

## **Constraints on coordinated idioms<sup>1</sup>**

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### **1. Introduction**

Idioms are among other things bits of lexicalised syntax. They also have further properties such as having more or less set conditions of use, and in many cases non-compositional semantics (Haggo and Kuiper 1983). The study of word formation over the last decade has shown that the properties of complex lexical items are subject to sets of constraints which are unique to the lexicon. It may therefore be that idioms although having what look in most cases like normal syntactic properties may have other, as yet unrecognized properties which constrain the syntactic representation of idioms in the lexicon. If that is so, it would falsify the lawlessness hypothesis of Di Sciullo and Williams (1987:3) that 'The lexicon is like a prison - it contains only the lawless, and the only thing that its inmates have in common is lawlessness.' Let us therefore suppose that the properties of items listed in the lexicon with syntactic representations may be of two kinds: performance constraints arising from, for example, the nature of human Long Term Memory or factors such as the social usefulness of idioms; or it may be that there are constraints independent of these performance constraints which would constitute a parallel set of constraints to those which have been proposed for word formation. Previous work by Austin (1983) and Davis (1986) has investigated this latter possibility as part of a research programme to give more substance to the

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<sup>1</sup>The research reported in this paper was supported by research grants from the New Zealand University Grants Committee and the University of Canterbury. We have benefitted from remarks of an anonymous *Te Reo* reviewer, the editor of *Te Reo* and discussion of an earlier version of this paper at the 6th New Zealand Linguistics Conference.

programmatic questions and theories proposed in Haggo and Kuiper (1983). Austin (1983) investigated two ways in which the transformational defectiveness of idioms might be constrained. The first constraint was proposed by Fraser (1970). Fraser hypothesized that a single hierarchy for all transformational operations exists and that any idiom could be located at one and only one position on this hierarchy. It would be subject to all the transformational operations at and below that point on the hierarchy and none of those above it. The second constraint, not proposed elsewhere, was that a particular idiom might be subject to one or more of Emond's constraints on transformations: i.e. root transformations, structure preserving transformations or local transformations (Emonds 1976). For example, a particular idiom might undergo structure preserving transformations but not root or local transformations. Both of these constraints were tested against a sample of idioms with the necessary structural properties and both hypotheses were found to be false. There is no hierarchy of frozenness nor are particular idioms limited as to the kinds of transformations they undergo. Instead it appears that idioms are idiosyncratic in their transformational behaviour. This is in the nature of a null hypothesis suggesting that there are no constraints on the syntactic representations of idioms.

Davis (1986) investigated the possibility that the distribution of empty categories in idioms might be constrained and concluded that while there were no firm constraints, there were a number of interesting tendencies. For example PRO in idioms is almost always subject-controlled.

In what follows we show, by contrast with the above two studies, that there are significant constraints on the phrase structure of idioms, using as examples idioms which have coordinate conjoined structure. Other papers (Burney 1985 and Cummins 1985) show that there are also constraints on the phrase structure of other phrase types. This work has led to at least one cross category generalization, namely that, in idioms, the recursivity of any phrase structure rule is limited to the index 2. It follows from this that unlimited self embedding for say NPs inside NPs or infinite coordination is ruled out. It does not follow that a phrase structure rule may not be involved in the structural description of an idiom more than twice. For example, a clause idiom may contain three NPs provided that none has more than a single NP embedded in it.

## **2. Constraints on the syntactic representation of coordinate idioms**

Let us suppose, for the reasons suggested in Jackendoff (1975) and Haggio and Kuiper (1983) and contra Di Sciullo and Williams (1987), that idioms are represented in a generative lexicon with a full syntactic representation in the form of a labelled bracketing. Some of these idioms will contain coordinate conjoined structure and, if grammatical, should therefore be generable by the syntactic component of the grammar of English<sup>2</sup>. Let us therefore investigate the hypothesis that the structural properties of idioms are generable by the rules of the syntax of a generative grammar. We now compare the potential output of the rules of coordination with the syntactic representations of idioms with coordinate structures either as highest node or internal to some other construction.

