The contingent meaning of –ex brand names in English

Laurel Smith Stvan

Abstract

The –ex string found in English product and company names (e.g., Kleenex, Timex and Virex), is investigated to discover whether this ending has consistent meaning across coined words and to observe any constraints on its attachment and interpretation. Seven hundred and ninety-three –ex brand name types were collected and examined, derived from American English texts in the Brown and Frown corpora as well as over 600 submissions to the US Patent and Trademark Office’s Trademark Electronic Search System database (TESS); American native English speakers were also surveyed to assess interpretations of –ex meaning in brands. Analysis of these coined terms reveals that –ex meaning is contingent, reflecting assumptions by a given speaker of a referent’s domain in a given time, region and culture. Yet, despite ambiguities in its interpretation, the –ex form shows increasing use.

1. Introduction

1.1 Reasons for studying brands

Brand names as elements of natural language are an area of great potential interest for linguists. However, despite their increasing occurrence in everyday discourse, brand names in natural communication are still largely unnoticed, rather than being regarded as representative of a speaker’s linguistic knowledge. Brand coinage is not unlike producing new common nouns. Both exploit language-specific patterns that reflect speaker perceptions about phonotactics and morphology, and, most importantly, rely on speaker intentions in generating word meaning. Among the

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2 of Department of Linguistics and TESOL, University of Texas at Arlington, Hammond Hall 403 – Box 19559, Arlington, TX 76019, USA
Correspondence to: Laurel Stvan, e-mail: stvan@uta.edu

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existing brand name types are those ending in –ex. This article focuses on
the internal patterning of this abundant group, linguistically valuable for
revealing nuanced productivity.

I examine the ways speakers distinguish meaning and whether
these support or contradict the ‘inherent’ semantic meaning of morphemes.
The study was initiated by curiosity about the consistency of coined terms –
a recognised source for branding in English. Although product names can
be innovative (e.g., Kodak, Exxon and Nylon), I focus on those terms that
are formed not ex nihilo, but are coined, apparently, through derivation. I
observe the shaping of the lexicon through semantic and pragmatic aspects
of words and by the attention of branding companies, thus exploring
influences on speaker adoption of productive morphemes. In particular,
this study explores the overlap between etymology and morphology,
examining when speakers acknowledge a string to be a separate,
consistently meaningful unit. After considering whether one isolatable
form (in this case, –ex at the end of a word) must indicate one meaning in
all new tokens, I show that more is involved than the presence of multiple
senses. Rather, meanings for –ex are contingent, reflecting knowledge by a
given speaker of a referent’s domain in a given time, region and culture.

In Section 1.2, I provide preliminary demonstrations of –ex brand
name use, illustrating their flexibility as nouns. Section 2 contains a review
of previous work on neologism, branding and derivational morphology,
highlighting works involving corpus-derived data. Section 3 presents the
current research questions, including hypotheses concerning
–ex meaning. Section 4 describes the corpora from which I sought
instances of –ex brand names and the sources of speaker judgments about
them. In Section 5, I break down the findings, first by morphology, then by
semantics, etymology and orthography.

1.2 Illustrations of –ex brand name use

Trade names can be regarded as proper modifiers of common nouns (e.g.,
Frito corn chips, Hefty trash bags). Often, however, the common-noun
head is deleted, leaving only the brand-naming adjective to stand for the
whole noun phrase. In addition, while originally used to refer to the
products of one company, brand name terms can undergo a semantic shift
in reference, becoming interchangeable with category terms, e.g., aspirin,
zipper and linoleum are now used as cover terms for their whole product
type, rather than denoting one company’s product. Hence, trademarks,
clipped and genericised over time, are one source of common nouns
(Clankie, 2002; Moore, 2003).

Unlike most nouns, proper names are often regarded as terms that
have reference, but no sense. While names for people may involve
derivation, (especially in showing family lines: Mc–, –son, –ova), in English, morphological processes most frequently appear in
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common nouns. Trademarked terms fall in between – their capitalised
designation makes them appear like proper names, yet they lack unique
referents. Indeed, within brand names, both company names (more name-
like) and product names (more noun-like) are found. For –ex terms this
holds true. While consumers often know individual product names, these
may be just one product a company sells, as seen by the following
companies and their trademarked products: G.D. Searle and Co. (Celebrex),
Kimberly Clark (Kleenex) and Corning (Pyrex). Yet –ex forms appear as
company names, too, (e.g., Artex, Blistex, Moulinex, Proctor-Silex, Timex,
calls ‘dual function’ trade names, used for both a company and its products.

Clipped from numerous common nouns, –ex products can be both
count nouns (like Kleenex and Rolex) and mass nouns (like Carmex and
Windex). In other words, the –ex ending itself does not signify that the
referent is countable. Hence we find singular and plural uses in (1), yet a
lack of plural markers in (2):

1. a) She dabbed her cheek with a crumpled Kleenex.
http://www.civilwarnews.com/archive/articles/snyder_dies.htm
b) Security vendor ClearSwift noted a big increase in the
number of spam mails offering Rolexes
http://www.pcw.co.uk/news/1160106

2. a) I bought some Carmex for $0.89 and it solved the
problem.
b) The case should be cleaned with a damp cloth and some
Windex
http://www.sphere.bc.ca/test/clean.html

Coining a trade name, however, is not as arbitrary as is the
connecting of a word and its meaning for most lexical items. A Name Lab
spokesman claims that ‘unlike natural language, a product or company
name derives much of its meaning from the perceiver’s experience of the
names of similar things’ (Freivalds, 1996: 27). Thus, brand name
interpretation can rely on the referent’s domain. However, distinct domains
for each term are not always apparent. Zaichkowsky (1995: 59) observes
that, ‘the question of the consumer’s perceptions of relatedness of the
product category is seldom asked in surveys for court cases.’ Domain
recognition matters, however; as per other trademarks, –ex words can be
found as brand names for more than one product. Trademark law allows
the same name to be used by multiple companies or in multiple countries if
the products are not competing in the same domain. Figure 1 provides
illustrations. As Davis and Eeles (1996: 257) note, in trademark rulings,
‘formal similarity (be it phonetic or visual) is not a matter of common-sense perception of resemblance’; instead, they observe that similarity ‘is a product of the identity of one trade mark realised in the experience of market members, and the evidence or probability of confusion or deception within a specific market context.’

<table>
<thead>
<tr>
<th>Word</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Durex</td>
<td>latex contraceptives</td>
</tr>
<tr>
<td></td>
<td>automobile antifreeze</td>
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<tr>
<td></td>
<td>fluorescent lamp</td>
</tr>
<tr>
<td>Entex</td>
<td>plastic model kit producer</td>
</tr>
<tr>
<td></td>
<td>video game manufacturer</td>
</tr>
<tr>
<td></td>
<td>cough medicine</td>
</tr>
<tr>
<td>Lanex</td>
<td>lanolin-based haemorrhoid ointment</td>
</tr>
<tr>
<td></td>
<td>herbicide</td>
</tr>
<tr>
<td></td>
<td>braided climbing rope</td>
</tr>
<tr>
<td>Windex</td>
<td>spray-on window cleaner</td>
</tr>
<tr>
<td></td>
<td>fishing reel</td>
</tr>
<tr>
<td></td>
<td>speed boat wind indicator</td>
</tr>
</tbody>
</table>

**Figure 1**: Multiple brands with the same –ex names

Domains may surface for trademark forms. Branding research mentions a subfield called ‘personal care products’ (Felices Lago, 1999), or the earlier ‘toilet goods’ (Forde, 2002), which contains many –ex types, though other categories also emerge. Figure 2 shows referent domains of the –ex brands I gathered.

