
Article:
Mehl, S.W. orcid.org/0000-0003-3036-8132 (2018) Corpus onomasiology in world Englishes and the concrete verbs make and give. World Englishes, 37 (2). pp. 185-206. ISSN 0883-2919

https://doi.org/10.1111/weng.12297

Corpus onomasiology in world Englishes: An investigation of concrete verbs

ABSTRACT: Traditional theoretical frameworks for WEs such as Moag's (1982) and Kachru's (1985) have not explicitly noted a role for lexical semantics. Schneider's (2007) dynamic model, however, explicitly defines specific stages of WE development in terms of lexical semantics, and Brutt-Griffler's (2002) model emphasizes semantic change. This paper fills a gap in the literature by presenting corpus studies into the concrete senses of the highly frequent, highly polysemous transitive verbs make and give, in the International Corpus of English components representing Singapore, Hong Kong, and Great Britain. Via onomasiological corpus methods, I show that onomasiological selection preferences for make and give, and their respective semantic alternates, vary across the three corpora in ways that do not corroborate the models of Kachru (1985) or Schneider (2007), but can be explained by Brutt-Griffler's (2002) model.

INTRODUCTION

Lexical semantics, as a central element of linguistic investigation, is essential to research in world Englishes (WEs). However, in theoretical frameworks for WEs, lexical semantics has not figured prominently. Whereas early WE work acknowledged lexical semantic variation (cf. Platt et al. 1984), early theories of WEs did not directly address such variation (cf. Moag 1982, Kachru 1985). Schneider's (2007) more recent theory of WEs does include lexical semantic variation and change in its definitions of WE categories at various stages of evolution. Affirming the importance of lexical semantic study for WEs, many linguists have called for further lexical semantic research in WEs (cf. Platt et al. 1984: 105, Hymes 1996: 9, Brutt-Griffler 2002: 153-4, Melchers and Shaw 2003, Lambert 2012).

This study investigates the semantics of concrete verbs in three components of the International Corpus of English (ICE). Specifically, the study is both semasiological and

onomasiological, examining the concrete senses of the high-frequency transitive verbs make and give, and their semantic alternates, as observed in the ICE components representing Singapore, Hong Kong, and Great Britain (ICE-SIN, ICE-HK, ICE-GB), selected because they represent different categories of WEs in the prominent WE frameworks of Kachru (1985), Schneider (2007), and Brutt-Griffler (2002). Concrete verb semantics have not been studied extensively in WEs; the present study fills that gap. While concrete semantics might be expected to vary little, given that they involve referents directly perceptible via the five senses, the findings here suggest some similarities, but also important differences.

The present study poses the following research questions:

i. Do the concrete senses of make and give vary across ICE-SIN, ICE-HK, and ICE-GB?
ii. Do onomasiological selection preferences for concrete senses of make and give, and their semantic alternates, vary across ICE-SIN, ICE-HK, and ICE-GB?
iii. Do similarities and differences in the lexical semantics of these concrete verbs in these regions corroborate or refute existing theoretical frameworks of WEs, particularly the prominent frameworks of Kachru (1985), Schneider (2007), and Brutt-Griffler (2002)?

I first present some contextual background on the theoretical importance of lexical semantics to WEs, in support of the argument that lexical semantics is an essential element of WEs research. I describe some previous semantic studies of WEs, and then discuss the semantics of concrete make and give. In the second half of the paper, I present the data and methods of the corpus study, discuss findings, and draw conclusions. Crucially, the concrete senses of

these verbs do not appear to vary dramatically across the regions, but onomasiological selection preferences do vary, particularly regarding stylistic choices.

SEMANTICS IN WORLD ENGLISH RESEARCH

The importance of semantics in WE research

Many researchers have pointed out the crucial fact that lexical semantics should be expected to vary in WEs, because semantic variation and change is part of the nature of language. According to Lambert (2012: 307), 'there must be a high likelihood of connotative differences [between varieties], but denotative differences may of course also be possible'. Lambert (ibid: 307) argues that 'we should not necessarily equate surface similarity with precise overlap in meaning or usage, or both', even with very common nouns. Furthermore, 'the assumption that these [words] are identical in meaning and usage between Indian English and Anglo-American English, while tacitly accepted, is untested, and fundamentally unknown' (ibid: 307). Hymes (1996: 9) similarly argues that in WE lexis, 'the overt forms may be familiar… but the interpretation given to them is subject to shift'. Hymes highlights that it is the nature of word meaning to change. Platt et al. (1984: 105) assert that some words may appear to have 'the same meaning' in two varieties of English, but may in fact have different 'shades of meaning' in each region. Platt et al. discuss specific examples of clear semantic variation, such as stranger for 'guest' and fellow for 'any person, male or female' in Nigerian English (ibid: 102). These shared observations are compelling, and it is crucial that researchers not assume common underlying meanings across varieties, simply because the lexical forms are identical. Indeed, the assumption should instead be that semantic variation and change are always possibilities to be investigated.

Acknowledging the lack of research into semantic variation in WEs, Brutt-Griffler (2002: 153-4) argues that:

> greater importance must be attached not to borrowings but to transformed meanings, a phenomenon that is much more difficult to investigate… It is in the nature of meanings to be subject to change, re-interpretation, recreation… Transformed word meaning, then, is likely to constitute a more general phenomenon than borrowing from a local language, and represents a clear manifestation of shared subjective knowledge as an agent of language change as well as constituting an overlooked question within language change.

Brutt-Griffler, then, echoes Hymes's (1996) and Lambert's (2012) points, above, that it is the nature of word meaning to change. I agree that this possibility must be acknowledged and investigated, even with lexis that may appear on the surface not to exhibit variation, and that such variation and change have been largely overlooked in WEs research. The present study, which investigates high-frequency lexis that does not stand out for its exotic semantic variation, is offered as a step towards filling that gap.

Melchers and Shaw (2003), in an introduction to WEs that broadly works within Kachru's (1985) model, identify three types of lexical semantic variation in WEs:

i. Localisms – words whose form and meaning are unique to a particular locale
ii. Heteronyms – local words for generally available concepts
iii. Tautonyms – words with the same form but different meanings in different varieties of WEs

Localisms and heteronyms will often be realized as two separate types of borrowings in Moag's (1982) and Schneider's (2007) models. Tautonyms are more in line with Platt et al.'s

(1984), Hymes's (1996), Brutt-Griffler's (2002), and Schneider's (2007) discussions of semantic shift. The present study investigates tautonyms rather than localisms or heteronyms, meeting researchers' call for more studies into such semantic variation and change.

Görlach (1995 [1990]: 127) notes that semantic distinctness of varieties of English worldwide is often a matter of 'stylistic values'. Görlach's note is particularly pertinent to the present findings, as I discuss in section 4.4: onomasiological variation with make and give arises in stylistic choices related to speech and writing.

Semantics in theoretical frameworks of WEs

Moag's (1982) developmental model proposes four stages of development for WE varieties. Within this model, lexical borrowing is a definitive feature of WEs from the second stage, but lexical semantics is not discussed. Kachru's (1985) Three Circles model, likely the most prominent model prior to Schneider's (2003, 2007), posits three categories of WEs:

i. varieties in regions where English is a primary language, and is endonormative (setting its own internal standards)
ii. varieties in regions where English is a secondary language, and is exonormative (following standards set by an external force such as Great Britain)
iii. varieties in regions where English is learned as a foreign language, and is exonormative.

