p. 362).

Tagliamonte and Roberts (2005, p. 297) confirm that *so* is characteristic of female speech, but they argue that the degree of emotionality of the dialogue is a critical factor, as the males in the study used more *so* when discussing emotional topics as well. Furthermore, Tagliamonte (2008, p. 383) observes that in Toronto, Canada, despite the highly diffused and delexicalized character of *very*, this intensifier is subject to a sex difference among the oldest speakers in the corpus, with older female speakers using it more frequently than the males. However, over time *very* goes through a rather steep decline in both sexes and has to make way for incoming intensifier forms (Tagliamonte, 2008, p. 383). For *really*, sex differences fluctuate for over time, with women using *really* much more frequently than men, particular in the youngest age groups. While these findings support the view that women are often leading in intensifier change, the results for incoming forms in the youngest age group seem to contradict this hypothesis. Among younger speakers, a remarkably clear pattern is visible whereby young males prefer *pretty* over *so* and are thus leading in its use (Tagliamonte, 2008, p. 388).

2.4 Development of intensifiers in North American English

Tagliamonte (2008, p. 364) argues that rapid changes, which develop over a relatively short period, should leave their trace in the language of a speech community. The way to tap into those changes is by viewing them from the apparent time construct. Apparent time studies observe speakers of different ages at the same time and interpret findings as temporal, which enables researchers to make inferences about linguistic behaviors of different age groups (Chambers, 2003, p. 212). If, for example, an intensifier form is used more frequently by younger speakers than by older speakers, the apparent time construct allows us to hypothesize that this form is a newcomer in the intensifier system (Tagliamonte, 2008, p. 364). Thus, analyzing intensification in Victoria English from an apparent time perspective also allows us to infer the trajectories of the individual lexical forms within the system of intensification of the speech community.

Previous apparent time studies have documented developmental trajectories of specific intensifiers. The most recurrent finding is that *very*, having widespread collocations and being highly delexicalized (Partington, 1993, p. 183), is used most by older speakers, while among younger speakers it has become less popular and is making way for other forms. For example, Tagliamonte (2008, p. 385) observes a strong upward trajectory of *really*. Lorenz (2002, p. 154) explains that in order

for *really* to reach the same frequencies of use as *very*, it will have to progress in the delexicalization process by losing its modal meaning of ‘truth’ and by merely functioning as an intensifier. Only then will *really* become a prototypical intensifier that is used in a greater variety of semantic and syntactic contexts (Lorenz, 2002, p. 154). For Toronto English, Tagliamonte (2008, p. 373) observes “advanced delexicalization” for *really*, with no frequency differences between attributive and predicative structures among the youngest speakers. Regarding semantic type, Tagliamonte (2008, p. 380) finds that while the oldest speakers use *really* for a limited number of semantic types, among the youngest speakers *really* collocates with more semantic categories.

Beside the rapidly increasing frequencies of *really* in Toronto English, Tagliamonte (2008) observes a similar but less extreme upwards trajectory for *so* and *pretty*. Tagliamonte (2008, p. 379) finds that *so* was more frequent in everyday American English at the beginning of the twenty first century than it was at the beginning of the twentieth century. Tagliamonte and Roberts (2005, p. 296) describe the same trend that they found in an intensifier analysis of the television show *Friends*, claiming that if language in the real world is the same as the language in *Friends*, “*so* is the new favorite in American English, surpassing the once primary intensifier *really* in North America”. Regarding the spread of *so* across semantic adjective types, Tagliamonte (2008, p. 379) observes that while the oldest speakers limited their use of *so* to only four of the seven adjective types, the youngest speakers use *so* across all adjective types.

Although *pretty* can function as a downtoner in some contexts and varieties (see Nevalainen & Rissanen, 2002); Biber, Johansson, Leech, Conrad, Finegan, & Quirk, 1999), Tagliamonte (2008, p. 370) regards *pretty* as scaling the meaning of the adjective up in Toronto English, be it with less force than other intensifiers. For the Toronto community, results show a steep increase of *pretty* from oldest to youngest speakers, reflecting the rapid change. Regarding the degree of delexicalization of *pretty* in the community, Tagliamonte (2008, p. 374) observes “an advanced profile” among all age groups, with *pretty* occurring in attributive structures as well as in predicative structures across all speaker generations.

The following hypotheses are put forward by Ito and Tagliamonte (2003, p. 262) and are tested here:

- i Correlation of intensifiers with particular linguistic contexts can be related with their degree of delexicalization.
- ii Correlation of intensifiers with social factors tap into the social evaluation of the particular intensifier within the community.
- iii Examination of I and II may enable us to track the interrelationship between linguistic and social factors in language change.

3 Data and methods

To test these hypotheses, this study conducts a pilot project in a large collection of vernacular speech materials, and operationalizes quantitative variationist methods to capture, holistically, the local system of intensification over time.

3.1 The Victoria English Archive

The analysis in the current study is concerned with Victoria English, a variety of Canadian English as represented by four corpora within the Victoria English Archive. The current project includes data from the Diachronic Corpus of Victoria English (DCVE; D’Arcy, 2011-2014a), consisting of oral histories from the University of Victoria Archives and the British Columbia Archives, and data from the Synchronic Corpus of Victoria English (SCVE; D’Arcy, 2011-2014b). This latter collection contains the speech of 162 local Victorians, obtained through sociolinguistic interviews that were carried out in 2011 and 2012. The corpora include speakers of different ages, sex and social and educational backgrounds. Together, the DCVE and SCVE contain “133 consecutive years of local English, reflected in just over 300 hours of casual speech” (D’Arcy, 2017, p. 44). Because of the casual nature of the speech and the stratification of sex, age and educational background of the speakers, the Victoria English Corpus provides a suitable means for examining language variation in a local context.

3.2 Selection of speakers

As a pilot study, a carefully constructed subsample of the Victoria English Archive (VEA) is required. 18 speakers were selected on the basis of their age at the time of recording and their sex. To capture patterns of intensifier use in (apparent) time, participants were divided into three age cohorts, as outlined in Table 1.

Table 1. Subsample of the Victoria English Archive

<i>Birth year cohort</i>	<i>Age at Time of Recording</i>	<i>Corpus</i>	<i>Males</i>	<i>Females</i>	<i>Total</i>
1870-1890	73-91	DCVE	3	3	6
1940-1960	51-70	SCVE	3	3	6
1970-1990	21-41	SCVE	3	3	6
Total					18

3.3 Procedure

When speakers talk about their life experiences and tell personal stories, they use their most casual language, as this style elicits the least amount of attention to speech (Tagliamonte, 2012, p. 27). Furthermore, emotional language is common

in casual speech; intensifiers are relatively frequent. The first parts of the interviews in the VEA were often not yet concerned with stories but with introductions in which the interviewer did most of the talking. Thus, for data extraction, the first hundred words spoken by the interviewee were excluded to ensure that the analysis would cover those parts of the interview that were more vernacular. From this point, thirty tokens were extracted from each speaker and coded for the social and linguistic predictors. Statistical analyses were carried out in GoldVarb X (Sankoff, Tagliamonte, & Smith, 2015), a multiple regression tool designed for descriptive and inferential statistics of variable linguistic data.

3.4 Circumscribing the variable context

In variationist sociolinguistics, the envelope of variation is circumscribed so as to isolate the locus of variability and set aside invariant contexts. Application of the principle of accountability (Labov, 1972) is also critical, such that all possible contexts of intensification are extracted from the data. In other words, “every variant that is part of the variable context, whether overtly realized in a system or not”, should be accounted for (D’Arcy, 2015, p. 457). This means that the current project includes instances where intensifiers were overtly realized as well as those where they are not but are licensed to occur. Isolating the ‘zero contexts’ can be a complicated task, but a comprehensive circumscription of the variable context ensures that all variants in the variable context will be uncovered.

To isolate the variable context for intensifiers, we first need to determine the linguistic structures in which they occur most frequently. Bäcklund (1973, p. 279) reports that intensifiers collocate most frequently with adjectives and therefore have the quintessential function of adjectival modification (D’Arcy, 2015, p. 458). Thus, following previous studies of intensifiers in North American English (Ito & Tagliamonte, 2003; Tagliamonte, 2008), the proposed study is concerned with adjectival heads only. Within this linguistic category, only those sentence constructions that could be intensified are considered tokens. Thus, a token with the adjective *hard* as in (4a), is included, but not with adverb *hard* (as in 4b).

- (4) a. It was just me and my grandma and it was *really* hard to lose her that way. (GK52m/1959)
 b. Since I moved back to Victoria we’ve been trying *really* hard to get that relationship back. (GK52m/1959)

Furthermore, the analysis includes only contexts that permit intensifiers and excludes those that do not. Therefore, a token such as (5a), in which the speaker talks about the *kinds* of jobs, not the *degree* of oddness, is excluded. Along the same lines, (5b-c) are excluded because, respectively, the degree of poorness and newness are irrelevant.

- (5) a. He was in London and just doing *odd* jobs when he saw a ship in the Thames loading. (WLB Young/1873)

- b. My *poor* brother had the marks for ages. Bitten all over his face. (Roberta E. Robertson/1871)
- c. Buildings are being torn down and *new* ones replacing them. (MD71f/1940)

Other sentence constructions in which intensifier use is not permitted are those that contain comparatives, superlatives and other constructions (6a-b). Constructions involving the lexical items *too* and *so* in which their function is other than intensification (6c-d) are also excluded.

- (6) a. I've always been *more* mature for my age. (FF31m/1980)
- b. The *funniest* part is I remember every year standing in front of the corner grocery store [...]. (GK52m/1959)
- c. We thought *so* much of them *that* everybody chipped in and bought [...]. (WLB Young/1873)
- d. Wow this is *too* great not *to* share. (MV61f/1950)

The analysis is concerned with affirmative tokens alone; negative contexts such as (7a-b) are excluded. Ito and Tagliamonte (2003, p. 264) explain that intensifiers in negative contexts do not have the same boosting or maximizing meaning as is expressed by intensifiers in affirmative contexts. For example, 'not very old' in (7a) does not mean the negation of being very old; instead, it means that the speaker was relatively young. Therefore, 'not very old' has the same meaning of a downtowner. Similarly, in (7b) the speaker is not saying that she very much did not like Victoria, but instead she is saying that she moderately disliked Victoria. However, tokens such as (7c-d) are included because the adjectival head is not immediately under the scope of negation:

- (7) a. She was there for a period when we were not *very* old like ten or eleven. (CA21f/1990)
- b. They tried but in this area, so close to the water here, it's not *very* good. (EM61m/1951)
- c. She said she didn't know there was *so* many different animals. (Catherine Maclure/1890)
- d. It's not Victoria where it's Ø hard to find a place to live. (VM23m/1988)

This circumscription of the variable context provides a consistent framework for extracting individual tokens and ensures that the analysis of lexical intensifiers as well as the zeroes can be replicated in future studies. In the analysis, I test for the contribution of linguistic predictors as well as social factors of speaker age and sex to determine the relative importance of these predictors in apparent time.

3.5 Linguistic predictors

This analysis incorporates three linguistic predictors sourced from the literature: double intensification, adjective type, and adjective function.

Whereas intensifiers can occur on their own to ‘scale up’ the meaning of an adjective, speakers can also iterate or combine them with other intensifiers to further increase their meaning. Previous studies on intensification (see Méndez-Naya, 2017) distinguish between repetition of the same intensifier or *iteration*, as in (8a), and *co-occurrence* of two different lexical intensifiers, as in (8b).

- (8) a. Oh some *very very* good food stores oh some excellent food stores.
(WLB Young/1873)
- b. I was *so very* bored with fourth grade level. (CA21f/1990)

As outlined above, the current study is concerned with intensifiers that modify the meaning of adjectival heads. Therefore, the semantic type of the adjective that is being modified is a linguistic predictor. The examples in (9) illustrate the semantic categories as constructed by Dixon (1977) that are commonly used in research on intensifiers (e.g. D’Arcy, 2015; Ito & Tagliamonte, 2003).

- (9) a. *Dimension (e.g. big, large, small, long, short)*
Life was opening up in a *very big* way. (Lottie Bowron/1879)
- b. *Physical property (e.g. hard, soft, heavy, hot, rough, sweet, sick)*
I’m not very tall but I’m *quite* beefy. (MB70m/1941)
- c. *Color (e.g. red, blue, black)*
It was *really really* red yesterday. (example taken from Tagliamonte, 2008, p. 377)
- d. *Human propensity and/or emotion (e.g. jealous, happy, kind, clever)*
They were *quite* stumped as to why I was there. (MV61f/1950)
- e. *Age (e.g. new, young, old)*
I remember thinking that she was *super* old. (RT41f/1970)
- f. *Value (e.g. good, bad, proper, perfect, interesting, important)*
It was *very* interesting for us to see all those European cities.
(Catherine Maclure/1890)
- g. *Speed (e.g. fast, quick, slow)*
I was *pretty* slow and I didn’t really like it. (MD71f/1940)
- h. *Position (e.g. right, left, near, close, far)*
Shotbolt’s drugstore, which was *very* close to Government Street.
(Joseph Clearihue/1887)

Adjectives that could not be assigned to these categories were grouped together as ‘other’. These adjectives are often concerned with characteristics of a person that are not physical properties or human propensities as described by Dixon (*wealthy, English*), or describe characteristics of abstract concepts (“the economy is so

unsettled”, “they had a very rough time”), often embedded in a predicate structure introduced by ‘it’ (“it’s very difficult for me”, “it was really frustrating”).

The third linguistic predictor is the syntactic function of the intensifying adjective. The spread of an intensifier across functional types provides insight to its stage of delexicalization (Ito & Tagliamonte, 2003; Lorenz, 2002; Partington 1993). In an earlier stage, the intensifier occurs mainly in attributive contexts (10a), whereas it occurs in predicative ones in the last stage of delexicalization (10b):

- (10) a. Everybody had *a hell of a* good time too. (WLB Young/1873)
 b. They were *very* religious. (MV61f/1950)

Having defined the social and linguistic predictors, we can now turn to the distributional and multivariate analyses.

4 Results

4.1 Overall distribution

Table 2 reports the overall distribution of intensification in the subsample. The original extraction phase resulted in 540 tokens. Closer examination of the individual speakers revealed that one female in the oldest age group was an outlier: she accounted for more than half of the occurrences of *so* in the cohort. As a result of this anomalous pattern, she was excluded from further analyses, resulting in a total of 17 participants and 510 tokens. Table 2 reports these results, where the overall frequency of intensification is 44.3 per cent (nearly identical to the 45.7 per cent when all speakers were included). This rate is relatively consistent with that reported by Tagliamonte (2008) for Toronto English (36.1%).

Table 2. Overall distribution of intensification in the VEA

Total N = 510			
<i>Intensified</i>		<i>Not intensified</i>	
%	N	%	N
44.3	226	55.7	284

4.2 Intensifiers

The question is, what is the distribution of individual forms within this aggregated set of results? The distribution by lexical intensifier is given in Table 3. The majority of forms are highly infrequent in the dataset. Therefore, the main intensifiers are reported individually while those that occurred fewer than ten times each (e.g. *awfully*, *absolutely*, *super*) were categorized as ‘other intensification’. Not one speaker used only a single intensifier; all speakers exhibited variation,

using at least three different variants. Thus, the findings support the hypothesis of diachronic change and synchronic competition (Ito & Tagliamonte, 2003, p. 261).

Table 3. Distribution of intensifiers by lexical item (Total N = 510)

Lexical item	%	N
<i>very</i>	19.8	101
<i>really</i>	7.8	40
<i>pretty</i>	4.7	24
<i>quite</i>	3.1	16
<i>so</i>	2.9	15
other intensification	5.9	30
zero intensification	55.7	284

The most frequent intensifier by far is *very*, accounting for nearly 20 per cent of the data. The second most frequent form, at 7.8 per cent overall, is *really*. Frequencies for *pretty*, *quite* and *so* are below 5 per cent. With 4.7 per cent of representation in the data, *pretty* rapidly follows *really* and is the third most frequent intensifier in Victoria English. This finding supports Tagliamonte's (2008, p. 370) observation that *pretty* is one of the most frequent intensifiers and that it is characteristic for North American speech in the twentieth century. *Quite*³ and *so* occur with around 3 percent of all intensified adjectives. This is a small dataset, but on the basis of a previously documented upward trend for *so* (Tagliamonte & Roberts, 2005, p. 280; Tagliamonte, 2008, p. 369), we predict that frequencies for *so* will be higher in the youngest age group when more Victoria English speakers from the late 1990s are added to the analysis. The question is, how do the data distribute across time and across speaker groups, and what effects from the linguistic predictors obtain? It is only through careful examination of the patterns in the data that the hypotheses outlined in §2.4 can be addressed.

Only 17 tokens of double intensification are found in the data. Similar to findings for Present-Day English documented by Méndez-Naya (2017, p. 252), the analysis shows that iteration of intensifiers (e.g. *very very nice*) (N=12) is more common than co-occurrence (e.g. *so very bored*) (N=5). These Ns are too low to include double intensification as a factor in further analyses. Therefore, from this point forward, the iteration tokens are included in the lexical category of the iterated intensifier, and the co-occurrence tokens are included in the category of *other intensification*.⁴

³ While *quite* is a downtoner in British English (Ito & Tagliamonte, 2003, p. 278), in North American English it is used as an adverb that intensifies an adjective.

⁴ Despite the low frequency of double intensification, analysis of the tokens with iteration and co-occurrence may provide insight into the development of the forms that were

The analyses in the following sections concentrate on the intensifiers that account for more than 5 per cent of modifiable adjectival heads: *very* and *really*. It is these forms that will be subjected to multivariate analysis. For the less frequent intensifiers —*so*, *pretty*, and *quite*—overall distributions will suffice, as the small token numbers render significance testing problematic (see, e.g. Guy, 1975).