<table>
<thead>
<tr>
<th>Domain</th>
<th>Sample tokens</th>
</tr>
</thead>
<tbody>
<tr>
<td>Medication</td>
<td>Celebrex, Cruex, Desenex, Lanex, Lipex, Sominex</td>
</tr>
<tr>
<td>Toiletries</td>
<td>Blistex, Carmex, Cutex, Durex, Kleenex, Kotex</td>
</tr>
<tr>
<td>Pesticides</td>
<td>Larvex, Mothex, Orthex, Pulvex, Warbex</td>
</tr>
<tr>
<td>Artefacts</td>
<td>Corex, Legumex, Moulinex, Pyrex, Timex, Rolex</td>
</tr>
<tr>
<td>Cleaning agents</td>
<td>Clearex, Glassex, Purex, Sprayex, Tilex, Windex</td>
</tr>
</tbody>
</table>

**Figure 2**: Domain types of –ex brands
Recognition of –ex name productivity in certain domains can be revealed in product spoofs. For example, a cartoon published during the coverage of deaths connected to Vioxx pain reliever makes reference to the made-up analgesic Fraudulex (Raeside, 2005). Part of this name’s effectiveness is its similarity to medication names such as Celebrex, Immunex, Lipex, etc.

US trademark law recognises four naming conventions (Clankie, 2002: 60). The first covers innovatively coined words (e.g., Kodak, Exxon), which, lacking built-in sense are ‘considered inherently distinctive’ (Piller, 2001: 194); the second consists of arbitrarily assigned names – existing words unconnected to the product (e.g., Apple for a computer brand, Blue Bunny for a brand of ice cream); the third contains terms that ‘suggest some attribute of or benefit from the goods or service,’ without describing the goods themselves (e.g., Coppertone for a tanning lotion, which describes how the user will be, but not the lotion itself); and the fourth describes the goods or services, including modification with surnames. Phrases that could apply to a whole class must be shown to have achieved secondary meanings through their advertising use (e.g., Hefty trash bags, Blue Ribbon beer, World’s Finest chocolate). These, Davis and Eeles (1996: 260) state, must be ‘shown by evidence in use to be adapted to distinguish one trader’s goods from another’s in the market.’

The watch brand Rolex, named by the company’s German founder, typifies –ex brands claimed to be innovatively coined. Other brands more transparently signal their compound origins (e.g., the Durex website claims, ‘the brand name was derived from the three principal attributes of the product – Durability, Reliability and Excellence’). For others, the –ex ending seems innovative, though it attaches to a base with a recognisable sense (e.g., Kleenex, Timex). Finally, for names such as the die-cast metal toy company, Xonex, or the foot powder, Desenex, it is unclear what the base itself refers to. Several factors, then, interact with –ex use. Tracking the introduction and influence of –ex attachment could thus reveal whether –ex involves an innovative or existing process, and how regular this process is.

2. Literature review

Work in three areas illuminates the coining of –ex brands: neologisms, branding and derivational affixation, with corpus analysis applicable to each.

2.1 Neologism studies

Although spontaneous, unobtrusive coining occurs, novel word formation has undergone scrutiny by lexicographers (e.g., Atlantic Monthly’s ‘Word Watch’ column, the American Dialect Society’s ‘Word of the Year’ and
articles in *American Speech*) and by humorists (e.g., Rich Hall’s *sniglets* in the 1980s). Metcalf (2002) and Kjellmer (2000) examine whether the longevity of new words can be predicted.

Algeo (1991) typifies hand-gathered neologism data, detailing 3,000 American English words appearing between 1941 and 1991.³ Corpora have helped neologists automate finding new tokens by extracting *hapax legomena*. Projects searching online texts includes the *Analysis and Prediction of Innovation in the Lexicon* (APRIL), *Sistema d’Extracció Automàtica de Neologia* (SEXTAN) and *NeoloSearch* (Vivaldi, 2000).

### 2.2 Branding studies

Popular etymological works on product names include Room (1991) and Staten (1998). Previous linguistic studies have examined brands in distinct product domains, such as automobile names (Aronoff, 1981; Piller, 1996) and medicine names (Leblanc, 1992). Genre analysis of advertising also highlights brands (Hermerén, 1999; Leech, 1966; Toolan, 1988). Psycholinguists (Gontijo *et al*., 2002) show that brands are recognised and processed differently than common nouns or proper nouns.

Friedman (1985a,b; 1986a) studies change in the social saturation of trademarks, finding that brand name frequency increased in novels, plays and song lyrics between 1946 and 1975, and newspaper editors believed that product names increased in non-business sections of US newspapers then, too, (1986b). Other corpus work has analysed collocated terms in text surrounding product names. For example, examining user postings on medical web sites and discussion groups, Malouf *et al.* (2006: 125) extracted non-brand terms occurring at least fifteen times on the same page as brand names, examining clusters for evidence of ‘feelings, beliefs, knowledge, and attitudes people have’ towards particular products.

Branding companies strategise lexical item creation: when ‘a new name is developed it is then legally known as an IPN “international proprietary neologism”’ (Freivalds, 1996). Brand coining is presented as ‘an analytical process. It’s not created – It’s cold construction linguistics’ (Imperato, 1996). Yet, though emphasising traditional word formation processes of *ex nihilo* coining, clipping, blending and derivational affixation (cf. Charmasson, 1988; Cintara, 2004; Joshi, 2002) branders sometimes rely on loose ‘rules’ of the psychological impact of sounds, accessing sound symbolism clusters in a given language. An anonymous *Psychology Today* article, for example, notes that the drug Paxil ‘begins with a “plosive” sound that suggests power’ as opposed to the fricatives that imply speed (2003: 78); Lexicon branding, on the other hand, states

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³ Only three –ex words appear in these 3000: *complex* ‘a cluster of related buildings’ (1965); *index*, specifically an *escalation index* (1975); and *sex kitten* (1964). All are semantic shifts or new compounds of existing words rather than creations from affixation; none were created as brand names.
that ‘the hard “P” in PowerBook communicates compactness and speed, while the “B” suggests dependability’ (Imperato, 1996). Panic (2003: 248) finds brand coining to be a process ‘characterized by a creative and imaginative structure that produces a pleasant psycho-acoustic effect and a meaning rich in layers of associativeness.’ Section 2.3.2 illustrates that –ex names are rich in such associations.

Hearing repeated ads may reinforce brand recognition, but Metcalf (2002: 61) suggests that even with common nouns, ‘successful new words are those so close to the edge of the vocabulary that they are invented over and over again till they finally catch on’. Besides advertising, iterations of neologisms in plays, novels and re-runs of sit-coms can strengthen new terms. Beyond lexical repetition, however, –ex brands expose hearers not merely to individual words, but, crucially, reinforce –ex derivational functions.

2.3.1 Affixation studies

Linguists have employed corpora in tracking individual affixes: the BNC supplies data on derivational morphemes in different registers (Plag et al., 1999) and derivational affix combinations (Hay and Plag, 2004). Riehemann (1998) searches twentieth-century newspaper corpora and electronic newsgroups for German –bar adjectives; and Light (1996) searches tagged Brown corpus data for morphemes reflecting lexical semantic information.

