Investigating Nonceness: Lexical Innovation and Lexicographic Coverage

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"THEY ARE SCOUNDRELS AND SUBSTRACTORS THAT SAY SO OF HIM." This observation, spoken by Sir Toby Belch in *Twelfth Night* (1.iii.37), contains a word that is said to be "obsolete, rare" by the *Oxford English Dictionary* (*OED*). *Substractor* is glossed as "detractor, calumniator," and it receives a single quotation in support—the above. As Sir Toby is usually in a state of inebriation, we might wonder whether the word is not an alcohol-inspired nonce-formation. But the verb *substract* ("withdraw, take away") is well-attested at around that time (1601) (though in the sense of "belittle" not until 1728), so it is a plausible sober form.

The *OED* has always taken pride in its policy of recording individual usages from major writers. As Burchfield put it, in a Fulbright colloquium on lexicography:[1] "I have been as much concerned to record the unparalleled intransitive use of the verb *unleave* ('to lose or shed leaves') in G. M. Hopkins . . . as Murray was to record Milton's unparalleled use of the word *unlibidinous* . . . or Langland's unparalleled use of *unleese*, 'to unfasten.' " And in a footnote to his paper, he adds: "Hapax legomena (such as Hopkins's *riverrun*) is [*sic*] recorded in the *Supplements* only for certain 'great writers—the writers who are likely to be still read in the twenty-first century'; other new entries require an appropriate weight of citational evidence." This is sensible practice, in the short term, as a way of motivating lexicographic priorities—though it is not uncontroversial.[2] But it leaves one with the feeling that a great deal of potentially interesting usage is being missed. Indeed, the whole topic of "lexical isolates"—a notion that includes hapax legomena, nonce-formations, and a certain type of neologism (to be discussed below)—has received very little investigation. As it is a topic that combines an interest in lexicog-

raphy with one in language change, and that is ideally investigated using electronic applications, it seems an ideal topic to offer someone who has made such major contributions in each of these domains.

We may begin by distinguishing the three relevant descriptive categories.

Hapax legomena are items recorded only once in a given corpus, such as an author's work, a literary genre, or even a literature as a whole. Because we have limited insight into historical contemporary linguistic norms, it is usually unclear whether a hapax found in a corpus is a regular part of the lexicon (which just happened never to have been recorded elsewhere), a neologism (which did not have a chance to be recorded elsewhere), a nonce-usage (where there was no intention on the author's part of using it again elsewhere), or an error (where there was no intention on the author's part of using it in the first place).

Nonce-formations are items spontaneously coined by a speaker or writer to meet the immediate needs of a particular communicative situation. The *OED* definition stresses the transient, pragmatic nature of the phenomenon: nonce-words are used "for the time being; temporarily." Examples I have heard recently include facetious puns and coinages (for example, *chopaholic,* for someone who liked lamb chops), momentary lexical gap-fillers (for example, *cyberphobic*), and rhetorical anomalies (for example, *unsad*, contrasted with *sad*). The items are deliberate coinages on the part of the user (thereby excluding from the term such phenomena as malapropisms, spoonerisms, copyist errors, and slips of the tongue), but (a) they are made on the spur of the moment, and are not the product of careful planning, and (b) there is no intention on the user's part that they should enter the lexicon as a whole, and thus acquire the status of a neologism. They may be used several times within a single speech event, but there is no expectation that they will be carried over into other discourses.

Neologisms are defined by the *OED* as "a new word or expression; innovation in language": the implication is that a word has passed beyond the stage of idiosyncrasy, and has settled down to become a recognized part of the lexicon, used in a variety of spoken or written settings—though still felt to be a "new arrival." As soon as people are aware that they have encountered or used a nonce-formation before, therefore, it ceases to be "nonce."[3]

"Twice-formations" identify the beginning of the road along which a word has to travel before it is accepted as a neologism.

The traditional focus on literature undoubtedly explains the limited attention that has been paid to lexical isolates. Only in cases of special literary interest, it seems, will lexicographers try to deal with them. For most authors, in any case, such forms are infrequent and stylistically marginal. In a few well-known instances, such as Joyce, Cummings, and Dylan Thomas, neologistic formations would necessarily be a major part of any stylistic statement; but even here the idiosyncrasy (if not eccentricity) of the innovations makes them unattractive sources for conventional lexicography. However, we obtain a different impression of the frequency and status of lexical isolates if we extend the scope of the inquiry to include other genres of writing than the literary.