4.3 Speaker age

Tagliamonte (2008, p. 371) argues that intensifier patterns develop rapidly, with change occurring in short periods of time. Therefore, by comparing frequencies of lexical intensifiers between the different age groups, changes in frequency of lexical intensifiers in Victoria English over time can be uncovered.

As illustrated in Table 5, the oldest participants use intensifiers the most (51.3%), while the middle age group uses intensifiers the least (38.9%). Intensifier frequency in the youngest age group lies in between (44.3%). Overall, these findings seem to counter previous assumptions that intensifiers are more frequent in speech of younger speakers than in that of older speakers (Paradis, 2000; Tagliamonte, 2008). However, the results in Table 4 show an increase in the youngest age group (b.1970-1990) compared to the middle one (b.1940-1960).

Table 4. Distribution of intensification
in Victoria English by speaker age

Birth year	%	N
1879-1890	51.3	150
1940-1960	38.9	180
1970-1990	43.9	180
Total N		510

combined. Iteration with *very* (e.g. *very very* tall) is most frequent among the oldest speakers (N=4) and declines in the middle (N=2) and youngest age groups (N=1). Together with the rise of *really*, iteration with *really* (e.g. *really really* fun) is isolated to the middle-aged (N=1) and younger speakers (N=1). These results seem to support the view that iteration can function as increasing established forms ‘as their frequency increases, grammaticalization progresses and their pragmatic force weakens’ (D’Arcy, 2015, p. 475). Co-occurrence of different intensifiers (e.g. *so very* bored, *pretty damn* tough) (N=5) is found more in the older cohort (N=3) than in the middle-aged (N=1) and younger one (N=1), contrasting with D’Arcy’s (2015, p. 475) findings in New Zealand English. The individual lexical intensifiers in the co-occurrences are highly variable and consist mostly of less established intensifiers, confirming Méndez-Naya’s (2017, p. 51) findings; no specific patterns of co-occurrence emerged.

Patterns of intensifier change become visible when frequencies of individual intensifiers are regarded according to speaker age. The temporal trajectories for the five most frequent intensifiers in the data are demonstrated in Figure 1.

Figure 1 reveals that *very* is the majority form across almost the entire period, however, the nature of the distribution changes over time. For older speakers, *very* is by far the main intensifier, accounting for over one third of all intensified adjectives, aligning with Tagliamonte's (2008, p. 361) observation that *very* is the most frequent intensifier among older speakers of North American English. In the oldest age group, all intensifiers other than *very* are minority variants. *Very* drops remarkably in the middle-aged speakers, remaining the most frequent form but competing robustly with *really*, *pretty* and *quite*. Only among younger speakers does it lose its majority status and is there a robust layering of competitors.

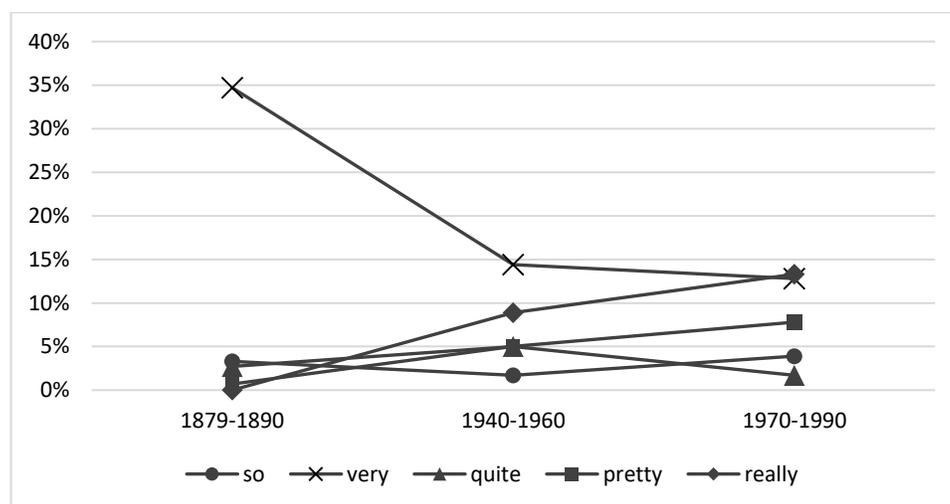


Figure 1. Overall distribution of main intensifiers by birth year

Considering that *really* is hardly attested among the oldest speakers, born in the late nineteenth century, this intensifier increases rapidly over time; among the younger speakers it reaches the same frequency as *very*. Overall, our findings for *really* and *very* in the current analysis support the suggestion that *very* as an intensifier is becoming less popular (Tagliamonte, 2008, p. 261) in English, while the incoming form of *really* is favored more strongly over time.

Tagliamonte (2008, p. 361) also found that *so* and *pretty* are increasing. In Victoria, the frequency of *pretty* is rising slowly but steadily from around zero percent in the oldest age group to nearly 5 per cent in the youngest age group. Indeed, it leads both *quite* and *so*, which have frequencies of around 3 per cent among younger speakers. In contrast with previous work, the frequency of *so* is fairly stable over time: the younger speakers in this sample seem to use *so* as often as the older speakers, with a decrease in frequency in the middle age cohort. The opposite trajectory is found in Toronto English, in which *so* is also a 'minor

variant’, but it is most frequent in younger speakers between 13 and 29 years old and less frequent in the speakers over 50 years old (Tagliamonte, 2008, p. 372). Again, it needs to be noted that the frequencies for *pretty*, *quite* and *so* are low, and that adding more speakers in future analyses might generate more robust trajectories.

4.4 Speaker sex

Table 5 demonstrates that the females in the sample intensify more frequently than the males. Although previous studies (Ito & Tagliamonte, 2003; Stoffel, 1901; Jespersen, 1922) have reported associations between the frequency of intensifiers with speech of females, a multivariate analysis (not shown) comparing the frequency of intensified tokens between males and females in the current study shows that the effect of sex on the total number of intensified tokens is not significant ($LL = -349.267, p = 0.18$).⁵

Table 5. Distribution of intensification in the VEA by speaker sex

Sex	%	N
females	47.5	240
males	41.5	270
Total N		510

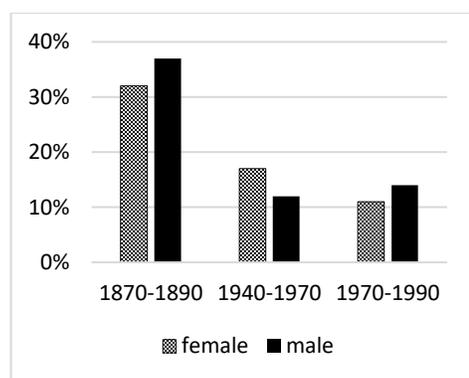


Figure 2a. Distribution of *very* across sexes and age cohorts

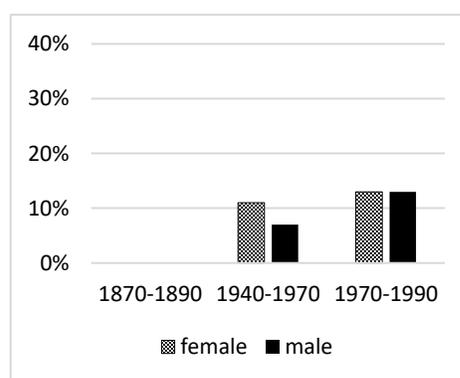


Figure 2b. Distribution of *really* across sexes and age cohorts

⁵ Future analyses of these materials should include the predictor of emotionality of the adjective (cf. Peters, 1994; Tagliamonte & Roberts, 2005). Exploring this property of the intensified adjective will provide insights for the question of whether women’s suggested ‘fondness’ (Stoffel, 1901, p. 101) of intensification is a result of their tendency to discuss more emotional topics than men.

As they occur relatively frequently, *very* and *really* can be examined more closely in terms of how they pattern across sex and age groups. Figure 2a shows that, for *very*, differences in frequencies between men and women are not stable between age cohorts. The males in the sample use *very* more often than females in the oldest and youngest age group, while the middle-aged females use more *very* than the males in that age cohort. The apparent time trajectory for females is a steady decline in frequency of *very*, whereas for males *very* declines only in the middle age group after which the rate of *very* fluctuates only slightly and appears to be effectively stable. These results contrast with Tagliamonte's (2008, p. 385) findings in Toronto English, that show that, overall, women used more *very*.

For *really*, the middle-aged females start out with higher frequencies than the males of the same age (Figure 2b). There is a larger increase of *really* in the youngest group for the males than the females, resulting in the same frequencies of *really* in the youngest speakers. Again, these results contrast with patterns of *really* in males and females of different age groups in Toronto English, where women between 20 and 30 years old use *really* much more frequently than their male counterparts (Tagliamonte, 2008, p. 384). Lastly, the data presented in Figures 2a and 2b seem to support the hypothesis that women lead linguistic change: they part with *very* more steadily than men and start out with higher rates of the incoming form of *really* than their male counterparts.

4.5 Semantic type

Table 6. Overall distribution of intensifiers by semantic type of the adjective

Semantic type	%	N
speed	100	3
other	73.9	46
age	64.3	14
physical property	62.5	24
human propensity	52.1	90
position	44.3	7
value	38.4	245
dimension	23.5	81
color	0	0
Total N		510

As Table 6 demonstrates, intensifiers are found with all semantic adjective types as described by Dixon (1997), except for the semantic adjectives of color. This does not mean that the intensifier system of Victoria English does not allow adjectives of color to be intensified; rather, no tokens were encountered during the extraction phase. Note also that although they appear to be frequently intensified, the semantic categories of speed and position are infrequently attested in the sample. As such, the overall distributions in Table 6 should be interpreted cautiously. The main observation is that all categories are subject to intensification, as predicted.

As we have seen in Figure 1, *very* is declining in frequency while *really* is increasing. In order to analyze the diffusion of these two most frequent intensifiers, we will now turn to the distribution of *really* and *very* across the different age cohorts and semantic types.

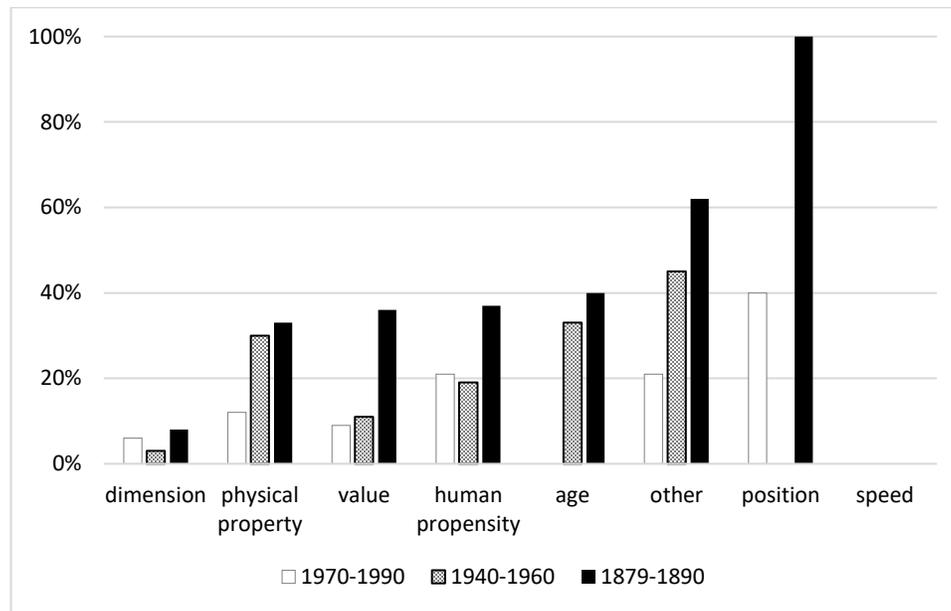


Figure 3a. Distribution of *very* by semantic type of the intensified adjective

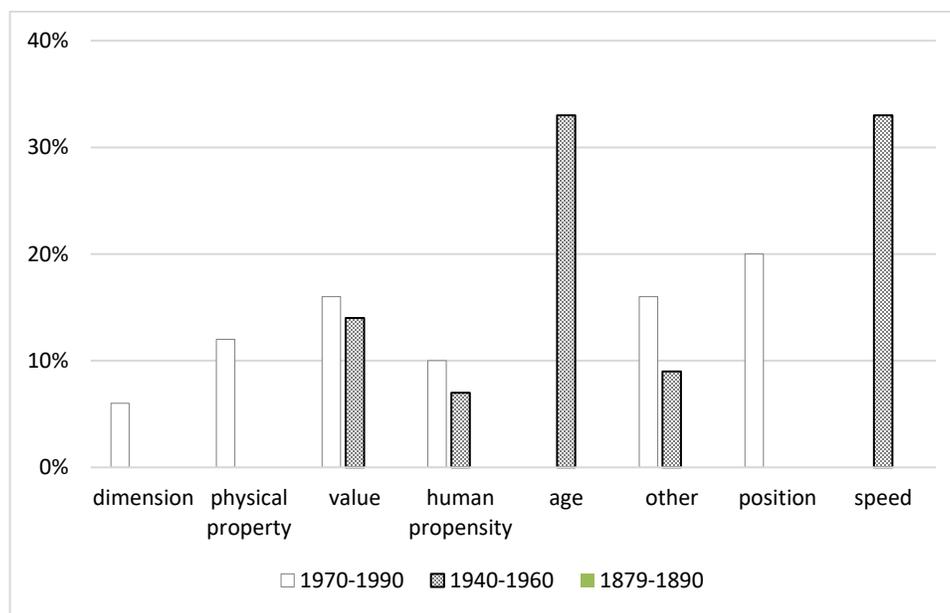


Figure 3b. Distribution of *really* by semantic type of the intensified adjectives

Figure 3a displays the use of *very*. Within the semantic categories of the adjective, the different age groups show remarkable stability: the three different age groups all use *very* and do not limit intensification with *very* to specific semantic adjective categories. The wide spread of *very* despite the great decrease in frequencies among youngest and middle speakers reflects its established position in the language (Tagliamonte, 2008, p. 379). Furthermore, the internal ranking in frequencies of the different age groups is stable: within each semantic type, the oldest age group uses *very* the most and the youngest age group uses *very* the least.

Figure 3b demonstrates the occurrence of *really* across semantic adjective types. While there are no occurrences of *really* in the oldest speakers, the middle age group uses *really* with five of the semantic types, and the youngest speakers shows the largest diffusion of *really* by using it with six of the semantic adjective types.⁶ This suggests that *really* is becoming more general and delexicalized as it collocates more widely among younger speakers.

⁶ Note that the youngest speakers use neither *very* nor *really* with adjectives of age. A closer look at the data reveals that six tokens of age adjectives are found among this age group, of which three tokens are intensified. The intensifier forms that the younger speakers prefer for modification of age adjectives preferred are the minority variants *so*, *pretty* and *super*.

4.6 Syntactic type

Table 7. Intensification in Victoria English according to syntactic type

Syntactic type	%	N
predicative	55	276
attributive	31.5	234
Total N		510

Table 7 shows that adjectival heads in predicative structures are intensified more often than those in attributive structures, which has been documented in previous linguistic studies as well (Ito & Tagliamonte, 2003, p. 272; Tagliamonte, 2008, p. 374). Ito and Tagliamonte (2003, p. 272) even go so far as to suggest that all intensifiers are preferred in predicative rather than attributive positions, and our findings for *very* and *really*, shown in Figures 4a and 4b, seem to support that hypothesis.

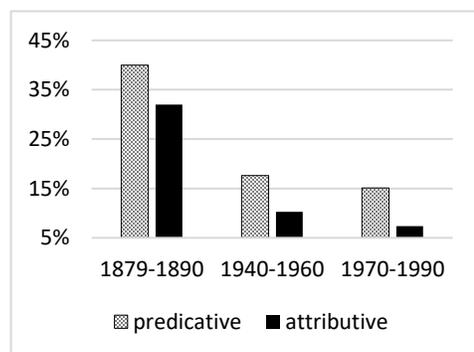


Figure 4a. Distribution of *very* by age and syntactic type of predication

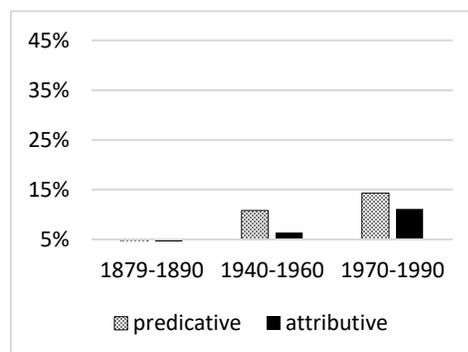


Figure 4b. Distribution of *really* by age and syntactic type of predication

Similar to what Ito and Tagliamonte (2003, p. 272) find for York English, the difference between the two syntactic types is greater with *very* than with *really*. Younger speakers have a strong preference for predicative types when intensifying with *very*, while for older speakers this preference is weaker. Note that the preference for a predication type in younger speakers is largest for *very* and considerably smaller for *really*. This finding indicates that over time, *really* has become more grammaticalized in Victoria English, which aligns with findings by Ito and Tagliamonte (2003, p. 276) for York English. Tagliamonte (2008, p. 373) observes a similar pattern for Toronto English, arguing that *really* in younger speakers seems to have reached the final phases of delexicalization, while in older speakers *very* shows this ‘advanced delexicalization’.

4.7 Multivariate analysis

The following sections discuss the relative contributions of the different social and linguistic predictors to the probability of intensification with *very* and *really* in the Victoria English data. Because the other intensifiers (*pretty*, *quite* and *so*) are found in less than 5 per cent of all adjectival heads in the data, the current paper does not discuss the multivariate analyses for these lexical items.