Branding and morphology intersect in exploring whether commercially reinforced morphemes differ regarding perceived referent types, semantic expansion to new domains, and staying power in the language. Piller (2001) examines non-derivational brand formation. English nominalising affixes for brands have also been studied. Lentine and Shuy (1990), studying the Mc– prefix in popular word formation for a trademark infringement case, find that speakers regularly convey additional senses when coining by attaching Mc– besides referencing McDonalds foods. User intentions, then, appear as crucial as those of marketers or coiners. Glowka (1985) tracks another brand morpheme conveying multiple senses, showing that negative connotations of –ola from 1960s payola news stories were ameliorated by subsequent products with more positive connotations, including Crayola, granola and Mazola. The future of the ending, Glowka (1985: 135) surmises, ‘will depend on the products it names’. This suggests that experience with the referent also influences the interpretation of meaning. Lentine and Shuy (1990: 349) conclude that ‘large corporations… have little effect on stopping the machinery of semantic change once it has begun to operate within the language of everyday spoken and written discourse’.
2.3.2 –ex studies

Hand-collected data has shown a long history for word-final –ex in English. Further, as a syllable-final grapheme, –x alone occurs in various coined names. In 1999, for example, the Institute for Safe Medication Practice issued this warning:

to health care professionals and consumers to be careful when prescribing, dispensing and using celecoxib (Celebrex) and other products whose names look and sound like Celebrex… The errors occur primarily from the fact that its brand name looks and sounds like two other existing drugs [Celexa and Cerebryx]

(Celebrex, 1999)

Since final –x appears in many medication names (see Figure 2), such orthographic confusion remains a legal concern.

Felices Lago (1999) and Room (1991) attribute positive values to –x names. For example, (Room, 1991: 112) notes that Lux soap, besides denoting ‘light’ and ‘luxury’, is ‘a perfect trade name. Short, distinctive, ending in “x”’. He further details the connotations of x:

As a sign for a cross (and Christianity) it has great status value… And “X” after all is a sign that “marks the spot” where something desirable (treasure?) is to be found. It is also the mark made by a person when casting a vote as well as serving as a substitute for the name of a person who cannot write his signature. “X” too is the symbol for an unknown quantity (as the mathematical “x”) or identity (as “Mr X”, “Brand X”)… as a category of film (“adults only”) and as the personal sign for a kiss

(Room, 1991: 195)

Analysing Cutex marketing, Kate Forde (2002: 177–78), an art historian, alludes to similar effects of x:

Even the name Cutex was hybrid, combining a familiar diminutive word with the “x”, which placed it firmly within a stable of other modern hygiene products advertised at the time. Other examples included Borax, Celotex, Innoxa, Kleenex, Kotex, Lux, and Pyrex; names that were powerful and enigmatic – enchanted names that conjured up notions of classical deities rather than branded goods.

Beyond individual graphemic impact, linguists expect senses of new words to reflect their morphological sub-units. Yet, although consultation of an Oxford dictionary of English prefixes and suffixes to confirm existing derivational affixes shows several ex– prefixes (Quinion, 2003), no –ex endings appear. Likewise, a work on English word-final
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elements (Urdang, 1982) includes the Latin combining form –plex, but no –ex affixations. In commerce, however, numerous discussions of –ex morphology occur. As early as 1927, a letter in American Speech noted ‘the popularity of the suffixes –ex, [and] –tex in the naming of currently advertised commodities,’ wondering ‘why are they supposed to have psychological potency for the advertiser or the patron?’ (Myers, 1927: 448). Likewise, a website summarising the history of Carmex lip balm notes the product name was derived by taking the laboratory name (Carma labs) and attaching –ex, ‘a very popular suffix at the time [1936]’ (Inventors, 2004). Final –ex appears in a Canadian trademark case where the marketers of Eliminex opposed those of Eliminator (Hansen, 2001). The ruling found significant the ‘distinguishing aspects of suffix –ex,’ noting that ‘the addition of the suffix –EX creates a coined word while the suffix –ATOR in the respondent’s mark creates a word found in the common vocabulary.’ An –ex suffix is also cited in Harper’s (2001) online etymology dictionary, where the entry for Kleenex indicates that it as ‘an arbitrary alteration of clean + brand-name suffix –ex’.

Two works specifically investigate –ex in product names: Sebba (1986) and Thornton (2000) each examine approximately seventy opportunistically gathered –ex types, offering preliminary explorations of meaning and constraints for –ex words. These articles, however, are limited in the number of tokens and data sources used, and lack searchable contexts for verification of the word meanings. Furthermore, in delineating her dataset, Thornton (2000) takes the shared –x termination of such words as Kleenex, Clorox and Tampax to be variants of the same [vowel + x] morpheme. I believe that this is an unhelpful conflation. First, such forms are not phonologically conditioned allomorphs (e.g., Clorox ends with –ox, but Glorex, Starex and Clearex do not; Tampax has –ax, Capex, Pulpex, Spotex and Lipex do not). Secondly, different vowel variants reflect word sense families: Tampax, for instance, is based on a respelling of ‘packs’ that also appears in product names like Gamepax, Sour Pax and Casepax; ‘sticks’ similarly underlies Slimstix, Wigglestix and Digi-stix; and ‘pictures’ shortened to ‘pics,’ appears in Magicpix, Buildpix and Veopix. Besides respellings, the unit –ox is often attributed to a clipping of oxygen, as in Clorox and Radox (see Room, 1991: 198). Thus, syllable coda –x is the shared feature of these words, regardless of the morpheme in which it appears, while –ex words form a distinct subset.4

Though I exclude tokens with –ix, –ax, –ox and –ux from further discussion, one area of likely overlap should be noted: in southern speech of the US –ix and –ex are often homophonous due to a lack of distinction between high and mid front vowels [i] and [ɛ] in many dialects of the region.
3. Research questions

3.1 Speaker expectations about etymology

As seen in popular literature and speaker comments about etymology, English speakers believe coined terms (unlike personal names) have inherent meaning. This reflects the widespread idea that knowing any word’s etymology will tell you what it ‘really’ means, based, in turn, on assuming that a word’s earliest sense is its truest (see McKean, 2002; Room, 1991). The complexity of the semantic and pragmatic groundwork of reference, however, belies these ideas. For most words, etymology alone does not create the current meaning – though it may help to explain how aspects of an intended meaning have come about. Word coining, by definition, entails one point at which the coiner’s original intended sense existed. But current users may no longer share this meaning, if they ever knew it. In other words, a word’s semantic sense and the idea that a speaker means to convey when using the word may not be aligned. Furthermore, while differences in created brands and more traditionally-formed lexical items may exist, the separation is porous, as seen by the existence of genericisation, regularisation, semantic shift and other changes over time.

As repeated notice of –ex terms in the literature suggests, the ending is quite acceptable to speakers – though this does not verify that –ex must signify some consistent sense. If speakers think that –ex has meaning in itself, it would be revealing to see whether they agree on what that meaning is. If not, it is puzzling how the words could be such repeatedly good examples of brand names without conveying meaning. And many popular books on word meanings assume an inherent –ex meaning exists (e.g., Room’s Dictionary of Trade Name Origins and Staten’s Do Pharmacists Sell Farms?). In short, since –ex words are so plentiful, it would be surprising if the words were each counted as arbitrary coinages. Yet, if no discernable sense is associated with the string, in what other ways can we assess the aspects that influence language users when deciding that they recognise certain word forms?

3.2 Derivational issues involved

The majority of neologisms in English are formed by combining elements (Algeo, 1991). If the –ex incorporated in brand names is a distinct morpheme, an initial question concerns whether it is a productive attachment. Possibilities regarding the unit’s productivity include: (a) it could be a totally productive derivational morpheme; (b) it could be a semi-productive affix with constraints on, for example, the language origin of the base, or narrower constraints affecting only trademarked or proper names; or (c) it could be a non-productive unit (such as the etymological remnants
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–ceive or cran–). I assume that the totally productive version suggested in (a) is overpredicting. On the other hand, with the longstanding precedent of words like index, cortex and numerous later brand names, a cran-like morpheme (i.e., one paralleling the first syllable of cranberry by adding no separate meaning to the word) seems inaccurate as well. Areas to be analysed, then, if in fact the –ex unit proves to be meaning bearing, are these:

- Is there some consistent sense or set of senses to the ending –ex?
- Can the meaning(s) be considered productive?
- If so, what is the extent of the constraints on new –ex term creation?
- Can the meaning of new –ex words be predicted?