An examination of journalistic writing, for example, brings to light a surprising number of instances, and raises interesting questions about their lexical status. Here is an extract from a 2000-word article on the health-value of red wine:[4]

> He occasionally gets his wine facts wrong, or fails to draw obvious conclusions. His country-by-country resveratrol trawl is fascinating, nevertheless. Red Burgundy, he says, is "unbeatable." It is made with Pinot Noir, best-scoring grape for resveratrol, in a damp, mould-prone climate. Interestingly, it's the cheaper, simple Bourgognes rouges that score best. Some resveratrol is lost during barrel-ageing, and some more during long bottle-ageing. Fine Burgundy will be both barrel- and bottle-aged.

If we examine the hyphenated compounds in the article as a whole, we immediately encounter some problematic cases. The article has several established compounds, such as *guinea-pig* and *north-west*, which would appear in any major dictionary. But it also has several examples of words that do not appear in bold-type in the *OED* or its supplements to 1988 (as displayed in the CD-ROM edition). How are these to be accounted for? They could be established items, inadvertently omitted by the *OED*, of course, but they could also be the author's nonce-formations, or neologisms at a very early stage of development. The question is: how can we decide? It makes an interesting exercise to pause at this point and ask yourself to which of these categories you would assign the following list of compounds (none of which is given separate dictionary listing):

1. Definitely nonce
2. Definitely neologism
3. Uncertain between nonce and neologism
4. Neither nonce nor neologism (i.e., an established item)

heart-friendly (wines)
red-wine-is-best (theory)
heart-stopping (blood clots)
sun-lover
country-by-country (trawl)
best-scoring (grape)
mould-prone (climate)
barrel-ageing
bottle-ageing
barrel-aged
bottle-aged
phenolic-rich (skins)

According to my intuition, *sun-lover*, *country-by-country*, and *best-scoring* belong to category (4); the remaining items are *all* category (3). The constructional patterns *-friendly*, *-prone*, *-rich*, *-ageing*, *-aged*, and *-is-best* are all familiar, of course, but I am simply not sure whether I have encountered these particular collocations before. *Heart-stopping* is particularly interesting. I know I have encountered it in such figurative contexts as *for one heart-stopping moment*, but I am not sure whether I have heard it in a literal use ("clots that stop the heart"). I may have, but I cannot be sure, and as it has caught my attention, as a quite effective expression on the author's part, it could well be novel. Intuitive uncertainty is invariably present, when we try to determine the nonce-usage of others.

Doubtless some of these issues could be resolved if we had direct access to the author's intuition. Of course, she might be as unclear as anyone else about whether she had heard any of these items before. But she would perhaps be able to confirm that, in writing *heart-friendly*, for example, she was consciously trying to say something in a new and lively way, and would claim this as a nonce-usage for her article. She would also probably be able to confirm whether any of these items (such as *barrel-ageing*) are standard terms in the wine trade. It might be, for example, that *bottle-ageing* is a standard term, and *barrel-ageing* is a journalistic parallel coinage.[5] My impression is that most authors are

aware (at least, while they are in the act of writing a piece) when they are doing something lexically innovative. It is certainly my own experience. It therefore seems likely that several of these usages would turn out to be individual coinages created for the purposes of the article—that is, they are nonce-formations.

Lexical isolates, especially compounds, are far more common in the written language than people think. In a German study of compound nouns in the magazine *Die Zeit*,[6] no less than 62 percent of 1,331 such nouns were not listed in dictionaries. This figure is surprisingly high (probably because of the German propensity for compounds), but even in English, unattested compounds are by no means unusual, especially in the kind of creative writing we read in newspapers and magazines. Most will never be recorded in dictionaries, either because they are coinages based on a recognized productive pattern, or because they do not reach a lexicographer's criterion of entry (the "appropriate weight of citational evidence" referred to by Burchfield). And even when they *are* recorded, a significant proportion fall out of use very quickly. Algeo studied 3,565 words which had been recorded as newly entering the language between 1944 and 1976.[7] He found that as many as 58 percent of them were not recorded in dictionaries a generation later, and must thus be presumed to have fallen out of use. As he says: "Successful coinages are the exception; unsuccessful ones the rule, because the human impulse to creative playfulness produces more words than a society can sustain." It is always a matter of presumption. If we do not have a clear intuition about when words come into the language, we have an even less clear intuition about when they leave it. As Burchfield says, "The problem of monitoring the obsolescence of words (as opposed to their emergence) remains intractable."[8]