Kachru does not directly address lexis or lexical semantics in any way, focusing on social or sociolinguistic factors of a variety instead. Schneider (2007) describes WE development as moving from exonormativity in the early stages, when regional speakers look to an external force such as Great Britain to set linguistic standards, to endonormativity later on, when

regional speakers develop their own internal standards. In Schneider's model, borrowing characterises stage 1 ('Foundation') of WE development, while semantic change is characteristic of stage 3 ('Nativization'). In stage 3 (ibid: 82), Schneider describes semantic change occurring with existing English lexis, such as heavy acquiring the sense 'pregnant' in South African English, among many other examples (ibid: 195). Schneider's model is crucial for semanticists, as it is the first WE model to systematically incorporate the important fact of semantic change in WEs.

Brutt-Griffler (2002) presents an alternative model of WEs, which focuses on the process of 'macroacquisition', or English language acquisition by entire speech communities, collectively, in historical contexts. In this model, while English is stabilizing in a colonial or postcolonial setting, within a community composed largely of speakers for whom English is not a primary language (termed an L2 community), Brutt-Griffler (ibid.: 133) argues that the variety begins as endonormative, rather than exonormative, because the local English speaker has very little understanding of an exonormative standard in any real way – no external standard has been fully learned, and the speaker therefore cannot adhere to it. Thus, in the early stages of the emergence of a WE variety 'there is no fixed target language, but the language variety rather develops from the SLA [second language acquisition] process itself… The target language only develops as the result of the SLA process, rather than preceding it'. This is an extremely insightful contribution to theories of WEs, one that contrasts with Kachru's (1985) and Schneider's (2007) dominant perspectives of endonormativity and exonormativity, and one that proves useful in the study presented here, insofar as it identifies a salient distinction between communities for whom English is a primary or non-primary language. Brutt-Griffler does not suggest a strict categorical distinction between L1 and L2 varieties, but instead underlines the process of language acquisition within and across communities.

Research into lexical semantics in WEs

It is helpful to classify semantic research, including in WEs, as semasiological or onomasiological. In semantics, semasiology is study that begins with a word (or similar unit), and examines the meanings that word can communicate. Onomasiology is the converse: it begins with a meaning or sense, and examines the many different ways of expressing that meaning or sense. Semasiological inquiry in WEs can be traced back to word lists and glossaries generated by colonial figures (Yule and Burnell 1886, Wilson 1940 [1885], Rao 1954), through more recent lexicographical work (Ramson 1966, Brown 1989, Meyler 2007, Kouega 2007, Cummings and Wolf 2011) and lexicographical theory (Lambert 2012). The Oxford English Dictionary's (OED) third edition includes word meanings from WE varieties, within valuable historical context (e.g. accomplish and tribal with senses unique to Indian English, and academics with a sense unique to North American English).[1]

In addition to lexicographical work, there is a body of academic literature reporting on new, unique, and marked meanings for relatively common English vocabulary. Chisanga and Alu (1997: 94-5) present semantic shift in Zambia and South Africa, including damage for 'impregnate' and ripe describing 'a young woman ready for marriage'. This work is implicitly semasiological. Examining even more highly frequent lexis, Fuchs et al. (2013) find a range of previously unattested meanings for just and even in Nigerian English, including even with an affirmative, focusing sense like British English really or actually; and a particularizing sense like British English actually. Lange (2007) finds that itself is used as a focus marker in Indian English, similar to British English even. Jeffery and van Rooy (2004) report that now in South African English can have an emphatic sense similar to the British English emphasizer really. A great deal of research has investigated got semasiologically in Singapore English (Platt and Weber 1980; Brown 1992; Lee et al. 2009; Hiramoto and Sato

2012). Like the verbs in the present study (make and give) got is a high-frequency, highly polysemous, transitive verb. Lee et al. (2009: 295-300) report six innovative senses of got. All of this semasiological work, like the early word lists by colonial figures, was stimulated by linguists' overt, casual observation of non-standard semantics: most of these phenomena readily attract conscious attention. This is what Lambert (2012: 305) calls 'lexical exotica', features easily identified by outsiders as non-standard – and, indeed, Lambert urges researchers to move beyond such lexical exotica to carefully investigate more subtle semantic features. As discussed above, researchers must consider the possibility the lexical semantics may vary in non-obvious ways. Indeed, that is one of the findings of the present study.

In onomasiological research, dialect atlases (cf. Hempl 1902; Kurath et al. 1939) constituted an early forerunner, charting, for example, preferences for alternates like bucket or pail in different geographic regions.[2] In other onomasiological work, Haase (2004) compares English motion verbs and their multi-word semantic alternates in ICE-East Africa, finding that language users in East Africa prefer to express 'path' (e.g. up, down) even if that leads to redundancy (e.g. ascend up). Lee and Ziegeler (2006) observe differing preferences for alternating causal verbs in Singapore English and British English. De Klerk (2005) finds differing preferences for intensifying adverbs and their onomasiological alternates in Xhosa English and New Zealand English. And there is a collection of important studies on alternation between modal verbs and semi-modals, another onomasiological alternation, in WEs (Owusu-Ansah 1994; Lee and Collins 2004; Collins 2005, 2009). Schneider (1994) examines common particle verbs (e.g. help out) and their onomasiological alternates (e.g. assist) in ICE-GB, ICE-Singapore, ICE-Philippines, ICE-India, and ICE-East Africa. Schneider acknowledges the limitations in his work, as he does not rigorously distinguish all polysemous senses of each item in question, due to the size of the data, but nonetheless observes differences including a significant preference for assist over help out in East African

data, in comparison to a significant preference for help out over assist in Singapore data. It is unclear whether these onomasiological studies were initiated based on linguists' overt, casual observation of the non-standard semantics of the items in question, but the findings seem not to have been intuited or hypothesised in advance.

Recent onomasiological work sometimes spotlights preferences for alternates in relation to genre, style, or register, as noted by Görlach (1995 [1990]: 127; see above), and as observed in the present study. For example, Balasubramanian (2009) finds that ICE-India and ICE-GB differ significantly from each other in selection preferences for also and too, and that ICE-India exhibits a great deal of variation between genres in this respect. That study explicitly acknowledges issues regarding the actual potential for also and too to alternate, as any onomasiological study must do. I discuss this alternation issue further in relation to the present study below.

SEMANTICS OF CONCRETE VERBS

The present study investigates onomasiological variation in concrete verbs, across ICE corpora sampled from three varieties of WEs, in order to identify possible semantic features of WEs that might not have been intuited or casually observed, and to determine whether such features might corroborate or refute established theoretical frameworks for WEs. This study begins with two high-frequency, transitive verbs that can take Direct Objects (DOs) with concrete referents: make and give. Using corpus methods (discussed below), onomasiological alternates for concrete senses of make and give are identified in ICE-SIN, ICE-HK, and ICE-GB. In their concrete senses, the verbs' DO referents are concrete insofar as they can be directly observed by the five senses, and they are often (but not always) tangible. Concrete make and its alternates generally express the concept PRODUCE; concrete

give and its alternates generally express the concept PROVIDE. Both are discussed further below.

