

## English compounding: a pedagogical approach

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# English compounding: a pedagogical approach

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## Abstract

Compounds of various types are a central part of English morphology (Lieber & Štekauer 2009; Spencer 1991) along with affixational morphology, conversion, cliticisation and other word-formation processes. Yet, despite their prevalence and systematicity, few if any standard coursebooks cover English compounding to any degree of depth. Moreover, informal, anecdotal evidence suggests that teachers are unaware of the complexity of English compounding. To help redress these deficiencies in English language pedagogy, this article, appearing in two parts, reviews the linguistics of several compounding phenomena in English discussing a range of pedagogical approaches to both including ludic / creative approaches (Cekaite & Aronsson, 2015). In the first part noun compounding will be considered; part two of the article will focus particularly on compound adjectives with a deverbal head in ‘-ing’ or ‘-ed’ concluding with a discussion of the issue of what linguistic concepts should and may be taught through compounding and how, and also whether compounding (and other grammatical patterns) may be used to develop a ‘compounding syllabus’.

**Keywords:** compounding; noun-noun compounds; compound adjectives; semantic relationships; linguistics and language teaching; ludic learning.

## 1. Introduction

In Andrew Niccol’s poignant 2005 film, *Lord of War* (Lord of War 2005), Nicolas Cage’s cool, calm and condescending arms dealer, Yuri Orlov, tussles with Eamonn Walker’s fictional dictator of Liberia, André Baptiste. Ostensibly their disagreements are about the supply of lethal weapons from Orlov to Baptiste; however they also disagree about word formation. Regarding this latter, on two occasions, Orlov comments on Baptiste’s choice of language form in (mis?)forming a compound noun.

### Dialogue 1

Baptiste:	No-one can stop this bath of blood.
Orlov:	It’s not ‘bath of blood’; it’s ‘blood bath’.
Baptiste:	Thank you, but I prefer it my way.

### Dialogue 2

Baptiste:	You know, they call me the Lord of War. But perhaps it is you?
Orlov:	It’s not ‘lord of war’; it’s ‘warlord’.
Baptiste:	Thank you, but I prefer it my way.

It's a clever motif. Perhaps it expresses Orlov's detached condescension; alternatively (or simultaneously), it portrays Baptiste as a man without care for the rules. It may also act as a metaphor for the emotional disconnect both men have for the wars they resource and enact. However, it also demonstrates something important about human language(s): existing words can be combined in various ways to create alternative meanings. Of course, human languages draw on a range of resources to express meanings: in rare cases they go lexical and invent a new word ('twerk', 'quark'); sometimes the syntax emerges a new structure or an existing structure extends ('I'm X-ing it' is currently highly productive: 'I'm skydiving it this weekend; 'I'm flapjacking it all Sunday'); metaphor is a third means of meaning creation involving a new use of a familiar word ('sex up the dossier'); on other occasions they borrow from another language ('a wiki'); names of people and places may also lend themselves to new meanings ('Kafkaesque', 'Pythonesque', 'sadistic', 'coach'). But very often, as in the above dialogues, they just use their current linguist resources and create new words from existing words ('miniskirt', 'internet', 'wireless', 'cupboard', 'morphophonological' and 'idiolect'); these are compounds.

Within linguistics, with respect to the 'warlord' / 'lord of war' alternation, the latter structure is phrasal: words combine to form a phrase. The former structure however is a compound which is defined here, following Bauer (2003: 40) to be the formal process of combining two or more lexemes such that the result is also a lexeme. In this sense, compounding is a particular type of word formation (i.e. it results in a 'word') and differs from both syntax (broadly conceived) and from other word formation processes (as well as from other processes like metaphor) as per Figure 1<sup>1</sup>.

Formal process	Definition	Example
Compounding	Two or more words combine to result in a word	Text + book → 'textbook'
Syntax	Two or more words <sup>2</sup> result in a phrase (what is commonly called grammar)	Go + to + the + shops → 'go to the shops'
Affix morphology	A word and one or more bound morphemes result in a word	In- + describe + -able + -ly and beauty + ful → 'indescribably beautiful'
Conversion	A word undergoes stress shift to result in a new word	' <b>Export</b> ' (verb) and ' <b>export</b> ' (noun)

<sup>1</sup> Figure 1 does not demonstrate all the word formation processes available in human language(s). Some do not occur in English at all for example template morphology (Simpson 2009) which is a feature of Semitic language and infixation. Others are fairly limited in English such as incorporation (Baker 1985) and reduplication. A further type of morphology not listed in the table but present in English is the clitic (Spencer & Luis 2012).