The area of written language where lexical isolates are most in evidence is (perhaps surprisingly) in the various terminological domains of academic enquiry. The parenthesis is warranted, for terminology, especially in such domains as science and technology, is generally thought of as being stable, conventional, and agreed. But it is indeed here, more than in any other area of usage, that lexical individuality is to be found. For it is the nature of academic enquiry to be lexically innovative. Repeatedly, academics find themselves in the position of saying, in an academic paper or monograph, "I shall call this X." Sometimes they coin a totally new word, sometimes they take a familiar word and give it a new meaning; but in all cases, their attempt to push forward the boundaries of their conceptualization leads to lexical innovation. Humpty Dumpty's well-known dictum,[9] "When I use a word . . . it means just what I choose it to mean—neither more nor less," usually considered absurd in the context of everyday conversation, is a *modus vivendi* of academic inquiry.

Academic lexical innovations seem to be different from the other types of lexical isolate described above because they fall between the definitions of nonce-usage and neologism. Unlike conversational nonce-words, (a) they are *not* made on the spur of the moment, and *are* the product of careful planning, and (b) there *is* an intention on the user's part that they should enter the (academic) lexicon as a whole. Why write a paper otherwise? Their intermediate status is confirmed by the use of the peer-review system, which ensures that, by the time any lexical innovations are published, they will have received a certain degree of sanction by the academic community—proposed usages will have been accepted as at least potential members of the subject's lexicon. They are on record. They might, of course, not succeed in having a long-term influence on the subject's lexicon: they might never be referred to again (thus becoming obsolete as soon as they are born), or might appear only in an occasional scholarly footnote. Alternatively, they could eventually become influential, either in their own right, or as a stimulus to another approach, thus becoming part of "the literature." There is no predictable time scale: a coinage might be ignored for years before being "discovered." As Bolton put it, in a rather different context, "One year's unwarranted neologisms . . . are another's useful terms."[10]

We need a term to describe this type of lexical innovation: lexical items that have been newly proposed for technical status within a specialized domain. They are nonce-like because they are being used for the first time to solve an immediate problem of communication within a single writing event; yet they are neologistic because they are being proposed with future standardized status in mind. They are typical of academic writing, though by no means restricted to it, so because academics are supposed to have very large heads, I shall adapt a British informal slang word for "head" and call them *bonce-formations*—"no more nor less."

The notion of bonce-formation allows us to focus on some intriguing questions. How far do the words that eventually achieve lexicographic status actually reflect the words that are or have

been in academic use? What proportion of this putative academic lexicon eventually finds its way into the dictionary? What criteria do lexicographers use, as they examine text-sources for this lexicon? Do they exclude bonce-formations, or do they selectively include them, using evaluative criteria like those employed in the case of literature? (There is a sense in which a Chomskian lexical isolate has in linguistics a status not far short of the Shakespearian. Should all of a leading academic practitioner's isolates therefore be included, in an unabridged historical dictionary?) If we were dealing with a backwater of the lexicon, these questions might seem somewhat arcane, but we are dealing here with emergent technical terminology—the source of the largest component of a modern lexicon—so they are by no means trivial. The decisions a lexicographer makes about the status of bonce-formations will have major implications for the size and character of a dictionary. So an initial question is simply this: how does a major historical dictionary currently handle them?

