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Henry Daniels

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**NOT ALTOGETHER DISAGREEABLE: RULES
FOR THE STRESSING OF DUPLEX AND
COMPLEX FOOD- AND DRINK-NAMING
FORMATIONS IN CONTEMPORARY ENGLISH¹**

Henry Daniels

IDEA, Nancy-Université

Dans cette étude de l'accentuation des noms de nourriture et de boissons, L'analyse morphologique et prosodique de c. 2800 assemblages duplex et complexes amènent à l'élaboration d'un système de règles permettant d'expliquer, entre autres, le désaccord apparent entre l'accentuation de *chocolate cake* et celle de *chocolate biscuit*, entre celle de *fruit tart* et celle de *fruit cake*. En outre, il est proposé un système de règles permettant d'accentuer des assemblages complexes de différents types, dont, par exemple *tasty garlic and mushroom pitta bread*.

Henry Daniels est Professeur de linguistique anglaise à l'Université Nancy 2, membre de l'IDEA et Directeur du CLAN. Il s'intéresse, entre autres, à l'interface phonologie-lexique en anglais médiéval et contemporain.

¹ An earlier version of this paper was presented at the 9^e Colloque d'avril sur l'anglais oral, Université Paris XIII, Villetaneuse, 1998, and is published in the volume of the proceedings edited by A. Deschamps and J.-L. Duchet (APLV, 2006). The present, modified version appears by kind permission of the ALOES.

Introduction

The present study is, quite literally, a prolongation of the research into the stressing of primary and derived words (Guierre 1979, 1984, Duchet et Fournier 1988, Deschamps 1994), and compound words (Boisson 1980, 1984, Huart 1984). The next logical step was twofold. The first objective was to take a closer look at duplex nominal food and drink compounds, of which Boisson (1980 : 436-437) somewhat sadly concluded

Il n'est pas possible de trouver un principe de répartition sérieux entre G[auche] et D[roit]... Les seules explications possibles ne seraient que du bricolage local.

and of which Huart's (1984) empirical study revealed considerable disagreement among American informants. Could the problem really be so intractable? The second objective was to attempt to extend what is known about the stressing of simple and compound words to the case of complex nominal formations containing several lexical and grammatical words.

This paper is the fourth in a series of studies of the stressing of complex nominal formations (see e.g. Daniels 1997; Daniels 1999c and Doctors and Daniels forthcoming) Though the findings reported here have no pretension to universality, it is hoped that they will turn out to be useful in the elaboration of a general theory.

In order to tackle what might be termed the Duplex disagreement over why for example we have *chocolate cake* but *chocolate biscuits*, *ginger biscuits* and *gingerbread*, and the Complex problem of why such formations as *salt and vinegar crisps* /302001/ *mincemeat with rum and brandy* /3302010/ are stressed the way they are, a corpus of over 4500 contemporary food- and drink-names was examined, and the non-simple formations, of which c2000 Duplex and 800 Complex, were listed randomly and read out by three independent native judges from West Yorkshire, England. The stress-pattern recorded here is that produced by at least two, and usually all three informants. Forms marked 'unstable' denote cases of intra-informant hesitation or doubt.

In the following pages I shall report the synthesized results of the survey and attempt to produce a consumer-friendly set of rules for the stressing of food and drink duplex and complex formations, that is sufficiently specific and numerous to generate a 90% foolproof

competence, and sufficiently general as to be accessible to learners whose principal preoccupation is not with stress-patterns.

Bon appétit.

1 Duplex formations

By *duplex formation* in the domain of foodstuffs I refer to any one of the following matrices:

syntagma	example
N+N	<i>chicken soup, orange cake</i>
N's+N	<i>pig's trotter</i>
adj+N	<i>red cabbage</i>
Ven+N	<i>shredded wheat</i>
topo N/topo adj+N	<i>Cheshire cheese, French fries</i>
N+topo N/topo adj	<i>chicken Kiev, cod provençale</i>
(foreign)N+(foreign)N/Adj	<i>fromage frais, macaroni cheese, beef Stroganoff</i>
phonæsthetic reduplicatives	<i>couscous</i>

These eight matrices were sufficient to account for all the duplex data, the most productive being, unsurprisingly, N+N.

The hypothesis followed in the search for some kind of agreement was that the semantics of the second element (i.e. the *determinatum*) should be the clue to the stress-pattern of the whole.

By first of all making two lists, one of strongly-stressed final elements e.g. (*chicken*) **soup**, and one of weakly-stressed final elements, e.g. (*orange*) *cake*, then looking for semantic similarities within each list, the distribution detailed in 1.1 was arrived at.

1.1 Strongly-stressed second elements

The following elements are **strongly-stressed** (i.e. contain /1/) when second in a duplex formation. Forms are listed in alphabetical order according to the second element. The stressed syllable, defined morphologically, inter-consonantly or pre-consonantly, is shown in bold print. Apparent exceptions are preceded by the word BUT.