In this section, I review and summarise existing work on the semantics of make and give. As discussed here, previous work on the lexical semantics of concrete make is generally uncontentious, whereas work on the lexical semantics of concrete give raises more issues. In particular, semantic features of give that have been identified in previous research are examined closely in the corpus study that follows. Thus, previous conclusions can be further corroborated or refuted.

There is little prior WE research on the semantics of concrete verbs (with the exception of Werner and Mukherjee, 2012). Semasiological observations, as cited above, often include obvious innovative meanings for concrete nouns, but there is little in the way of similar observations for concrete verbs. It might be presumed that 'concrete semantics' should be straightforward, given the existence of concrete referents, observable by all interlocutors. In fact, concrete semantics are not straightforward, as is evident in the literature discussed here and the findings below. It might also be assumed that concrete semantics should form part of a hypothetical 'common core' of English worldwide, and that it is more abstract semantics that would allow for subtle and nuanced variation from one region to another. That presumption, too, seems to be incorrect, as is evident from the current findings.

Previous work on the semantics of concrete make is summarised in Table 1, including lexicographical work. Both the OED and COBUILD dictionaries clearly acknowledge a sense of make with a concrete DO that is a product or result of the action indicated by the verb. Levin (1993: 56) identifies make as a 'build verb', with alternates including develop, arrange, assemble, and bake. This sense of 'build' is obviously quite broad.

Table 1. Summaries of definitions of concrete make from previous lexicographical and linguistic research

Source	**Definition of concrete make**
OED	Produce or result in a concrete object
COBUILD Dictionary	Produce a concrete object
Levin (1993)	'Build' a concrete object
Aubois (2008)	Directly manipulate, create, or change the state of a concrete object
Gilquin and Viberg (2009)	Produce a concrete object

Aubois (2008: 42), in a cognitive, semasiological study of make, identifies a concrete sense indicating 'direct manipulation of a concrete thing, including creating a concrete thing or changing the state of a concrete thing'. Finally, Gilquin and Viberg (2009: 69) conduct a semasiological cognitive study of make, and acknowledge a distinct concrete sense related to 'production'. Generally, in the work summarized here, the concrete sense of make seems to be quite clear, distinct and uncontentious.

Previous work on the semantics of concrete give is summarised in Table 2. COBUILD lists a unique concrete sense of give, in which a concrete object is transferred from a Subject to a recipient via a physical act. The OED entry for give has not been updated since OED version 1; it cites a prominent historical sense, 'confer ownership', involving either a concrete or abstract DO referent. I return to this distinction between conferring ownership, or not, in the corpus study of give.

Table 2. Summaries of definitions of concrete give from previous lexicographical and linguistic research

Source	**Definition of concrete give**
OED	Confer ownership of a concrete or abstract object
COUBUILD Dictionary	Transfer a concrete object from an Agent to a Recipient
Newman (1996)	Transfer a concrete object from an Agent to a Recipient; Contact is maintained first between the Agent and the object, and then between the receiver and the object
Gilquin (2008)	Provide or hand over a concrete object
Werner and Mukherjee (2012)	Provide or hand over a concrete object

In Cognitive Linguistic research, Newman (1996) identifies a primary concrete sense of give in which 'the Subject referent passes an object by hand, along with control over that object, to a receiver. Contact is maintained first between the giver and the object, and then between the receiver and the object'. Newman, then, introduces the notion of 'contact' to the definition of give. I investigate 'contact' for concrete give further in the corpus data. Gilquin (2008: 243) presents 15 senses of give, including two concrete senses.

i. Hand – 'He pulled a handkerchief from his pocked and gave it to him.'
ii. Provide – 'Please give your seat to an elderly or disabled.'

Gilquin does not provide systematic or rigorous definitions beyond the examples, and it would be difficult to reproduce her study with the sense distinctions provided. Werner and

Mukherjee (2012), nonetheless, do replicate Gilquin's (2008) categories in a semasiological corpus study of give in Indian English, Sri Lankan English, and British English, but provide no additional information on how these sense distinctions might be reliably and rigorously applied. Give, then, is perhaps not as semantically straightforward as make, with possible distinctions related to the conferral of ownership, and the maintaining of contact with the concrete object being transferred. Both of these potential features of the lexical semantics of concrete give are investigated in the present corpora below.

CASE STUDIES: DATA AND METHODS

The lexical semantics of concrete make and give are investigated here in ICE-SIN, ICE-HK, and ICE-GB. The regions represent three different categories in the two dominant theoretical frameworks for WEs (Kachru 1985, Schneider 2007). British English is seen as a historical exo-normative force and an international standard (Schneider 2007, Lee and Ziegeler 2006, Kachru 1985). Table 3 outlines the position and description of Hong Kong English and Singapore English in Kachru's and Schneider's models.

Table 3. Categorization of English varieties in Singapore, Hong Kong, and Great Britain, according to Kachru

	Kachru's Circles	Kachru's Norms	Schneider's Phases	Schneider's Norms
Singapore English	Outer Circle	Endonormative/ Exonormative[3]	Phase 4	Endonormative
Hong Kong English	Outer Circle	Exonormative	Phase 2/3	Exonormative
British English	Inner Circle	Endonormative	N/A	Endonormative

The present study addresses whether there is in fact a correlation between semantic variation and each of the following: phases of Schneider's model; Inner and Outer Circle categories in Kachru's model; exonormative and endonormative categories, in either model. Precedent for such an approach, comparing models via their phases and categories, can be found in Mukherjee and Gries's (2009) work on verb construction associations across multiple categories of WEs.

ICE components are designed for balance and comparability between sampled regions. For example, language users in the corpora are at least 18 years of age and have completed school, primary through secondary, entirely in English, in the region,[4] such that English is a primary language for speakers and writers in the corpora. There are, however, crucial caveats to the design of ICE-HK, which relate to the findings presented here, and which render Brutt-Griffler's (2002) theory of WEs in relation to macroacquisition particularly relevant. Even schools technically designated 'English language schools' in Hong Kong often officially use English text books but unofficially lecture in Cantonese (Bolt and

Bolton 1996). The criterion of 'English language schooling' is therefore impossible to verify in Hong Kong.[5] In addition, the compilers of ICE-HK took the unique step of aiming to include only speakers of Hong Kong English who were 'native speakers' of Cantonese (Bolt and Bolton 1996: 199). In contrast, there was no control for multilingualism in any other ICE corpus – some language users in ICE-SIN may not be 'native speakers' of any language other than English, while others will be native multilinguals. It is probable that many language users in ICE-HK have not, in fact, used English as a primary language for most of their lives. What is certain is that ICE-HK is systematically different to ICE-SIN or ICE-GB, and that this difference relates to macroacquisition.[6]

In analysing the corpora, all instances of all forms of all three verbs were first identified using AntConc (Anthony 2014) for ICE-SIN and ICE-HK and ICECUP (Nelson et al. 2002) for ICE-GB. Each example was manually analysed in its context. Concrete instances were identified and the following data was recorded:

i. corpus, text number, and line number for each occurrence
ii. verb employed (make or give)
iii. complete utterance context (words to left and right of make or give, within the utterance)
iv. DO (as a lemma or lemmas)
v. coordination of DO (if present)
vi. IO (if present)
vii. modifiers of the DO (if present)
viii. passivisation (if present)
ix. other complementation including Preposition Phrases (if present)