<sup>2</sup> This definition of course assumes that syntax does not descend below the level of the word, an assumption rejected by most theories of grammar.

Portmanteau	The 'parts' of two words result in one new word	Breakfast + lunch → 'brunch'
Metaphor	An existing word takes on a new (somehow 'related') meaning	The human heart → 'the heart of the city'

Figure 1: Methods of forming new meanings in human languages

Before turning to particular types of compounding in English, we first unpack a little more the claimed distinction between compounding (combining words to make a word) and syntax (combining words to make a phrase). To linger with the opening example, the compound and phrase seem to mean very similar things: 'warlord' and 'lord of war'. 'War' is non referential<sup>3</sup> (c.f. 'Crimean Warlord' which can only mean 'a warlord (non-capitalised) from Crimea', not 'a lord of the Crimean War' (capitalised); and 'lord' denotes 'powerful person' not 'aristocrat'. However, a number of key differences between compounding and syntax can be identified (adapted from Spencer 1991). One key syntactic differentiator is the inability of the two elements of 'warlord' to be separated by any intervening element (Lieber & Štekauer 2009; Ryder 1994). In 'lord of war' (etc.), modifiers can be added to either key element as follows:

- (1) Lord of war → Imperial lord of war
- (2) Cup of coffee → Big cup of delicious coffee

As Ryder (1994: 14) notes, no such intervention by any element can occur in warlord: \*'war imperial lord'; \*'war English lord' and \*'coffee big cup'. However, 'imperial warlord' and 'English warlord' are both acceptable. Connected to this is the inability of the compound to pluralise the first nominal element (or indeed take inflection (Lieber & Štekauer 2009)): \*'warlord' is not English whereas 'lord of wars' is<sup>4</sup>.

A second differentiator is stress (Spencer 1991). In the compound, primary stress occurs on the first element of the compound ('wár lord') whereas in adjective-noun combinations 'English lord', the stress falls on 'lord'. This stress phenomenon is seen in the following alternations.

Adj + Noun	Noun + Noun	Adj + Noun	Noun + Noun
A white house	The White House	A black bird	A blackbird
A green house	A greenhouse	A red head	A redhead
Some orange juice	A glass of orange juice	A yellow hammer	A yellowhammer

Figure 2: examples of stress pattern variation in phrasal versus compound word combinations

<sup>3</sup> Non-referentiality is not always a property of both compound and phrase: 'a cup of coffee' contains a particular kind of coffee; a 'coffee cup' is a cup for coffee but may not have any coffee in it right now.

<sup>4</sup> Occasional exceptions to this rule surface: 'sports shops', 'sportswear', 'sports car'; 'systems analyst' and (Hewings 2005: 86) 'savings account', 'customs officer', 'clothes shop', 'arms trade', 'glasses case' and 'arts festival'. However, in these compounds, the first element cannot be singular (\*'arm trade'); plurality, here, then is fixed unlike in phrasal constructions.

A further example of how stress plays a role in compounding can be seen in multi-word compounds. Take Spencer's (1991) example of 'government pay review committee'. This is ambiguous between the following two readings:

- (3) a [review committee] looking at [government pay]  
 (4) a committee tasked with undertaking a [pay review] either of government or assigned that same task by government

In (3), 'review' receives stress, thus marking it as the first element of a two element compound; in (4) 'pay' receives the same stress. Moreover, in the reading in (3), no element may intervene between 'review' and 'committee' on the one hand and 'government' and 'pay' on the other c.f. *\*a government annual pay review public committee* versus *a annual government pay public review committee*.

Finally, at a semantic level, 'warlord' and 'lord of war' do not mean the 'same thing' and are not used in the same way. This, perhaps, is the (linguistic) essence of Orlov's oral corrective feedback to Baptiste: effectively it's a case of 'we just don't say it like that' (or in Widdowson's (1978) terms, a violation of usage). More specifically, this raises the issue of the (at least<sup>5</sup>) three ways in which nouns can be combined in English: NN, N's N and N preposition N. These are exemplified in Figure 3 with a partial commentary on the 'N part of N' rule adapted from Swan (1995).