Table 8. Predictors affecting the probability of *very* and *really* in Victoria English

	<i>very</i>			<i>really</i>		
Input	.161			.091		
Significance	0.000			0.096		
Factors	FW	%	N	FW	%	N
<i>Age</i>						
1879-1890	.72	34.7	150	-	0	n/a
1940-1960	.44	14.4	180	[.45]	8.9	180
1970-1990	.37	12.8	180	[.54]	13.3	180
	<i>range</i>	35				
<i>Speaker sex</i>						
female	[.50]	18.3	240	[.53]	12.2	180
male	[.50]	21.1	270	[.47]	10.0	180
<i>Semantic type of adjective</i>						
position	.83	42.9	7	[.64]	16.7	6
other	.76	38.8	49	[.60]	13.3	30
physical property	.62	25	24	[.36]	5.6	18
human propensity	.60	23.3	90	[.47]	8.5	71
age	.53	21.4	14	[.51]	11.1	9
value	.50	18.4	245	[.63]	15.0	167
dimension	.18	4.9	81	[.17]	1.8	56
speed	-	0	n/a	[.81]	33.3	3
	<i>range</i>	65				
<i>Syntactic function of adjective</i>						
predicative	.52	20.5	278	[.51]	12.7	228
attributive	.47	19.0	232	[.48]	8.3	132
	<i>Range</i>	5				
Total N			510			360

4.7.1 *Very*

The multivariate analysis in Table 8 reports the contributing factors to the probability of *very* and *really*. The external factor of speaker age is selected as a significant and strong contributor to the frequency of *very* (range of 35). With a factor weight of .72, the older age groups have a significantly stronger preference for *very* than the younger speakers, who tend to disfavor *very* (FW= .37). Predictable from Figure 2a, speaker sex does not have a significant effect on the occurrence of *very*.

Both linguistic factors tested in this analysis are selected as main effects. The multivariate analysis confirms that *very* occurs in a wide range of semantic adjective types. As the category of speed adjectives has too few tokens, this semantic type is added to the ‘other’ semantic types category. Although there are only 7 tokens of position adjectives, this semantic type strongly favors intensification with *very*. Adjectives of physical property, human propensity, and other semantic adjectives favor *very* as well. With factor weights of .53 and .50, age and value adjectives are marginal for *very*, neither favoring nor disfavoring this intensifier, while the semantic adjective type of dimension (FW= .18) strongly disfavors *very*.

The second internal factor, syntactic function of the adjective, is also significant but has a considerably smaller range than the semantic type (respectively 5 and 65). *Very* is favored slightly more in predicative (FW = .52) than in attributive (FW = .47) structures, supporting Ito and Tagliamonte’s (2003, p. 276) claim that intensifiers are preferred with predicative adjectives. To conclude, the multivariate analysis confirms Tagliamonte’s (2008, p. 373) suggestion that *very* is diffused into a wide range of adjectival categories and thus entrenched in North American English. Furthermore, the analysis confirms the patterns that were discussed on the basis of the overall distributions for the effect of age and syntactic function on the probability of *very*.

4.7.2 *Really*

For the analysis of *really*, the data from the oldest speakers, where no tokens of *really* are attested in the dataset, were removed from the multivariate run. The results show that no factors significantly contribute to the probability of *really* in Victoria English⁷ (Table 8).

The results show that the middle-aged group seems to prefer intensification with *really* more (FW= .54) than the youngest age group (FW= .45). A comparison between these frequencies and that of the oldest speakers points to the fact that *really* as an intensifier is a newcomer in Victoria. On the basis of similar findings

⁷ The overall distribution of *really* across speaker sex and age suggest a possible interaction between these predictors. However, elimination of speaker sex from the multivariate run demonstrates a non-significant effect of speaker age on frequencies of *really* ($LL = -124.674, p = 0.18$).

for *really* in Toronto English (Tagliamonte, 2008, p. 384), we argue that the current study captures the first stages of the diffusion of *really* among the Victoria English speech community and that adding more speakers to the dataset in future analyses will support this hypothesis. Regarding speaker sex, the direction of the effect in the multivariate analysis shows that females seem to use more *really* than males. This is consistent with previous findings (Tagliamonte, 2008, p. 384) and the general hypothesis that females are leading in intensifier change. However, the difference in frequencies of *really* is only visible in the middle age group, and ceases to exist among the youngest speakers.

Regarding the semantic type of the adjective, Table 8 shows that some semantic types have a stronger preference for *really* than others. While speed, position, value and age prefer intensification with *really*, adjectives of dimension and physical property disfavored this. Although Ito and Tagliamonte (2003, p. 276) claim that intensifiers are generally favored in predicate structures rather than attributive structures, for *really* the difference between the two predication types is not as evident in the current study.

5 Discussion and conclusion

Our results demonstrate that the preference for particular lexical intensifiers and their frequency is changing in the Victoria English community. Similar to findings for Toronto English (Tagliamonte, 2008) and York English (Ito & Tagliamonte, 2003), *very* and *really* are used to intensify the majority of the adjectival heads in Victoria English, however, rapid changes are taking place in the frequency and diffusion among the population studied here.

Although lofty rates of intensifiers are often associated with the language of young speakers (Paradis, 2000; Tagliamonte, 2008), results of the current study do not fully support this hypothesis. The most evident difference between older and younger speakers is found in their preference for the type of lexical intensifiers. Preference for *very* is waning in younger speakers, while *really* is hardly ever found in the oldest speakers but is steadily making its way up in middle aged and younger speakers. In the youngest speakers, *really* and *very* reach the same frequency. These findings confirm patterns of increasing preference for *really* and decreasing use of *very* found in Toronto English (Tagliamonte, 2008, p. 361) and seem to point to *really* as the new favorite in Victoria English. Following Tagliamonte's findings (2008, p. 361), we predict that the magnitude of this upward trajectory of *really* becomes even more visible if speakers of a younger generation are added to the analysis in future studies.

Speaker sex does not have a significant effect on the probability of *very* or *really* in our sample. However, the distribution of *very* across sex and age cohorts shows that women are more stable in gradually parting with *very*, while the males show a less steady but still declining trend. Furthermore, distributions for the incoming form *really* show that middle-aged women started out with higher rates than their male counterparts. These findings seem to support the hypothesis that women lead intensifier change (Jespersen, 1922, p. 248). More generally, findings

for age and speaker sex in the current study support the hypothesis that “correlation of intensifiers with social factors can be taken to tap into the social evaluation of particular intensifiers within the community” (Ito & Tagliamonte, 2003, p. 262). Due to low token numbers, the current study is not able to uncover the social evaluations of the more recent incoming forms in North American English, that of *pretty* and *so*. Therefore, we suggest that more data be added in future studies in order to examine whether the pattern in Toronto English, of young males preferring *pretty* and young females preferring *so* (Tagliamonte, 2008, p. 388), can be uncovered in Victoria English as well. These studies should consider the emotional value of the adjective (Peters, 1994, p. 101; Tagliamonte, 2008, p. 381) as a relevant factor in the discussion of possible sex differences in intensifier use.

The mechanisms underlying change of *very* and *really* in Victoria English can be understood in terms of the delexicalization process of both variants. *Very* is decreasing in frequency, but even in the youngest speakers, who rarely use it, it still collocates with a wide range of semantic adjective types and in both predicative and attributive structures. For *really* to become as entrenched in Victoria English and as delexicalized as *very* already is, it will have to reach similar frequencies across the different semantic and syntactic contexts. We observe that diffusion across semantic types in the middle-aged and youngest age group is already relatively large and the youngest age group does not seem to prefer *really* in one syntactic structure over the other, indicating advanced steps in the delexicalization process. Therefore, we argue that the trajectories for *very* and *really* in Victoria English support the hypothesis that the degree of delexicalization of an intensifier can be inferred from their collocation patterns with particular linguistic contexts (Ito & Tagliamonte, 2003, p. 262).

Beside the new incoming lexical forms, double intensification as a tool of increasing meaning of the individual intensifiers is rare but present in the data. Frequencies of iteration and co-occurrence in the data are similar to those found in previous studies on Modern English (D’Arcy, 2015; Méndez-Naya, 2017), suggesting that certain patterns in double intensification can be found across different varieties of English. Therefore, future studies could take a closer look at double intensification as a means of increasing the intensifying force of a single intensifier, the delexicalization processes of the single intensifiers that are combined, and the height of the competition with other intensifiers.

Frequent, diffused and long-time use of intensifiers will lead to a weakening of their force and the speakers’ need for stronger forms that boost emotional intensity. The Victoria speech community welcoming new forms, such as *really*, into their intensifier system, and decreasing their use of more entrenched intensifiers, such as *very*, is therefore part of an ongoing process of language change. Tagliamonte (2008, p. 392) even goes so far as suggesting that “the waxing and waning of intensifiers is actually a requisite of the feature for the speech community”. Tracking the ways in which linguistic and social factors interact in language change can therefore provide valuable insights into the current trends of intensifiers in Victoria English.

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Co-constructing simple and complex frames using repetition and evaluation in Taiwanese family dinner talk

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Building on past research that uses Goffman's (1974) framing theory to analyze family interaction, I use discourse analysis to demonstrate how a frame, or "definition of the situation," can be co-constructed by using repetition as a linguistic strategy and evaluation in stancetaking per Du Bois' concept of the "stance triangle" (2007). I also adopt Gordon's (2009) theorization that frames can be "laminated" when participants interpret the current event as having more than one definition. This suggests that frame is an interactive achievement that requires collaboration of both speakers and listeners. I examine four excerpts of dinner talk in Mandarin Chinese among members of a Taiwanese family to illustrate how "topic structure" and "participant orientation," as outlined by Schiffrin (1993) in the delineation of multiple frames, play a key role in the co-construction of both relatively simple and more complex frames. Findings show that family members may attend to different words or other linguistic units and position themselves to different stance objects. As they evaluate the topics differently in the stance triangle, their evaluations influence how the frames in the interaction are co-constructed. Whether a frame is created as intended depends not only on the speaker's production but also on the listener's corresponding response. Also, by establishing different alignments and assuming relational roles, family members can evoke several frames that are layered in complex configurations, such as a parenting frame laminated on top of a reporting frame when the father reports medical test results as a topic while orienting to the son in a parent-child alignment by evaluating the son's behaviors. The study contributes to the extant research on framing theory by considering repetition and evaluation as resources to flesh out participant alignments and adds to the literature on family discourse a case study of a Taiwanese family.

Keywords: frame lamination; repetition; evaluation; stancetaking; family dinner talk

1 Introduction

Taking the perspective of interactional sociolinguistics that conversation is built on collaboration between speaker and listener (e.g., Tannen, 2005), I ground this study in the notion that conversation is a practice in which participants "use talk to

achieve their communicative goals” (Gumperz, 2015, p. 313). In this paper, I investigate the co-construction of “frames” as proposed by Goffman (1974, 1981), or what Tannen and Wallat (1993) call “interactive frames,” to see how both speakers and listeners collaboratively define the situation in family dinner talk. This study adds to the discussion of how frames are laminated, or layered, in discourse, as theorized by Gordon (2009), by examining how family members invoke and manage multiple definitions in one situation at once. To illustrate how the participants in the study create alignments, I incorporate Du Bois’ concept of the “stance triangle” (2007) to highlight their evaluations of topics in the conversation and in so doing, reconfigure the frames to create cohesion in interaction. More specifically, I analyze the use of repetition, described by Tannen (2005) as an involvement strategy, to show how frame lamination is achieved through mutual ratification on the parts of both speakers and listeners. This analysis extends existing research by showing how frame co-creation occurs in the context of family dinner talk in Mandarin Chinese, especially through the discourse strategy of repetition and the mutual orientation to a shared stance object. Also, it shows how listener and speaker sometimes achieve joint framing, while other times failing to do so, in relatively simple versus more complex interactions (i.e., when frames are laminated). Further, this study contributes to the research on framing theory by considering the stance triangle to locate and identify participant alignment in the co-construction of frame.

Past research suggests that although the formation of a frame often coincides with the introduction of a new topic, whether a frame is maintained and how it is developed depend not only on the speaker’s production but also on the listener’s reception, namely, on the interaction between all participants (e.g., Gordon, 2008; Hoyle, 1993; Kendall, 2006). Frames, as a communicative achievement, are how participants guide each other in understanding the conversation, and therefore, framing is not a static result but a dynamic process of constant negotiation in interaction. In this analysis, I present four excerpts as examples to emphasize the importance of responses in the creation and negotiation of frames. The first part (§4.1) is the comparison between two interchanges: in one, the frame does not take form as the speaker intends because the listener fails to pick up on relevant “contextualization cues” (Gumperz, 1982), while in the other, the frame is established from mutual recognition of the cues, as is evidenced by the participants’ use of repetition. The second part (§4.2), building on the configurations of laminated frames identified by Gordon (2009), gives a comparison between two complex frames: in one, the speaker initiates the discussion and the listener reacts in a way that corresponds, contributing to the formation of “blended frames.” In the other, the speaker initiates a similar discussion but the listener responds in a mismatched way, giving rise to another frame that is layered differently.

2 Theoretical background

2.1 Frame, repetition, and evaluation

A frame, as Goffman (1974) puts it, is “a definition of the situation” that “allows its user to locate, perceive, identify, and label” current events (p. 21). A frame can be evoked by what Gumperz (1982) terms “contextualization cues,” which he defines as “any feature of linguistic form that contributes to the signalling of contextual presuppositions” (p. 131). When situated in a “joking frame,” for example, an utterance is to be interpreted as a joke (i.e., as non-serious) by the participants. A mismatch of framing can occur when one fails to pick up relevant cues and does not perceive the utterance as intended, thereby defining the current event otherwise. As participants create frames they also take up footings (Goffman, 1981), or alignments, within those frames; thus, a joking frame entails participants taking up non-serious footings vis-à-vis what is said.

This aspect of frame is further elaborated by Tannen and Wallat (1993) in their study of a medical encounter involving a pediatrician, a child, and the child’s mother that was videotaped for demonstration to students. In their definition, “interactive frame” refers to “what is going on in interaction” (p. 59) and is co-constructed along with participants’ alignments. Tannen and Wallat identify three distinct frames that the pediatrician juggles simultaneously: social encounter frame (where the pediatrician uses a teasing register to address the child), the pediatric examination frame (where the pediatrician uses a flat tone to report the findings for videotaping), and the consultation frame (where the pediatrician uses a conversational register to address the mother). Each of the frames is characterized by markedly contrasting linguistic and paralinguistic cues. The pediatrician aligns with different audiences within different frames. For example, within the examination frame, she uses a reporting register and addresses future pediatric residents who will watch the video (e.g., Her tympanic membrane was thin, and light) while in the consultation frame, she talks to the mother in a question/answer structure (e.g., answering the mother’s question with As you know, the important thing is that she does have difficulty with the use of her muscles). While focusing on the pediatrician, Tannen and Wallat also demonstrate how the mother and child’s responses contribute to the framing of the activity.

In investigating frames in my data, I propose highlighting participants’ responses, as the listeners repeat and circulate certain words, phrases, or other syntactical units. Responses are a constructive way to look at frames as well as their shifts, maintenance, and lamination. As Goffman (1981) explains regarding responses, “they tell us something about the individual’s position or alignment in what is occurring” (p. 35). In other words, responses lend us insights into participants’ alignment as they tell us “what is occurring,” that is, a frame. This idea underlies Goodwin’s (1996) analysis of four examples of frame shifts. Goodwin (1996) argues that the understanding of an activity “emerges through the mutual and collaborative framing of the activity in progress by the recipient as well as speaker” (p. 81). Her analysis emphasizes how the ways participants respond to

ongoing talk trigger those shifts. An example shows how the addressed recipients in a storytelling event initiate joking talk instead of attending to the storyteller, thus “opening up a complex conversational floor” that is subordinate to the main floor (p. 73). This corresponds to Schiffrin’s study (1993), in which she observes that different sections of her sociolinguistic interview data are “characterized by radically different topic structures and participant orientations” (p. 251). In her data, she differentiates in-frame, between-frame, and out-of-frame sections as the participants maintain the interview structure (in-frame) at one time and put it on hold at another (out-of-frame). Following her approach, I look specifically at “topic structures” and “participant orientations,” that is, alignments, in the excerpts of my data to elucidate the transformations of frames.

In order to supply an account for that, I focus on the linguistic strategy of repetition as a way of examining participants’ uptake and their responses to previous utterances. Repetition is predominantly useful in that “it bonds participants to the discourse and to each other” (Tannen, 2007, p. 61). When a word is repeated by the listener, there is a strong implication that it is taken up, and that to both parties, it stands out as a thematically salient part of that specific interchange. Repetition, according to Tannen, is not simply the reiteration of words; rather, it creates what she calls “involvement” in terms of mutual participation in sense making (p. 62).

While alignment is fundamental in framing, as Goffman (1981) points out, there is still much to learn about how alignment is built and how it can be gauged. Therefore, to delineate participants’ alignment in conversations, I borrow Du Bois’ (2007) model of the “stance triangle” to show how speakers simultaneously evaluate objects, position themselves, and align with others (p. 163) in the process of stancetaking, as illustrated in Figure 2. In taking a stance, a stancetaker evaluates the stance object by attributing certain qualities or values to the object (p. 143). Positioning refers to how the stancetaker situates self in relation to the stance. Alignment is defined as “the act of calibrating the relationship between two stances, and by implication between two stancetakers” (p. 144). Identifying the stance objects, pinpointing the stance participants take, and outlining their evaluation of the stance objects make transparent the organization of the relations between them. This makes clear the participant alignments in interaction, and thus helps illuminate the construction and transformation of frames.

In the second part of my analysis (§4.2), I extend the concept and build on Gordon’s (2009) model of frame lamination when I analyze frames in more complex configurations. I identify two types of multilayered frames in the data previously identified by Gordon: “embedded frames” and “blended frames.” “Embedded frames,” in Gordon’s terms, “refers to a situation in which a frame with a more specific metamessage is completely embedded in a frame with a more general metamessage,” such as when pretend play between a mother and child becomes a reenactment of a specific prior experience (p. 141).