Additional attributes were catalogued for give, based on the distinctions set out in the lexicographical and linguistic work discussed above:

x. the distinction between conferring ownership, or not
xi. whether contact is maintained between Agent, object, and Recipient

All concrete DOs of each verb were catalogued. Those that occurred at least twice in each corpus were selected for further investigation. Each instance of those DOs with other verbs was then identified, along with the verb it complemented. This new list of verbs was deemed a list of potential onomasiological alternates for make and give.[7] Via introspection, many verbs were removed from the list immediately. For example, making a cake is not semantically equivalent to dropping a cake. This approach, combining a thorough and systematic investigation of corpus data with minimal linguistic introspection, facilitates a reasonably comprehensive, evidence-based onomasiological comparison. Other alternates may exist, and rarer alternates might be evidenced in larger corpora, but this approach is justified and reasonable. Full lists of alternates appear in the descriptions of each corpus study below.

This onomasiological approach is particularly strong for two reasons. First, it reflects the psycholinguistic reality of selection preferences (Geeraerts et al. 1994, Wallis 2014), insofar as language is a tool for communication, and language users have various options for expressing meanings, e.g. make or produce. Second, onomasiology provides a baseline of actual, probabilistic alternates, reducing invariant Type C terms (Wallis 2014), i.e. non-alternates that should not be included in the baseline of a statistical model.

Finally, close reading and manual semantic analysis of every example of every verb, and of each alternation, constituted a crucial step in the research, as is apparent in the discussion of findings.

CASE STUDY 1: CONCRETE MAKE

Data collection

Typical examples of concrete make in the corpora include the following:

(1) You don't have to make poster lah for your case. [ICE-SIN S1A-020 #68]

(2) Custard pie is when you make it with condensed milk. [ICE-SIN S1A-039 #214]

Example (1) indicates the creation or production of a concrete object, a poster, while example (2) represents the creation or production of food, another concrete object. The referents of both DOs are directly observable with the five senses and, in this case, tangible.

Use of make with DOs representing food is quite common. There is only one instance in the corpora in which food and non-food referents are coordinated.

(3) On that day, we shall sell the handicrafts and snacks which are made by our students. [ICE-HK W1B-017 #17]

One instance is not strong evidence for semantic identity between make with food and non-food DOs; the presence of only one such instance might even be seen as evidence against the identity between a 'food' and 'non-food' sense. This issue is taken up again in the onomasiological analysis.

Make is sometimes ambiguous between the concrete sense and the light verb use (on light verbs, cf. Jespersen 1954: 117, Huddleston and Pullum 2002: 290-4). The most common ambiguous construction is make a copy (in reference to photocopies), which can be interpreted either as a light verb construction (LVC) equivalent to the verb copy, or as 'produce / create a concrete thing', in this case a tangible, printed sheet of paper. Less frequent ambiguous DOs include note, mark, recording, list, and crease; each of these might be analysed as an LVC with a related verb, or as make in its concrete sense. Due to their ambiguity, these examples are removed from the analysis of concrete verbs.

Data analysis

Following the methods laid out above, the following alternates were identified for concrete make in the three corpora.

Table 4. Alternates for concrete make, as evidenced in ICE-SIN, ICE-HK, and ICE-GB

Alternates for concrete make:	produce, create, bake, prepare, manufacture, cook, generate, form, build, emit, construct, develop, draw, yield, erect, compile, dig

An initial statistical analysis was performed, for a rough comparison of proportions across all alternates in speech and writing, using a Newcombe-Wilson test with continuity correction (cf. Wallis 2009).[8] It was readily determined that most (but not all) of these alternates occur too infrequently in the corpora with concrete DOs to reach any confident conclusions about usage preferences.

Close reading was performed on each example of each of the 17 alternate verbs, including all instances with a concrete DO. It was determined that although each verb can

alternate with make, most of the verbs can only rarely, if ever, alternate with each other. Three examples serve to illustrate the non-alternation.

i. Bake and cook occur strictly with DOs referring to food, while prepare is the only alternate that can take either food or non-food DOs. Whereas language users in the corpora bake cakes, they do not manufacture cakes, and none of the 'non-food' verbs occurs with 'food' DOs.
ii. The most frequent 'non-food' DO in the data is product. Product occurs with make and produce, and very occasionally with create, manufacture, build, and generate. There are not enough examples of create, manufacture, build, or generate in the ICE corpora to compare preferences across all of these verbs with product as a DO.
iii. There are many other, less systematic non-alternations. For example, relatively common 'non-food' DOs in the data include manuscript and compost. While language users in the corpora make compost or produce compost, they never erect, emit, or construct compost; while they make manuscripts and produce manuscripts, they never build or yield manuscripts;

The method employed here is useful for identifying possible alternates, but this relatively complete picture of alternation is not a picture of universal alternation. Due to the scarcity of data and the absence of universal alternation, the decision was taken to compare concrete make to its most frequent and most semantically general alternate, produce, to ensure the fullest possible alternation, and to achieve the most reliable experiment design. Moreover, produce in the corpora does not occur with DOs referring to food. For that reason, occurrences of make with food DOs were removed from the data in order to facilitate a more sound comparison with produce.

Table 5. Instances of make and produce with the sense ‘Produce (Concrete, Non-food)’, in the spoken portion of ICE-SIN, ICE-HK, and ICE-GB

	make (concrete, non-food)	produce (concrete, non-food)
ICE-SIN	69	33
ICE-HK	54	47
ICE-GB	96	64

Table 6. Instances of make and produce with the sense ‘Produce (Concrete, Non-food)’, in the written portion of ICE-SIN, ICE-HK, and ICE-GB

	make (concrete, non-food)	produce (concrete, non-food)
ICE-SIN	37	66
ICE-HK	67	59
ICE-GB	68	135