1.1.1 N+N liquids or very moist foods derived from one principal natural substance

<i>beef broth</i>	<i>tomato ketchup</i>
<i>dandelion coffee</i>	<i>beef lasagne</i>
<i>chicken casserole</i>	<i>lamb moussaka</i>
<i>fruit cocktail</i>	<i>garlic puree</i>
<i>apple compote</i>	<i>tomato sauce</i>
<i>blackcurrant coulis</i>	<i>kipper soufflé</i>
<i>avocado dip</i>	<i>chicken soup</i>
<i>banana fruitjack</i>	<i>beef stew</i>
<i>beef goulash</i>	<i>vegetable stroganoff</i>
<i>marrowbone jelly</i>	<i>chicken supreme</i>

1.1.2 N+N desserts

<i>creme caramel</i>	<i>orange jelly</i>
<i>blackcurrant cheesecake</i>	<i>fruit junket</i>
	<i>chocolate mousse</i> BUT
	<i>strawberry supermousse</i>
<i>ice cream</i>	<i>apple pie</i>
<i>apple crumble</i>	<i>sponge pudding</i>
<i>apricot custard</i>	<i>chocolate sensations</i> (see below 1.1.13)
<i>lemon curd</i>	<i>pineapple sponge</i> (see below 1.1.13)
<i>banana delight</i> (see below 2.1.13)	<i>chocolate surprise</i>
<i>blueberry dessert</i>	<i>fruit tart</i>
<i>(chocolate) rice dream</i>	<i>fruit torte</i>
<i>fruit flan</i>	<i>rum truffles</i>
<i>strawberry fool</i>	<i>hazelnut waffles</i>
<i>chocolate gateau</i>	<i>banana yoghurt</i>
<i>almond halva</i>	

1.1.3 N+N filled dough or pastry

<i>cheese bap</i>	<i>steak and kidney pudding</i>
<i>cheese breadcake</i>	<i>ham sandwich</i>
<i>chip buttie</i>	<i>onion tart</i>
<i>garlic nan</i>	<i>ham teacake</i>
<i>meat pasty</i>	<i>apple turnover</i>
<i>chicken pie</i>	

1.1.4 Meat

1.1.4.1 N+N meat cuts (cf. below 1.2.4)

pork chop

lamb cutlet

pork fillet

BUT

beefsteak, rumpsteak; tuna steak; pork joint; beef burger

1.1.4.2 N's+N

pig's ear

pig's trotter

BUT

lamb's liver

1.1.5 Adj+N (assorted)

green beans

red cabbage

hot chillis

dark chocolate

flaky pastry

mushy peas

BUT

?fast food cf. *?junk food* (both unstable)

wholemeal (see below 1.2.1)

1.1.6 Ven+N (assorted)

sugared almonds

baked beans (cf. below 1.2.1)

minced beef

diced carrots

spotted dick/dog

boiled ham

shredded wheat

1.1.7 *N+N preserves, fermented and distilled drinks*

<i>root beer</i>	<i>mint jelly</i>
<i>nettle brew</i>	<i>lime marmalade</i>
<i>cherry brandy</i>	<i>harvest pickle</i>
<i>rum butter</i> BUT <i>brandy butter</i>	<i>strawberry preserve</i>
<i>tomato chutney</i>	<i>navy rum</i>
<i>vintage cider</i>	<i>amontillado sherry</i>
	<i>cucumber spread</i>
<i>Bristol cream</i> (see below 1.1.8.1)	<i>rye whiskey</i>
<i>strawberry jam</i> cf. <i>diabetic jam</i>	<i>elderberry wine</i>

1.1.8 *Place-names*

1.1.8.1 *Place-name/place-name-derived Adj+N (assorted)*

Cheddar cheese
Scotch egg
London grill
Lancashire hotpot
Hungarian lamb
Yorkshire pudding
Frankfurter sausages
Brussels sprouts
 BUT
Bath bun, Eccles cake (see below 1.2.5)
Vichy water (see below 1.2.8)

1.1.8.2 *N+place-name/place-name-derived Adj (assorted)*

vegetable Bolognese
cod provençale
chicken Kiev
 BUT
butterscotch

1.1.9 *Foreign foods (assorted)*

1.1.9.1 *Both elements foreign*

moong dhal
fromage frais
tagliatelle carbonara

BUT

ginseng (< Chi *jên shên* ‘man root’)

coleslaw (< Du *kool sla* ‘cabbage salad’)

1.1.9.2 Foreign 1st element+English 2nd element (assorted)

macaroni cheese

tandoori chicken

vindaloo curry

1.1.9.3 English 1st element+foreign 2nd element (assorted)

vegetable biriyani

chicken chasseur

wholewheat couscous

vegetable enchiladas (see below 1.1.10)

lemon meringue

beef stroganoff

1.1.10 Spices and flavouring

stem ginger

tomato relish

hot salsa (see above 1.1.5; 1.1.9.3)

BUT

allspice

1.1.11 Savoury snacks

rice crackers

bacon crisps

mini munchers

garlic nan (see above 1.1.9.3)

savoury snacks (see above 1.1.5)

BUT

track snacks (see below 1.2.7)

1.1.12 *N+N largely metaphorical shapes (see below 1.2.2)*

pasta elbows/shells/spirals/tubes/twists

fish fingers

cream horn

chicken nuggets

pasta parcels

farmhouse triangles (non-metaphorical)

potato wedges

BUT

jelly baby (see below 1.2.2)

bagel bites

1.1.13 *Invented names (assorted)*

cranberry crunch

almond crunchy

banana delight (see above 1.1.2)

Golden Grahams (see above 1.1.5)

tiddy oggy (see above 1.1.3)

raspberry ripple (see above 1.1.2)

chocolate sensations (see above 1.1.2)

vegetable special

strawberry split

mesa surprise (see above 1.1.9.2)

rhubarb velvet

cheese wheezies

1.1.14 *Dvandvas² (assorted)*

cauliflower cheese

salami chicken

vegetable rice

1.2 *Weakly-stressed second elements*

The following elements are **weakly-stressed** (i.e. do not contain /1/) when second in a duplex formation. Formations are listed in

² A *dvandva* is a duplex formation whose two elements are semantic coordinates having equal status: thus *vegetable rice* is a dish consisting of rice and vegetables in roughly equal proportions. Other, non-foodstuffs examples of *dvandvas* are *Anglo-American*; *fighter-bomber* and *worker-student*.

alphabetical order according to the second element. Stressed syllables are defined as above, and are shown in bold print.