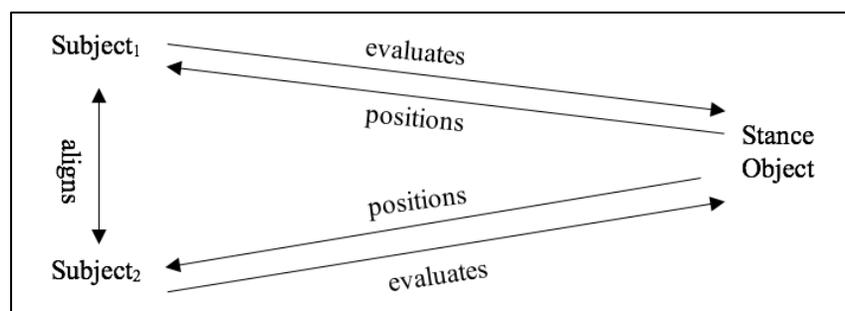


Figure 1. The stance triangle (Du Bois, 2007, p. 163)

A metmessage, (following Bateson, 1972 and Tannen, 2005) indicates how participants mean what they do and say. As for “blended frames,” Gordon (2009) defines “blending” as a more intentional discourse strategy (p. 161). This is contrary to the “leaky frame” that Tannen and Wallat (1993) notice in the medical setting where the pediatrician accidentally utters, to the child and in the social encounter frame, a technical term with a playful tone. An example of a blended frame Gordon identifies is that a mother uses role-play in a play frame to teach her daughter manners, thus simultaneously invoking a parenting frame (p. 164).

2.2 Methodology

In the analysis, I focus on repetition to map out the topic structures and evaluation to identify participant alignments. As noted in section 2.1, a participant may invoke a frame by raising a new topic as a contextualization cue. Nonetheless, it also depends on the subsequent interaction whether the frame is maintained, reconfigured, or dismissed. A topic structure can emerge as an interchange revolves around a certain topic that is marked by the reoccurrence of particular lexical items or syntactic structures. Repetition becomes important for this purpose. To show that certain lexical items are picked up and repeated, I boldfaced them in the excerpts. This goes to substantiate that both the speaker and the listener are participating collaboratively in the process of making sense of what is going on, namely, the co-construction of a frame.

I then analyze how each family member, through their participation, displays what they think stands out as important in the interaction and how they evaluate these topics. Tracing the relations between evaluation, positioning, and alignment in the stance triangle, I am able to tease out alignment or misalignment between family members, thereby illustrating whether a frame is constructed as agreed upon by the participants or a mismatch occurs because of their varying evaluations of topics. Similarly, evaluation serves to show how multiple frames can be laminated at once as the participants give the current event more than one definition.

3 Data

The data under analysis is a segment of family dinner talk among my family. The entire audio recording, 34 minutes in length, was collected on January 13, 2016, at a food court during my stay in Taipei, Taiwan in the winter break. The participants of the conversation include my parents, Tom and Jane, both in their fifties, my younger brother, Jacky (age 18), and me (age 25). I explained to them the purpose of the study, which is to better understand interactions between Taiwanese family members when they eat out, and obtained their consent to have the conversation recorded. They were each assigned a pseudonym. The recorder, which is my phone, was placed in the center of the table, amidst our dishes. The conversation was then transcribed for analysis (see Appendix A for transcription conventions).

The conversation is the first one being recorded in a corpus of my family eating out, consisting of 23 hours of audio recording in total. This segment is selected for the comparison it offers: an interchange between my brother Jacky and me, as compared with one between my father Tom and me, show how frames can shift in a stretch of interaction as the topic structure and participant alignment change. The conversation is in Mandarin Chinese, the first language of all four family members. The transcript was glossed and translated into English (see Appendix B for Pinyin and Appendix C for gloss).

A relevant piece of background knowledge about this part of the conversation is that a few days earlier I had a physical examination arranged by my dad, Tom, who had been concerned about my health conditions, as I had been living abroad. Prior to our dinner that day, he went to the hospital to retrieve the report and consulted with the doctor. At the point where the transcript begins, Tom is absent from the table to pick up his food, while Jane is just about to leave the table. Around the same time, my brother, Jacky, is scrolling newsfeeds on his phone, probably seeing something that prompts him to bring up the first topic of the recorded conversation. The transcript ends with the topic back to food, especially Korean food because Tom, Jane, and Jacky are taking a trip to Korea the next month.

4 Analysis

In this section, I analyze four excerpts from the transcribed data by comparing them and highlighting the linguistic and interactional differences to demonstrate how frames are created through moment-by-moment interaction between participants. In section 4.1, the comparison of the first two excerpts showcases how the listener's reactions influence the construction of a relatively simple frame. I demonstrate how, through repetition and by evaluating a stance object, a frame is created not by a single utterance of the speaker but by the mutual collaboration of both the speaker and the listener. In section 4.2, the final two examples highlight how listener and speaker co-create laminated and more complex frames.

4.1 Repetition and evaluation in simple frames

I begin with the simple frames to isolate the determining factor in the formation of a frame for the purpose of making a comparison: shared stance object. Both excerpts presented share two things in common: (a) Jacky and I are the only two participants, and (b) Jacky raises the topics. While the creation of frames sometimes coincides with the introduction of new topics, frames should by no means be equated with discussions of various topics. The two examples show a discernible difference in regard to topic structures and participant alignments, and therefore, the formation of a frame; the difference is revealed through repetition and participants' evaluation of the subject matters.

4.1.1 A mismatch in frame caused by mismatched repetition and evaluation

First, I show how a frame mismatch can grow out the participants' focus on two different stance objects. In (1a), Jacky brings up the topic of the Liberation Army, the armed forces of the People's Republic of China (*So the Liberation Army is going to attack us.* line 3), and provides his evaluation in the next line (*It's so unbelievable.* line 4). My response, however, immediately shows a mismatch. As Schiffrin (1993) points out, "language evokes a number of potential frames within which a next utterance can be interpreted" (p. 255). I do not interpret Jacky's words in a way that ratifies his evaluation.

- (1a) 3. Jacky: Suǒyǐ **jiěfàngjūn** yào dǎ wǒmen le. <laughter>
so liberation.army will attack 1PL-ASP
 'So **the Liberation Army** is going to attack us.'
 <laughter>
4. Chāo kuāzhāng de.=
super unbelievable DE
 'It's so unbelievable. ='
-
5. Ping: =Nǎlǐ de rén shuō de a.
Where-GEN person say DE PT
 '=Who said that.'
-
6. Jacky: **Jiěfàngjūn** zìjǐ fāwén jiǎng de.
liberation.army self post speak DE
 '**The Liberation Army** post online themselves.'
-
7. Ping: Wǒ zhīdào a. Nà nǐ zài nǎlǐ kàn dào de lǐ.
1SG know PT Then 2SG LOC where see-RES DE PT
 'I know that. I mean, where did you see that.'
-
8. Jacky: Liǎn shū xīnwén ba hǎoxiàng shì.
Facebook news ASS seem BE
 'Facebook news, I guess.'
-
9. Ping: N hēng.
uh huh
 'Uh huh.'
-

10. Jacky: Ránhòu tā shuō qián- qián **jiěfàngjūn**
 jūnguān
and.then 3SG say former former liberation.army
commander
 ‘And then it said, former- former **Liberation Army**
 commander’
11. zài fā wénzhāng zhè yàngzi.
PROG post article this.manner
 ‘posted an article.’

In lines 1-11, Jacky introduces the Liberation Army as a topic, whereas I focus on where he got the information. Then in line 12, as shown in (1b), I pick up the element “Facebook” that Jacky does not intend to elaborate. From there, our focuses diverge: he moves on talking about what he read before while I remain focused on Facebook. Twice Jacky uses the discourse marker “ran hou,” which means “and then” in English, to persist with the topic (*And then, it said- said a lot. So annoying.*, line 19). The persistence technique (Tannen, 2005) can be seen as his efforts to maintain the current frame. However, I do not participate in the same construction and my repetition of the word is not central to the discussion he initiates. An incongruity of the topic structure appears and causes the frame to shift.

- (1b) 12. Ping: Zài **liǎnshū** shàng o
LOC Facebook up PT
 ‘On **Facebook.**’
13. Jacky: Dāngrán bù kěnéng yòng **liǎnshū** a tāmen
of.course NEG possible use Facebook PT 3PL
 ‘Of course not. They can’t use **Facebook.**’
14. Tāmen- tāmen shì yòng tāmen de wǎngzhàn
3PL 3PL BE use 3PL-GEN website
 ‘They- they used their own website.’
15. Ping: Nǐ hēng.
uh huh
 ‘Uh huh.’
16. Jacky: Sōuhú.
Sohu
 ‘Sohu website.’
17. Ping: Ō duì hòu tāmen bù nénggòu yòng **liǎnshū**.
PT yes PT 3PL NEG can use Facebook
 ‘Oh right. They can’t use **Facebook.**’
18. Bù huì yòng **liǎnshū**.
NEG will use Facebook
 ‘Won’t use **Facebook.**’
19. Jacky: Ránhòu jiù: Jiǎng shuō, jiǎng yīdà duī hǎo chǎo o.
and.then just say say say huge CLF so noisy PT
 ‘And then, it said- said a lot. So annoying.’

20. Kànle zhēnde hěn bú shūfú.
See-ASP really very NEG comfortable
 ‘Seeing that made me very uncomfortable.’
-
21. Ping: <laughter>
22. Jacky: Zài pèi shàng- xiǎngxiàng tāmen de kǒuqì- jiùshì kǒuyīn.
again pair up imagine 3PL-POSS tone just accent
 ‘And together with- imagine their tone- accent, I mean,’
23. Jiù zhè yàng- ē. ((acts annoyed))
Just this.manner ugh
 ‘Just like that- ugh.’ ((acts annoyed))
24. Bù yào zhè yàng jiǎnghuà
NEG must this.manner talk
 ‘Don’t talk like that.’

Based on Du Bois’ (2007) model of the stance triangle, Jacky’s utterances, including “so annoying” (line 19), “making me very uncomfortable” (line 20), and the response cry “ugh” coupled with a nonverbal act of his facial expression (line 23), display explicit evaluations of the stance object, the Liberation Army and their announcement, thereby positioning himself as taking a disfavoring stance toward the object. In contrast, I do not take up a stance toward the same object, instead putting my attention on the topic of “Facebook.” The discrepancy in the ways Jacky and I take our stances in terms of making evaluations of the stance objects points to a divergent alignment (Du Bois, 2007: 164). In other words, Jacky seems to be inviting me to also evaluate the Liberation Army, and thereby position myself to align with him, and I fail to do so.

4.1.2 Co-constructing a frame through repetition and matching evaluation

While (1) illustrates that Jacky and I are hardly communicating within the same frame as a result of the mismatched topical focus and our misalignment regarding the stance object, (2) serves as a contrasting example in which the repeated word or phrase is recognized by both of us and leads to a more cohesive discussion. Toward the end, we make matching evaluations of the same stance object, thus putting us in alignment.

Prior to (2), after Jacky fetches my meal at the counter, he relays to me what the clerk has told him (She said you can have the soup refilled., line 34) and makes a comment on the soup (*It’s such a good deal.*, line 36). The word “soup” triggers his recent memories of having hotpot with his friends in the dormitory, and prompts him to recount the past event. As soon as he finishes, I make a remark (*How could you not add salt.*, line 47) on his explanation of not adding salt to the hotpot (*Be- because not adding salt- if not adding salt*, line 46). And from this point on, there is a cluster of repetition in our conversation. The word “salt,” or more precisely, the syntactic structure of negative phrase “not add salt,” is repeated by both of us in this section.

- (2) 46. Jacky: [Yīn-yīnwèi] **méi jiā yánbā**, méi jiā yánbā dehuà
because NEG add salt NEG add salt COND
 ‘[Be- because] **not adding salt-** if not adding salt’
-
47. Ping: Zěnme kěyǐ **bù jiā yánbā** =
how can NEG add salt
 ‘How could you **not add salt.**’
-
48. Jacky: =Wǒmen **méi yǒu yánbā**
IPL NEG have salt
 ‘=We **didn’t have salt.**’
49. Méi yǒu rén huì tèdì mǎi yánbā zài sùshè fang zhe
NEG have person will specially buy salt LOC dorm put-DUR
 ‘No one would bother to buy salt and have it in the dorm room.’
-
50. Ping: Nà cóng jiā lǐ dài jiù hǎo la
then from home inside bring just good PT
 ‘Just bring it from home.’
-
51. Jacky: A: Méi yǒu rén xiǎngdào
PT NEG have person think-RES
 ‘Ah: no one thought of that.’
52. Wǒmen zhǐ yǒu shā chá jiàng
IPL only have barbecue.sause
 ‘We **only** had barbeque sauce.’
-
53. Ping: <laughter>
-
54. Jacky: Shā chá huǒguō a
Barbeque.sauce hotpot PT
 ‘Barbeque hotpot.’
55. Tāmen chī hǎo jiànkāng ō, dōu shishūcài, ránhòu ròu sī
3PL eat so health PT all vegetable and.then meat slice
 ‘Their diet was so healthy; all vegetables, sliced meat,’
56. Bǐjiào shǎo zhīfáng de zhūròu
COMP little fat GEN pork
 ‘Pork with less fat.’
-
57. Ping: Shūcài, jiùsuàn shūcài **bù jiā yánbā** yě huì hěn kěpà
vegetable even vegetable NEG add salt also can very terrible
 ‘Vegetables- even vegetables taste terrible **without adding salt.**’
-
58. Jacky: <laughter> Chāo nán chī de
super difficult eat DE
 <laughter> ‘It tasted so bad.’

The fact that the word “salt” and the phrase “not add salt” are repeated several times evidences that both Jacky and I find it significant in the conversation. Eventually we come to make a like-minded evaluation toward the topic, soup

without salt (*taste terrible*, line 57 and *It tasted so bad.*, line 58). In the stance triangle, both Jacky and I are the stance subjects, evaluating the same stance object, that is, “soup without salt.” And by doing so, we are in a convergent alignment. Because of this alignment, we collaboratively build on each other’s words with repetition and thus, co-construct the “discussion of soup without salt” frame.

4.2 Evaluation in complex frames

In the second part of the analysis, I move on to discuss how the listener’s responses shape complex frames, that is, frames that are laminated. Goffman (1981) notes that frames can be laminated. Extrapolating on this idea, Gordon (2008, 2009) explores different configurations of multi-layered frames in family discourse, which include overlapping frames, embedded frames, and blended frames. In the excerpts below, I identify two types of laminated frames in the recorded transcript: blended frames and embedded frames. “Blended frames,” as Gordon discerns, is an intentional discourse strategy where “two definitions of interaction are being signaled at once” (2008, p. 323). “Embedded frames,” on the other hand, is when a more specific metamessage is completely embedded in a more general one, rather than distinct from each other (2009, p. 141)

Again, I compare two excerpts which have two things in common to draw attention to the deciding factor that causes the different formations of frames. In both excerpts, Tom and I are the primary participants who are engaged in those discussions, and secondly, Tom is the one who initiates the discussions by bringing up the topics while I am the one being directly addressed. The two excerpts below exemplify how frames are negotiated and transformed during interaction because of the different linguistic strategies I use such as telling narrative in response to Tom’s utterances.

4.2.1 *Blending reporting frame and parenting frame through father-son alignment*

In line 154 (*The results of your physical exam came out.*) in the extract below, Tom introduces the topic of my physical examination because he had picked up my report from the hospital earlier that day. From line 154 to 178, he briefs me on some items about which the doctor informed him. The way he initiates the discussion can be said to “invoke” a reporting frame, but as demonstrated in earlier sections, another participant’s responses can fundamentally contribute to the formation of this frame. In other words, if I did not pick up Tom’s cues, acknowledge his intention to make the report, and hence, respond in a corresponding manner, this frame would not take form as the speaker, Tom, intends. Also, along with the results, Tom also makes comments that are pertinent to those items he mentions, thereby simultaneously evoking a parenting frame that is characterized by relational footings between Tom and me. Below I boldfaced my responses to his words and code how Tom reports and evaluates the information

the doctor gave him and gives directives to me (the child) as a parent at the same time. “He” in line 155 refers to the doctor.

- (3) 154. Tom: Nǐ nà gè hōu, nǐ nà gè tǐjiǎn chūlái
2SG that CLF PT 2SG that CL physical.exam come.out
 ‘So, about you. The results of your physical exam came out.’
155. Jiù shì tā shàng cì jiǎng nà gè
just BE 3SG up time say that CLF
 ‘It’s that thing he mentioned last time.’
156. Gān de zhǐshù yǒu yī gè bǐjiào gāole yīdiǎndiǎn
Liver-GEN score have one CLF COMP high-ASP a.little.bit
yes NEG yes
Report ‘One of your liver function scores is a little bit high, right.’
-
157. Ping: **N hēng?**
uh huh
‘Uh huh?’
-
158. Tom: Nà gè zài shāowéi zhùyì yīxià jiù hǎo le
that CLF again slightly pay.attention a.little just good
ASP
Directive ‘Just pay a little extra attention to that, and it should be fine.’
159. Bù yào áoyè
NEG must stay.up
Directive ‘Don’t stay up late.’
-
160. Ping: **Ō.**
oh
‘Oh.’
-
161. Tom: Fǎnzhèng nǐ de gān mùqián shénme dōu
anyway 2SG-POSS liver currently what all ultrasound
what all ok
Report ‘Anyway, for now your liver looks fine, ultrasound and everything.’
162. Yě méi yǒu B gān, yě méi yǒu C gān, shénme dōu méi yǒu.
also NEG have B liver also NEG have C liver what all
NEG have
Report ‘No HBV, no HCV. Nothing.’
-
163. Ping: **N hēng.**
uh huh
‘Uh huh.’
-

164. Tom: Nà gè zìjǐ yào zhùyì, bù yào áoyè.
that CLF self must pay.attention NEG must stay.up
Directive ‘Pay attention to that yourself. Don’t stay up late.’
165. Ping: **Hǎo.:**
yes
‘Ok.:’
166. Tom: Ránhòu hái yǒu yī gè hǒu.
and.then still have one CLF PT
 ‘And then, there’s one more thing.’
167. Dǎnnáng yǒu yī gè xiǎo xí ròu la, dǎnnáng
Gallbladder have one CLF small polyp PT gallbladder
 ‘There’s a polyp in the gallbladder. Gallbladder.’
168. Ping: **N̄ hēng**
uh huh
‘Uh huh.’
169. Tom: Hēi, tā shuō nà gè yě méi yǒu guānxi
PT 3SG say that CLF also NEG have relation
Report ‘He said that’s fine too.’