### **2.1 Coordination of categories.**

Coordinating conjunctions can coordinate any lexical or syntactic categories. If the structural properties of idioms were to be accounted for by the rules of syntax then we would expect to find examples of all of these categories in such idioms. The following table gives examples of a number of categories in idioms:

Table 1.

NP

1. cakes and ale
2. bits and pieces
3. between the devil and the deep blue sea

VP

4. keep a dog and bark PRONself
5. as I live and breathe
6. chop and change

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<sup>2</sup>For a preliminary definition of idiom see Haggio and Kuiper (1983). Here we are not precise as to what model of syntax we are using. It might be a component consisting of redundancy rules for the strict subcategorization of heads of phrases and the transformation *Move  $\alpha$*  plus various modules which constraint syntactic representations in other ways in the fashion of Chomsky (1981).

## AP

- 7. black and blue
- 8. alive and kicking

## ADVP

- 9. bright and early
- 10. here and there
- 11. well and truly

## PP

- 12. up hill and down dale
- 13. by hook or by crook
- 14. look NP up and down

There are a few minor lexical categories which do not appear regularly as conjuncts in coordinated idioms and the phrases which have such categories as heads therefore do not appear either. Thus quantifier and degree phrases seldom appear as conjuncts in coordinated idioms as might be expected given their status as minor categories<sup>3</sup>.

## 2.2 Coordinators.

There are three central coordinating conjunctions in English: *and*, *or*, and *nor* (Dougherty 1970-1). *But* is not usually regarded as a full coordinating conjunction because it does not operate down the full X-bar hierarchy. For example, \**The man but the boy came to the meeting*. All of the central coordinators are exemplified in English idioms as can be seen in table 2.

Table 2.

- 15. bow and scrape
- 16. through thick and thin
- 17. for better or worse
- 18. rain or shine
- 19. see neither hide nor hair of NP
- 20. BE neither here nor there

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<sup>3</sup>But note *all and only* in mathematical jargon and *each and every*.



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It may be noted that in existing coordinate idioms there is a clear pattern of appearance of coordinators: *and* appears most frequently, *or* next most frequently and *nor* very seldom.

### 2.3 Distributive adverbs

Coordinating conjunctions interact in various ways with distributive adverbs such as *severally* and *together* (Dougherty 1970-71). Idioms with coordinate structure seldom include an optional distributive adverb. We have found only two cases of such an idiom, the idioms *share and share alike* and *turn and turn about*<sup>4</sup>. This constraint thus predicts that the following could not be English idioms:

Table 3.

21. fast and free together
22. old and young severally
23. trials and tribulations alternately
24. up hill and down dale severally
25. walk and talk together

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<sup>4</sup>These idioms may be ungrammatical on other grounds. The first seems to be either an incomplete sentence or a very strange imperative. It is strange because *share* is a transitive verb except optionally where the situational context makes it clear what the object is. For example, *Because there was only one bun left the twins decided to share*. The second has as distributive adverb one which occurs as such only in this idiom. The constraint prohibiting the appearance of distributive adverbs in coordinated idioms may therefore be total. However, there are verbs which have idiomatic distributive adverbs, e.g. *put* can take *together*, *cut* can take *apart*. It is worth looking at such cases briefly here.

*Put* is normally subcategorized for both an NP and a PP complement. However, in phrases such as *put those two parcels together* we have a distributive adverb and not a locative argument as the normal subcategorization suggests. Such a distributive adverb is an obligatory element suggesting that the strict subcategorization of *put* may have either a locative or a distributive adverb if the object NP is either plural or coordinated with the feature [-disjunctive] in the manner of Dougherty (1970-71). When *put* takes the latter option, as it may do with coordinated objects, idioms based on such constructions will take the distributive adverb. However, this means our constraint stands as a restriction on optional distributive adverbs.

## **2.4 Recursion.**

Coordination is recursive allowing a potentially infinite set of conjuncts to be coordinated either syndetically or asyndetically. In idioms, however, the recursive property of the rules of coordination is limited to two operations of the rule and thus three conjuncts at most may appear in idioms.