1.2.1 *N+N parts or derivatives of plants*

<i>soya beans</i> cf. butter bean , kidney bean	barley kernels
elderberry cf. blackberry , raspberry , strawberry	bay leaves
wheat bran	oatmeal cf. wholemeal (see above 1.1.5)
corn cob	coconut cf. Brazil nut ,
peppercorn	chestnut , peanut , tigernut
barley flour cf. self-raising flour	rose petals
	senna pod
	arrowroot (< W. Indian arawak < aru-aru 'meal of meals')
lime flowers	sunflower seed
wheat germ	bamboo shoots
rosehip	lemongrass stems
clover honey	dill tops
psyllium husk	
	cf. grapefruit passionfruit , water chestnut

1.2.2 *N+N largely non-metaphorical shapes (cf. above 1.1.12)*

jelly baby (metaph.) BUT jelly teddy ³	carob drops
meat ball	corn flakes
sesame bite	garlic granules
energy bar	asparagus spears (metaphorical but probably assimilated to 1.2.1)
potato chips	liquorice stick
soya chunks	norri strips

³ In **jelly teddy**, a sweet included here because of its formal and semantic interest, **teddy** is contrasted with the second element of the original **jelly baby** and is thus stressed /1/. A parallel, though inverted situation is seen in the pair **town house** vs (original) **country house** (cf. non-contrastive **town council**; **town hall**; **country seat**. **Country folk**, is also presumably contrastive to **townsfolk**).

stock cubes

BUT *chocolate chips, pear halves*

1.2.3 *N+N liquids, fats and powder derived from animals, fruits and vegetables*⁴

peanut butter

pork dripping

vanilla essence

pork fat

coconut milk

sunflower oil BUT *olive oil* (cf. *Popeye's girlfriend*, and (medicinal) *cod liver oil*)

orange juice

BUT *beef extract* (unstable)

green pepper paste

garlic powder

vegetable stock

date syrup

malt vinegar

cereal drink

1.2.4 *N+N parts of animals (cf. above 1.1.4)*

chicken liver

cowheel

cod roe

1.2.5 *N+N with underlying 'for'*

muesli base

cough candy

salad cream

pie crust

salad dressing

BUT *diabetic jam* (see above 1.1.7)

sandwich filler

baby food

pizza herbs

wok oil

1.2.6 *N+N pure (i.e. unfilled) oven-baked food*

ginger biscuits BUT *chocolate biscuits*

ryebread

currant bun cf. *Bath bun* (see above 1.1.8 1) BUT *hot cross bun*

⁴ This appears to be a category exhibiting considerable instability and where a careful inter-dialectal study is called for.

orange cake

meat loaf

BUT blueberry brioche (see above 1.1.9.3)

1.2.7 Phonaesthetic food-names (assorted)

Forms are listed in alphabetic order according to initial letter.

baba

couscous

flapjack

hotpot

piri piri

track snack

BUT tutti frutti

1.2.8 Water

Malvern water

spring water

tap water

Vichy water

1.3 Comments on the duplex data

The most striking feature of this data is the large number of strongly-stressed second elements (150 here) as against the smaller number of weakly-stressed ones (73 here). Before concluding that food and drink compounds are 66% late-stressed, it should be noted that the corpus contained very few examples of 2 vast domains: alcoholic drinks (in particular cocktails), and sweets. These two areas were left out of the present study in view of their often metaphorical or playful nature (e.g. *milky way*; *bloody Mary*; *screwdriver*) which puts them in a category of their own, requiring a separate study. It should also be borne in mind that it is not so much a given word that attracts the stress as that word-as-second-element. For example, though *custard* is strongly-stressed in *apricot custard* (1.1.2.), it would yield up its claim to primary stress as first element in say *custard cream* (cf. *ice cream* (1.1.2.)). *Cream* would however retain primary stress in *creamcake* (cf. *orange cake* (1.2.6)). Taking these

two points into consideration we are nonetheless presented with an essentially late-stressed overall picture.

There now follow a series of comments specific to certain of the categories – in which there is a certain amount of overlap owing to rule-synergy and a very low rate of irregularity owing to rule-conflict.

With regard to the categories *1.1.1 liquids and moist foods* and *1.1.2 desserts* there is inevitably overlap since many desserts are moist. However it is wise to keep the two categories apart as some desserts, e.g. *waffles*; *tart*, are dry. The apparent irregularity of *chocolate biscuit* may be due to assimilation to *tart* and *flan*, the chocolate being a superimposed extra, as against *chocolate cake* and *ginger biscuit* where the flavour is an ingredient in the mixture.

The category *1.1.5 Adj+N* conforms to Boisson's (1980) finding of 68% late stressing for this type of compound. The irregularity of *fast food* can be related to the general principle that compounds in *-food* and *-drink* are early-stressed (e.g. *babyfood*, *dogfood*, *healthfood*, *orange drink*, *milk drink*)⁵, while the *whole* of *wholefood* attracts the stress for this reason and also by analogy with *wholesale*, *wholesome* and *wholewheat*.