The participants’ alignment can first be examined with Du Bois’ stance triangle. In this part of the conversation, Tom and I are both stance subjects in the talk. Tom reports on my health information that the doctor provided, including the doctor’s evaluations of test results. He evaluates the information as truthful by reporting it, and as actionable my making suggestions how I might improve my health. In this way, Tom also evaluates my physical conditions. The pattern of our interaction shows the stance we take. I reply with “continuers,” in Schegloff’s (1981) terms, like uh huh, to show my understanding of the stance I take toward this talk, while “passing an opportunity to produce a full turn of talk” (p. 81). That is to say, I recognize the form and nature of this interchange between him and me: Tom is the dominant speaker who possesses the knowledge or information that I do not have, and thus, I reduce my speech to entirely continuers. In this way, my minimal responses as a listener’s reception facilitate Tom’s reporting act as a speaker’s production; together, our interactions co-construct the “reporting of my physical examination” frame.

It should be noted that Tom’s reporting of my physical conditions is more than simply repeating what the doctor said; it is a way for him, as a parent, to monitor and evaluate my health. Furthermore, his use of directives in line 159 and 164 (*Don’t stay up late*) and line 158 and 164 (*pay attention to that*) also accomplishes the blending of the reporting frame with a parenting frame. He expresses his concern about my health on one hand, and on the other, “problematizes” my lifestyle while evaluating my physical conditions. Similar to what Ochs and Taylor (1992) point out in their analysis of dinnertime data – that family members often assume particular roles (p. 303), as in Goffman’s (1981) idea of “footings” – Tom takes up the role as a “problematizer,” who “renders an action, condition, thought or feeling... problematic” (p. 311). Tom’s and my

utterances in (3) reflect our footings; as Tom brings in the issue of my lifestyle, he takes up the stance of a concerned father and blends the initial reporting frame with the parenting frame. My responses, or continuers, contribute to the formation of the blended frames; I take up the complementary footing, the role as a “problematizee,” by allowing Tom to evaluate my conditions and my behaviors and thus, aligning in a father-son relationship that underlies the parenting frame. Thus, in this extract, we see that while a reporting frame is evoked by the topic structure that Tom creates and is supported by participant orientations indicated by my ratifying responses, a parenting frame is laminated on top of it when the Tom and I respectively assume different roles that are typical of parent-child interaction.

4.2.2 Story frame embedded in “discussion of weight” frame as a response

Following the previous interchange, Tom later adds one more piece of the results and mentions my body weight in line 198 (*Also, your body weight is slightly too low*). (4) begins almost in an identical way as (3): Tom directly addresses me while bringing an item to my attention and calling it into question. However, the interaction exhibits drastic differences in that I do not respond with continuers.

- (4a) 198. Tom: Ránhòu, nǐ tǐzhòng shāowéi qīng le yī diǎn,
Then 2SG body.weight slightly light ASP a.little
 ‘Also, your body weight is slightly too low.’
199. yào liùshísān gōngjīn cái kě.
Have.to 63 kilogram only okay
 ‘It has to be at least sixty-three.’
-
200. Ping: Wǒ yǒu zài nǚlì le.=
1SG HAB PROG work-ASP
 ‘I AM trying.=’
-
201. Tom: =Nǐ cái liùshíyī. <laughs>
2SG only 61
 ‘=You are only sixty-one.’ <laughs>
-
202. Jane: Nǐ xiànzài chàbùduō yīnggāi yě yǒu liùshísān le ba
2SG now around should also have 63 ASP ASS
 ‘You should be around sixty-three by now.’

In this excerpt, my utterance in line 200 (*I AM trying.*) shifts footing among the participants – I am not simply a recipient of information but offer information about my own health practices. As the conversation continues, I again change the way I respond, and also change my footing, which, according to Goffman (1981), “implies a change in the alignment we take up to ourselves and to the others present as expressed in the way we manage the production or reception of an utterance” (p. 128), especially in relation to Tom’s previous footing as the problematizer who evaluates. Through realigning, I disrupt the formation of the previous reporting frame when I adopt a different linguistic strategy, narrative, as my response. This

frame, using Gordon's (2009) term, is "embedded" in the discussion frame, as shown in Figure 4a and Figure 4b below.

After a long pause, I provide a narrative from line 209 to 216, in which I recount my encounter with my former supervisor at school earlier that day. Not having seen me for almost five months, the head teacher also made a remark on my body, saying that I seemed to have lost weight. Her utterances position me in an unfavorable way because it contradicts how I position myself: the head teacher's description of my body image discounts my efforts to gain weight. In the telling of the story, I make the evaluation (*It's just (.) just frustrating.*, line 216) exactly because of this contradiction.

- (4b) 209. Ping: Wǒ jīntiān qù gāomíng le.
I today go Kao-Ming ASP
 'I went to Kao-Ming today.'
-
210. Tom: Nǎ.
AFF
 'Um-hm.'
-
211. Ping: Ránhòu, nà gè zhǔrèn kàn dào wǒ, tā shuō,
Then that CLF head.teacher see-RES ISG 3SG say
 'And then, the head teacher saw me. She said,'
212. "Nǐ yòu biàn shòu le."
2SG again become thin ASP
 'you've lost weight again.'
-
213. Tom: Ō [*<laughs>*]
oh
 'Oh.' [*<laughs>*]
-
214. Ping: [Wǒ jiù xiǎng shuō,] kào yào ō, [wǒ zài táiwān]
Isg just think say cry.hunger PT ISG LOC Taiwan
keep eat thing PT
 '[I was like,] what the fuck, I've been eating all
 the time in Taiwan!'
-
215. Tom: [*<laughs>*]
-
216. Ping: Jiùshì hěn (.) Hěn cuòzhé.
It is very very frustrating
 'It's just(.) just frustrating.'
 (2.0)
-
217. Jacky: Měi gè rén dōu yǒu yī gè shàngxiàn,
every CLF person all have one CLF up.limit
 'Everyone has a maximum weight limit.'
218. xiàng wǒ shàngxiàn jiùshì qīshí'èr, ránhòu jiù shàng bù
 qù le.=
like ISG up.limit just 72 then just up NEG
AND ASP
 'Like mine is seventy-two. Can't go over.='

At first sight, I appear to raise a new topic. But when it comes to what Labov and Waletzky (1967) call the “complicating action” in a narrative structure in line 211 and 212 (*And then, the head teacher saw me. She said, and “you’ve lost weight again.”*), it becomes clear that the story is in fact related to the discussion of my body weight. My narrative is intended as a response to Tom’s judgment about my weight, and therefore, remains within the discussion of body weight. However, based on the two criteria of frame shifting, which I identify as topic structure and participant orientation, the story creates new alignments and is, therefore, told within a new frame. First of all, although the theme of the narrative is connected to the prior talk, reactions from the other participants mark the beginning of a story frame. In line 213 and 215, Tom’s laughter, unlike a mere continuer *Um-hm* in line 210, suggests that he grasps the gist of the story, in which my body weight being too low is dramatized in a real-life event that shows a teacher sharing my father’s concerns. In line 217 (*Everyone has a maximum weight limit.*), Jacky’s response regarding body weight can be conceived of as a linguistic strategy that Tannen (2005) calls “mutual revelation.” This move implies how Jacky interprets my narrative, evaluates the stance object “body weight,” and takes up a supportive footing in the storytelling activity, thus realigning himself vis-à-vis me. What’s more, Tom is no longer the dominant speaker but the story recipient, who does not make a comment problematizing my body weight.

The narrative inevitably invokes a second frame, which would be understood by the other participants to be set in a different time and place. With this narrative, I complicate the configuration of frames, combining the current frame in which family members are engaged in the discussion of body weight and the story frame in which my body weight is accentuated and dramatized. By telling the story, I draw a parallelism between the two frames. My evaluation seems like a reaction to the head teacher’s positioning instead of Tom’s; however, my storyline can actually be mapped onto prior interchange. In line 212 (*“you’ve lost weight again.”*), my utterance corresponds to what Tom says earlier in line 198 (*your body weight is slightly too low.*); likewise, in line 214 (I’ve been eating all the time in Taiwan!), the voicing of my thought can be linked to my words in line 200 (*I AM trying.*) as an instantiation. That is, I am trying to gain weight by eating all the time during my stay in Taiwan. Interestingly, my words in line 216 (*It’s just(.) just frustrating.*), in this vein, are not only the evaluation of the story but also that of the interchange between Tom and me. The configuration of the two frames are illustrated using the figures below (based on Gordon, 2009). The boxes represent the frames. The bolded parts in the right-hand corner indicate the name of the frame, and the line numbers are listed to indicate the utterances that characterize that frame. These figures capture the way frames are laminated in interaction and show that in conversation, participants’ understanding of “what is going on” can operate on several levels at once as they evaluate different topics in stancetaking and orient themselves to establish different alignments, thus contributing to the co-creation of complex frames.

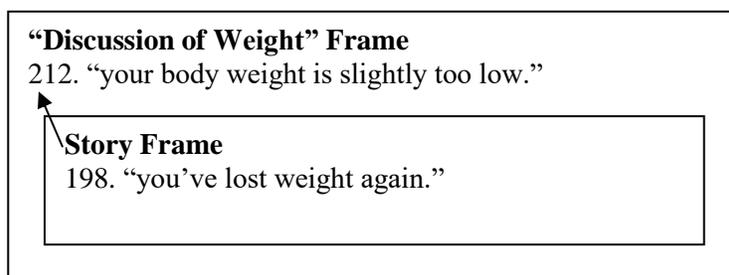


Figure 2a. Embedded frames created by my utterance in the story

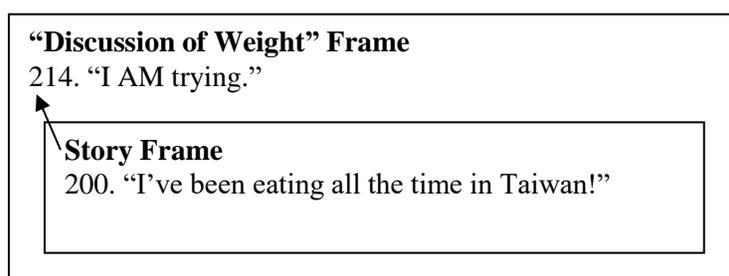


Figure 2b. Embedded frames created by my utterance in the story.

In sum, my responses reconfigure the complex frames by realigning the participants. Though the overarching theme of body weight remains the same, the stance object is altered: while previously it was my body weight being evaluated, from midway through (4) and on, we discuss body weight in a more general sense. In addition, participants’ alignment evolves in the interactions: I do not cooperate in the construction of the reporting frame, and by telling a story, I initiate a story frame. Responding to my story with evaluations, Jacky and Tom take up different footings from those in the reporting frame. The interactions in (4) exemplify the transformations of complex frames and the important role the listener’s responses play.

5 Conclusion

This study extends our understanding of framing by incorporating Du Bois’ theoretical construct of the stance triangle, considering repetition as a specific strategy to display stances, and analyzing family dinner talk in Mandarin Chinese. In this analysis, I have demonstrated how using Du Bois’ stance triangle and highlighting repetition helps us tease apart how framing in discourse happens collaboratively, including how complex frame laminations are accomplished. It is clear that frame is not merely invoked by the speaker; instead, it is negotiated by both the speaker and the listener. Frame should be treated as a part of the collaboration by all participants as they work toward their communicative goals such as commenting on shared opinion and perspective (e.g., discussion of not adding salt) and exchanging information (e.g., reporting physical exam results).

Linguistic strategies such as repetition and the act of evaluation in stancetaking can illuminate framing as a process. When the listener does not pick up a “contextualization cues” (Gumperz, 1982), such as repetition, as intended by the speaker, the frame shifts. Likewise, when the listener responds differently, the change in alignment leads to the reconfiguration of laminated frames. Repetition helps discern how the topic structure is maintained. Evaluation in the stance triangle, on the other hand, helps bring to the foreground participant alignments, which are fundamental to frame formation. Also, the existing research on family discourse on framing has considered primarily White American, middle-class families. This study adds to the work a case study of how frames, both simple and complex ones, are co-constructed during dinner talk by members of a Taiwanese family.

The first part of my analysis (§4.1) focuses on simple frames, illustrating how a frame might not take form when the listener fails to pick up the cues, that is, a specific phrase that one intends to name the stance object, as in (1). The mutual recognition of the topic by the participants can lead to the formation of a frame; this failed to happen in this example where my brother focused on the Liberation Army and its actions and I focused on Facebook. Participants’ agreement on the topic or what is significant in the conversation can be revealed through the use of repetition as shown in (2), where my brother and I talked about salt and soup. The second part (§4.2) focuses on complex frames, including what Gordon (2009) calls embedded frames and blended frames. The two excerpts help illuminate the same idea that the listener’s responses have considerable influences on shaping the frames. Even when the topic remains the same, the frames are still susceptible to the realignment among participants as shown in (3), where my father reports results of my medical exam to me while also parenting me, and (4), where the discussion of my body weight continues, but I tell a narrative within that frame.

A limitation of this analysis is that, as a case study, it considered only one part of the dinner conversation of one Taiwanese family. Future research can build on this idea to examine more examples of dinner talk, and extend this analysis which serves to highlight the co-constructed nature of frames. By analyzing dinner talk among members of one family from the theoretical perspective of framing, I hope to have contributed to the discussion of framing theory and frame lamination in family discourse. By examining repetition and evaluation to identify the frames at work, we get a better picture of the co-construction and lamination of frames in conversation and of how family members come to understand each other’s words in the setting of dinner talk.

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Appendix A

Transcription Conventions

,	Punctuation reflects intonation, not grammar.
?	Question mark indicates rising intonation at the end of a unit
.	Period indicates falling intonation.
=	Equal sign shows latching (second voice begins without perceptible pause)
[Brackets show overlap (two voices heard at the same time)
→	Arrow to the right indicates the speaker continues
<i>Word</i>	Italics indicate emphatic stress
:	Colon following a vowel indicates elongated vowel sound
-	Dash indicates an abrupt stop in speech; a truncated word or syllable

Appendix B

Pinyin (Romanization)

ā	First tone (high); otherwise marked as “a1”	ǎ	Third tone (low); otherwise marked as “a3”
á	Second tone (rising); otherwise marked as “a2”	à	Fourth tone (falling); otherwise marked as “a4”

Appendix C

Gloss			
1	First person	DUR	Durative aspect
2	Second person	GEN	Genitive
3	Third person	HAB	Habitual aspect
AFF	Affirmative	LOC	Locative
AND	Andative	NEG	Negation
ASP	Aspect	PL	Plural
ASS	Assumptive mood	POSS	Possessive
BE	'Be' verb	PROG	Progressive aspect
C	Complement	PT	Particle
CLF	Classifier	Q	Question marker
COND	Conditional	RES	Resultative
COMP	Comparative	SG	Singular

Semiotic analysis of the Facebook postings of grade 11 learners via syntax and semantics

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This paper attempts to analyze the January Facebook postings of Grade 11 Students of Bunguiao National School. The analyses carried out in the paper covered the textual contents of the postings via the interplay of syntax and semantics—that is, the subject of the post, a grammatical function vis-à-vis the semantic role. This paper claims that the forgoing interplay analysis corroborates the findings in the themes (the semantics) of the different contents of the posts, the non-textual postings: photos, smileys/emoticons, and videos. The analyses of the semantic contents of the postings were analyzed via coding, categorizing and theorizing. As this paper is in part qualitative in nature, the participants, whose FB posts have been subjected to analyses, have been chosen purposively. A small facet of the paper involves a quantitative analysis, i.e. the frequency counts of the interpenetration of syntactic and semantic constituents of the textual postings of the participants. At some extent, this paper draws upon the mixed methods approach in its attempt to put the data under scholarly lucubration.

Keywords: Facebook, semiotics, semantics-syntax interface

1 Introduction

Facebook is among the most trafficked social networking sites (SNSs) on the Internet. As of June 2011, *Facebook* is the top ranked SNS in the world (with 550 million users) according to Rambe (2012) as he indicated in his study on Facebook posting-related research. It is inferred that after five years, this number will exponentially have increased as this is manifest in the increase to 1,23bn monthly active users and 757 million daily users who log onto Facebook (Awan, 2016).

Lai and To (2015) aver that social media have become a vital part of social life. And they further claim that it affects the beliefs, values and attitudes of people, as well as their intentions and behaviors. Some people misuse and overuse the liberty afforded to them by Social Networking Sites like Facebook. This has been evident in the study executed by Awan (2016) where he claims that as a result of recent figures that show an increase in online anti-Muslim abuse, there is a pertinent need to address the issue about Islamophobia on social media. Media is drawn upon for purposes of expression of hate or anything other related to it.