3.3 Operationalising the search for –ex meanings

To address these questions, I explore whether –ex usage shows that speakers believe the string conveys a fixed meaning, and, if so, what sense it has. Here I lay out four initial suggestions distilled from surveying –ex speculation in the existing word-sense literature, as well as collecting current opinions through a questionnaire given to speakers of American English.

3.3.1 –ex as ex–

As a prefix, ex– has multiple senses (including ‘out of’, ‘former’ and, more recently, X or –ex as ‘extreme’). Speakers could view word-final –ex as being used with the same denotations of a prefix spelt in this same way. Accordingly, one possibility suggested by speaker surveys is that –ex conveys ‘former’ or ‘gotten rid of’, as in the prefixed form ex-wife.

3.3.2 –ex as clipping of ‘excellent’

Another recurring suggestion is that –ex replaces some clipped, positively connoted ex-starting word, such as excellence, extra, exact, exciting or expert (see Room, 1991: 197). Bearing in mind that not all ex– initial words are positive, (e.g., excrement, extinct, explode, exhume), if –ex is interpreted as part of a clipping, then we must establish how speakers know which –ex word it is derived from and whether all speakers or coiners perceive this sense.
3.3.3 –ex as ‘manufactured product’

Because a large number of trade names contain it, some authors have speculated that –ex is ‘arbitrary, simply added to a standard adjective to indicate a commercial product’ (Room, 1991: 166), that it has ‘no specific meaning except to indicate a manufactured product’ (Room, 1991: 200). Likewise, Sebba (1986: 321) notes that ‘–ex may function itself as MARKER of a trade name’… where it has ‘acquired a semantic value of its own, as a “product name marker”’ (cf. Hansen, 2001; Harper, 2001). This sense is less exact than the first two possibilities, merely narrowing the existing base meaning.

3.3.4 –ex as nominal

This final possibility supplies the least input into the word sense, simply signaling the lexical category of the derived form.

Of these four, the lexical category premise in 3.3.4 is expected to hold true throughout: all the derived –ex forms will be nominals. Furthermore, since the data to be examined consist mainly of brand names, premise 3.3.3 should apply as well. Yet, while this latter ‘product’ aspect may be part of the meaning, analysis will show whether it is a sufficient gloss. It is not clear whether –ex has accumulated a ‘manufactured product’ sense from its long use in successful brand coining or whether the products were successfully named by being clearly marked as products from the start. That is, premise 3.3.3 may, currently, be synchronically true, whether it applied to the first uses or not. Indeed, Panic (2003: 250) notes that ‘brand naming itself has given rise to new units of morphological and semantic analysis,’ whereby endings such as –ex, –o and –ola, for instance, ‘have become productive and acquired affix status exactly as a result of their being exploited in brand names.’ Along with this possible circular influence, examination of collected brand names will clarify which –ex interpretations are currently at play in meaning construction. The characteristics of the types found are detailed in Section 5.

4. Methodology

4.1 Describing the corpora

In order to investigate the meanings associated with –ex words, a corpus-based study was undertaken. The word corpus is often used to refer to the material from which a sought-after type of token is culled, i.e., a specified set of source texts representative of a particular language type. This is the sense used in studies relying on established large corpora such as the BNC, Brown, LOB, etc. (e.g., Plag et al., 1999; Riehemann, 1998). Other
linguists, however, use *corpus* to refer to the large collection of contextualised tokens that they have found, i.e., data illustrating a particular construction, amassed from varied sources to reveal significant patterning (e.g., Fromkin, 1973; Ward and Hirschberg, 1985; Birner, 1996). This latter sense of the term *corpus* might also be called a *citation file* or *derived dataset*. In this paper, I use *corpus* to denote the delineated source of sampled texts, while I use *dataset* to indicate the set of collected tokens, (cf. Hoffmann’s (2004) discussion of the use of OED citation material as corpus, whereby the dataset itself becomes a secondary type of corpus).

The current study additionally assumes that a corpus consists of both a large, machine-sortable collection of texts and, more particularly, texts consisting of naturally occurring language usage, rather than created examples. In view of this, three collections of American English supply the main controlled source corpora of the study: the Brown Corpus, the Freiberg-Brown (FROWN) corpus and the entries and descriptive material submitted to the US Patent and Trademark Office’s *Trademark Electronic Search System* database (TESS). These first two are composed of selections of general language texts, containing fiction and non-fiction prose on different topics. Each is a closed corpus, available on CD-ROM. TESS, on the other hand, qualifies as both a Language for Special Purposes (LSP) corpus, focused on marketing, and as a monitor corpus, accessible through the Web. The material in TESS includes individual citation forms for each brand name submitted, plus descriptions of each product and its use, slogans, trademark owners and contested claims. Thus the material represents communicative uses, though of different discourse types than the longer stretches of narrative prose in the Brown and FROWN samples.

### 4.2 Gathering the tokens

To collect enough tokens to reach reliable conclusions about the behavior of *–ex* coining, choosing the genre to sample proved crucial. For example, the one million words of general American English from 1961 in the Brown Corpus contained 419 *–ex* tokens, but only six brand name types. (Figure 3 shows an excerpt of the Brown concordance of *–ex* words in context.) In data from 30 years later, the one million words in the FROWN corpus contained 485 *–ex* words, with only three company names and no product names. The breakdown of the *–ex* words found in the Brown and FROWN corpora (excluding Latin quotes) is shown in Figure 4, sorted by frequency. Thus, compiling a more complete set of *–ex* brands required finding texts that discuss brands more frequently. For, despite Friedman’s diachronic studies revealing an increase in brand names in recent fiction and reporting (1985a,b; 1986a), my searches of the Brown and FROWN general language corpora show that these terms still occur infrequently. To offset this, I sought additional tokens from earlier studies that examined trademarks (e.g., Clankie, 2002; INTA, 2004; Room, 1991), *–ex* terms
on the verge of tears. to that effete gentleman. At least out the pros and cons of the most free enterprise is up against in our who would revitalize so He can often make the in the temporally linked problem that bothers all of us in a has hardly been compounded. most formidable foe, with located where the so", she said taking a for the odd euphemism contempt the "girls who just move <Tropic of Cancer>. Elemental, but wrong after all. She understood hesitate to use her had to be fought. Let the best Alex Poldowski- in a fashion he owed a debt Alex had told him he wasn't dying. Perhaps complex issues and make them available to complex maze of regulatory laws. #A complex an organization must, first of all, complex ridiculously simple, and vice versa. complex of Tshombe-Gizenga-Goa-Ghana. complex world: how do we retain our Ex-Presidents, relieved of accountability for ex-Gov& Knight a close second. But the rest index finger and thumb are placed when Kleenex from her purse. When she had sex maniac or an overeager Greek sailor, the sex". @ Leila (Malia Phillips), 25, is a sex. That's what was on my mind. I was sex anyway, and played at it well. We went sex. Johnnie was a trucker with a small sex win. But his resolution hardly seemed