In *1.1.8.1 place-names*, there is rule-conflict in the cases of *Bath bun*, *Eccles cake* and *Vichy water*. Here the 'pure oven-baked' rule which de-stresses *bun* and *cake*, proves stronger than the place-name rule. The de-stressing of *water* as a second element is similarly a stronger rule than the place-name one.

As a metaphorical name, *jelly baby* (*1.2.2*) ought to be late-stressed. The anomaly is unlikely to be due to a higher than average degree of iconicity, as imaginary analogous formations such as **chocolate submarines* or *toffee rabbits* would, to the author's and the three informants' view, be late-stressed, and is more likely to be due to the fact that this type of sweet has been on the market for much longer than all the other 'shapes' foods, with the possible exception of (also early-stressed) *cornflakes*, and is stressed like other N+N coordinate duplexes, e.g. *frogman*; *lamp-post*. It is interesting to note

⁵ C. Boisson (personal communication) points out that *-food* and *-drink* are semantically lightweight and as such are assimilable to unstressed *-affair*; *-stuff* or *-thing* as in vague but often used expressions such as, a (kind of) *pasty affair*; *some (sort of) gruel stuff*; a (bit of a) *cracker thing*.

that the late-stressing of the recent variant, *jelly teddy* is both contrastive and regularising.

An awareness of the tendency to late-stressing in duplex food compounds is presumably behind such invented names as *banana delight* and *rhubarb velvet*. However these inventions, which often result in the highlighting of an opaque non-food but positively-charged element like *-fantasy* or *surprise*, may well be a reflection of a post WW2 move to increasingly elaborate processing of food (see below).

With regard to the exceptionality of (1.2.3) *olive oil* as against the regular *sunflower oil*, I see two possible explanations: either the well-known star *Popeye's* girlfriend *Olive Oil*, whose name obeys the late-stressing rule for forename+surname (see Daniels 1997), has influenced the food compound; or, given that until recently the substance had only medicinal applications in Britain, its late-stressing may be analogous with the, also medicinal, *cod liver oil*.

The early-stressing of 1.2.5 *N+N with underlying for* is perfectly in keeping with Boisson's (1980 : 413-415) finding that this category of compound is almost exclusively early-stressed (see also Daniels 1999c).

There appears to be a general rule covering the categories 1.2.1 *N+N parts or derivatives of plants*, 1.2.3 *N+N liquids, fats and powder derived from animals, fruits and vegetables*, and 1.2.4 *N+N parts of animals*, which states that relatively unprocessed animal and plant derivatives are early-stressed. This is perhaps in keeping with the primacy of the source, as against highly processed (i.e. transformed) food, which stresses the end product (i.e. the dish). Compare

relatively unprocessed		processed
<i>apple juice</i>	vs	<i>apple pie</i>
<i>beef dripping</i>	vs	<i>beef stew</i>
<i>chicken liver</i>	vs	<i>chicken soup</i>
<i>garlic powder</i>	vs	<i>garlic sauce</i>

The sophistication of modern living would thus suggest a current shift from early to late-stressing, which would be a reversal of Boisson's (1980: 437) hypothesis:

On peut imaginer que la règle suivant laquelle les noms de nourriture sont D[roits] a été vraie à 100% il y a quelques siècles, mais cette catégorie de noms tend à gauchir

progressivement...

However, it may well be that the very recent trend away from over-refined food with resulting interest in bulk buying of cereals, pulses, dried fruit, etc. is reversing the early to late tendency : the *back to basics* philosophy being reflected in *back to early-stressing*.

From the point of view of learners, a very general rule saying, 'In a restaurant stress late (i.e. the dish) and in a health-food store stress early (i.e. the source)' would appear to be useful.

2 Complex formations

The term *complex formation* refers to any nominal syntagma consisting of more than two elements. The four basic matrices found in the food and drink data are:

1) prepcoms⁶ e.g. N+Prep+N *chicken with tarragon*

2) coordinates e.g. N+and+N *fish and chips*

3) noun strings e.g. [N+N]+N *russet apple juice*

4) noun and adjective/Ven strings e.g. [Adj+N]+N *tropical fruits crunchy*

In the lists 2.1 to 2.6 we see illustrated 40 patterns of varying complexity

2.1 Prepcoms (Prepositions attested, *au, en, in, of, on, with*)

2.1.1 Simple prepcoms

1 N+Prep+N	<i>chicken with tarragon</i>	/200100/
2*det+N+Prep+N	Ø	
3 N+Prep+det+N	<i>chicken in the basket</i>	/200010/
4*det+N+Prep+det+N	Ø	

- simple prepcoms used as premodifiers

⁶ The term *prepcom*, of my own coinage, refers to any lexicalised or partially lexicalised formation having the basic structure N+Preposition+N. This basic structure may be complexified via the addition of extra elements to the left or right of the preposition. Though not all scholars consider such formations to be compounds, I retain the term for reasons of brevity, transparency and pedagogical usefulness.