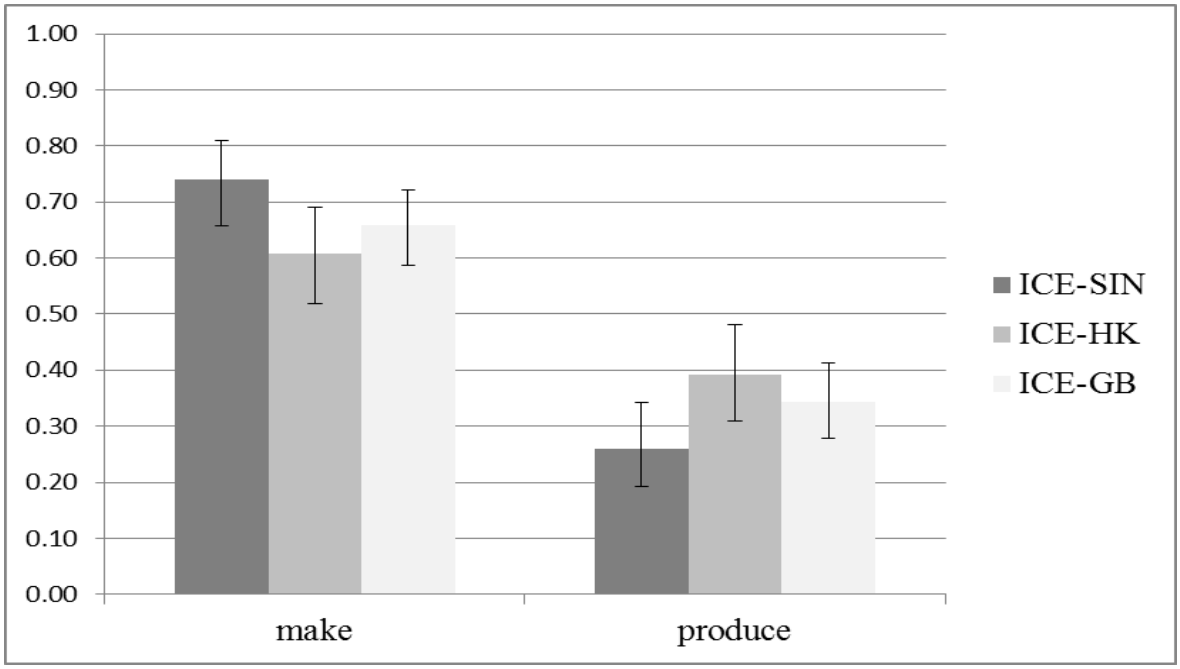

Figure 1. Probability of selecting make and produce with the sense ‘Produce (Concrete, Non-food)’, in the spoken portion of ICE-SIN, ICE-HK, and ICE-GB. The y-axis represents probabilities for each term in each corpus, and error bars represent Wilson intervals.

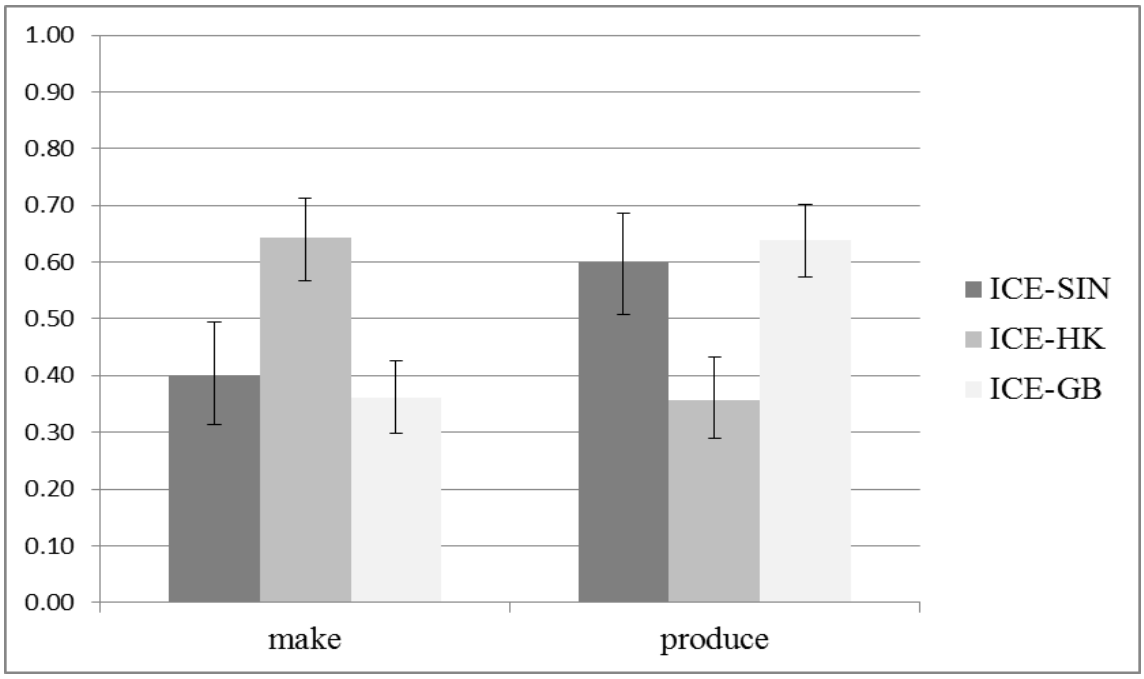

Figure 1. Probability of selecting make and produce with the sense 'Produce (Concrete, Non-food)', in the written portion of ICE-SIN, ICE-HK, and ICE-GB. The y-axis represents probabilities for each term in each corpus, and error bars represent Wilson intervals.

In speech, shown in Figure 1, ICE-SIN and ICE-GB exhibit similarly strong preferences for concrete make over concrete produce. ICE-HK, however, shows no significant preference for make or produce in speech. In writing, shown in Figure 2, ICE-SIN and ICE-GB exhibit a very different preference from that of speech, in favour of the polysyllabic Latinate alternate produce over the monosyllabic Germanic alternate make. ICE-HK, on the other hand, maintains an equal preference for make and produce, even in writing. ICE-HK is the unique data set, then, in not following the preferences for make over produce in speech, and produce over make in writing.[9] This finding is remarkable, and it is discussed at greater length, alongside findings for give, in the discussion below.

CASE STUDY 2: CONCRETE GIVE

Data collection

Typical examples of concrete give in the corpora include the following:

(4) She always wore her elder sisters' old clothes, and was often given the old toys. [ICE-GB W2F-017 #6]

(5) The buyer is given a slip with the price and a four-digit code. [ICE-HK W2B-036 #33]

In example (4), a concrete object, toys, is transferred to a recipient, the Subject of a passive clause. Similarly, in example (5), a concrete object, slip, is transferred to a recipient, the Subject of a passive clause.

The OED distinguishes give with the sense 'conferral of ownership' from give with the sense 'transfer' without conferral of ownership. In the corpus data, many examples do not clearly convey ownership or non-ownership; that is, the distinction made by the OED is not always clear in practice.

(6) Meanwhile, a small bit of food was given to the subjects when they made the designated response… [ICE-HK W1A-004 #43]

In example (6), a concrete object, food, is provided to subjects participating in an experiment. It is, however, unclear, unspecified, and probably irrelevant, whether the subjects are thought to 'own' the food before consuming it. While informants might be able to provide their intuitions about this question, there is no evidence in the corpora for interpreting ownership.

(7) But if there is going to be appreciation you can give him a plaque. [ICE-SIN S1B-052 #35]

In example (7), a concrete object, a plaque, is provided to a recipient. Example (7) likely indicates conferral of ownership of that plaque. That is, listeners are likely to understand that when a plaque is handed over to express appreciation, the recipient likely then owns the plaque. This is, of course, subject to variation in social and cultural norms and customs, as well as particular circumstances, and while 'conferral of ownership' may be inferred in such cases, it is still not entirely certain from the corpus data, and certainly not explicit.

(8) If for some reason he is not in a position to initiate forward play, then he should not be given the ball. [ICE-GB W2D-015 #125]

In example (8), it is clear that giving the ball in football does not confer ownership, but instead involves only a physical transfer. It would be difficult to argue that players trade ownership of the ball as they pass it around the field.

Table 7 indicates the number of instances of concrete give in each corpus in which there is an implication that ownership is conferred (as in example (7)); there is an implication that ownerships is not conferred (as in example (8)); or there is no clear implication in either direction or ambiguity between implications in either direction.