The first task, of course, is to recognize them when they occur. In the case of everyday conversation, and in all but the most obscure literary writing, lexicographers are unlikely to miss a nonce-formation, for their native-speaker intuition will alert them to new usages. But the question is less clear in the case of academic writing. Lexicographers do not have a "native speaker-like" ability to process the vocabulary of academic subjects, and are thus likely to miss identifying many innovations—especially where a familiar word is being used in a new sense (as in the case of such items as *level*, *form*, and *surface* in linguistics). The solution might seem to be to use academic specialists as lexical "informants," but this technique is not foolproof either, for two chief reasons. First, the specialists may be too close to the subject to notice that a word or sense is lexically interesting or innovative.[11] And second, they are likely to overestimate the lexical significance of a new usage—thinking of it as a neologism when all that can be legitimately claimed for it is that it is a bonce-formation. This has happened a great deal in new sciences, such as linguistics, where the proliferation of approaches in such areas as syntax and phonology has led to innumerable *ad hoc* terminological proposals ("the such-and-such constraint," "the such-and-such condition"), many of which are never subsequently taken up. Bolinger summed it up, in a memorable, caustic reflection on what he saw as unnecessary lexical innovation in linguistics:

"One sign of immaturity [in a science] is the endless flow of terminology. The critical reader begins to wonder if some strange taboo attaches to the terms that a linguist uses, whereby when he dies they must be buried with him."[12]

But it is not just linguistics. The frequency of bonce-formations is high in any domain where concepts are continually being refined and revised. The new vocabulary of any specialized subject is context-bound in a way that conversational innovation is not. In a manner reminiscent of General Semantics,[13] specialists are always thinking of new usages in relation to specific people, periods, or schools of thought. Linguists, for example, know that *transformation*^{1957} is not the same as *transformation*^{1965}; or that *phoneme*^{Jones} is not the same as *phoneme*^{Trubetskoy} or *phoneme*^{Bloomfield}. This kind of constraint is not usually relevant in everyday usage: when someone coins a new word, it is (apart from very general cultural or categorial factors, such as British, American, slang, economics) context-free. To what extent does a historical dictionary take into account high levels of academic context-sensitivity?

Since the availability of the *OED* on CD-ROM, new methods have emerged that enable us to throw some light on these issues. It is now possible to determine the total coverage of a domain within the dictionary, and identify precisely which authors, titles, and timeframes have been used as source data for the lexicographical description.[14] It should therefore be possible to analyze the decision-making process that has taken place, with reference to these source materials, to determine the extent to which the procedure has tried to capture bonce-formations, or other types of innovation. The rest of this paper provides an illustration, using the *OED*, a restricted domain (a monograph in phonology), and an author who can be asked for an opinion about coverage (myself).

The monograph in question is *Systems of Prosodic and Paralinguistic Features in English*, written by Randolph Quirk and myself in 1964.[15] Why this particular book was selected for inclusion in the *OED* corpus I do not know. But, one might ask, why would any scientific source be included? Presumably to find out about the specialized lexicon it uses. A priori, there would seem little point in using a highly technical text to illustrate points of everyday usage. Of course, there is no reason at all why such texts should not be used in the latter way. To show that a general word

or sense is to be found in a technical text could reinforce the claim about its generality. But there is still something intuitively perverse about such a procedure. We expect technical texts to provide examples of technical usage. After all, that is the one thing they can do that everyday texts cannot. *Systems* was explicitly devoted to developing a framework for handling a neglected area of phonology, and was thus likely to be a fruitful domain for lexical innovation in that branch of the subject. If the lexicographers' choice of this book reflected the above reasoning, this should be apparent in the selection of its terms.

In the present case, there are no *substractor*-type problems. As coauthor, I know exactly what the bonce-formations were, as each of them was discussed at length before a decision was made to include it. They were of three kinds:[16]

1. Terms already used in the linguistics literature, but here given a new systemic status: *paralinguistic, prosodic, rhythmicality, subordination (prosodic),quality, qualification, vocalization, simple, complex, tension, tense, lax, prominence, pitch range, pause, prominence, low, high, fall, rise, fall-rise, rise-fall, fall-plus-rise, rise-plus-fall, level*
2. Terms from a different domain (musicology) applied to phonology: *tempo, allegrissimo, allegro, lento, lentissimo, accelerando, rallentando, pianissimo, piano, forte, fortissimo, crescendo, diminuendo, glissando, staccato, legato*
3. Everyday words here given a technical status: *low drop, drop, continuance, booster, high booster, extra-high booster, spiky, slurred, precise, brief, unit, double, treble, clipped, drawled, personal, conventional, huskiness, creak, whisper, breathiness, falsetto, resonant, laugh, giggle, tremulousness, sob, cry, monotone, narrow, wide, rhythmic, arhythmic*

There are seventy-four terms in this list, and most of them would need to be recognized as novel in a comprehensive historical record of phonological terminology of the 1960s—although in some cases, such as *fall*, *rise*, etc., it is doubtful whether the fresh systemic status given to these familiar terms would be sufficiently different from previous treatments to motivate separate lexicographical treatment.