5 [N+Prep+N] +N	<i>cod in butter sauce</i>	
	/20301/	
6 [N+Prep+det+N]+N	<i>fruits of the season tea</i>	/200301/

2.1.2 Complex prepcoms

- addition of one or more adjectives/Ven

1 [Adj+N] +Prep+N	<i>brown casserole of rabbit</i>	/3203010/
2 [Ven+N] +Prep+N	<i>sliced papaya in syrup</i>	/3020010/
3 N+PREP+ [Adj+N]	<i>haddock in crispy batter</i>	/2003010/
4 [Ven+N]+Prep+[Adj+N]	<i>braised beef in rich gravy</i>	/320310/

- addition of one or more noun determinants

5 [N+N] +Prep+N	<i>tomato marinade with sherry</i>	/033302010/
6 N+Prep+[N+N]	<i>angels on horseback</i>	/20313/
7 [N+N] +Prep+[N+N]	<i>chilli pepper in sherry sauce</i>	/20300201/

- addition of one or more noun determinants and one or more adjectives/Ven

8 [Adj+[[N+N]+N]+Prep+N	<i>smooth peanut butter with salt</i>	/3233001/
9 [N+N]+Prep+[Adj+N]	<i>olive oil with hot peppers</i>	/3020310/
10 [adj+N]+Prep+[N+N]	<i>brown lentils in tomato sauce</i>	/32000331/
11 [[adj+Ven]+N]+Prep+[Ven+N]	<i>brown sugared peaches with soured cream</i>	/33020031/

2.2 Coordinates

2.2.1 Simple coordinates

N+and+N	<i>fish and chips</i>	/201/
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2.2.2 Complex coordinates

- addition of one or more noun determinants and one or more adjectives/Ven

1 [N+and+N]+N	<i>steak and kidney pie</i>	/30201/
2 N+and+[N+N]	<i>peas and baby carrots</i>	/203010/
3 [N+N]+and+N	<i>avocado dressing and dip</i>	/30332001/
4 [N+N]+and+[N+N]	<i>bamboo shoots and water chestnuts</i>	/32301033/

- coordinates used as premodifiers

1 [Ven+and+Ven]+[N+N]	<i>roasted and salted cashew nuts</i>	/30020013/
2 Adj+[[N+and+N]+N]	<i>creamy garlic and herb sauce</i>	/2030031/
3 [[N+and+N]+Adj]+N	<i>apple and cinnamon herbal tea</i>	/300200301/
4 [N+N+and+N]+N	<i>sultana fig and banana wine</i>	/330300201/
5 [Adj+and+Adj]+N	<i>sweet and sour chicken</i>	/20310/

2.3 Noun strings

1 [N+N]+N	<i>russet apple juice</i>	/20103/
2 N+[N+N]	<i>vegetable cottage pie</i>	/3000201/
3 [N+N]+[N+N]	<i>raisin ripple almond crunchy</i>	/30302010/
4 [N's+N]+[N+N]	<i>goat's milk strawberry yoghurt</i>	/2330010/

2.4 Noun and adjective/Ven strings

1 [Adj+N]+N	<i>tropical fruits crunchy</i>	/200310/
2 [Adj+N]+[N+N]	<i>wholemeal pitta bread</i>	/23103/
3 Adj+[N+N]	<i>spicy olive cocktail</i>	/302013/
4 Adj+[Adj+[N+N]]	<i>whole medium Brazil nuts</i>	/2300013/
5 [Adj+N]+[Adj+N]	<i>short grain brown rice</i>	/3231/
6 [Adj+N+N]+[Adj+N]	<i>Spanish sunflower clear honey</i>	/30230310/

2.5 Simple prepcom-coordinates

1 N+Prep+[N+and+N]	<i>terrine of veal and chicken</i>	/0302010/
2*[N+and+N]+Prep+N	Ø	

2.6 Complex prepcom-coordinates

1 [N+N]+Prep+[N+and+N]	<i>soya milk with calcium and apple</i>	/3030200010/
2 [Ven+N]+Prep+[[Ven+N]+and+N]	<i>braised beef with soured cream and mushrooms</i>	/33032013/
3 [N+and+[N+N]]+Prep+[Ven+N]	<i>spinach and ricotta pasta with smoked ham</i>	/30003020031/
4 [N+and+N]+Prep+[[N+and+N]+N]	<i>pasta and chicken in tomato and basil sauce</i>	/3002000330301/

These 40 patterns by no means account for all the data, in which over 180 different permutations are attested. The 40 illustrated here appear to be among the most productive matrices.

2.7 Formal considerations

2.7.1 Prepcoms

These are noticeable by virtue of the very restricted range of prepositions attested. Unlike common core prepcoms, which mobilize 23 different prepositions, the chief one being *of*, accounting for 67,7% of examples (see Daniels 1997:54-55), food and drink prepcoms make approximately equal use of *in*, *on* and *with*. The higher class the *cuisine* the higher the incidence of French *au* and *en*. Prepcoms gain in complexity by the addition of adjectives, (e.g. *smooth*); Ven (e.g. *braised*) and noun determinants (e.g. *tomato*), *olive oil with hot peppers* being an illustration of a very productive matrix.

2.7.2 Coordinates

These semantic dvandvas follow the same build-up procedure as prepcoms, ranging from the simplest *sage and onion* to a typical *bamboo shoots and water chestnuts*.

2.7.3 Noun (and adjective) strings

These formations, are either 3-term (e.g. *vegetable cottage pie*) or 4-term (e.g. *Spanish sunflower clear honey*). Lacking as they are in grammatical words, their semantic composition is often opaque and difficult to analyse, as may be seen in [*spicy olive*] *cocktail* or *spicy [olive cocktail]*.

2.7.4 Super-complex formations

Super-complex formations are achieved by combining prepcoms and/or coordinates and/or noun/Adj/Ven strings. One noticeable feature of the data illustrated is that all four basic matrices may be mobilised for the purposes of premodification as can be seen from

	premodifier	head
prepcom	<i>cod in butter</i>	<i>sauce</i>
coordinate	<i>sweet and sour</i>	<i>chicken</i>

noun string	<i>raisin ripple almond</i>	<i>crunchy</i>
adj/Ven string	<i>whole medium</i>	<i>Brazil nuts</i>

The most elaborate super-complex formations are born of the embedding of 2 coordinates within a prepcom of the type

pasta and chicken in tomato and basil sauce

There are no instances in the data of prepcoms being embedded in coordinates, though the reverse is common (see below).