Table 7. Number of instances of give in ICE-SIN, ICE-HI, and ICE-GB with implied conferral of ownership, implied non-conferral of ownership, and no implication of ownership

	ICE-SIN	ICE-HK	ICE-GB
give with implied conferral of ownership	66	66	62
give with implied non- conferral of ownership	41	29	59
give with no implication as to conferral of ownership	72	70	23

It is worth reiterating, in discussing Table 7, that there are no instances in the corpora in which conferral of ownership is entirely, explicitly certain with give, only cases like example (7) in which it can be inferred. As is apparent, there is a considerable number of cases of ambiguity, or lack of any clear implication of ownership or non-ownership, in all three corpora. This frequent ambiguity appears particularly strong in ICE-SIN and ICE-HK,[10] and it may be that Singapore English and Hong Kong English tolerate ambiguity regarding the conferral of ownership more than British English.

In most cases, there is no evidence in the corpus to determine whether contact is maintained between a giver and the thing given, and then between the receiver and the thing given; such contact is one of the defining factors for Newman's (1996) typical sense of concrete give. However, there are several examples in each corpus in which contact is not

maintained between the giver and the receiver, such as in the case of passing a football in example (8). Such examples would seem to contradict Newman's (1996) assertion. This observation usefully illustrates the value of corpora for testing conjectures about lexical semantics.

Data analysis

Following the methods described above, the alternates in Table 8 were identified for concrete give in the three corpora.

Table 8. Alternates for concrete give, as evidenced in ICE-SIN, ICE-HK, and ICE-GB

Alternates for concrete give:	provide, hand, issue, submit, pass, donate, transfer, contribute, supply, grant

As with make, an initial statistical analysis was performed, for a very rough picture comparing selection preferences across all of these alternates in speech and writing, with a Newcombe-Wilson test with continuity correction (cf. Wallis 2009; see also note 8). As with make, it was determined that most of these alternates occur with concrete DOs in the corpora too infrequently to reach any confident conclusions about usage preferences.

Close reading was performed of each example of each alternate verb in all corpora, including instances with a concrete DO. As with make, it was further determined that although each verb can alternate with give, most of the verbs can only rarely, if ever, alternate with each other. The distinctions are not as systematic as the 'food'/'non-food' distinction for make, but a few examples illustrate the issue:

i. Whereas language users in the corpora submit applications and give applications, they do not pass applications in the corpora, and although they give tissues and pass tissues, they do not submit tissues.

ii. Similarly, although language users in the corpora issue licences and give licenses, they do not donate licences.

iii. Whereas language users give blankets and donate blankets, they do not issue blankets.

It must be noted that constructions like issue blankets may not be impossible, but they do not occur in the corpora, and cannot be measured as actual onomasiological alternation preferences in this corpus study.

As with make, the method employed here is useful for identifying actual alternates, but this relatively complete picture of alternation is not a picture of universal alternation. For a strong onomasiological experiment design, given the limited data, it is necessary to select forms that alternate more universally, and that occur frequently enough to engender some confidence in the data. The decision was taken, therefore, to compare concrete give to its most frequent and most semantically general alternate, provide.

Table 9. Instances of give and provide with the sense ‘Transfer (Concrete)’ in the spoken portion of ICE-SIN, ICE-HK, and ICE-GB

	give (concrete)	provide (concrete)
ICE-SIN	131	19
ICE-HK	94	27
ICE-GB	105	11

Table 10. Instances of give and provide with the sense ‘Transfer (Concrete)’ in the written portion of ICE-SIN, ICE-HK, and ICE-GB

	give (concrete)	provide (concrete)
ICE-SIN	50	39
ICE-HK	77	39
ICE-GB	52	57

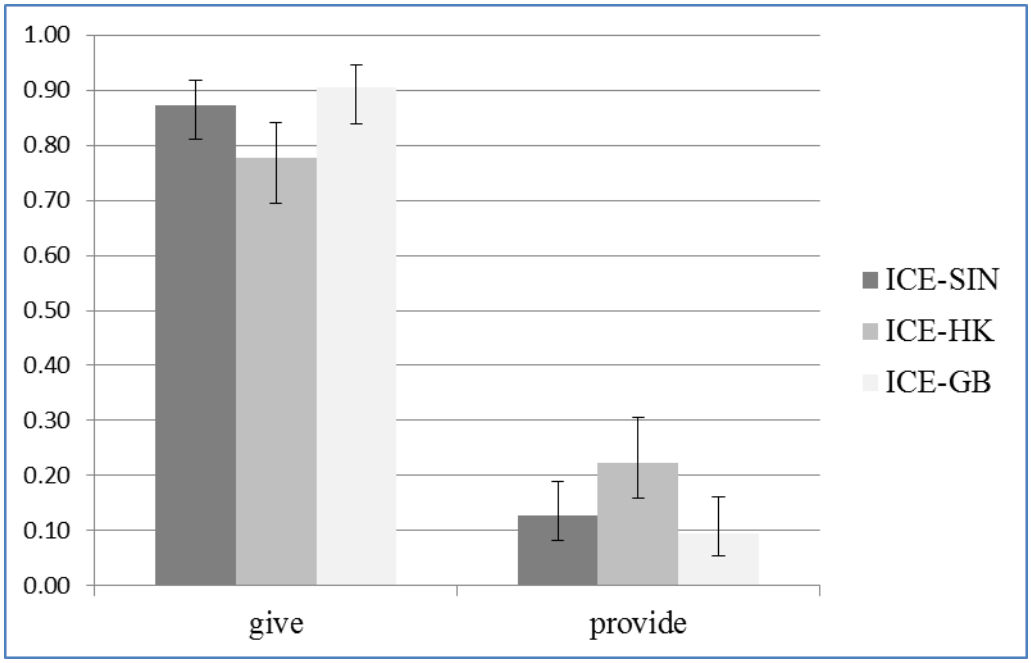

Figure 3. Probability of selecting give and provide with the sense 'Transfer (Concrete)' in the spoken portion of ICE-SIN, ICE-HK, and ICE-GB. The y-axis represents probabilities for each term in each corpus, and error bars represent Wilson intervals.