As most of the students in Bunguiao National High School possess a Facebook account, it is desiderated that the themes of their posts be analyzed and

synthesized for the purpose of identifying their usual and common Facebook postings in that this can shed light to the guidance that can be made available to them relative to SNS responsible utilization. In the study that was desired to be done, the Facebook posts of senior high school students of Bunguiao National High School were analyzed and synthesized with premium given to the two areas of analysis related to theoretical linguistics: syntax and semantics of semiotics.

Taro (2015) explains that semiotics is the study of signs. Signs take the form of words, images, sounds, odours, flavours, acts or objects but such things have no intrinsic meaning and become signs only when we invest them with meaning. Taro proposes that semiotics is constituted of three branches: *Semantics* which is the relation between signs and the things to which they refer; their denotata (an actual object referred to by a linguistic expression); *Syntactics* which is the relations among signs in formal structures; and *Pragmatics* which is the relation between signs and their effects on people who use them. Furthermore, he delineates the variation among these three branches. Syntactics is the branch of semiotics that deals with the formal properties of signs and symbols. It deals with the rules that govern how words are combined to form phrases and sentences. According to Charles Morris “semantics deals with the relation of signs to their designate and the objects which they may or do denote” (Foundations of the theory of science, 1938); and, pragmatics deals with the biotic aspects of semiosis, that is, with all the psychological, biological and sociological phenomena which occur in the functioning of signs.

Taro (2015) explains the work of Saussure with the following remarks: nothing is more appropriate than the study of languages to bring out the nature of the semiological problem’ (Nature of the Linguistics Sign, 1916). Semiotics draws heavily on linguistic concepts, partly because of the influence of Saussure and because linguistics is a more established discipline than the study of other sign systems.

Gurr (2001) discusses the similarity between the linguistics of natural language and the sub-disciplines’ similar relevance to the study of non-text linguistics. He explicates that the study of natural languages is typically separated into the following categories: phonetics and phonology; morphology; syntax; semantics; pragmatics; and discourse. With the obvious exception of the first, the study of analogous categories in diagrammatic languages is at the same time both highly revealing of differences and similarities between the two forms of representation; and also provides a structure in which to explore the alternative means by which a diagram may capture meaning.

Further, it is elucidated—in relation to linguistics and semiotics—that morphology concerns the shape of symbols. In contrast to typical textual languages, the basic vocabulary elements in some diagrammatic language may include such diverse shapes as circles, ellipses, squares, arcs and arrows. These objects often fall naturally into a hierarchy which can constrain the syntax and, furthermore, inform the semantics of the system. This hierarchy may be directly exploited by the semantics of symbols so as to reflect the depicted domain. In addition to a morphological partial typing, symbols may be further categorised

through graphical properties such as size, colour, texture, shading and orientation. For example, the meaning of symbols represented by circles may be refined by distinguishing between large and small, and different coloured circles. Thus, again, part of the structure in the semantic domain is directly captured by morphological or syntactic features. The primary properties of graphical symbols may be considered to be: value (greyscale shading); texture (patterns); colour; orientation; size; thickness (Gurr, 2001).

The relationship between syntax and semantics is emergent in the study of linguistics or languages. This can be taken into account in the analysis of language. For the purpose of this paper, such analysis was carried out particularly in the syntax and semantics interface of the subject's semantic role. The Ohio State University Press explicates this vividly: The fact that the meaning of a sentence depends on the meanings of the expressions it contains and on the way they are syntactically combined is called the principle of compositionality. As a result, even though all languages have a finite lexicon, they all allow the construction of an infinite number of meaningful sentences. In this sense, syntax and semantics are intimately related.

Jurafsky and Martin (2015) define the semantic roles as representations that express the abstract role that the arguments of a predicate can take in the event. They summarize the semantic roles as follows:

AGENT. The volitional causer of an event
 EXPERIENCER. The experiencer of an event
 FORCE. The non-volitional causer of the event
 THEME. The participant most directly affected by an event
 RESULT. The end product of an event
 CONTENT. The proposition or content of a propositional event
 INSTRUMENT. An instrument used in an event
 BENEFICIARY. The beneficiary of an event
 SOURCE. The origin of the object of a transfer event
 GOAL. The destination of an object of a transfer event

To further explain the foregoing roles, the examples taken from Jurafsky and Martin (2015) are in order:

AGENT. The *waiter* spilled the soup.
 EXPERIENCER. *John* has a headache.
 FORCE. The *wind* blows debris from the mall into our yards.
 THEME. Only after Benjamin Franklin broke the *ice*...
 RESULT. The city built a *regulation-size baseball diamond*...
 CONTENT. Mona asked "*You met Mary Ann at a supermarket?*"
 INSTRUMENT. He poached catfish, stunning them with a *shocking device*...
 BENEFICIARY. Whenever Ann Callahan makes hotel reservations for her *boss*...

SOURCE. I flew in from *Boston*.

GOAL. I drove to *Portland*.

Because this paper provides premium to syntax and semantics, the relationship between grammatical relations and the semantic roles are considered and incorporated in the paper. Summer Institute of Linguistics (2004) has the following to say about the foregoing relations. Grammatical relations (subject, object, oblique...) are morphosyntactic, whereas semantic roles (agent, patient, instrument...) are conceptual notions. Semantic roles do not correspond directly to grammatical relations. Notice what varying semantic roles a subject can play are exemplified in Table 1:

Table 1. Semantic roles of subjects

Sentence	Grammatical relation	Semantic role
<i>Bob</i> opened the door with a key.	<i>Bob</i> = SUBJECT	<i>Bob</i> = AGENT
<i>The key</i> opened the door.	<i>The key</i> = SUBJECT	<i>The key</i> = INSTRUMENT
<i>The door</i> opened.	<i>The door</i> = SUBJECT	<i>The door</i> = PATIENT

For this paper, only the grammatical function of subject was investigated and the semantic role of it was examined.

SIL (International 2004) defines subject as a grammatical relation that exhibits certain independent syntactic properties such as the following: (1) the grammatical characteristics of the agent of typically transitive verbs; (2) the grammatical characteristics of the single argument of intransitive verbs; (3) the particular case marking or clause position; (4) the conditioning of an agreement affix on the verb. SIL defines agent as usually the grammatical subject of the verb in an active clause. A prototypical agent is conscious, acts with volition (on purpose), and performs an action that has a physical, visible effect.

Because this paper is a descriptive qualitative paper, the analysis via coding is pivotal. Categorizing is as vital as a process as coding in a qualitative research project; Lane and Menzies (2015) as they cited Bazeley (2007) say that coding is a classification or indexing of certain parts of a text in order to facilitate comparison and retrieval. Strauss (1987) points out “the excellence of the research rests in large part on the excellence of the coding”. For the semantic analysis of the respondents’ postings, codes were arranged in categories that is a bit different from the codes used by Gerolimos (2011): advertisements, hate speech, friendship, complimentary comments, funny comments, news, offensive language, general comments, religious comments, political comments, complaints, thankful comments, suggestions, directions.

Following what this paper has claimed and cited, the following research questions were investigated:

- i What are semantic roles of the subjects (a grammatical function) in the postings of the Senior High School students?
- ii What are the themes of the semantics of the postings of the Senior High School students in Bunguiao National High School?

The first research question aided in the analysis of the relationship of semantics and syntax as these two are parts of the makeup of the language. The first research question incorporated two levels of analysis—taken from the discipline of theoretical linguistics—in the study of semiotics. The second one showcased the semantic themes of the postings of the informants of the study.

At the syntactic level, the construction and structure of the sentences and symbols (e.g. emoticons) were dissected. The subjects of every sentence were analyzed to make sense of how much I-talk happens in the postings of the senior high school learners. At the semantic level, the meanings of their posts—words, phrases, sentences, discourses, signs, symbols—were looked into with utmost attention. The meanings were categorized according to their semantic content. These analyses and syntheses can aid in the thorough and in-depth scrutiny of the themes of the postings of the senior high school students in Bunguiao National High School. To further give pivotal significance to the amalgam of syntax and semantics, the notions of semantic roles and grammatical relations are incorporated in this paper.

2 Methodology

Thereupon the consent of every informant was given, the analyses were initiated. From the ten informants, five were girls and the other five were boys. The postings for the month of January were the ones that had been dissected. For the participants that had more than 15 postings for the month of January, not all the posts were analyzed but only 15-20 postings were examined. For the rest that did not have more than 15 postings, all their posts were put into examination relative to the analysis carried out.

Every literature—word, fragments, sentences, remarks and the like—was analyzed in two ways: syntactically and semantically. One grammatical feature had to be given premium in this paper: the grammatical function or relation—the subject— of a sentence, and the semantic role or thematic role of the subject. This was given consequential significance in the paper in that the involvement of the ‘self’ in the FB postings had to be looked into for the possible utilization of FB, a social media site, as pedagogical tool for the learners. The learners can draw on their own postings for self-reflection relative to paragraph writing. The postings of the learners in Facebook can be indicative of who they are and thus can be a

supplementary basis for the pedagogues in getting to know their students better as time constraint is practically always an issue to consider.

The syntax of the entire posting—the amalgam of sentential, graphic and pictorial posts—was slightly given attention. Slight attention was given because the dissection of the syntactic features of the entire posting was carried out in conjunction with meaning, the relationship of the semantics of the posts. The syntactic component of the emoticons being placed side by side likewise was analyzed.

In the analysis carried out for each and every posting, coding had to be done. Thereupon the initial coding, another coding had to be executed where related analyzed posts were put together. Subsequently, the initial categorizing from the codes had to be carried out, and whenever another categorizing was deemed necessary, it was carried out. After all the coding and categorizing, theorizing came next. Wellington (2015) explains that one of the cruxes of the qualitative data is the teasing apart or the analysis of the data. He avers that categorizing or coding units, i.e. beginning to create categories, patterns or recurring themes which can gradually be used to ‘make sense’ of the data. He further states that the attempt to subsume subsequent units of data under these provisional categories, or, if units do not fit, then developing new categories in which they can find a home. Wellington further purports that in analyzing data, then in reporting and publishing it, it is important never to claim too much, or “overclaim’ as some call it. In other words, limit (but not over-apologetically) the claims you make about your research. Barbour (2014) explicates that it is possible, even desirable to derive theoretical propositions and frameworks from the raw data generated in qualitative research encounters. This insinuates that the researcher should be attentive to the ideas and terms invoked by respondents and that s/he can draw on their conceptual frameworks in developing explanations.

3 Results and Discussions

3.1 The semantic roles of the subject (grammatical function) of the posts

The numbers in Table 2 represent the number of times where the grammatical element had which semantic role. *Implied* pertains to the implied ‘you’ in a post or the understood subject that is not necessarily the pronoun ‘you.’ *1st per pro* refers to the first person pronoun: *pl* for plural ‘we,’ and *sing* ‘I.’ *2nd per pro* pertains to the second person pronoun ‘you,’ not implied. *Noun* refers to a nouns used in the post at variance with pronouns. The *3rd per pro* refers to the third person pronouns ‘she,’ ‘he,’ or ‘they.’ The non-referential ‘it’ refers to the pronoun like the one that appears in the sentence *It is raining* where the referent is unknown.

Table 2. Quantified grammatical elements of semantic roles

Semantic Role	1. Agent	2. Experiencer	3. <i>Stative(not a semantic role)</i>	4. Experiencer-stative	5. Theme
Grammatical Element					
1. Implied	8	1	4		2
2. 1 st per pro <i>sing</i>	7	2	6	3	
3. 1 st per pro <i>pl</i>	3		1		
4. 2 nd per pro	4	3	5	7	1
5. Noun	5		7		3
6. 3 rd per pro	1		6		3
7. Nonreferential 'it'/referential 'it'			4		

Only three semantic roles for the subjects figured in the postings of the learners: agent, the doer of the action which is done in volition; experiencer, the subject experiences the event in the sentence; and theme, the affected caused by the verb in the sentence.

Stative is labelled alongside the semantic roles to show that some arguments do not necessarily figure as experience. Some, though, clearly qualified as stative with the semantic role experiencer. Jurafsky and Martin (2015) believe that it has proved quite difficult to come up with a standard set of roles, and equally difficult to produce a formal definition of roles like AGENT, THEME, or INSTRUMENT. A difficulty relevant to the definition in the difficulty analyzed by Jurafsky and Martin was understandable relative to the forenamed difficulty in setting the fine line between *stative not experiencer* and *stative-experiencer*.

Among the three semantic roles that figured in the postings of the informants, agent was used by the informants mostly. It can be inferred, according to the data, that there is the active involvement of the item made to be the subject in the sentence. Most of these subjects are 'personal' subjects. Furthermore, other semantic roles did not figure, and as a researcher, it can be deduced that the subject is mostly involved in the postings. This is corroborated by the fact that most of the grammatical elements are personal pronouns including the implied ones.

The semantic role *experiencer* evinces the experiences being shared in the postings. The *stative* feature of some of the posts exudes the expressions of the state of things in the postings apart from the agency and experience that the posters post.

It can then be inferred that the other semantic roles did not figure because the involvement of the poster, his actions, experiences and state do not figure in the other thematic roles.

To more clearly explicate the findings, samples from the data are in order:

- (1) Hinde gat yo tan move on kuneste.
 Neg-intensifier-aspect marker- move on-this
 “I don’t move on from this.”

The subject is ‘I’ and it is the agent:

- (2) Babe, I love you!

The subject is the experiencer and this exhibits a state:

- (3) I’m not perfect.

This is clearly a state, but the concept of experiencer is relatively hard to qualify in this construction.

3.2 Other Syntactic Findings Relative to the Verb

Not indicating the other grammatical items that figured in the informants’ posting would be an utter mistake in accordance to the dictates of research. Other grammatical items like interjection, deictic items, a nominalized clause, one-word adverb, the use of the vocative case, a gerundial subject, the indefinite pronoun, the interrogative pronoun, proper noun, a one-word noun, and a subjectless clause in the Filipino language. This first category falls under *other grammatical items* apart from what was analyzed relative to thematic roles. Some *phrasal constructions* like the ‘subjectless’ fragments and some set expressions likewise figured in the postings of the informants. The third category that figured in the posts was the *just punctuations* where only punctuations were utilized alongside a photo. The last type of postings that figured in the postings of the learners was the *representations* where only acronyms and gibberish characters appeared.

Along the preceding lines, it can be inferred that the postings of some senior high school in Bunguiao National High School are not necessarily full sentences, but they also utilize other items where words and /or emoticons are expected to appear.

The following screen shot in (4) shows an interjection in the posting of one of the informants.

(4) Interjection Posting:



3.3 Themes of the Postings

3.3.1 words, fragments, sentences, remarks and the like

Nine themes came up in the analysis of the first type of postings. These nine themes were further categorized for their relationships and furthermore for their differences from each other. The first main category is the EMOTIVE category (5) where the postings involved the emotions or feelings in the posts. Some of the posts were purely about emotions; some were about boyfriend-girlfriend things that also involved emotions; others were greetings and farewells; others were self-expressions through songs, and some about their faith, which I believe also involves emotions. The second main category which I call the COGNITIVE category (6) involves the use of the mind. The first of this kind were the ones that had something to do with just thinking or the expression of thoughts. The others were descriptive in nature where thinking has to be involved in posting and reading these posts. There are those that are only for the sake of expressing oneself—the so-called *just saying*—and there are those that talked about wisdom. The last and final category for this typology of postings is the PHYSICAL category (7) where the informants appeared to have posted materials that seem to exhibit action in their meaning.

The following items are lifted from some of the informants' posts:

- (5) Emotive
e.g. HISSHHH!

This posting exuded anger or disgust. Alongside this post is an angry emoticon.

- (6) Cognitive
e.g. If you are WORRYING it simply means you CARE !!

This post was analyzed as one that expresses a thought for one to ponder or simply think about. The process of thinking, in this analysis, is done both by the poster and the reader of the posted material.

- (7) Physical
e. g. Panoorin nyo.. laugh trip !!

This appears to be an invitation or an instruction. This type of post was analyzed under the category of PHYSICAL because the meaning seem to evince an action.

3.3.2 *Photos*

From the initial six categories, three categories were used in the analysis of the themes of the photos posted by the SHS student-informants. The first theme found in the analyses of the photos is called *FOR YOUR EYES ONLY* (8). This is called this way because the photos of this kind require the act of *looking* at the photos as they are selfies, groupies, and other photos of other things or objects like houses, paper works and the like. The second theme for the photos is the one that is called *FOR READING* (9) where the photos had words in them and they are deemed descriptive: descriptions like instructional or vulgar. The third theme that was analyzed in the photos posted were the ones called *BEYOND READING AND LOOKING* (10) where the photos had deep emotions, positive and negative alike. Posts under this category may have words, but the emotions that they exhibit qualify them to be analyzed in this category. Photos that seemed to require action in their meanings like celebration were analyzed as being in this category in that to understand meanings like the ones that seem to exhibit action in their meaning.

The following screenshots can facilitate the foregoing discussions:

(8) For Your Eyes Only:



(9) For Reading:



(10) Beyond Reading and Looking:



3.3.3 Emoticons/smiley

The analyses done for the emoticons/smiley generated five themes namely (1) *POSITIVE EMOTIONS*, (2) *NEGATIVE EMOTIONS*, (3) *RESEMBLANCE OF REAL OBJECTS*, (4) *ACTIVE* and (5) *SIGNS FOR SOMETHING ELSE*. In the name of the theme alone, it can be expected that some emoticons utilized are those that evinced positive emotions, e.g. *smiling emoticons, laughter, very big smile, love*; the second, negative emotions, e.g. *broken heartedness, weeping, sadness, disgust, worry, big eyes and small eyes for crazy* (as indicated in the post) an etc. The third are those that are symbols of the real objects, e.g. *money, gun, strong arm, bomb, ackes with candles, flight, boats, water and waves*. The fourth one are the ones that are considered to be active in that they do not just smile but they seem to act in other ways or have acted in other ways apart from smiling, e.g. *messy smiley because of careless eating, party, celebration, travel, kiss, prayer, etc.* The last theme is the one that are representatives for something else, e.g. *peace symbol, heart in place of a verb, smileys with medical masks, snake for double-crossing*.