2.8 Rules for the stressing of super-complex formations

A rapid glance at the stress patterns of 2.1. to 2.6, represented by a Guierre-Deschamps type system of four values (/1/ = primary stress, /2/ = secondary stress, /3/ weakly-stressed but non-reduced, /0/ = weak /ə/ or /i/) confirms an intuitive, syntax-inspired feeling that the primary stress is likely to be close to the end of the group. The reason for this is that as Boisson (1980:573-577) finds, prepcoms are massively late-stressed⁷. The same is true for coordinates⁸. Thus, whatever their precise composition, both of these matrices have an underlying /21/ stress pattern. (For a more detailed analysis, see Daniels 1997). *Ceteris paribus* the same is true for noun and adjective/Ven strings: the longer the string, the further from the beginning the primary stress comes, as it gradually takes on the role of nucleus in a non-lexicalised tone group.

Compare:

pitta bread

garlic pitta bread

tasty garlic and mushroom pitta bread

Thus, the combined knowledge of

1) a simple word stress-rule⁹, which generates for example

⁷ Exceptions include *jack-in-the-box*; *mother-in-law*; *brother in law*, etc., and *good-for-nothing*.

⁸ Apparent exceptions include partially lexicalised expressions whose second element is semantically lightweight, added to extend and de-specify the reference of the first element, e.g. *books and things*; *students and people*; *pubs and places*; *groceries and stuff*, not to forget the anomalous *so-and-so*.

⁹ Disyllabic nouns and adjectives whose first syllable has the form (C)VCC- (where CC = geminate) are regularly stressed on that syllable (e.g. *adder*; *bottle*;

carrots /10/

2) a duplex food and drink compound stress-rule¹⁰, which generates

baby carrots /2010/

3) a general coordinate stress-rule¹¹, which would generate

peas and carrots /2010/

finally generates

peas and baby carrots /203010/

in which the subordination-by-embedding of *baby carrots* causes the first syllable of *baby* to have its original /2/ demoted to the rank of /3/ while the more powerful 1st element of the embedding coordinate maintains its original /2/.

We appear to have here an example of a higher order rule subsuming a more local one, i.e. that of a coordinate maintaining its overall shape at the expense of an embedded Adj+N duplex.

We see exactly the same subordination occurring in for example

2.1.2.:

1 Adj+N *braised beef* /2 1/

2 Adj+N *rich gravy* /2 1/

3 prepcom **beef in gravy* /2010/

4 embedding *braised beef in rich gravy* /320310/

Note that in both examples it is the creation of a coordinate or a prepcom which takes charge of an embedded hierarchy by simply demoting the latter's /1/s and /2/s, which find themselves to the left of the element whose original, and maintained /1/ finds itself furthest to the right.

What happens when a prepcom meets a coordinate?

In the case of

[*terrine*] of [*veal and chicken*] /0302010/

where a coordinate is embedded as **second** element of a simple prepcom, the order of operations must be

1 *veal* /1/ *chicken* /10/

2 (coordination) *veal and chicken* /2010/

3 (prep-compounding) *terrine of X* /0201/

4 (embedding) *terrine of [veal and chicken]* /030[2010]/

error; issue; litter; rabbit; silly; succour; utter; whippet, BUT *terrain; terrine*; and the negative adjectives *immense; immune*).

¹⁰ Stress the noun, not the adjective.

¹¹ Stress the lexical element to the right of *and*.

and not

1 *terriner* /01/

2 (prep-compounding) *terriner of X*/0201/

3 (coordination) X = *veal and chicken* /2010/

4 (embedding) *terriner of [veal and chicken]* */020[3010]/

in order to ensure *chicken*'s double claim to primary stress (see below) and to prevent *veal* from usurping it (the latter's claim being that of the lexical element to the right of the preposition).

Thus the final operation (embedding) leaves intact the original /2/ of *veal* which now finds itself within the same brackets as /1/, but demotes the original /2/ of *terriner* (as 1st element of a prepcom) which finds itself outside the brackets. Unlike the types of embedding seen above, in the case of a coordinate being embedded as second element in a prepcom, the embedded coordinate is left entirely intact.

The data unfortunately contains no example of the reverse formation: that of a simple coordinate embedded as **first** element of a simple PREPCOM, with which to compare the previous example. However we do have in 2.6.3 a more elaborate version of this matrix, which, if pared down would presumably give

*[*spinach and pasta*] with *ham* /[30020]01/

Here, as with the previous example, the same sequence of operations has to be postulated, this time to ensure that in the end-product the original /1/ of *pasta* is now demoted to /2/, and that the original /2/ of *spinach* is demoted to /3/, thus preserving an underlying /21/ pattern for the embedding prepcom (*x with ham*).

The result of this confrontation appears to be clear: the conditioning factor is one of ordering of operations. This ensures that in both types of embedding the element which finds itself furthest to the right claims primary stress and in so doing demotes an embedded /1/ to /2/ and an embedded /2/ to /3/. As a result we have an underlying /321/ (i.e. a crescendo) pattern for both these kinds of super-complex formations.