Combination type	Example	Partial commentary
Noun1 + noun2 (NN)	Table leg	Used when N2 is a 'part of' N1 and N1 is inanimate (c.f. 'car door')
Noun1's + noun2 (N's N)	A man's leg	Part of a person or living animal (c.f. elephant's trunk)
Noun2 + preposition + noun1 (NpN)	A leg of lamb (versus 'lamb shank')	Used instead of 'lamb leg' as the part is perhaps sufficiently detached (indeed literally!) from the whole to 'break' the 'part of' rule. The fact that such the lamb is necessarily dead (in context) further

Figure 3: Three ways of combining nouns with example and commentary partially from Swan (1995)

As the subsequent detailed discussion in Swan (1995) makes clear, the 'part of' rule is only one of several rules distinguishing these three noun formation processes, and there are, in any case, exceptions to it ('roof of a house' not 'houseroof'<sup>6</sup>). The point is this: whatever complexities NN compounding may contain, the pattern itself is complicated further by being one of three possible patterns in total.

<sup>5</sup> A fourth way in which two nouns can be combined which is not discussed in this article is exemplified by the formulation 'sausage eater', 'dragon slayer' and 'hairstylist'. Although a noun-noun combination these are not NNCs in the sense the term is used here as the second head noun is morphologically complex.

<sup>6</sup> This exception may be due to another (sub)rule of how frequent the expression is.

With the phenomenon of compounding at least ostensibly defined, this article will now proceed to discuss the abundance and complexity of English compounding and place this in the context of English language teaching. Given the complexity that will be mapped out, it is argued that the learner is faced with a high degree of challenge. This challenge is not made easier by a somewhat unordered and non-comprehensive approach to compounding (and indeed other morphological phenomena) in the language learning textbooks and support materials. In a review of standard textbooks (see Appendix), the author found little or no mention, certainly discussion, of compounding. Moreover, while finding more space for compounding, standard support materials do not offer much in the way of exercises, a graded syllabus or, again, a full linguistic explanation. The current article will therefore attempt to address this gap for language teaching professionals by presenting certain compounding phenomena in English in a systematic way, and then discussing the pedagogical approaches to them. In this way, the article hopes both to shed light on compounding as a linguistic phenomenon, and offer possible approaches to it in the contemporary language classroom. Throughout the discussion the question of the application of linguistics to language teaching will be had. Specifically, certain linguistic notions (headedness in compounds, semantic relationships and metaphor) will be given consideration. The aims of the article, then, are threefold:

1. To unpack certain aspects of the English compounding system and to demonstrate their regularity and systematicity;
2. To consider what aspects of the linguistics (broadly conceived) of these processes may be relevant to (certain levels of) the language classroom thus contributing to the discussion on the place of linguistics in language teaching;
3. To suggest what pedagogical approaches may help learners to approach these structures thus addressing the gap in teaching materials and perhaps teaching practice.

## 2. Noun-noun compounds

### 2.1. The phenomenon

Noun-noun compounds (NNCs) are ubiquitous in English: computer screen, teacup, exercise machine, eyeglasses, screensaver, textbook and shirt sleeve. Their abundance is such that they can be grouped with some degree of systematicity. Figure 4a presents a large grouping based on the second element 'book'; figure 4b exemplifies smaller sets with a shared second element.

Student book	Poetry book	Science book
Answer book	Audio book	Guidebook
Work book	Notebook	Macbook
Storybook	School book	Rulebook

Figure 4a: A partial set of noun-noun compounds with 'book' as the second element

Right-most element	Set of exponents
Shop	Cop shop, sandwich shop, sweat shop, swapshop, talking shop
Chair	Armchair <sup>7</sup> , garden chair, baby chair, massage chair,
Car	Race car, sports car, family car, saloon car
Room	Bedroom, bathroom, shower room <sup>8</sup> , throne room, showroom, box room, store room, torture room, sun room, guest room
Investigation	Crew investigation, police investigation, safety investigation, accident investigation, weekend investigation, government investigation

Figure 4b: sets of compounds with the same right-most element

We begin with two observations regarding similarity. Firstly, these sets of NNCs are identical in terms of their formal make-up (they consist of only two nouns, both in singular form<sup>9</sup>). Aside from the relatively trivial issue of the tripartite variation in written form between NN, N N and N-N, the syntax is simple and straightforward. Secondly, semantically, the second (right-most) element is always the semantic head of the compound: a poetry book is a kind of book; a throne room is a kind of room. This type of compound is called an endocentric compound: the semantic head is inside (endo-) the compound<sup>10</sup>.