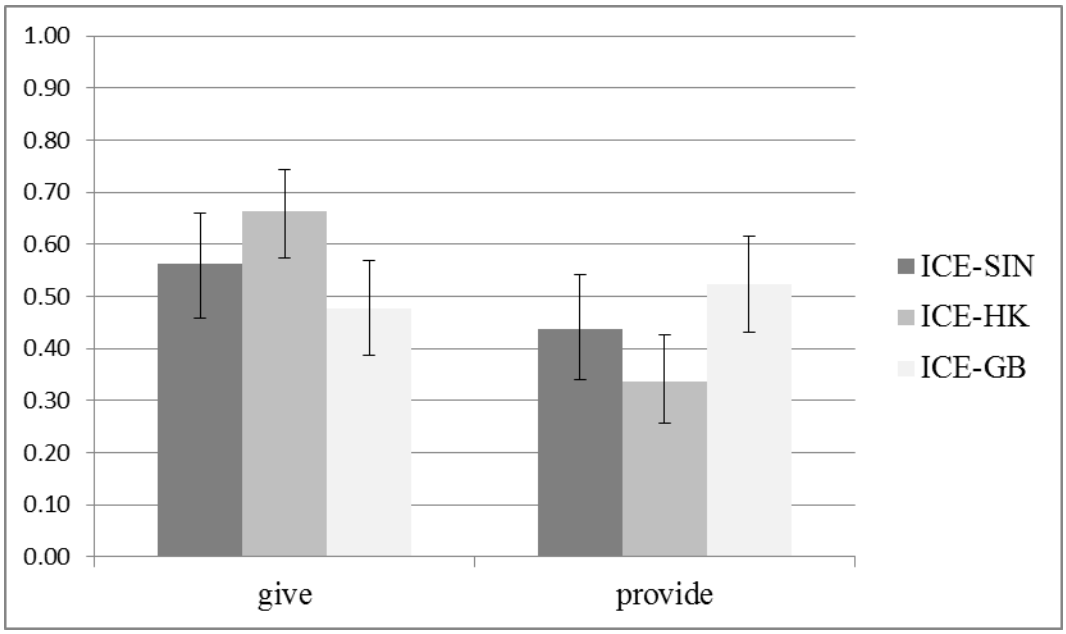

Figure 4. Probability of selecting give and provide with the sense Transfer (Concrete) in the written portion of ICE-SIN, ICE-HK, and ICE-GB. The y-axis represents probabilities for each term in each corpus, and error bars represent Wilson intervals.

In speech, shown in Figure 3, the three corpora exhibit similar selection preferences, strongly preferring concrete give to concrete provide in spoken language: the monosyllabic Germanic alternate is preferred in speech over the polysyllabic Latinate alternate. In writing, shown in Figure 4, ICE-SIN and ICE-GB differ from speech, as they did for make and produce. The preference for provide rises in writing in ICE-SIN and ICE-GB, such that provide is preferred equally with give; ICE-HK, however, maintains a strong preference for give over provide even in writing. This finding, and its similarity to the findings for make and produce, are discussed at length in the next section.

DISCUSSION

First, it must be noted that the original experiment design, aiming to measure onomasiological selection preferences across an array of alternates for the concrete senses of make and give, proved untenable given the scarcity of data in the relatively small ICE corpora. There are simply too few instances of semantically specific, relatively rare words such as manufacture or supply for such an analysis. Instead, the only strong and reliable analysis possible was a comparison of concrete make with its most high-frequency, semantically general alternate, produce (with non-food DOs); and concrete give with its most high-frequency, semantically general alternate, provide.

Meaning nuances proposed in previous work on make and give were examined in the corpora. Newman (1996) defined give such that contact is maintained first between the agent and the concrete object, and then between the recipient and the concrete object. This definition was not supported by the corpus data. In general, there is no explicit distinction between give indicating conferral of ownership or non-conferral of ownership, and there is no obvious unique preference for one of those meanings or the other in any variety. This might

not have been the case: it is conceivable that a variety might show a restricted use of give in which it necessarily communicates conferral of ownership. That is not the case. However, there may be a greater tolerance in the ICE-SIN and ICE-HK data for ambiguity between conferral of ownership and non-conferral of ownership. This finding is not corroborated by statistical analysis, but it is nonetheless suggested by the qualitative, subjective process of categorizing ambiguous cases among limited data, and may therefore deserve further scrutiny in larger data sets.

There are no examples of concrete make that suggest novel semantics, and no instances with concrete DOs that challenge the existence of a concrete sense. While constructions such as making dosai or making popiah (both foods) do occur in Singapore, for example, reflecting real world facts of the environment, these constructions do not challenge the semantics of concrete make. Likewise, there are no examples of concrete give that exhibit novel semantics, and no instances with concrete DOs that challenge the existence of a concrete sense.

The similarities between the varieties, as listed above, are extremely important. In contrast to the many proposals described above, that subtly distinct senses will have emerged in English varieties worldwide, the findings on make and give suggest a remarkably robust 'common core' observable in corpora. Baker (2010: 83) has emphasized the importance of similarities between language varieties, and the necessity to report such similarities in order to avoid 'bottom drawer syndrome', whereby studies that evince similarity between varieties are left unpublished, and only a minority of studies that evinces differences is ever published. Owusu-Ansah (1994: 341) asserts that 'a model of NNEs ['Non-Native Englishes'] that highlights only the differences between them and NEs ['Native Englishes'] to the neglect of similarities is a distortion of facts'. The similarities observed here are a crucial element of the facts of these three varieties, and should not go unreported.

Statistically significant differences do appear between the three varieties. The findings are consistent, and were not predicted by existing frameworks for WEs. In the spoken data, ICE-GB and ICE-SIN exhibit a strong preference for monosyllabic, Germanic alternates (make over produce; give over provide). In writing, ICE-GB and ICE-SIN exhibit an increased preference for polysyllabic, Latinate alternates. However, ICE-HK does not exhibit these preferences, as described above. Given that this variation relates semantic onomasiology and selection preferences to norms for speech and writing, it seems precisely to reflect Görlach's (1995 [1990]: 127) assertion that semantic distinctness in WEs will often be a matter of 'stylistic values'. This is a remarkable finding for Hong Kong English – a difference from the common preference in Singapore English and British English towards a polysyllabic Latinate alternate in writing and a monosyllabic Germanic alternate in speech. This difference seems to hold across populations of data, and likely operates well below the level of consciousness.

How do we interpret these findings in relation to theories of WEs? Schneider's (2007) dynamic model is often interpreted as predicting that endonormative varieties of WEs, those in more 'advanced' stages of WE development, will exhibit more unique features, such that Singapore English would have been expected to exhibit unique characteristics, while Hong Kong English would be expected to adhere to external British English norms. Instead, we find that British English and Singapore English are similar, while Hong Kong English is significantly different.[11] This does not corroborate Schneider's (2007) model. Nor do the findings seem to correlate with Kachru's (1985) Three Circles model. Kachru's model, too, would predict that Hong Kong English follows an external norm, while Singapore English does not.

Brutt-Griffler's (2002) model becomes useful here, alongside what we know about ICE-HK. Uniquely, ICE-HK represents a population that cannot be expected to have used

English as a primary language in the way that the populations underlying ICE-SIN and ICE-GB have (as discussed above). Populations like that underlying ICE-HK, and the process of language acquisition, are central to Brutt-Griffler's theory of WEs. For Brutt-Griffler, populations like the one sampled in ICE-HK cannot be exonormative (following an external British standard) because, as local language learners, these populations do not have complete knowledge of any external or foreign norm. According to Brutt-Griffler's model, the population represented by ICE-HK is expected to be endonormative, generating its own internal norms because its language users cannot be expected adhere to an external norm. The variation in the present study can therefore be explained: as the only sample of such a population among the three corpora, ICE-HK represents subtle stylistic divergence from external (or possibly international) norms in relation to stylistic choices in spoken and written language. Language users in ICE-HK display their own internal stylistic norms, such that they do not follow the common norms of British and Singapore English towards a monosyllabic Germanic alternate in speech and a polysyllabic Latinate alternate in writing. Brutt-Griffler's theoretical framework, rather than any of the more prominent frameworks in the literature, has explanatory adequacy for the present findings. Indeed, her framework is likely to be more broadly useful in WE studies, and deserves to be explored and tested further.