In the case of *terriner of [veal and chicken]*, *chicken* has a double claim to primary stress: firstly because it is, according to the order of operations postulated, second element of a coordination, and secondly because having asserted that claim, it becomes the only candidate for the position of second element in the embedding prepcom. In the case of *spinach and pasta with ham*, *ham* is the only element to the right of the PREP and is therefore the only candidate for primary stress. If it

had been premodified by an adjective or noun determinant, a preliminary operation producing a /21/ pattern would have ensured that it, and not the determinant was the only candidate for primary stress in the end product. As there is no opportunity for promotion (see below) in the course of the operations, the determinant, even in its post-preposition slot, is prevented from being a candidate.

A perusal of the stress-patterns from 2.1.1 to 2.6.4 reveals that the construction of super-complex formations involves the maintenance of the original /1/ furthest to the right, the demotion of one original embedded /1/ to /2/ and the demotion of all other /2/s to /3/. In our data, there is never any promotion, a /3/ never becomes a /0/, and the /2/, of which there can be only one, is always to the left of /1/. To the right of /1/ we find the following possibilities:

Ø	as in	<i>steak and kidney pie</i>
/00/	as in	<i>chicken with tarragon</i>
/0/	as in	<i>sweet and sour chicken</i>
/3/	as in	<i>angels on horseback</i>
/03/	as in	<i>russet apple juice</i>
/033/	as in	<i>bamboo shoots and water chestnuts</i>

Note that anything to the right of /1/ is determined either by the stress-pattern of the simple word (e.g. *tarragon*) or by the rules for the stressing of the duplex formation which happens to find itself in final position (e.g. *water chestnuts*).

In cases where there is multiple embedding and therefore multiple demotion, as in

[*braised beef*] with [[*soured cream*] and *mushrooms*] /33032013/
 the rule appears to require that, since a /3/ never becomes a /0/, any distinction between original /2/s and /3/s is levelled, thus there is theoretically no limit to the number of /3/s or /0/s permitted. The stress-pattern of these examples was arrived at simply by listening to the informants, without instrumental analysis, however, for a speaker to place the /2/ in 2.6.2 on *beef* instead of *cream*, which would imply a different ordering of rules, would sound equally convincing. We are probably here in the presence of flexible, dialectal, idiolectal or situation-specific rules, which need to be tested instrumentally, using a larger number of informants. My own *a priori* feeling is that tests run in laboratory conditions are likely to produce data different, and not necessarily more regular overall, from samples of spontaneous speech, where the stressing of super-complex formations by one

speaker is in all probability influenced by the pattern used by his/her interlocutor.

Predictably, examples such as

<i>creamy garlic and herb sauce</i>	/2030031/
<i>sweet and sour chicken</i>	/20310/
<i>tropical fruits crunchy</i>	/200310/

reveal a distinct unwillingness, at least on the part of these few informants, to put a /2/ in the slot immediately preceding a /1/, even though this is what the matrix would normally demand. In the examples above, *herb* should, as the second element in a coordinate, normally have its original /1/ demoted to /2/, as should *sour* (for the same reason), while *fruits* (as a noun premodified by an adjective) should be demoted from /1/ to /2/. This “/21/ aversion rule” only comes into effect in the case of noun and adjective/Ven strings (see above 2.4.5 and 2.4.6) and of super-complex formations: as is perfectly well-known, /21/ is a perfectly licit stress-pattern for duplex formations (e.g. *ice cream*, *meat pie*, *root beer*; cf *Prime Minister*; *football special*, *court-martial*). Evidently, formations containing grammatical elements tend to be perceived and handled as units of discourse rather than lexical items, and as such are subject to prosodic constraints, which emerge as more powerful than purely phonological rules.

3 Concluding remarks

In this paper I have attempted to show how a mixture of formal and semantic criteria can generate a set of reasonably transparent and thus teachable stress-rules underlying the apparent disagreement, if not to say chaos in the duplex denominative food and drink data.

We have seen that the rules for the placing of primary stress in complex and super-complex formations, are the straightforward output of a combination of simplex and duplex rules plus the inviolable “final embedding rule”, which requires primary stress to be preserved only within the formation or part of a formation furthest to the right, with concomitant demotion of original /1/s and /2/s to the left. The only real difficulty is in determining which original /1/ somewhere along the line shall qualify as the end-result /2/. Furthermore the rules appear to be powerful, generating data which is

largely clean i.e. devoid of any real complications produced by rule-conflict. Clearly, only further work, using corpora from other lexical fields and, most desirably, based on the performance of a wider range of informants, will bring to light a general rule-ordering principle.

For learners of English who might be worried about their linguistic table manners, and who need a rule-of-thumb, the general position is clear: in the case of DUPLEX formations, you have to know the semantically-determined rules and apply them: a correct appraisal of the nature of the second element is essential. Reduced to their most fundamental expression, they say “stress late except in the cases of the categories 1.2.1 - 1.2.8”. In the case of complex and super-complex formations, the general rule is: “Identify embedded components, and don’t think about primary stress until the onset of the penultimate word, then start thinking – fast”.