Against these similarities a more intriguing semantic difference: the kinds of meaning relations which obtain between the two elements differ widely, even within the sets. A storybook, for example is a book which contains (usually only one) story. A workbook, however, does not contain work (whatever that means); it is a book for working in, or in which work can be done. Again, a poetry book is a book containing almost certainly many (perhaps unrelated) poems whereas a science book is a book about science. A guidebook, finally, is a book which functions as a guide (or is it a book for a guide?). Clearly, also the second element, 'shop', is sometimes (variously) metaphorical ('sweat shop'; 'cop shop'). The metaphorical and perhaps culturally-bound meaning of certain compounds presents a further level of complexity to the phenomenon.

The issue of semantic unpredictability (and that of metaphor) appear also in compounds with shared first elements. Consider Ryder's (1994) three NNC examples with 'gold' as the initial element: goldfish, gold-digger; goldsmith. In the first, the fish 'resembles' or has the quality of

<sup>7</sup> We note in passing that the elements in this compound, and those 'race car', can undergo inversion and remain meaningful (and used) compounds: 'car race'; 'chair arm'.

<sup>8</sup> Although the first three elements of this set appear very similar, the semantic relationships may be subtly different.

<sup>9</sup> Singularity is not an inherent feature of these combinations c.f. footnote 5.

<sup>10</sup> Exocentric compounds in English also exist ('pick-pocket', 'paperback') where the head is outside the formal string (i.e. a pick-pocket is a kind of thief; a paperback is a kind of book).

gold; in the second, gold is a metaphor for wealth and the meaning connection is around seeking wealth perhaps in a dubious way; in 'goldsmith' 'gold' is a material worked with. Noun-noun compounds, then, have very similar formal surface properties (N + N), but quite different, and unpredictable, semantic relationships exist between those nouns. Figure 5 offers a more detailed example in which some of these semantic relationships are now unpacked.

<i>Ship</i> compound	Semantic relationship between head and modifying noun	Semantic relationship term
Cruise ship	A ship which is for cruises, used for cruises	N2 intentionally or unintentionally designed or used for N1
Warship	A ship designed for war	
Rescue ship	A ship which can rescue / has rescued	
Transport ship	A ship which is used for / designed for	
Coal ship	A ship powered by coal	N1 is the means by which N2 is powered
Steam ship	A ship driven steam	
Slave ship	Either a ship which transports slaves or a ship powered by slave labour	In the first meaning, N1 represents the type of person who travels in N2. The semantics of the travelling differ, however
Tourist ship	A ship which transports tourists / is used for tourism	
Airship	A 'ship' which travels in the air	N1 is the medium through which N2 travels or is commonly found in
Space ship	A 'ship' which travels in space	
Military ship	A ship owned by / belonging to the military	N2 owned by N1
Toy ship	A ship which is a toy	N2 is a type of N1
Lego ship	A ship made of Lego	N2 is made of N1

Figure 5: Some noun-noun compounds with 'ship' as the second element



Note that despite the table's attempt to group these ship compounds into sets, at least one remains ambiguous ('slave ship'). More importantly, the list of semantic relationship types on the right is not complete. Further types are now offered (adapted from Girju et al. 2005 and Nastase et al. 2006) with noun-noun examples of each<sup>11</sup>.

Type of semantic relationship	Examples
Causation	performance bonus; flu virus; exam anxiety
Attribute-holder	Quality sound; penknife
Agentive	Government investigation; police cover-up; student protest
Temporal	Night flight; weekend trip; afternoon nap
Make / produce / sell	Car factory; sandwich shop; candy store
Container	Coffee cup; chocolate box; DVD rack

Figure 6: types of semantic relationships adapted from Girju et al. (2005)

All aspects of NNCs discussed so far (the ostensibly simple formal order; the right-hand semantic headedness and the variable semantic relationships) can represent a learning barrier to speakers of certain languages. In Arabic, for example, the nearest equivalent to English NNCs is the *idafah* construction (Brustad et al. 2004). Although often cited as a type of NNC (Brustad et al. *ibid.*, p.31), it differs along all three parameters. Firstly, headedness of the *idafah* is the inversion of the English order as in (5):

- (5) baytu al- talabati  
house DEF- student.PL  
the students' house or a the student hostel

The Arabic compound in (5) is endocentric in the sense given above but the head is the initial element. This accounts at least in principle for Arab L1 speakers producing such compounds as 'race car' for 'car race'. Secondly, as (5) also indicates, the *idafah* construction does not have to be a concatenation of two bare nouns; the second noun (only) can take the definite

<sup>11</sup> Debate continues on the number of semantic relationships and the basis for the classification. See Girju et al. (2005) for a discussion.

article. This is a difference from English where no element in an NNC can intervene between N1 and N2. Finally, although there can be some semantic ambiguity in the *idafa* (again, in (5), two English renderings are given), the relationship is always one of possession of some kind, not part-whole or make-produce. In this sense, the *idafah* is more semantically predictable than English NNCs.