CONCLUSION

This study has employed corpus onomasiology to investigate selection preferences for concrete senses of the highly frequent transitive verbs make and give and their corpus-derived alternates. The methods described here have proven strong and valuable ones that can serve as a template for future work in WEs. Indeed, the findings here affirm the need for further onomasiological work, in order to identify additional similarities and differences in lexical

semantics in WEs. The present work is a first step, and the findings here might be usefully corroborated or refuted with additional studies into selection preferences for comparable alternations in these three varieties.

Onomasiological alternation preferences for make and its alternate produce, and for give and its alternate provide, differ across Singapore English, Hong Kong English, and British English, in remarkably consistent ways. Hong Kong English is the unique variety, insofar as it does not demonstrate the common preference in British and Singapore English towards the monosyllabic Germanic alternates in speech and the polysyllabic Latinate alternates in writing. The variation that is observed does not corroborate the theoretical frameworks of Schneider (2007) or Kachru (1985), but is explicable via the theoretical framework of Brutt-Griffler (2002), a framework that deserves further attention. Indeed, it may be that the process of ongoing macroacquisition is a factor that correlates with semantic variation.

Future research can usefully investigate other selection preferences across additional semantic alternates, for make, give, and other lexis, in much larger data sets than the ICE corpora. At present, there is no carefully controlled data set for these three varieties: in the future, we may have large corpora for Singapore and Hong Kong, and other WE varieties, which would facilitate studies into lower-frequency alternates. Finally, it would be valuable to determine the relationship between these preferences for make and produce, give and provide, in relation to formality and informality, perhaps via broader studies into formality in the ICE corpora.

Ultimately, a theoretical framework for WEs that is built on, or at least correlates with, semantic features would be a worthwhile goal. Such a framework might build up from individual semantic features of varieties, like those presented in this study, to map semantic similarities and differences across varieties, and in turn to identify groups of regional

varieties that share common semantic features. In phonetics, Schneider's (2008) study is a useful precedent for such an approach. In semantics, that approach will first require collection of far more semantic data than is currently available. The present work is a step in that direction.

NOTES

1. Although Görlach (1995 [1990]) criticized the second edition of the OED for neglecting WE lexis, the third edition is much improved.

2. Onomasiology also relates implicitly to ecological linguistic models. Mufwene (2001: 6) proposes that language environments allow a range of linguistic features, which constitute a 'feature pool'. Language users select from their feature pool in different ways in different situations (ibid: 5), and this must therefore include the onomasiological selection process between alternating lexis for expressing a given meaning. Schneider's (2007) dynamic model draws deeply on Mufwene's (2001) work, describing WE speakers' selection processes from their local feature pool, and Schneider (2007: 96) mentions onomasiological alternation in relation to bucket/pail distinctions employed in traditional dialect maps; he does not incorporate onomasiological variation into the stages of his theoretical framework.

3. In 1985, Kachru (1985) suggested that Singapore is a variety which is generating internal norms, but is not yet endonormative. Later, Kachru (1992) recognized that Singapore English might have changed from exonormative to endonormative.

4. ICE components have been sampled to represent an array of spoken and written text types from WE varieties (Greenbaum 1996). Five hundred texts of 2,000 words each are sampled, totaling one million words per region, at a balance of 60% spoken, 40% written, with further control and balance for specific text types and sub-types.

5. In Hong Kong, a limited number of English-language schools were established through the educational reforms of 1978 (Bolton 2006: 2). By 1997, roughly when ICE-HK was compiled, 100 out of 460 secondary schools in Hong Kong were allowed to teach in English (Bolton 2006: 9), with an unknown number of those schools adhering consistently to English for all purposes. In Singapore, by contrast, a switch towards universal English-language schooling was effectively initiated in 1983 (Deterding 2007: 86) and finalized in 1987 (Ling 2010: 232).

6. In addition, the spoken portion of ICE-HK includes interlocutors who are not from Hong Kong and who do not fit any of the criteria required by the ICE corpora. In such spoken texts, at least one interlocutor fits the corpus's criteria for local speakers, but the other interlocutor or interlocutors do not. Other interlocutors include speakers 'from a variety of "expat" backgrounds, including the US, UK, Australia, Europe, etc.' (p.c. Kingsley Bolton 2012), but details on particular speakers' backgrounds were not recorded (p.c. Gerald Nelson 2013). For example, the outside interlocutor in ICE-HK text S1A-065 identifies himself as Japanese, though it is unclear whether Japanese indicates nationality or ethnicity. The outside interlocutors' words are included in the corpus files but tagged as non-corpus text. Outside interlocutors' use of make and give is excluded from the data here. Nonetheless, if outside interlocutors have led to convergence in some features, it may be that the spoken section of ICE-HK resembles other varieties more than it would have if strict ICE guidelines had been followed in its compilation.

7. In fact, the list of alternate verbs was saturated after examining all DOs that occurred three times in each corpus, and the further investigation of DOs occurring twice only reinforced those findings. It is reasonable to conclude that investigating DOs that occur only once would not provide further additional data.

8. A Newcombe-Wilson test with continuity correction is appropriately employed between-subject for categorical variables. Results will only rarely differ from a more common, and readily justified, r x c chi-square test (Wallis 2009). The Newcombe-Wilson test with continuity correction has the advantage that it does not allow confidence intervals to extend below 0 or above 1, which would be a logical impossibility. Other statistical tests could certainly be applied, but it is not standard procedure to compare various tests against each other unless the tests themselves are the object of scrutiny.

9. These preferences seem to accord with what might be common knowledge regarding speech and writing, and register or style: make is likely to be preferred in speech and informal contexts, and produce is likely to be preferred in writing and formal contexts. There is, however, no rigorous definition of formality in the ICE text types. While the spoken section of ICE is dominated by face-to-face dialogues, and the written section is dominated by formally edited academic and popular writing, the category of 'Private conversations' is not composed entirely of informal conversations. Close reading gives the impression that it is generally informal, but important exceptions arise: ICE-GB includes at least one doctor-patient interview (ICE-GB S1A-051) in its face-to-face dialogues, which might be expected to be more formal than other casual conversations; the other two corpora seem to include only casual private conversations between peers in this section. Future research could work to establish degrees of formality in the ICE corpora, perhaps along the lines proposed by Biber (1988).

10. There is no true alternation between give with these three senses, i.e. the categories are not mutually exclusive. So, a categorical contingency test such as a chi-square or Newcombe-Wilson test is not suitable for analysing the data. A multi-sample t-test (i.e. ANOVA) for ratio data is a better option, and it reveals no statistically significant difference between the data sets ($p<0.05$). That is, we cannot reject the null hypothesis that the three samples

represent underlying populations that are the same in their tolerance of ambiguity regarding conferral of ownership. Aggregating the measures from ICE-HK and ICE-SIN, based on their similarity, and comparing that aggregate to the measure from ICE-GB, yields the same result.

11. A similarity between synchronic varieties does not indicate an influence – there is no indication that Singapore English is following a norm set by British English, for example. There is also no indication that Singapore English has always resembled British English – it is conceivable that Singapore English might not have matched British English in this regard a generation ago.

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