One feature of emoticon use was to use it in place of a word, e.g. verb for *I love you*. The heart was used in place of the verb love in the sentence. Other graphic figures that appear alongside the emoticons or smileys are counted as emoticons or smileys.

3.3.3 Videos

The fewest materials drawn upon in the postings were the videos. All the videos posted were analyzed as *EMOTIVE*. Music, movies (heavy dramatic), fun, love and sadness were the themes that came up. All these express emotions.

4 Overall Findings & Conclusions

The syntax of the different materials in the posts: WSFR (words, sentences, fragments, remarks, etc.), photos, emoticons and videos all appeared to have *contents* like content words. The functions of the varied functors in a communicative language all seem to appear only in the brain of the reader of the posts. Precisely identical case can be observed in the relationships of the different emoticons used together or used in one posting though not exactly together.

The final analysis done for the postings was the analysis for the entire posts as whole entities. The posts carried a lot of emotions and that is understandable due to the fact that humans are beings replete with emotions. A corroboration can be drawn from the *stative* posts of the informants. Some of the posts were very expressive, and with this an inference that posts are used to disgorge expressions, thoughtful or emotional ones. Some posts suggested some physical activity or actions (kiss, prayer), and this is corroborated with the use of the semantic role agent in some of the subjects and the semantic role experiencer.

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Penetrate science: Gendered descriptions of reproductive biology in online resources

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Textbooks on reproduction have been found to be gender-biased in four main ways: (i) Passive voice used for the female reproductive system (e.g., *is swept, is transported, is fertilized*) and active voice used for male reproductive system (e.g., *penetrates, enters, fertilizes*); (ii) The sequence of terms puts the male term first (e.g., *sperm* before *egg*); (iii) Direction of comparison is most often female compared to male, with less information, or misrepresented information, about the female system; and (iv) The usage of metaphors, such as *vestments* for the egg and *quest* for the sperm, mirror gender-biased roles. These representations do not convey the reality: the female reproductive system is more active, and the male system more passive, than has been portrayed (see Lawrence & Bendixen, 1992; Martin, 1991; Metoyer & Rust, 2011). How are descriptions of reproductive systems represented in different online resources? This question was explored in three online sites: Wikipedia, the Oxford English Dictionary (OED), and Urban Dictionary (UD). Wikipedia webpages were quantitatively and qualitatively analyzed in a similar way as in textbook studies. UD and OED were analyzed based on a word search of reproductive terms. Collectively, these three online resources complement previous studies by illuminating more evidence about how gender biases within the field of biology via language usage have been pervasive historically, and continue to this day. In sum, the male reproductive system has a longer history of usage, people discuss it more on UD, and Wikipedia provides more information on it as opposed to the female reproductive system.

Keywords: Gender; language; egg; sperm; reproduction; Wikipedia; Urban Dictionary; Oxford English Dictionary

1 Introduction

Scientific research is presented in a factual, authoritative manner, especially in textbooks (Campo-Engelstein & Johnson, 2014). However, it is often reported subjectively, based on dominating paradigms (Kuhn 1996) due to cultural biases and preconceptions (Gould, 1996, pp. 53-54), such as the two-sex model within Western culture (opposed by, e.g., Bem, 1993, pp. 80-81; Bing & Bergvall, 1998; Butler, 1990, pp. 9-10). Gender role biases have been argued to be prevalent throughout reproductive and anatomical descriptions in textbooks. Four main ways in which language has been used for gendered descriptions are as follows:

- i “Feminine” language (passive voice, e.g., *is swept, is transported, is fertilized*) has been used for descriptions of the female reproductive system, and “masculine” language (active voice, e.g., *penetrates, enters, fertilizes*, and so on) has been used for descriptions of the male reproductive system (Beldecos et al., 1988; Campo-Engelstein & Johnson, 2014; Martin, 1991; Metoyer & Rust 2011).
- ii The sequence of terms favours the male before the female (Campo-Engelstein & Johnson, 2014; Lawrence & Bendixen 1992) such as *sperm* before the *egg*, or, in general, sections of the male reproductive system before the female reproductive system.
- iii Female biological systems are presented in comparison to the male systems more often than the reverse, such as *The Perineum* versus *The Female Perineum* (Lawrence & Bendixen, 1992, p. 930) or sperm “production” versus egg “degeneration” processes (Martin, 1991, pp. 487-488), with the amount of information disproportionately favouring the male system (Lawrence & Bendixen, 1992, pp. 928-930), and/or omission of information, or incorrect information for the female system (Campo-Engelstein & Johnson, 2014, pp. 207-210; Metoyer & Rust, 2011, pp. 188-193).
- iv Metaphors and/or similes reflecting gender biases have been used (Beldecos et al. 1988; Campo-Engelstein & Johnson 2014; Martin 1991), such as the eggs “vestments”, “corona” (crown), and the sperm’s “quest” to “rescue” the egg before it dies (Martin, 1991, p. 490).

A range of textbooks has been analyzed in the studies just mentioned, yet, to my knowledge, no study has explored how this information is conveyed on the internet. Thus, the research question presented is this: How are descriptions of reproductive systems represented in different online resources?

Previous studies build upon cultural preconceptions of gender roles being mirrored in scientific descriptions. They thus serve to reinforce a social discourse of stereotypical gender roles through biological essentialism (Bem, 1993, pp. 9-13; Gilbert & Fausto-Sterling, 2003, p. 238). Gilbert and Fausto-Sterling argued that developmental biology informs us about how we are created, born, and become “sexed”. In other words, developmental biology plays a critical role in our self-definition. Therefore, it is important to provide descriptions that are neutral, balanced, and objective, as best as possible. This is especially pertinent regarding educational materials. With the advent of the internet, there are various online resources to discuss and read about on these topics. This offers a rich area of potential research using these previous studies as the groundwork laying out a methodological framework to explore online resources. To answer the research question, I investigated three online resources: Wikipedia, Oxford English

Dictionary (OED), and Urban Dictionary (UD). My three hypotheses are as follows:

- i. Wikipedia will contain balanced and neutral language because it is continually updated, meant to be used for educational purposes by the public, and aims to have a neutral point of view. It has also been suggested that medical schools allow their students to make edits by removing lower quality information in exchange for higher level information (Azzam et al., 2017).
- ii. The OED will have a longer history of male terms, and a shorter history of female terms, based on the historical one-sex model which situated female anatomy in relation to the existing male terminology (Laqueur, 1990), (e.g., *female penis*, p. 64).
- iii. UD will emphasize male biology over female biology because the website's audience is predominantly males aged 15 to 24 (Wortham, 2014).

These online resources offer a contemporary viewpoint of descriptions, and a historical perspective of word origins. Additionally, Wikipedia and UD can be accessed by anyone who has an internet connection, and the online OED can only be accessed with affiliation to an educational institution or by subscription. Basically, these online resources have the potential to reach wide audiences, they are continually updated, two are edited against verifiable information (Wikipedia and OED), and one (UD) offers a perspective from a certain sector of the public.

In section 2, I briefly describe each of these online resources, the type of contents they contain, and how they are edited. Then, I provide background information and findings from some previous studies on gendered language in biological descriptions in section 3. Next, in section 4, I outline my methodology for collecting data from Wikipedia, OED, and UD. In section 5, results are provided alongside discussion of each online resource individually. In section 6, I discuss the overall findings from the results, how they complement previous studies, some research suggestions for the future, and the limitations of this study. Lastly, I conclude with the notion that subjective gendered descriptions are still present, even in online resources, and that they are reinforced by cultural paradigms, in section 7. Wikipedia is not shown to be balanced and neutral. OED is shown to have an androcentric emphasis in the history of English, and UD is shown to emphasize male biology over female biology.

2 Description of Wikipedia, OED, and UD

Wikipedia is a multilingual, web-based, free-content encyclopedia that was created in 2001. It currently has 5,564,897 content articles in English (as of the latest edit to Wikipedia's *About* page on January 20, 2018). There are 1,231 administrators (for English Wikipedia) and roughly 71,000 active contributors working on articles in 299 languages. The volunteers that write and edit are mostly anonymous and are not paid; contributors can use a pseudonym or their real identity. The edited information must be within Wikipedia's policy guidelines and be verifiable against a reliable published source. Articles are called "extra-linear" because they incorporate hypertext in the form of wikilinks. This makes more in-depth information accessible on other pages.

The online OED was launched in 2000 and currently contains more than 600,000 words over a period of about a thousand years. The website claims that OED is the "accepted authority" on the English language, and people find the meaning, history, quotes, pronunciation, categories, timelines, sources, and related terms (via the historical thesaurus) of words and phrases. Quotations are selected to show how a given word (i.e., lexeme) has been used for a given time period and how it has changed. The historical thesaurus allows people to find out the historical synonyms of lexical items; in other words, words that are or were related to ones used today. There are over 70 editors and the OED database is updated online every three months. These updates can include changes to existing words and the addition of new words. The OED can be accessed by using a library membership from a university, college, school, and/or other institution, or by personal subscription to it. The OED can be used to approximately track when certain lexical items, such as *vagina* and *penis*, first appeared in print.

UD is a "crowdsourced" free online dictionary of words and phrases, which was created by Aaron Peckman in 1999. At the start of 2014, there were over seven million definitions and the audience was largely made up of males aged 15 to 24 (Wortham, 2014). The website states that "Urban Dictionary is written by you". Anyone can participate, compile, and edit as long as they have a Facebook or Gmail account. Entries are reviewed by volunteers. The definitions on the website are not necessarily objective or factual. Instead, they can be subjective, incorrect (in a prescriptive way), and the website as a whole shifts away from traditional lexicography (Smith, 2011). UD allows people to define their world, be satirical or humorous, and allows the users to be the contributors of definitions. Visitors to the website can agree or disagree with the definitions using an up or down voting system. Therefore, UD can be used as a tool to gauge which words people discuss the most based on the number of entries, and the number of likes or dislikes (the votes) a definition has received.

3 Research on Descriptions of Reproductive Biology

Gender-biased language has been found in other disciplines and sub-disciplines, such as linguistics (e.g., Macaulay & Brice, 1997; Pabst et al., 2018), social studies (e.g., Naseem, 2006), and language learning (e.g., Foroutan, 2012; Lee, 2014). In the field of biology, researchers have found gender-biased language in textbooks containing information about developmental biology (e.g., Beldecos et al., 1988; Campo-Engelstein & Johnson 2014; Lawrence & Bendixen 1992; Martin 1991; Metoyer & Rust, 2011). This current study uses methods from various studies that have investigated the language used in descriptions of reproductive biology in textbooks. Three studies are summarized in this section: Martin (1991), Lawrence and Bendixen (1992), and Metoyer and Rust (2011), with the aim of building a coherent and clear picture of how language usage in a scientific field can reflect gendered biases.

Martin (1991) qualitatively analyzed descriptions in textbooks about reproductive biology for undergraduate premedical or medical students and provided in-depth information about how new biological research did not match the old imagery being depicted. For instance, the sperm was described to “penetrate” or “burrow into” the egg (p. 489). However, the forward thrust on the sperm is weak. The motion of the tail is sideways. The egg’s surface is designed to adhere to the sperm if they make contact, and the head of the sperm ends up lying flat. Therefore, the sperm would not be able to penetrate the egg mechanically. Instead, enzymes (the acrosome reaction) chemically break down the zona, which is the egg’s outer layer (pp. 493-494). Additionally, research on mice and sea urchins has shown a more active role for the egg, and a less agentive role for the sperm (p. 497). The reproductive processes are similar in humans. Nevertheless, Martin still found that gender roles are prevalent in the descriptions of the egg (passive descriptions: *is transported, is swept, or drifts*) and the sperm (active descriptions: *penetrates, enters, burrows, has a strong tail*). The use of metaphors was also found in some of the textbooks, such as the egg’s “vestments” and “corona” while sperm have a “mission” to “move through the female genital tract in quest of the ovum” or where the sperm are on journey and the “survivors” “assault” the egg “surrounding the prize” (p. 490). Even though Martin’s analysis was qualitative, she provided essential scientific detail with new research at the time, and how reproductive descriptions were still presented with gender biases.

Lawrence and Bendixen (1992) quantitatively analyzed thirty-one anatomical textbooks, for medical students, ranging from 1890-1989. They found that female bodies are primarily presented as variations on the male body. Up until the seventeenth century, female organs were described using modified male ones. Ovaries were “female testicles”, for example. Would this depiction remain similar a few hundred years later in anatomy textbooks? They had four main findings. First, chapters and sections were organized with male or human (but presented as male) first, then female (e.g., “The Perineum and Genitals” versus “Female Genital Organs”; “The Perineum” versus “The Female Perineum”, p.930). Second, female terms and structures were sometimes omitted. Third, females were compared to

males and not vice versa. Finally, visual depictions always started with the male as the template: “Imagine the bulb in the male perineum is divider [sic] longitudinally so as to form the bilateral bulb of the vestibule [...] as we described in the male but the bulb is not split in two halves.” (p. 932). Furthermore, the amount of text provided for the male reproductive system did decrease over time, but was consistently higher than the amount provided for the female system. Thus, they concluded that male anatomy was presented as the standard or norm, and female anatomy as being marked.

Metoyer and Rust (2011) qualitatively and quantitatively analyzed the descriptions of reproduction in the contraception chapters of ten gynecology textbooks and handbooks for medical students. They examined how these textbooks described the egg, cervix, and cervical mucus; and sperm and semen. They searched the terms *egg*, *ovum*, *ova*, *oocyte*, *cervical mucus*, *cervix*, *sperm*, *spermatozoa*, *semen*, *seminal*, and *ejaculate* (verb). Updated information since Martin (1991) was also provided in regards to how the egg, as well as the cervix and cervical mucus, play an active role in fertilization. The egg can send signals to control the development of follicles around it, its shells (plasma membrane and zona pellucida) alter themselves to prevent more than one sperm in the fertilization process, and the egg rotates after sperm attachment (pp. 185-186). The cervix protects spermatozoa, with protective mucus, from cells that ingest harmful particles (called phagocytes). The cervix can also store sperm after ejaculation and gradually release them into the uterus. Furthermore, the cervix is able to select sperm with a filtering mechanism (separating abnormal and healthy sperm from each other), which was discovered by JR Beck in 1874 (p. 189). However, they found that female reproduction is still presented in a passive voice more often than male reproduction. The cervix was passive (as a location, destination, object to be felt, and a route/opening for physicians, p. 189), and the egg was also passive (e.g., *being fertilized*, *released*, p. 186), in the majority of descriptions, whereas the sperm is described as being active (*reach*, *go into*, *enter*, *are motile*, p. 186) the majority of the time. The sperm is presented as passive in the fewest contexts (*transport of*, p. 188). The mutual findings included words such as *unite*, *between*, and *meet* (p. 188). They concluded that there was still a “gendered lens” being used in the descriptions.

In sum, the main findings from the background articles consisted of four main components reflecting gender biases: (1) Passive and active voice; (2) The sequence of terms favouring males; (3) Comparisons of the female system to the male system, while providing less information; and (4) The usage of metaphors. With this in mind, my goal is to now present a new study based on three online resources to determine how reproductive systems are represented. I used these criteria for the text analysis of Wikipedia. For OED, I analyzed the attested years and related terms. For UD, I analyzed the number of entries and votes. The methods for each are described in the next section.

4 Methodology

4.1 Wikipedia

The information on Wikipedia is not laid out in a straight-forward chronological manner or contained within a single webpage because it is extra-linear. In order to cover enough information, I searched these Wikipedia pages within the categories of human reproduction: *Human Reproduction*, *Human Reproductive System*, *Female Reproductive System*, *Male Reproductive System*, *Human Fertilization*, *Egg Cell*, and *Sperm*. Since Wikipedia is subject to change, I copied the text, and took screenshots of the web pages on January 30, 2018.

First, I did a text analysis of phrases containing either *egg/ova/ovum/oocyte* and *sperm/spermatozoa/spermatozoon* and quantified them into three categories: passive, active, and mutual. Examples of each category are shown in Table 1. Each verb in the presence of the egg or sperm counted as a token. For instance, "... a single sperm can enter and merge with the egg, fertilizing it", was counted as two active tokens (*enter*, *fertilize it*) and one mutual token (*merge*) for the sperm, whereas it counted as two passive tokens and one mutual token for the egg (cf. Metoyer & Rust, 2011).

Table 1. Categories of quantification with examples

Category	Examples
Passive (anything that removes agency)	<i>is/are captured, released, fertilized, shed; sent, transit, carry, deliver, and becomes shed</i>
Active (anything that creates agency)	<i>burrow, penetrate, enter, encounter, travel, fertilizes it, pierce, reach, journey, propel, moves, produce, embed, absorb, travel, will admit, attaches, and traverse</i>
Mutual (a sense of mutual engagement or interaction)	<i>merge, unite, meet, join and fuse</i>

Second, I analysed the structural sequence of the information. In other words, the placement of male and female terms in phrases that contain both (cf. Campo-Engelstein & Johnson, 2014). Third, I analyzed for the direction of the comparisons. Fourth, I analysed the text for information that was not present, based on previous studies (cf. Martin, 1991; Metoyer & Rust, 2011), and the general amount of information given. Finally, I analyzed for metaphorical use. The term *cervix* was also analyzed qualitatively in the same Wikipedia pages that were mentioned above, based on the amount and type of information provided (cf. Metoyer & Rust, 2011). The results are given in Table 2 in section 5.1.