As Spencer (1991: 312) points out, French L1 speakers have different but no less opaque challenges when approaching English NNCs. French has no formal equivalent, the only noun combination type available being syntactic and of the pattern noun + preposition + noun as in (6)

- 6a un chemin-de-fer  
a road of iron  
'railway'
- 6b le mise-au-point  
putting in focus<sup>12</sup>  
'focus'

These, as with Arabic have the opposite headedness to English. Another type of compound is common in French but again it not an NNC:

- 7a porte-parole  
carry-word  
'A spokesperson'
- 7b porte-monnaie  
carry-change  
'A purse'
- 7c pince-nez  
hold-nose  
'glasses'

Thus, French has compounds, and can compound nouns, but not in the same way as English NNCs. The above is a brief introduction to the form and semantics of noun-noun compounds in which some aspects of the language-internal complexity has been presented along with some examples of L1 to L2 transfer barriers. We now turn to the pedagogical applications of this type of English compounding.

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<sup>12</sup> If the fictional Baptiste character in the introduction is a L1 French speaker (as his name may imply), this explains his error.

## 2.2. Pedagogical implications and applications

As noted above, one issue for English language learners of certain L1s is the ostensibly simple issue of headedness. This might be approached through a systematic noticing exercise (Schmidt 1990), observing of sets of compounds with shared first (goldfish, gold-digger) or second elements (swapshop, talking shop). With level-appropriate lexical items, such an exercise might be used fairly early in a syllabus to introduce the notion of an NNC and the notion of headedness. The same exercise might be repeated at a higher level to introduce the notion of metaphor through NNCs. A possible schematic worksheet is provided (examples partially from Ryder 1994) with low frequency lexemes in which metaphorical examples are square bracketed. A simple picture matching exercise of whatever form (pelmanism; placing pictures around the room) might introduce the terms which might then might easily be worked into a text to allow contextualisation. Learners would then be able meaningfully to guess what the compound might mean, or if not, realise that it is likely metaphorical.

Shared first element	Shared second element
Goldfish, goldsmith, [gold-digger]	Worksheet, bedsheet, timesheet, marksheet
Finger bowl, finger print, finger plaster	Guesthouse, bath house, henhouse [doghouse, madhouse]
Nightspot, nightshirt, night-light [night owl]	Bullet hole, mousehole, water hole, keyhole, [wormhole]

Figure 7: Shared first element NNCs versus shared second element NNCs

A second more complex issue concerns the semantic opacity of noun-noun compounds as part of the learning challenge for second language users which derives from the lack of any grammatical clue as to what kind of relationship the two nouns have to each other. Here, there is an argument for the relevance, perhaps necessity, of the teaching of the relevant linguistic concepts in the language classroom. How might this be done? One option is a matching exercise perhaps using with the 'ship' example, above and a list of possible semantic relationships as in Figure 6. The role of the teacher will be to clarify and offer further examples of the semantic relationships. This can be done by offering fuller phrasal examples of any semantic terminology which causes difficulty. It is debateable whether the standard terminology need be used in labelling the types of semantic relationship (e.g. part-whole and attribute-holder). It may suffice to provide informal names for the relationships.

A more linguistically rich but metalinguistically simple way of approaching this puzzle is offering phrasal paraphrases of the various semantic categories. Thus, the causation relationship ('flu virus', 'exam anxiety') might be glossed with the phrase 'N1 gives rise to / causes N2'. Similarly, the agentive structures can be glossed with 'by': 'investigation by the government'; 'protests by students'. Of course, phrases such as 'give rise to' will need to be taught but once taught, this can be employed in some kind of noticing activity in order to hone judgements and develop intuitions.