Figure 3: KWIC Results of ex$ query of the Brown Corpus (sections B and P)
<table>
<thead>
<tr>
<th></th>
<th>Brown</th>
<th>FROWN</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>total types</td>
<td>30</td>
</tr>
<tr>
<td></td>
<td>total tokens</td>
<td>419</td>
</tr>
<tr>
<td></td>
<td>brand types</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>brand tokens</td>
<td>16</td>
</tr>
</tbody>
</table>

|    | complex(es) | 98    | 148 |
|    | sex(es)     | 98    | 127 |
|    | index(es)   | 83    | 68  |
|    | Alex        | 40    | 46  |
|    | vertex      | 19    | 19  |
|    | Essex       | 12    | 14  |
|    | reflex(es)  | 10    | Vortex |
|    | cortex      | 7     | 6   |
|    | Dowex       | 6     | Apex |
|    | perplex(es)/(ing) | 6 | Tex |
|    | neocortex   | 5     | 3   |
|    | Pyrex       | 5     | duplex |
|    | Rex         | 5     | 2   |
|    | apex        | 4     | Rex |
|    | flex        | 2     | Tex-Mex |
|    | hex         | 2     | convex |
|    | latex       | 2     | Greendex |
|    | Sussex      | 2     | Hex |
|    | Timex       | 2     | Mex |
|    | ADAPTALEX  | 1     | Middlesex |
|    | annex       | 1     | Scitex Corp |
|    | convex      | 1     | Sussex |
|    | duplex      | 1     | Culex |
|    | Kleenex     | 1     | ex |
|    | Lex         | 1     |
|    | simplex     | 1     |
|    | Tex         | 1     |
|    | vex         | 1     |
|    | vortex      | 1     |
|    | Wall-Tex    | 1     |

**Figure 4**: Word-final –ex
December 2004, I found 617 submitted product names ending in
–ex. These, plus the addition of a few dozen types collected by chance
observation of advertising and the Brown and Frown tokens, gave a
total of 793 different –ex brand types. (Several types, not unexpected,
appeared in multiple corpus sources.) This combined dataset provides
ten times the number of –ex types examined in previous studies. This quantity combined
with the rigor of corpus analysis tools, provides a testing ground for a more
thorough investigation.

4.3 Judging the meaning of the tokens

Since I hypothesised that the meaning speakers intended by –ex might
differ from that which hearers understood, one goal was to see what –ex
meaning hearers expect and whether they perceive only one meaning in all
its uses. To that end, a brief written survey of native speakers of American
English was also undertaken (n=8) to observe current interpretation of –ex
morphology in brand names. The survey asked respondents to explain the
meaning of derived English nominals including –ex words. This instrument
was meant to establish whether respondents offered more than one –ex
sense when no meanings were suggested.

In addition, text supplementing the tokens in the dataset was
examined (i.e., descriptions in the TESS database and wording in –ex
product ads) to see how accompanying prose might suggest marketers’
definitions of –ex brands. (See Figure 5 for representative fields showing
contextual clues.) Thus, the project’s goal was not to find the frequency of
–ex words in general speech. Rather, frequency and collocations in the
dataset were explored as signals of intended –ex meaning.

| Word Mark | Goods and Services | ARBOREX - TREE CARE EXPERTS -
| (CANCELLED) IC 042. US 100 103. |
| G & S: TREE CARE AND MAINTENANCE SERVICES. |
| FIRST USE: 19880330. |
| FIRST USE IN COMMERCE: 19880330 |

| Word Mark | Goods and Services | TREDX |
| IC 028. US 022 023 038 050. |
| G & S: Exercising Equipment, Namely, Treadmills. |
| FIRST USE: 20031201. |
| FIRST USE IN COMMERCE: 20031201 |

Figure 5: Partial TESS entries for Arborex and TredX
5. Findings

Analysis of the –ex words collected from contemporary English suggests that multiple uses exist for English words with this ending, distinct in their semantics and etymology.

5.1 Sorting all –ex words by morphology

Examining the dataset and survey responses showed separate types of English words ending in –ex. All the words ending in –ex were sorted to extract those involving the –ex string as a morpheme. Section 5.1.1 first discusses other words ending with –ex ruled out of the final dataset.

5.1.1 Morphemes other than derivational –ex

To begin, I separated the two types of –ex words not used as brand names.

5.1.1.1 Inflected Latin words

The first English –ex terms come intact from Latin. Searches for –ex words in the Brown and Frown corpora and the OneLook online dictionaries found the fifteen non-brand-name forms listed first in Figure 6. Several inflections produced the Latin –ex words: past participle forms (annex and circumflex), a variant of the combining form –plic (duplex, multiplex, simplex) or ex contained within a noun root (apex, codex, cortex).

5.1.1.2 Monomorphemic words

The other non-brands are monomorphemic (flex, hex, sex and vex) and proper names (Lex, Rex, Essex, Middlesex and Sussex). The non-brands lack a shared semantic field. I present them first to show that the –ex word form predates its brand name use. Thus, Latinate forms serving as company names (e.g., Apex Fitness Group, Vortex Technology) require no innovative use of an –ex ending.

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5 Compounds headed by these words generated thousands of hits in the OneLook online dictionaries, where wild cards allowed searching by word-final strings. Under ‘All matches’ were phrases and technical terms like alpha-keto acid dehydrogenase complex. Here I have only counted each headword type, rather than all modified or compounded tokens.
5.2. Sorting the –ex brand names

The remaining discussion examines brands formed by derivationally adding –ex, sorted in turn by semantics, etymology and orthography.

5.2.1 Sorting the –ex morphemes by semantics

Within the words where –ex had a distinct meaning, five –ex meaning types emerged.

<table>
<thead>
<tr>
<th>Word formation process</th>
<th>Sample tokens</th>
</tr>
</thead>
<tbody>
<tr>
<td>Latin –ex Words</td>
<td>annex, apex, circumflex, codex, complex, convex, cortex, duplex, index, multiplex, reflex, retroflex, simplex, vertex, vortex</td>
</tr>
<tr>
<td>Products with ‘Enhanced’ –ex Morphemes</td>
<td>Carmex, Celebrex, Durex, Moulinex, Sominex, Timex, Tintex</td>
</tr>
<tr>
<td>Products with –tex Morphemes</td>
<td>Gore-tex, Healthtex, Kotex, Lastex, Latex, 6 Playtex</td>
</tr>
</tbody>
</table>

Figure 6: Origin of English words with an –ex morpheme

5.2.1.1 ‘Killer’ –ex brands

With product brands, two types of –ex attachments were found. The first contains a sense that the product will get rid of a referent, with the semantic role of patient named by the base.

Certainly this meaning is not active with all –ex brands. For example, the cleaning product Tilex is not intended to ‘get rid of tiles,’ nor does Timex signify ‘time killer’ and Kleenex is not used to mean ‘clean begone’, etc. Thus, word-final –ex, is sometimes quite distinct from this prefix ex– meaning. For other products, however, the ‘gets rid of’ sense is

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6 Latex (‘fluid’) started in English as a Latin term like those the first row, but has showed semantic shift over time. Though not trademarked, the OED shows that since 1937 latex has been interpreted as a textile or material.
The contingent meaning of –ex brand names

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quite active. These include *Mothex* – garment bags that protect against moths, *Blistex* – a lip balm for preventing blistering, and *Virex* – software for eliminating viruses. These products all function to eliminate some offending element (typified by the twenty –ex pesticide names found by searching product descriptions for *cide*).

By naming the object to be ‘killed’, brands such as those in the second row of Figure 6 are among the most direct instances of this semantic type. However, some derivatives functioning to eliminate an object had as their base another participant in the event than the patient role, e.g., *Balmex*, a nappy rash remedy, does not get rid of balm, rather it gets rid of a rash. Other such forms are *Orthex* – a brand of plant pesticide, *Curex* – an insecticide, *TrapX* – a type of rodent lure, etc. This absence of a named patient creates more opaque words, which then appear more generally as ‘product’ –ex terms, while still conveying treatment of a symptom or pest. Killer –ex terms where the base names the pest show up in seventy-one types (8.9 percent of the dataset).