4.2 Oxford English Dictionary

The first attested date in print was provided for the following thirteen words on reproduction: *sperm*, *semen*, *testicle(s)*, *penis*, *scrotum*, *prostate*, *clitoris*, *uterus*, *labia*, *ovary*, *ovum*, *vagina*, and *cervix*. The historical thesaurus was also used to determine the number of related terms for each of these words. This proved to be too challenging to include in the results because some related terms were used as “slang” (e.g., *childbed* for *uterus* dating back to 1863), were contemporary to the time period and are either no longer used (e.g., *pillock* for *penis* dating back to 1568), or have a different meaning (e.g., *purse* for *scrotum* dating back to c1395). The majority of the definitions for these words were strictly anatomical in regards to function and placement within the body. In order to provide succinct and relevant information for the purposes of this analysis, only definitions or quotes that compared male and female biology were illustrated. The OED uses a convention of symbols before the year of some of the definitions; the symbol ‘c’ means ‘circa’ (around), ‘a’ means ‘ante’ (before), and ‘?’ indicates an uncertain date. The results of the word search are shown in Table 3.

4.3 Urban Dictionary

The following twelve words were looked up: *penis*, *testicles*, *scrotum*, *semen*, *sperm*, *prostate*, *vagina*, *clitoris*, *labia*, *uterus*, *ovary*, and *cervix*, on January 30, 2018. The words *ova* and *ovum* were not found, and *egg* was too general to include. I counted the number of total definitions and votes (the likes and dislikes summed together) on the first page of search results for each word. The first page of each word contained seven definitions of that word, provided by anonymous users. The main results are shown in Table 4. The top definition, which is the very first definition to appear, is subject to change, and I could not find any literature that explained why. Therefore, I included the results from the entire first page of search results in order to maintain more consistency. The entry years of the definitions range from 2003 to 2017. The definitions were analyzed for use of scientific descriptions, but there was an overall lack of consistency across the lexical items, and, thus, I have selected a few non-scientific definitions which I discuss in section 5.3.

5 Results and Discussion

5.1 Wikipedia

Quantified results of the passive, active, and mutual contexts of the sperm and the egg are shown in Table 2, along with corresponding examples that appeared in the text. The percentage and number of tokens out of the total are shown, along with examples of the voice category contexts. *Sperm* is depicted as being active the majority of the time, whereas the *egg* is shown to be passive the majority of the time. The egg is presented as active in some of the contexts, whereas this was rarely

found in previous studies on textbooks (cf. Metoyer & Rust, 2011; p.187). The number of mutual contexts for the sperm and egg are equal because they are mutually dependent on each other as the *egg* and *sperm* need to *unite*, *join*, *fuse*, and so on, together. Overall, the egg is spread out more evenly among the contexts, with passive contexts being the highest, followed by active, and mutual being the lowest. The sperm, on the other hand, is depicted as being active about five times more than in passive contexts, and more than twice in mutual contexts.

Table 2. Descriptions of Sperm and Egg in a Wikipedia text analysis

	Sperm, Spermatazoa, Spermatozoon		Egg, Ova, Ovum, Oocyte	
	Total % (n)	Examples	Total % (n)	Examples
Passive	12.2% (9)	<i>sent, transit, carry, deliver, release,</i>	46.0% (40)	<i>is/are captured, released, fertilized, shed; becomes implanted</i>
Active	60.8% (45)	<i>burrow, penetrate, enter, encounter, travel, fertilizes, pierce, reach, journey, propel</i>	31.0% (27)	<i>moves, produce, embed, absorb, travel, will admit, attaches, traverse</i>
Mutual	27.0% (20)	<i>merge, unite, meet, join, fuse</i>	23.0% (20)	<i>merge, unite, meet, join, fuse</i>
Total occurrences	n=74		n=87	

The term *cervix* was not analyzed quantitatively because it only occurred eight times, seven of which related to dilation during birth. It was stated once that the uterus “produces vaginal uterine secretions which help the transit of sperm to the Fallopian tubes” on the *Female Reproduction System* page. Additionally, the storage and gradual release of sperm by the cervix was never mentioned. This information is on the *Cervix* page, but not on the pages I analysed.

The sequential placement of the sperm before the egg is slightly favoured at ratio of 20 occurrences to 14 occurrences, respectively. The female system is compared to the male system (4 occurrences), whereas the male system is never compared to the female system. On March 25, 2017, on the *Human Reproduction* Wikipedia page, the male system section was presented first, and on the *Human Reproductive System* page the reverse was true. As of January 30, 2018, the order on the *Human Reproductive System* page has been changed such that the male system is now placed before the female system. There are mutual phrases used, such as “The ovum **meets** with Spermatozoon”, “**union** of a human egg and sperm”, and “The process of fertilization involves a sperm **fusing** with an ovum”.

The sperm is mentioned in passive contexts nine times, two examples are shown in (1) and (2)

- (1) "... immature spermatozoon or sperm are then **sent** to the epididymis where they gain a tail and motility"
- (2) "...uterine secretions which help **the transit** of the sperm..."

Four active context examples of the sperm are shown in (3) and (4). In (3), *penetrate* and *fertilizing it* count as an active context each, whereas *merge* was counted as a mutual context.

- (3) "A sperm may **penetrate** and merge with the egg **fertilizing it**..."
- (4) "The sperm ... **travels** through the vagina and cervix ...", and "...immature sperm then **travel** to the epididymis".

The egg (or female system) is presented in both passive and active phrases (40 occurrences to 27 occurrences), but more so in passive contexts. Two passive context examples are shown (5) and (6). In (5), *is released* is a passive context, whereas *it passes* is an active context.

- (5) "One ovum **is released** and it passes through the fallopian tube into the uterus"
- (6) "If the ovum **is fertilized** by the sperm..."

Two active examples for the egg are shown in (7) and (8).

- (7) "...the ovaries which **produce** the female's ova"
- (8) "There it [the ovum] **travels** toward the uterus, pushed along by movements of cilia..."

The *Egg Cell* Wikipedia page contains just over half of the word count that the *Sperm* page does, (approximately a ratio of 1100 words to 1700 words, respectively). Information on the *Sperm* page also provides a section on quality, but the same is not true for the *Egg Cell* page. The section on *Testes* on the *Male Reproductive System* page contains 372 words, and provides three links (one to development on gonads, two on ducts), whereas the section on *Ovaries* on the *Female Reproductive System* page contains 151 words and provides a link to *Ovary*. I did not find any metaphors being used to the extent that Beldecos et al. (1988), Martin (1991) or Campo-Engelstein and Johnson (2014) found. However, I did find one usage of *journey* (9) on the *Sperm* page.

- (9) “...for the **journey** through the female cervix, uterus and uterine tubes”

Finally, the verb *penetrate* was found six times, as illustrated in (10).

- (10) “One of the sperm encounters, **penetrates**, and fertilizes the ovum.”

The data from Wikipedia does not support my first hypothesis that the language being used would be balanced and neutral. Wikipedia has a unique set up that may have lessened structural sequences and comparisons. Unlike there being chapter headings and sections in a strict chronological order, Wikipedia has access to more detailed information via links to other sub-websites (i.e., is extra-linear). This allows the user to determine the order in which they access the information. In the text analysis, there is an overall gendered effect where the sperm is presented as active and the egg is presented as passive the majority of the time. That being said, there were instances of mutual language being used, such as *fuse*, *meet*, and *join*. Furthermore, the use of *penetrate*, and active voice regarding sperm, could be lessened. Campo-Engelstein and Johnson (2014) suggest that when describing fertilization, “the egg experiences fertilization”, or “undergoes fertilization”, could be used instead of “the egg is fertilized” (p. 215). These suggestions still present the egg as being non-agentive experiencers undergoing the action, but may be an overall improvement.

5.2 Oxford English Dictionary

Generally, male reproductive terms came into the English language before female reproductive terms did (Laqueur, 1990). This is shown in Table 3 with the words and the earliest date found in print. The dates are in chronological order according to the male terms, with the most similar female terms lining up next to the male terms. This shows that all of the male words, with the exception of *prostate*, came into the language before all of the female ones did. It should be noted that *prostate* was a borrowing from Middle French (*prostate*, dating back to 1555) and/or Latin (*prostata*, dating back to 1625).

Table 3. First attested dates in print of male and female reproductive terms from the OED

Male Term	Year		Female Term	Year
Sperm	c1386		Ovum	1672
Semen	1398		Ovary	1653
Testicle	c1425		Clitoris	1615
Penis	1578		Labia	1634
Scrotum	1598		Uterus	1615
Prostate	1638		Cervix	1741
			Vagina	1682

There is an imbalance of terms; for instance, according to Wikipedia, *prostate* actually corresponds to *skene's gland* in females, and *uterus*, *cervix*, and *vagina* corresponds to the *prostatic utricle* in males. These organs are considered homologous, which means they share ancestry in a pair of structures or genes. That does not mean that they are necessarily analogous. After development, their functions are different. Hence, in Table 3, even though *prostate* and *uterus*, *cervix*, and *vagina* do not fully correspond, it is shown as such for simplification. This is the same with *ovum* across from *sperm* and *semem*: An equivalent scientific female term does not exist for *semen*, as far as I am aware (except perhaps “female ejaculation”, which was not found in the OED).

My second hypothesis was supported because OED illustrates that there is a longer history of male reproductive terms. Essentially, English has an androcentric history regarding reproductive terms based on the earliest dates in print, ranging from 1386-1638, with *sperm* being the oldest word. This is not a surprising finding because English has historically been male-biased due to the usage of generic nouns (e.g., *man*, *mankind*) and generic *he*, which has been interpreted as “male” being the “norm”, whereas the female is marked (Spender, 1985). Female terms were not found in print until at least 1615 (*clitoris* and *uterus*). Furthermore, the female terms, which range from 1615-1741, probably came into usage due to the transition from a one-sex model to a two-sex model around the eighteenth century (Laqueur, 1990). Further emphasis on the male as norm is through *ovary* originally being referred to as *testicle*, as one OED definition of *testicle* illustrates, “The ovary in females. *Obs.* [(obsolete)]”, alongside a quote dated in 1560, “The right stone or testicle in a woman”. This would mark it as a [female] *testicle*. Moreover, *clitoris* was defined in the OED as “a homologue of the male penis...” without the same comparison being made about the definition of *penis*. Laqueur (1990) found similar comparisons as well when the one-sex model was prevalent (e.g., the clitoris as “a female penis”, p. 64).

5.3 Urban Dictionary

The twelve words (identified in section 4.3) in Table 4 were hierarchically ordered in descending order based on the total number of definitions they had. The total number of definitions for the male reproductive system is more than twice that of the female reproductive system, and the total votes for the male system is about one-third more than the female system. *Penis* and *vagina* are the top two most discussed definitions, respectively, out of the entire set. *Clitoris* is the third top most discussed definition. However, *testicles*, *scrotum*, *semen*, and *sperm* are all discussed more evenly among each other, and in higher amounts than the rest of the female reproductive system.

Table 4. The number of definitions and votes for biological terms on UD, as of January 30, 2018

Male Term	Number of definitions	Total votes	Male Term	Number of definitions	Total votes
Penis	514	160,757	Vagina	205	99,666
Testicles	40	7,211	Clitoris	65	16,929
Semen	37	15,000	Labia	17	8,281
Scrotum	36	9,653	Uterus	9	1,193
Sperm	27	13,065	Ovary	8	1,244
Prostate	7	3,677	Cervix	1	247
Total	661	209,363	Total	305	127,560

The data from UD is the most striking because it is immediately apparent that *penis* is the most discussed topic having 514 definitions, with 160,757 votes total on the first page of definitions. Both the number of definitions and votes are more than the entirety of the selected female reproductive words combined. Some definitions are misogynistic, for example, one for *penis* is “One of two things men keep after a divorce; *She got the house and the kids. I kept my penis and my soul.*”. This was written in 2004, and is currently the second definition on the page.

In general, the terms for the male reproductive system are voted on most compared to ones for the female reproductive system, which supports my third hypothesis. The top definition for *vagina* has remained the same since March 25, 2017, and it is also misogynistic, referring to how a woman is used to pleasure a man, “The best friend a penis will ever have.”, and was written in 2003. *Vagina* has 205 definitions, which is less than half of what *penis* has. Overall, it is difficult to get a consensus of the types of definitions and to gauge how serious or satirical they are. The seven definitions of each word, which appear on the first page search results, can vary widely amongst themselves. Definitions generally seem to range from sarcastic, satirical, intended humorous, and derogatory statements. It is of interest that users are more inclined to vote and provide definitions for anything

relating to the male reproductive system more so than compared to the female. Aaron Peckman, the creator of UD, has stated that the majority of the audience is made up of young males (Wortham, 2014), which could be the reason as to why the male reproductive system is favoured. As the provided quoted definitions and the emphasis on the male body illustrate, UD is androcentric, and often misogynistic.

6 Overall Discussion

Wikipedia is not balanced and neutral, and therefore does not support my first hypothesis. As with previous studies (cf. Martin, 1991; Lawrence & Bendixen, 1992; Metoyer & Rust, 2011), the general area that needs the most improvement is the type and amount of information provided. That being said, Wikipedia does can be overwhelming because information is broken up among multiple pages which provide a lot of detail in one area, and less in others. On the pages with general information, some more specific information should be added, such as the weak forward movement and sideways motion of sperm (never mentioned), how the cervix can be beneficial to transporting and protecting sperm, and how the egg's cortical reaction prevents it from undergoing fertilization by more than one sperm. In other words, even the general overview pages such as *Human Reproduction* should provide more descriptions that are informative and balanced. Other information needs to be added as well, such as the egg quality, which has been studied in other species (e.g., Bobe & Labbé, 2010; Hunter, 2000; Sotelo & Porter, 1959). More recently, the process of fertilization has been theorized to be selective due to the egg being an active participant (Nadeau 2017), and this information should be added as well. Regarding language choices, Wikipedia can become balanced by using more mutual language, fewer active portrayals of the sperm, fewer passive portrayals of the egg, and essentially providing more information in general about the female reproductive system as having a more active role. More research has been published about the active role of the female reproductive system in other species (cf. Dean, Nakagawa, & Pizzari, 2011; Eberhard, 2010; Orr & Zuk, 2012; Yeates et al., 2013), and should be reflected in contemporary sources such as Wikipedia, especially because these processes may have similarities within humans.

The OED shows that there is an androcentric bias in the history of the English language because male reproductive terms appear earlier in print materials, which supports my second hypothesis. Moreover, the female system is shown as being marked due to the earlier terms such as [female] *testicles*. UD seems to reflect either the amount of information provided to the public regarding the reproductive system and/or the young male dominated demographic (Wortham, 2014) because the emphasis is on the male reproductive system (i.e., androcentric). This supports my third hypothesis. UD is also, at times, misogynistic. It is challenging to assess the level of seriousness, knowledge, and satirical content that users are conveying on UD because of the lack of uniformity among the definitions. In general, Wikipedia is the least androcentric when compared to the

historical accounts of words provided by the OED, and the number of definitions and votes emphasizing males over females on UD.

This study builds upon previous studies on print material (textbooks) by utilizing a mixture of those methodologies to analyze some contemporary online resources. In comparison, Wikipedia is an improvement over the textbooks, and it has the potential to become more balanced through continual updates. The online OED provided further evidence to support Laqueur's (1990) argument of a one-sex model. Bringing in the perspective of UD brought insight into which reproductive terms people (mostly young males) are discussing the most. Collectively, these three online resources complement previous studies by illuminating more evidence about how gender biases within the field of biology have been pervasive historically, and continue to this day.

There are four suggestions for further research. First, the online spaces of social media could be explored, such as Facebook, Reddit, and Twitter, to investigate the types of conversations people are having about anatomy and the reproductive system. Second, these methods can be applied to private and public online textbooks that are used for online courses or general public education. Third, the online OED's historical thesaurus can be used to find the related terms used throughout history, and categorize these into similar groups based on type. Finally, these methods could also be applied to more specific Wikipedia pages, which this study did not analyze, such as the *Cervix* page.

Ironically, this study falls into the binary of the two-sex model because most of the information available about the reproductive system constitutes this model, and is described in terms of "male" and "female". A recent qualitative publication by MacDonald et al. (2016) challenges this rigid notion of sex and gender as transmasculine individuals are able to become pregnant, birth children, and chestfeed. This is just an example of how the boundaries of biology, and cultural notions of reproduction, are being pushed even further. Educational materials will have to be updated with these changes in human biology in order to remain current.

7 Conclusion

This paper provided an analysis of the descriptions of male and female reproductive biology in the online resources Wikipedia, the Oxford English Dictionary, and Urban Dictionary. The focus was on how the egg is passively portrayed through language, such as it being *fertilized*, *swept*, and *released*, and how the sperm is actively portrayed through language, such as it *penetrating*, *entering*, *burrowing*, and *travelling*. The previous research investigated how the female is marked based upon placement of the male terms before the female terms, and the omission or misrepresentation of information about the female system. All of this settles into a story about how sex is a socially constructed concept.

Wikipedia was found to not be balanced and neutral, but it does contain mutual terms (*merge*, *union*, *fuse*, *join*, *meet*), and active contexts for the egg, even though the majority are passive contexts. There are a few comparisons, and the sequence of terms is more mixed with the male reproductive system being before

the female system slightly more. Improvements to Wikipedia can be made, such as less active portrayals of the sperm, more active portrayal of the egg, more mutual portrayals of both, and more information provided for the female reproductive system. Regarding the OED, English has an androcentric history with male terms being in use longer and, in some cases, being the “norm”. Lastly, UD shows that the conversation of reproductive biology is emphasized on the male, with UD being more androcentric, and, at times, misogynistic. In sum, a gender-biased cultural paradigm is reinforced because the male reproductive system has a longer history of usage, people seem to discuss it more on UD, and Wikipedia provides more information on it as opposed to the female reproductive system.

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