For higher level students, another awareness-raising approach might be to capitalise on the ‘government pay review committee’ type of string which allows two readings, disambiguated from each other via stress. This involves the notions of ambiguity and stress as well as the semantic relations discussed above. Teachers might introduce such examples (some of which are given below) and invite students to attempt to ascertain two readings and assign stress to them. Students might also be asked which is more likely as a reading, and why, and then finally (as a productive activity) write a short paragraph containing the compound in one of its two readings, disambiguated by that co-text.

String	Interpretations
Film criticism discussion board	<ol style="list-style-type: none"> <li>1. A discussion board relating to film criticism</li> <li>2. A board for film criticism discussion</li> </ol>
Heart disease charity commission	<ol style="list-style-type: none"> <li>1. A charity commission looking at heart disease</li> <li>2. A commission relating in some way to a heart disease charity</li> </ol>
Postgraduate funding programme head	<ol style="list-style-type: none"> <li>1. The head of a postgraduate funding programme</li> <li>2. The programme head (as opposed to the financial head) of postgraduate funding</li> </ol>
Postgraduate programme funding head	<ol style="list-style-type: none"> <li>1. Funding head of the postgraduate programme</li> <li>2. The head of the postgraduate funding programme</li> </ol>
Student film society (Spender 1991, 310)	<ol style="list-style-type: none"> <li>1. A society which studies films made by students</li> <li>2. A film society for / run by students</li> </ol>

Figure 8: Further examples of NNNN strings with two interpretations

A final issue in which awareness raising might be relevant is the metaphorical nature of many NNCs. This has been touched on already. As is well known, metaphors vary along a continuum of opacity, with cultural and diachronic interference to a great or lesser extent. Other linguistic features can also play a role such as rhyme, as in ‘copshop’ and ‘swapshop’. In NNCs, either or both elements may be metaphorical (‘sweatshop’). In principle, of course, either the metaphorical or the compounding aspect of metaphorical NNCs could be emphasised in the teaching roll-out.

The above exercises are primarily awareness-raising and noticing activities with the aim of familiarising learners with the relevant linguistic concepts; they are receptive activities which aim to illustrate the concepts underpinning NNCs. We move now to productive activities, focussing on those which have an element of language creativity and language play, activities which may be categorised as ludic, a concept discussed in both education literature (Cekaite & Aronsson 2005<sup>13</sup>; de Castell 2011; Huizinga 1950; Kirkham 2015; Kolb & Kolb 2009) and

<sup>13</sup> Cekaite & Aronsson (2005) use the term ‘ludic turn’ (p.170) to describe the shift they perceive in methodology towards a respect for the learning power of play. This article adopts this terminology.

psychological literature. Ludic activities have been defined by Huizinga (*op. cit.*) as those activities which are: a) free; b) take the player out of real life; and c) are bounded in time and space. At least three such productive ludic activities are available for noun-noun compounds. The first invites students to attempt to create the longest possible noun-noun compound, capitalising on the psychological power of competition and an open-ended activity. This can be done in pairs or groups with the students passing a piece of paper between them in turn as each adds a new noun to the emerging compound. Other students can challenge at any time if they feel the resulting compound is too opaque. Figure 8 presents an example beginning with 'book'.

Book
Textbook
Student textbook
Student textbook error
Student textbook error investigation
Student psychology textbook error investigation
University student psychology textbook error investigation committee
Yorkshire University student psychology textbook error investigation committee
Yorkshire Science University student psychology textbook error investigation committee
Yorkshire Science University student psychology textbook error investigation committee findings
Yorkshire Science University student psychology textbook error investigation committee findings scandal
Yorkshire Science University student brain psychology textbook error investigation committee findings scandal
Yorkshire science University student brain psychology textbook error investigation committee findings scandal investigation
...

Figure 9: A lengthy noun-noun compound which at each point may be considered meaningful

As Figure 9 indicates, new nouns can be added not only at the end, but at the beginning and the middle and indeed a given noun (here 'investigation') can recur within the structure, albeit, naturally, referring to different kinds of investigation. The choice of noun is constrained, however, by pragmatic and collocational realities (c.f. the oddness of 'Yorkshire University

camel science textbook yogurt’). A useful twist on this activity is to invite the student who has just added a new noun to the mix to rephrase the string with prepositions or relative clauses (as noted above), thus, ‘Student psychology textbook error investigation’ would be rephrased as ‘an investigation into an error in a textbook for students about psychology’. This invites and requires knowledge of the appropriate prepositions needed to express these meanings.