5.2.1.2 ‘Enhanced’ –ex product names

Contrasting with those terms in the second row of Figure 6 are –ex terms with more positive connotations. Here the base does not name a pest, but is a neutral concept related to the product (*sleep, mill, time, Carma labs*), in many cases a positive word itself (*pure, cure, kleen, celebrate*). This –ex category creates products whose names have connotations of newness. Since marketers intend newness to signify an enhanced product, I have designated this the ‘enhanced’ –ex sense. Though these words have a positive sense, no single –ex word compound can substitute for them (i.e., *Windex* ≠ ‘window excellence’, *Curex* ≠ ‘cure excitement’, etc.). Instead, the positive sense is more general. Further examples appear in row 3 of Figure 6. Words where base names the enhanced patient make up 166 tokens (20.9 percent), though other enhanced situations can also be evoked.

5.2.1.3 ‘Expert’ company names

Another positive –ex sense occurred with a different subset of trademarks. Several sources suggested ‘expert’ as the meaning of –ex. For products, the –ex string was not found as a clipping of *experts*, since many –ex products name items or materials, and not agents. Thus, product users would not ‘call in the Rainex’ [rain experts]; likewise, when suffering jetlag, one does not ‘ask for the Timex’ [time experts]. But as mentioned in Section 1.2, brands can also name companies. Of the –ex terms I collected, 15.1 percent were company names rather than products or dual function brands. Company names included the term ‘experts’ in descriptions of six –ex types (e.g., *Arborex* ‘Tree Care Experts’; European manufacturers of industrial...
paints and wood finishes, *Tintex*, ‘tinting experts’). Thirty-seven other companies used descriptions containing ‘services,’ which also produced an ‘experts’ meaning. Other names incorporating the ‘expert’ sense are shown in (3):

3. a) *UltraEx*: Same day delivery experts  
   b) *Valformex*: Formulation management for experts  
   c) *Buyselllex*: Web-based business-to-business services  
   d) *Couponex*: Financial services combining all rebate coupons into one single system

Here the interpretation of –ex is dependent on the type of entity named, i.e., whether it is a company rather than an object. Note the contrasting pair, for example, with the company named *Tintex* that makes wood finishes, and the product *Tintex* sold in the US from 1915 to 1992, a brand of clothing dye. This latter brand (with the slogan ‘tints as you rinse’) conveys the ‘enhanced’ product sense. Thus, for a brand naming a company rather than a product, the meaning of ‘experts’ can be a component.

Variable –ex senses, then, can be observed. Just as some –ex products function to get rid of an element without the base naming the patient, other terms starting out as ‘killer’ –ex may be semantically reinterpreted over time. For example, *Cutex* was originally marketed as cuticle remover, making it a prime member of the ‘killer’ –ex group. As the company expanded, however, *Cutex* began making numerous manicure products, including nail polish. Thus, the –ex in *Cutex* has shifted in function; *Cutex* may be reconceived by later consumers as an ‘enhanced’ product or even an ‘expert’ company. Context is necessary to select the intended use: one survey taker, for example, speculated that the brand *Tintex* ‘gets rid of tint,’ thinking it must be a cleaning agent rather than a dye.

Since not all entries provide product descriptions, the ambiguity of –ex makes the total number of each semantic type approximate. Though 8.8 percent of the –ex product words were overtly ‘killer’ brands, many of the remaining product names could just as easily be categorised as ‘killer’ words with unnamed patients, ‘enhanced’ words or simply brands having unknown roots.

**5.2.1.4 Textile products and companies**

\textit{–tex} brands beyond the \textit{–ex} dataset. Examples appear in the bottom row of Figure 6.

In addition to the overt use of \textit{–tex}, this semantic domain also contains brands lacking \([t]\). Ambiguity arises with textile products for which the \textit{–ex} string alone supplies a semantic core of the \textit{tex} syllable. Examples include \textit{Gannex} raincoats and textiles, \textit{Lurex} yarn and \textit{Marlex} polymers. Six types in the \textit{–ex} data contained no \([t]\) in the suffix yet occurred with the words \textit{fabric, textile, clothing or material}. As further indication of contingency of meaning, four of seven survey takers in Texas suggested textile brands \textit{Gore-tex, Healthex} and \textit{Martex} had meanings involving \textit{Texas}. Morphological reanalysis, therefore, surfaces on several fronts. Likewise, Thornton’s work on \textit{–ex} subtypes suggests that hearing \textit{Kotex}, consumers reanalysed the syllable to which the \([t]\) belongs, moving it from the ‘texture’ \textit{–tex} morpheme and reinterpreting the word as containing a new ‘product’ \textit{–ex} morpheme. Kimberley-Clark, however, continues to present the ‘cotton texture’ origins of \textit{Kotex}. Thus, tension is also created by different parsing of the same term by consumers and by manufacturers.

5.2.1.5 Component morphemes in other blends

Finally, some brands shaped similarly to those in Figure 6 were created more recently than the Latin borrowings, but by processes other than \textit{–ex} affixation or \textit{–tex(tile)} compounding. Other blending and clipping processes produced the unrelated final morphemes shown in Figure 7.

<table>
<thead>
<tr>
<th>Word</th>
<th>Original compound</th>
<th>Real string</th>
</tr>
</thead>
<tbody>
<tr>
<td>\textit{Entex}</td>
<td>\textit{energy Texas}</td>
<td>Tex–</td>
</tr>
<tr>
<td>\textit{FedEx}</td>
<td>\textit{Federal Express}</td>
<td>Ex–</td>
</tr>
<tr>
<td>\textit{Philex}</td>
<td>\textit{philatelic exhibition}</td>
<td>Ex–</td>
</tr>
<tr>
<td>\textit{Rolodex}</td>
<td>\textit{roller index}</td>
<td>–dex</td>
</tr>
<tr>
<td>\textit{Soloflex}</td>
<td>\textit{solo flex}</td>
<td>Flex</td>
</tr>
<tr>
<td>\textit{Telex}</td>
<td>\textit{teleprinter exchange}</td>
<td>Ex–</td>
</tr>
<tr>
<td>\textit{Tex-Mex}</td>
<td>\textit{Texan Mexican}</td>
<td>Mex–</td>
</tr>
</tbody>
</table>

\textbf{Figure 7:} \textit{–ex} forms derived by other word-formation processes
Words in Figure 7 may show syllable boundaries that are different from words with –ex suffixation; for example, *Entex* is not parsed as *[ent + ex]*, nor is *Rolodex* to be parsed as *[rolod + ex]*. The ex strings in the right-hand column of Figure 7 come from many English syllables. The compound origin appeared in some product slogans: *Face-ex* ‘facial exerciser’, *Fre-ex* ‘Free expression’, *Tri-ex* ‘triple lumen extraction’, *etc.* For endings containing ex within larger morphemes, the most common attachment found was –flex: *Airflex, Aquaflex, Bowflex, Dura-Flex, Exerflex, Norflex, Pendaflex, Soloflex, Zanaflex.*

While the words in Figure 7 include ex– in clipped compounds, these are excluded from additional examination in order to focus on affixation. Of those brands with suffixes, further sorting of words with –ex and –tex morphemes are examined by their etymology.

### 5.2.2 Sorting –ex brands by etymology

Section 3.1 discussed folk expectations of etymology affecting word meaning. Here I focus on the views of linguists detailing four aspects of etymology besides meaning that are suggested in the linguistics literature to relate to the derivation process. Specifically, I investigate the original language of the base, the relevance of the POS of the base, the shape of the base and the derived word, and the entry date of the words into English.