To what extent does the *OED* try to capture this terminology? When we examine the actual use made of *Systems* by the lexicographers, we find that the following items were selected for citation:

catch (in the voice)
componential
co-occur (2 citations)
emotion(-markers)
high(-velocity)
higher-(order)
kinesic
monopitch (referring to someone else's use)
over-(aspiration)
paralinguistic
pitch(-movement)
pitch(-range)
prelinguistics
replicably
rise
sames
spiky
supra-(glottal)
tone(-unit)

It is immediately evident that the *OED* did not make use of *Systems* to capture its bonce-formations. Even in the four cases where terms from these lists are apparently involved (*paralinguistic, pitch-range, rise, spiky*), the excerpted passages are all supplementary citations for a more general sense. For example, the specific sense of *paralinguistic* used in the book, where it is systemically opposed to prosodic, is not identified. And 95 percent of the bonce-formations in *Systems* are not logged by the *OED* at all.

Is there a principle underlying the words that the lexicographers chose? Several of the other citations used by the *OED* are in relation to terms with special currency in linguistics: *componential, kinesic, monopitch, prelinguistics*. The two citations for *co-occur* also fall into this category (interestingly, all the citations for this verb are from linguistic sources, though this emphasis is not explicitly recognized in the *OED* entry). But two are terms from intellectual discourse in general: *sames* and *replicably* (the *Systems* excerpt for the latter actually being the only *OED* citation for this word). The use of *catch* is nontechnical. And the re-

mainder are there to illustrate further uses of combining terms: *emotion, high, higher, over, pitch, supra, tone*. None of them are bonce-formations. I can discern no principle here. The selection process may well have been random, as indeed is suggested by the sole choice of *rise* from the set of seven terms postulated as members of the English nuclear-tone system.

Curious to see whether this conclusion obtained elsewhere, I then looked at the use made by the *OED* of my introductory paperback, *Linguistics* (1971). Any introductory text, it seems to me, has an obvious role in a historical dictionary, as it provides usually well-defined instances of core terminology—ideal lexicographic data. A text search in the *OED*, using the word *linguistics*, brings to light 1,401 hits, and many of these do refer to introductory textbooks, chiefly R. H Robins's *General Linguistics*, but also works by Pei, Simeon Potter, Hartmann and Stork, R. A. Hall, Wardhaugh, Gleason, Martinet, Lehmann, Lepschy, and Lyons. It should be appreciated that each of these books was not used throughout the whole of the dictionary. My own book, for example, was evidently brought in at the point where the lexicographic team had reached letter I (its first citation is in relation to *IC analysis*), and it seems to have stopped being used at the end of letter P (apart from an isolated example from letter S). There are thirty-seven citations from it. Most are indeed directly concerned with linguistic topics, but the book was, once again, used as a general source for items that had nothing to do with linguistics. Specifically, it provided backup citations for the words *informedness, intellectual, occupationally, lunch-time*, and *literary*.[17]

This examination of nonceness and lexicographic coverage has been no more than preliminary, but it is nonetheless possible to reach some conclusions, and raise some further questions. Three points stand out.

1. Lexical isolates are much more common, especially in certain genres, than the traditional accounts of hapax legomena and nonce-formation in literature would lead us to expect. They are especially prevalent in academic writing. Journalism is another domain where they seem to be important, though it is less easy there to determine the lexical status of apparent innovations. Whether lexical isolates are characteristic of other everyday genres (sports commentary? advertising?) remains to be seen.