The second ludic activity follows from the highly productive property of NNCs i.e. that despite the fact that there are pragmatic and collocational constraints to the contexts in which nouns are likely to occur with (an)other noun(s), it remains the case that any two nouns in English can be given a meaning (or indeed several). Figure 10 offers some examples.

NN compound	Possible meaning(s)
Dragon soufflé	A soufflé made in the shape of a dragon; made of dragons; made for some dragons
Fire death	The death of fire; a death caused by fire; a fictional (?) ritual which involves killing captives in a fire
Tree chair	A chair which is in / under / near a tree; a chair made from a particular tree; a chair in the shape of a tree
Book ransom	A ransom which requires the giving of a book; a ransom for a book; a ransom delivered in book form / hidden in a book

Figure 10: entirely novel and semantically ambiguous NNCs

This activity might be done in pairs of students where each member of the pair writes down a random (singular) noun and the pair discusses possible meanings. This is easily transformed into the ‘pelmanism’ or pairs style of game. Extending this yet further, in triads, three random nouns might be written down and the six resultant dyad possibilities given consideration<sup>14</sup>. A paragraph might then be written using two or three of them. This is exemplified below.

Three base nouns:	cake, cave, frog	
Resulting NN compounds:	cake cave	cake frog
	cave cake	cave frog
	frog cave	frog cake

Story: Once upon a time there was a cave frog called Frederica. She lived happily in her frog cave at the end of the Big Forest. One day she woke up and realised it was her birthday – and she wanted a cake. So she asked all her friends to bring her one. William the worm brought a cream cake – which was delicious; Steve the stoat brought a chocolate cake – which was lovely. But the best cake of all was brought by Andrea the Antelope who brought her a lemon cave cake. Yes, a delicious cake, made from lemon in the shape of a cave. And not just any cave, Frederica the cave frog’s frog cave. A delicious cave cake for a lucky cave frog! Happy birthday Frederica! Enjoy your lemon cave cake and have a lovely cake day

<sup>14</sup> Of course one could combine more than two nouns to create ‘frog cave cake’. Experience suggests that these are not easy to use in the narrative.

This activity should serve to highlight the flexibility and creativity of this pattern as well as facilitating growing familiarity with the head-modifier ordering and semantic relationship aspects of NNCs.

A third productive ludic activity for NNCs takes its lead from the Anglo-Saxon game of kenning (Mitchell & Robinson 1992), the use of metaphorical NNCs in poetry and prose to figuratively paraphrase concepts for which a single word already exists. Some examples are given in Figure 12 along with the Germanic literary sources for the kennings.

Kenning	Meaning	Source
Battle-sweat	Blood	Beowulf
Whale-road	The sea	Beowulf
Bait-gallows	Hook	Flateyarbok
Sky-candle	The Sun	Old English translation of Exodus

Figure 12: Some kennings from Germanic literature

This ancient form of wordplay can be brought readily into the contemporary EFL classroom. Indeed, contemporary English offers its own examples: refrigerator can be rendered as ‘coolbox’; spare bedroom can be rendered as ‘boxroom’. Both these are appropriately metaphorical in the spirit of the Old English kenning game. Having introduced the concept of the kenning, then, this activity would invite students to coin kennings for contemporary phenomena which are typically expressed in only one word. Some possibilities include the following: ‘page journey’ (book); ‘life knot’ (marriage); ‘glue festival’ (wedding); and ‘life tent’ (house). All the above activities are creative and playful whilst at the same time ‘serious’ in their engagement with the linguistic phenomenon of the NNC in English.

### 2.3. Noun compounds envoi

For reasons of space this article does not consider morphologically complex NCs such as ‘truck driver’ and ‘slum clearance’. However, to round-off this first discussion, one further kind of noun-noun compound in English termed here the appositional compound is briefly discussed. Examples are given in Figure 13.

Example	Commentary
Singer-songwriter actor-director celebrity chef	A two-pronged professional or social role
Player-manager learner-driver Queen Mother	
Mother-child relationship China-UK diplomacy	Two nouns as a compound adjective
Murder-suicide finders-keepers	Miscellaneous

Figure 13: Appositive compounds in English

As opposed to NNCs, there is little system or productivity here. However, these patterns are not uncommon lexemes, nor are these entirely unproductive patterns and the 'appositional' structure can be extended to non-NNCs e.g. 'the get-go'. Their inclusion within an English language curriculum is therefore justified. Pedagogically, these are most likely to be approached from a lexical approach point of view (Lewis 1993). A functional syllabus which introduces them with other jobs or with countries might be a way in. Such 'everyday' inclusion may normalise the phenomenon of the compound to the student and serve to support the NNCs which this paper argues are introduced more early than has perhaps been typical.