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BIBLIOGRAPHY

- ADAMS, Valerie, 2001. *Complex Words in English*. London: Longman.
- BAUER, Laurie, 1983. *English Word Formation*. Cambridge: Cambridge University Press.
- BOISSON, Claude, 1980. *L'accentuation des composés en anglais contemporain avec quelques contributions à l'accentologie générale*. Thèse présentée pour l'obtention du Doctorat d'Etat, Université Paris VII.
- BOISSON, Claude, 1984, "L'accentuation des composés anglais", in M. Cling, J. Humbley, (dir.), *Actes du 2^e colloque d'avril sur l'anglais oral : le suprasegmental*. Villetaneuse : Université Paris XIII, pp. 165-178.
- DANIELS, Henry, 1997. "From *the Woman in White* to *Room at the Top*; it's a piece of cake: on the usefulness of prepositional compounds in the teaching and learning of English rhythm", in F. Chevillet, (dir.), *Idéologies dans le monde anglo-saxon*, 9. Grenoble : CREA, Université Stendhal Grenoble III, pp. 49-67.
- DANIELS, Henry, 1999c. "*Conserving that vital glow* : A propos de l'accentuation des composés nominaux duplex et complexes utilisés dans la dénomination des produits de beauté", in F. Chevillet, (dir.), *Idéologies dans le monde anglo-saxon*, 11, *Conservation et Innovation*. Université Stendhal-Grenoble III, CREA : 127-160.
- DESCHAMPS, Alain, 1994. *De l'écrit à l'oral et de l'oral à l'écrit : phonétique et orthographe de l'anglais*. Paris : Ophrys.
- DOCTORS, Simone; Henry DANIELS, à paraître. "Rules and tendencies underlying the stressing of three-part nominal formations in contemporary English: a shaggy dog story, or just another nine-day wonder?", in Alain Nicaise (dir.), *Actes du XIII^e colloque d'avril sur l'anglais oral, les 2 et 3 avril 2004, Université Paris XIII*. Villetaneuse : ALOES.
- DUCHET, J.-L., 1991. *Code de l'anglais oral*. Paris : Ophrys.
- DUCHET, Jean-Louis; FOURNIER, Jean-Michel, 1988. "Isomorphisme et productivité dans l'accentuation et la prononciation des mots dérivés anglais", in M. Cling, J. Humbley, (dir.), *Actes du 4^e colloque d'avril sur l'anglais oral : Le*

- suprasegmental II*. Villetaneuse : Université Paris XIII, pp. 111-122.
- FOURNIER, Jean-Michel, 1992. "Théorie et enseignement : l'accent en 10 questions", dans J.-L. Duchet, J.-M. Fournier, J. Humbley, P. Larreya, (dir.), *Actes du 6^e colloque d'avril sur l'anglais oral*. Villetaneuse : Université Paris XIII, pp. 73-97.
- GUIERRE, Lionel, 1979. *Essai sur l'accentuation en anglais contemporain*, Thèse de Doctorat d'Etat présentée devant l'Université Paris VII.
- GUIERRE, Lionel, 1984. *Drills in English Stress-Patterns*. Paris : Armand Colin-Longman.
- HUART-FRIEDLANDER, Ruth, 1984. *La composition nominale en anglais : Opérations de repérage et accentuation*. Thèse pour le Doctorat de troisième cycle, Université Paris VII.
- HUART, Ruth, 2002. *Grammaire orale de l'anglais*. Paris : Ophrys.
- HUDDLESTON, Rodney; Geoffrey K. PULLUM, 2002. *The Cambridge Grammar of the English Language*. Cambridge: Cambridge University Press.
- KINGDON, Roger, 1958. *The Groundwork of English Stress*. London: Longmans.
- LARREYA, Paul; Claude RIVIERE, 2005. *Grammaire explicative de l'anglais*. Harlow : Longman (1^{ère} édition 1999).
- MARCHAND, Hans, 1960. *The Categories and Types of Present-Day English Word-Formation: A synchronic-diachronic approach*. Wiesbaden: Otto Harrassowitz.
- MAUROUX, Susan, 2002. "Les mots composés : Analyse de schémas accentuels de l'anglais britannique standard", Thèse de Doctorat, Université de Poitiers.
- PLAG, Ingo, 2003. *Word-Formation in English*. Cambridge: Cambridge University Press.
- TOURNIER, Jean, 1985. *Introduction descriptive à la lexicogénétique de l'anglais contemporain*. Paris-Genève : Slatkine.
- The New Shorter Oxford English Dictionary*, 1993. ed. Lesley Brown, Oxford: Clarendon Press.
- The Oxford Dictionary of English Etymology*, 1966. ed. C.T. Onions, London: Oxford University Press.
- QUIRK, R.; S. GREENBAUM; G. LEECH; J. SVARTVIK, 1972. *A Grammar of Contemporary English*. London: Longman.

- ROACH, Peter; James HARTMAN; Jane SETTER (eds.), 2006. *Cambridge Pronouncing Dictionary*, 17th edition, Cambridge: Cambridge University Press.
- ROSSET, Audrey; Henry DANIELS, à paraître. "You mean Slaithwaite: Stress and Reduction in English place-names" in Nicolas Ballier, Michael O'Neil (dir.), *Actes du X^e colloque d'avril sur l'anglais oral*. ALOES, Université Paris XIII, avril 2000, 24p.
- STOCKWELL, Robert; Donka MINKOVA, 2001. *English Words: History and Structure*. Cambridge, New York: Cambridge University Press.
- TOURNIER, J., 1985. *Introduction descriptive à la lexicogénétique de l'anglais contemporain*. Paris - Genève : Champion - Slatkine.
- WELLS, J.C., 1990. *Longman Pronunciation Dictionary*. Harlow: Longman.

Primary sources

- Good Housekeeping : Cooking for Today*. London: Octopus Books, undated, c. 1978.
- Heinz products : label nutritional data*. Wigan: Heinz, 1997.
- Hutchins, Sheila, 1979. *Grannie's Kitchen: Recipes from the North East of England*. London: Granada.
- Nestlé makes the very best*. Croydon: Nestlé, 1997.
- Suma Wholefoods, July and August 1997 Catalogue*. Halifax: Suma.