#### 5.2.2.1 Base stratum

Kjellmer (2000: 206) suggests that one predictor of the likelihood of a new word staying in the language is whether ‘its derivational affix is etymologically compatible with its stem.’ This approach would recognise a candidate for creating a good –ex term according to its base type (e.g., Greek, Latinate, Germanic). In fact, all three strata are included as bases of –ex product terms, Greek: *Symbolex, Resinex* and *Cattarh-ex*; Latin: *Terminex, Vaginex* and *Purex* (cf. Thornton, 2000); and Germanic: *Blendex, Scrubex* and *Windex*.

Furthermore, due, in part, to the widespread cross-linguistic coda cluster of /ks/, –ex brands have also been coined in other languages, including German (*Rolex* watches and *Tipp-ex* correction fluid), French (*Moulinex* food choppers, *Courex* courier services), Dutch (*Vendex* stores) and Czech (*Lanex* climbing ropes, *Semtex* plastic explosives). Thus –ex names are also acceptably borrowed into English.

This explains conflicting etymologies of *Pyrex*. Many sources list the Greek *pyr* ‘fire’ as its base (e.g., Pyles, 1957). While the surveys showed that speakers readily echo this belief (71 percent wrote ‘fire’ for the base), other historians (Gantz and Matranga, 2005; Harper, 2001) suggest the coining reflects the material’s original use in making pie pans. This
version entails an epenthetic –r– inserted before the –ex (cf. Sebba, 1986: 324) as might also seen in Optrex and Butrex. Either interpretation suffices if both Greek and Germanic bases attach to –ex. In short, not only are several strata used as bases, but the language identity of the base is also sometimes unclear. Hence, base type for –ex attachment shows little influence in forming new terms.

5.2.2.2 Base POS

The second aspect of etymology concerns knowing the lexical categories of the units that –ex nominalises. Many derivational morphology studies, especially since Aronoff’s Unitary Base Hypothesis (1976), suggest that base part of speech (POS) is crucial word formation information. Countering this assertion, however, is Plag (2004: 193), who proposes that base POS is not necessary input information in derivation, and often, ‘there are productive affixes where the syntactic category of potential base words is only a by-product of the semantics of the process.’ The behavior of –ex brand names supports this conclusion, as seen by the varied base types in (4):

4. a) Adjective bases
   Rapidex, Sharpex, Solidex, Sweetex

b) Noun bases
   Catarrh-ex, Chefex, Mothex, Rain-x, Sugarex

c) Verb bases
   Absorbex, Buyex, Blendex, Parkex, Scrubex, Shredex

Since the bases can be different lexical categories, and also because distinct senses exist for –ex itself, without context, new –ex brand names are semantically ambiguous. Moldex, for example, was submitted to the trademark database as a ‘killer’ –ex cleaning product meant to eliminate mold (where mold is a noun). However, Moldex entries marketed with an ‘enhanced’ –ex affix also exist, e.g., naming a producer of facemasks and earplugs. These could be interpreted either as products made with an enhanced type of mold (with a different mold as a noun) or as products molded to fit one’s face (where mold is a verb).

The use of the noun-based forms in (4b) rather than those in (a) or (c) forms to convey ‘killer’ –ex provides an illustration of how the semantics of the base rather than its POS drives the whole word’s interpretation. For strict ‘killer’ –ex terms, the element that is removed is the base, which would be an argument and hence a noun. At the same time, the ‘enhanced’ –ex process can surface as base verbs, as in (4c), or as end state adjectives in (4a).
5.2.2.3 Base shape

Other word formation concerns involve the wholeness of the base. Bases appear both bound and unbound, with truncation being quite common. In addition, both common noun and eponym forms are found. Textile companies, in particular, base brand names on the founder, though in the surveys, speakers recognised the root for the brands Gore-tex and Martex as a proper name only 21 percent of the time. Figure 8 shows some base origins of –ex and –tex words.

<table>
<thead>
<tr>
<th>Word</th>
<th>Clipped Bases</th>
</tr>
</thead>
<tbody>
<tr>
<td>Blistex</td>
<td>blister</td>
</tr>
<tr>
<td>Celebrex</td>
<td>celebrate</td>
</tr>
<tr>
<td>Cruex</td>
<td>tinea cruris, Latin for ‘fungus of the leg’</td>
</tr>
<tr>
<td>Lastex</td>
<td>elastic</td>
</tr>
<tr>
<td>Spandex</td>
<td>expand</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Word</th>
<th>Clipped Bases</th>
</tr>
</thead>
<tbody>
<tr>
<td>Healthtex</td>
<td>health</td>
</tr>
<tr>
<td>Kleenex</td>
<td>variant of clean</td>
</tr>
<tr>
<td>Moulinex</td>
<td>French for ‘mill’</td>
</tr>
<tr>
<td>Playtex</td>
<td>originally made children’s play clothes</td>
</tr>
<tr>
<td>Rain-X</td>
<td>rain</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Word</th>
<th>Clipped Bases</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gore-tex</td>
<td>founders Bill and Vieve Gore</td>
</tr>
<tr>
<td>MARTEX</td>
<td>founders William and Albert Margerison</td>
</tr>
<tr>
<td>Phifertex</td>
<td>founder J.R. Phifer</td>
</tr>
<tr>
<td>Wayn-Tex</td>
<td>located in Waynsboro, Virginia</td>
</tr>
</tbody>
</table>

Figure 8: Origin of some bases with –ex and –tex

Alternate spellings of bases occur (e.g., Xonex and Kleenex as variants of the bases zone and clean). Likewise, Kotex is presented by its manufacturers as deriving from ‘cotton + texture’, though this may not be
readily recognised by its consumers. Room (1991: 196) for example, suggests that ‘it is very likely… that the name Kotex, also apparently meaningless, was directly inspired by [the invented name Kodak].’

Other spelling variants include Forex (for ‘four X’ or ‘XXXX’) and Tuex (for ‘two X’ or XX), where X indicates multiplied strength.

Some –ex forms lack recognisable bases, as seen with Rolex. Similarly, Room (1991) includes Bolex cameras in his appendix of ‘unexplained names’. Additional unclear base forms in my data included: Coex, Danex, Inex, Iblex, No-ex, Noni-ex, Nas-ex, Qiaex, Srim-ex and Vardex.

5.2.2.4 Phonological aspects

A last word-shape issue involves the number of syllables and their stress pattern. Both Sebba (1986) and Thornton (2000) have presented phonological descriptions of –ex brand names. Thornton found input conditions on Germanic bases such that they never end in a vowel, and output is always disyllabic and trochaic. She found a wider variety of forms for Latinate bases, including trisyllabic forms. These findings hold true when examining the 700+ words in the current dataset, though, again, this relies on being able to identify the base stratum. In Sebba’s data, product names always had primary stress on the first syllable. This trend is disproven in the current larger dataset, e.g., Catarrh-ex, Constructex, Designex, Determinex and Directex.

5.2.2.5 Coinage dates

The final etymological issue is the point at which –ex brand names entered the language. By finding the date of the first coinage for commercial –ex, we can observe whether there was a noticeable twentieth century change with mass advertising. Also valuable is the length of time before other trademarks began to follow this pattern. Many words created using –ex were claimed to be innovatively coined. If they were all created independently, this would illustrate Metcalf’s theory of a multiply ‘re-invented’ lexeme succeeding and finding a niche; but if one early –ex was influential and spawned analogous later –ex uses, then we would be able to see the development of a new productive morpheme.