2. As soon as we broaden the scope of inquiry we need to refine the descriptive categories involved, recognizing further types of innovation. The category of bonce-formation was proposed (as a bonce-usage) to handle the kind of innovation specifically encountered in the academic domain; but it is likely to be relevant elsewhere.
3. The investigation of one text source showed that the lexicographers virtually ignored its emergent academic vocabulary. Is this typical of the genre as a whole? If it is, we must radically revise (upwards) our thinking about the size of scientific vocabulary. Dictionaries are accounts of lexical competence that are usually not far removed from lexical peformance, and indeed, people routinely use them as guidelines for their performance. But in the case of academic usage, the gap between lexical performance and lexicographic assertions about competence is apparently very great. Is it the case that 95 percent of the innovations that define academic lexical performance never appear in the dictionary? The linguistics case may well be atypical, but what is the figure elsewhere?

The remarkable power of the *OED* and other computer corpora present us with new opportunities of inquiry into such matters. This last conclusion would not of course come as any surprise to Whitney Bolton, who has been a model for us all about how to bridge the gap between old and new methodologies, in philology and stylistics. They are scoundrels and substractors that say anything else of him.

Notes

1. R. Burchfield, "The Oxford English Dictionary," in R. Ilson, ed., *Lexicography: an Emerging International Profession* (Manchester, Eng.: Manchester University Press, 1986), 24, 27.

2. I recall (having been present at the Fulbright colloquium) a lively argument following the Burchfield paper, unfortunately unrecorded in the proceedings, about how "great" was to be defined (how far "up" or "down," in terms of "market"), and whether the *OED* (in common with most other citation-based dictionaries since Johnson) had not become uncomfortably highbrow.

3. L. Bauer, *English Word-formation* (Cambridge: Cambridge University Press, 1983), 45.

4. Kathryn McWhirter, "Hearty cheers for red wine," *The Sunday Review, Independent on Sunday* (London), 9 June 1996, 44–45.

5. The *OED* does have an entry for *bottle-age*, though it mentions no derived forms, but it has no corresponding entry for *barrel-age*.

6. G. Thiel, "Die semantische Beziehungen in den Substantivkomposita der deutschen Gegenwartssprache," *Muttersprache* 83: 377–404; see also Bauer, 46.

7. John Algeo, "Desuetude among New English Words," *International Journal of Lexicography* 6, 4 (1993): 281–93.
8. Burchfield, 27.
9. Lewis Carroll, *Through the Looking Glass*, 1872, chapter 6.
10. W. F. Bolton, *The Language of 1984* (Oxford: Blackwell, 1984), 204.
11. For example, only in preparing this paper did I discover (with considerable surprise) that I am listed in the *OED* as the first citation for the word *nounness*, in 1971.
12. D. Bolinger, *Aspects of Language*, 2nd ed. (New York: Harcourt Brace Jovanovich, 1975), 554.
13. S. I. Hayakawa, *Language in Thought and Action* (New York: Harcourt, Brace and World, 1939), chapter 12.
14. In what is probably the most arcane scholarly footnote in this volume, it should be recorded that W. F. Bolton's name appears four times in the citations of the *OED*, all with reference to the first edition of his edited collection for the *Sphere History of Literature in the English Language*, Volume 10 (1975). The list contains an error: The first quotation in fact comes from the chapter by P. F. R. Barnes, not F. R. Palmer. How common are such slips? In checking the thirty-seven quotations from *Linguistics* cited later, there were three more errors—two carried through from the original *Supplement* text, and one spelling error introduced by the rekeying for the electronic edition. There were none in the twenty quotations from *Systems* (see also below). All were trivial errors, but four out of sixty-one nonetheless suggests the need for caution in making direct use of electronic corpus quotations.
15. David Crystal and Randolph Quirk, *Systems of Prosodic and Paralinguistic Features in English* (The Hague: Mouton 1964).
16. This list excludes: 1.) terms used in chapter 2 of the book, which was essentially a review of the literature; 2.) terms used by the authors in inverted commas (scare quotes), indicating their nonce use of previous terminology (e.g., "bundle features"); and 3.) unconscious neologisms, of the *nounness* type (see footnote 11).
17. The irony of using a 1971 book on linguistics as evidence for the word *literary* will not be lost on those involved in the stylistic conflagrations of the 1960s–1970s. One wonders just how much (conscious or unconscious) Johnsonian naughtiness there has been in lexicography in recent years.

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