The above section has sketched some awareness-raising and ludic teaching approaches to NNCs, some of which make crucial reference to certain linguistic concepts specifically modifier-head linear order, stress and NNC semantic relationships. The text has addressed the issue of language level namely that NNCs are so prevalent, and form around any kind of word (i.e. are not necessarily 'academic' lexis), that they could and should be introduced very early and mentioned one issues that a compounding syllabus might consider i.e. the place of metaphor in the syllabus. It has also considered one relatively peripheral aspect of English compounding, appositives, and argued that a lexical approach (Lewis 1993) within a functional syllabus framework lends itself to these structures. The notion of ludic learning has guided some of the pedagogical suggestions. The second part of this article in the following issue of this journal will consider the pedagogical ramifications of a further type of English compounding, compound adjectives as well as making some more general observations on the interaction of linguistic concepts with language teaching.

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## Appendix: List of Learning Resources

The below list details coverage of language materials which can be viewed as teaching compounding in a range of standard coursebooks (Part A) and support materials (Part B). The coursebook resources reviewed have a very similar approach to compounding: it is mentioned very briefly, there is no unpacking of the relevant linguistic concepts, the tasks provided are surface level.

This is less true of the support materials, particularly Quirk et al. (1985), which provides its usually fairly extensive discussion. There is of course, little in the way of exercises, and it is debatable to what extent Quirk et al. is usually referred to as teaching resource. Hewings (2005) and Swan (1995) are both judged acceptable by the current author but in the latter there is again no space for exercises.

### Part A1: Upper intermediate coursebooks

Cunningham, S. and Moor, P. (2005) <i>New Cutting Edge Upper Intermediate</i>	No mention of compounding appears to be made
De Chazal & McCarter (2012) <i>Oxford EAP Upper Intermediate: A course in English for Academic Purposes</i>	Unit 2 (p.26-7 and p.34) briefly describes what is called 'noun phrases', in each case in a very small box. Page 204 in the Language Reference section briefly mentions and exemplifies various types of compounds
Greenall, S. (1996) <i>Reward Upper Intermediate</i>	No specific mention of compounding appears to be made although Lesson 13 (Words connected with technology) presents a number of NNCs: <i>video recorder, security system</i> .
Soars & Soars (2005) <i>New Headway Upper Intermediate</i> (3 <sup>rd</sup> ed.).	Unit 9 discusses 'intensifying compounds' such as <i>scared stiff, dead easy</i> . This is given around 1/3 of a page (p.81).

### Part A2: Advanced coursebooks

Acklam, R. (2001). <i>Advanced Gold Coursebook</i> . Essex: Pearson	Page 23 talks briefly (1/2 a page of information and 12/ a page of exercises) on 'noun phrases' i.e. NN, N'sN and N prep N
Aspinall, T. and Capell, A. (1996) <i>Advanced Masterclass CAE</i> . Oxford: OUP	No apparent coverage
Cunningham, S. and Moor, P. (2003) <i>Cutting Edge Advanced</i>	Module 7 ostensibly includes 'compound phrases' but no compounds of the types discussed here are provided.

Goldstein, G. et al. (2009) *New Framework Advanced*

No apparent coverage

Part B: Support materials

Hewings, M. (2005). *Advanced Grammar in Use*

Unit 43 covers 'compound nouns and noun phrases' in some depth looking at

Unit 69 covers 'compound adjectives' presenting some of the patterns given here.

Mascull, B. (2002). *Business Vocabulary in Use*

Although this book contains a very large number of exemplars of various compounding types<sup>15</sup>, they are consistently presented simply as lexemes in context. There is no discussion of the systematicity of the compounds.

Quirk, R. et al. (1985). *A Comprehensive Grammar of the English Language*

Considerable coverage but no exercises. Rarely used by English language teacher (author's own personal observation).

Swan, M. 1995 *Practical English Usage*. Oxford: OUP

Some coverage in various places e.g. compound adjectives receive a short mention on section 13 and the coverage of noun combinations is fairly in depth.

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<sup>15</sup> Unit 3 (Recruitment and selection) for example, contains at least 10 word + word formations.