Trademarked terms, because of their legal and public status, provide a great opportunity for traceability. For common words, researchers can check a source such as the OED, with its vast citation files giving the first use found in print. But terms are expected to have earlier uses as spoken forms, making the precise introduction of most words into the language hard to verify. Trademarks, however, have a known date of first public exposure. Works such as Clankie (2002, for American trade
names) and Room (1991, for British trade names) have relied on published style lists, such as the International Trademark Association Checklist. But today, a more systematic search for particular forms can be completed through the US Patent and Trademark Office’s searchable online database, which lists both the date on which trademarks were applied for and the date brands were first used in commerce. Based on this data, the first and last four coinings with the ‘enhanced’ –ex, ‘killer’ –ex and –tex morphemes are listed chronologically in Figure 9.

<table>
<thead>
<tr>
<th>Type of –ex morpheme</th>
<th>Word (date of origin)</th>
</tr>
</thead>
</table>

**Figure 9:** Actuation dates for products with different –ex morphemes

The observer’s sense of trends emerges here. Room (1991: 103) notes that ‘names ending in “x” were fashionable in the 1920s’ for brands. He later observes, in an analysis of an artificial sweetener, that ‘Sweetex was first marketed in 1955 when the –ex ending was still going strong’ (1991: 166). This presupposes a point in that century during which –ex coining peaked. However, after examining over 700 brand names, I was unable to pinpoint a peak in –ex formation. For example, while 1900–1929 saw many new –ex terms introduced in the US, such coinings continued.

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7 This list, now online (INTA, 2004), is an editorial style guide for ‘proper trademark usage’ in print.
steadily throughout that century (e.g., the renaming of Allied Van Lines in 1993 as Xonex, and BetanCourt Janitorial Services in 1992 as FreshX High-Tec Cleaning). Such changes suggest that –ex endings were still felt to produce ‘new’ sounding terms). Figure 10, tracking those –ex forms in my dataset with verified first use dates, shows that the creation of new –ex brand names has continued to grow each decade. For comparison, Figure 11 shows the number of overall brands coined each decade, based on the total trademarks applied for annually (as listed in the Official Gazette of the United States Patent Office for the last year of each decade).

Note that while both –ex terms and brand names in general have increased, the –ex terms began a steeper increase three decades earlier than general trademarks did. In addition, the US Patent and Trademark office attributes the rapid increase in the 1990s in part to the availability of online application submission. In short, despite the overall increase in brand names, the number of individual –ex coinings, not to mention their frequency, shows no signs of having crested.

Figure 10: Number of –ex brands coined

Figure 11: Increase in total number of trademarks
As noted in Figure 1, multiple senses of the same brand name exist. Therefore, one subsequent goal might be to track multiple uses of each form, to see when a particular form continues to be a viable name for new products after one product with that name ceases to be marketed. In other words, the effect of the ending with a certain base may keep resonating after the first coining, though different products are referred to.

5.2.3 Sorting –ex brands by orthography

Finally, when examining the list of –ex products, four orthographic variations emerge that crosscut the words’ etymology. In some cases, the addition of –ex is less obvious, appearing within a solid word. In others, a mid-word capital is used beginning with the –ex. In more visually extreme separation, a hyphen separates the morphemes. Lastly, I discuss ex vs. X distribution.

5.2.3.1 Solid words

Solid words ending in ex appear in both affixation (Blistex) and closed clipped compounds (Arborex). This orthographic form most resembles common noun derivatives.

5.2.3.2 Mid capital letter

Whether clipped from a compound where the ex represents a separate word or with an –ex affix, the status of ex as a separate unit is often visually apparent through mid-word capitalisation. BillEx, DebtEx and FeedEx for example, are orthographically highlighted with a capital to show the morpheme separation. No total percentage is available for these first two types, unfortunately, since most entries in the TESS database are entered entirely in capitals. Some records, however, include the company logos, making typographic conventions visible.

Ex words are not unique in using the mid-capital device. Software titles often employ the form (e.g., AppleScript, FileMaker and TextEdit). Clankie (2002: 98) notes blends showing a mid capital when one written element of a geminate is dropped (e.g., ReaLemon and SweeTart). As geminate [e] is not an option in English, however, this would not explain capitalised –Ex. This motivation could underlie the [t] in the –tex derivations. Indeed, Lastex (elastic textile), Spandex (expandable textile)

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8 In the same spirit, the FedEx logo displays different colours for each base element, emphasising the name’s compound nature.
and Kotex (cotton texture), show evidence of deleted geminates at their morpheme boundaries, without containing capitalised segments.

5.2.3.3 Hyphenation

Of the 793 types of –ex brands found, 235 (29.6 percent) appeared with a hyphen before the last segment. The same string occurred with and without a hyphen 19 times (e.g., Castex/Cast-ex, Chemex/Chem-ex, Jetex/Jet-ex and Moldex/Mold-ex). Another variation, discussed below, showed the syllable after the hyphen portrayed as –X.9

5.2.3.4 Ex vs. X

Forms with –X instead of –ex made up twenty-four types (3 percent). Though recalling the Do No Enter and No Smoking signs, both ‘killer’ –ex and ‘enhanced’ –X brands occur. The X-only spelling is a newer phenomenon, beginning in the 1950s and continuing into the twenty-first century. In some cases, the –X spelling reflects aspects of pronunciation, i.e., Car-x is spelt with the single character –x so as not to alter the first syllable’s pronunciation, as would be the case with Carex. The cholesterol medicine, Lipex, on the other hand – which ostensibly alludes to ‘lipids’ – does not use this spelling, thus supporting a diphthongal pronunciation. All brands in my data spelt with hyphenated X are shown chronologically in the fourth row of Figure 9.

Most recently, since 1992, product names show combinations of the X–only form and the mid-word capital, using a non-hyphenated, but capitalised X. All the unhyphenated X forms are shown in the last row of Figure 9.

6. Conclusion

For eighty years the popularity of –ex endings for brand names can be observed. But questions have persisted as to why this string is so acceptable, and what its users and coiners take it to mean. In investigating user expectations about naturally-occurring coined terms, we see that words ending in –ex fit English phonotactics, with several spelling precedents (e.g., wrecks, techs), including the –ex of inherited Latin vocabulary. In coined brand names, however, the –ex form is found to involve several types of meaning.

9 These contrast with names where X is treated as a separately referred to alphabetic entity, as in Triple X, comparable to names such as Triple H or Triple 9.
Recalling the research questions seeking any core sense, productivity, constraints on attachments and predictability of –ex meaning, we can conclude the following: even if speakers recognise the base (in meaning, POS or stratum), they do not always know its relationship to the attached –ex. However, subpatterns in the –ex data do emerge. For company names, a sense of ‘expert’ may be seen. For product names, referents can be mass or count, with a focused sense of ‘base exterminator’ or a looser relation to eliminating symptoms. Conversely, referents may show a focused sense of enhanced base or a looser sense of product enhancement, i.e., not all combinations modify exocentric bases. In addition, compounds involving textiles occur, though clippings from words beginning with ex– feed this process too: express, exchange and exhibition. Furthermore, other morphemes ending in ex (–dex, –flex, –plex) supply final syllables. Finally, orthography reflects trends over time, with X appearing since 1952 for –ex uses.

Together, these aspects, traceable in corpus data, create complexity in the popular [eks] ending for coining brands. Options in the intended meaning of the form across time, and inconsistency of meaning across words or across speakers, lead to variation in meaning. That is, –ex meaning in brands is neither context independent nor transparent. Thus, speaker meaning (the meaning intended by the seller or coiner) does not necessarily equal hearer meaning (that of the consumer) and neither can it be assumed to represent a single inherent meaning of –ex. In short, though partially patterned, –ex words are interpreted in multiple ways, showing context-dependence at several levels. Yet, despite dissonant interpretations, the form is productive, and even growing in use. Hence, suggestions of a simple, predictive regularity in the form’s use (as expected by the branding industry or by speakers) represent an inadequate understanding of meaning generation.

**Corpora**


The contingent meaning of –ex brand names

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