### **Table 4.**

Two conjuncts:

- 26. out and about
- 27. wait on NP hand and foot
- 28. BE the life and soul of the party

Three conjuncts:

- 29. swallow NP hook, line and sinker
- 30. lock, stock and barrel
- 31. neither fish, flesh nor fowl

This constraint predicts that the following could not be English idioms:

### **Table 5.**

- 32. over hill, dale, puddle and swamp
- 33. search high, low, far and wide

although 33. with the conjuncts in pairs would be permissible under the constraint.

The rules of coordination thus appear to be subject to two syntactic constraints: a constraint on recursion and a constraint on the appearance of distributive adverbs. We claim that these are hard constraints on the structural descriptions of such idioms.

## **3. Constraints on conjuncts**

We now outline some constraints on the conjuncts in coordinated idioms. These constraints are of two kinds, syntactic constraints which appear to be

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fairly hard constraints, and less absolute patterning of a phonological and semantic kind.

### **3.1 Constraints on the syntactic structure of the conjuncts of coordinate conjoined idioms<sup>5</sup>.**

#### **3.1.1 Constraints on complements in conjuncts.**

3.1.1.1 Clause complements are not generally found as constituents of the conjuncts of coordinated idioms<sup>6</sup>. The prediction of this constraint is that the following could not be English idioms:

Table 6.

- |     |  |
|-----|--|
| 34. | the house which I know and family which I hate |
| 35. | see what I see and know what I mean            |

This is an interesting constraint since there appears to be no such constraint on PP or NP complements.

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<sup>5</sup>In this section we give only a sample of such constraints. Some of them are also rather harder than others.

<sup>6</sup>Exception: *do as I say not as I do*. An anonymous *Te Reo* reviewer has also mentioned the following sentence as a potential counter example *Show me an ambassador and I'll show you a man who's been sent abroad to lie*. Given the significance of the conditions of use criterion in Haggo and Kuiper (1983) for idioms and formulae it might be objected that this is a quotation which has no associated pragmatics and thus doesn't qualify as a formula. One might say that is it just like memorizing all of *War and Peace* and then using sentences from it as counter examples to any theory of idioms. But one would not find such sentences in dictionaries of idioms and I think this example also doesn't belong in one. To put it differently, we think that native speakers have intuitions about what is or is not listed in a native speaker's lexicon, a listeme in Di Sciullo and Williams' terminology, and what is a quotation. In one case we think the phrase has associated conditions of use and in the other it has not. We are uncertain at this stage about proverbs. Proverbs and some of the problems they create for a theory of idioms and formulae were brought to our attention by Katsuaki Takeda. They have, for example, some of the same transformational properties as formulae and idioms but they do not have clear conditions of use. Instead they have a role in moral reasoning. In that way they are a bit like quotations in being apposite in certain semantic contexts and not others but not in some social contexts and not others. We would, for the meantime, want to exclude them too from the class of formulae and idioms.

**Table 7.**

- 36. run with the hare and hunt with the hounds
- 37. take it or leave it
- 38. tell the truth and shame the devil

Note that the NP complements of Vs where such verbs are subcategorized for them are normally obligatory as is noted in Burney (1985). But there are a number of examples of coordinated verbs which are transitive yet do not take objects in particular coordinated idioms:

**Table 8.**

- 39. forgive and forget
- 40. pick and choose
- 41. give and take
- 42. fetch and carry

PP complements within the conjuncts of coordinate conjoined idioms are, however, constrained by the general constraint on recursion, namely that the index be limited to 2 .

**Table 9.**

- 43. an eye for an eye and a tooth for a tooth
- 44. the long and the short of it
- 45. Jack of all trades and master of none.

A case such as the following would therefore be predicted not to be a possible English idiom:

**Table 10.**

- 46. a house in the country by a lake  
and hearth in the house in the country

This is shown to be the case for PPs in general in Cummins (1985).

3.1.1.2. The phrase structure representations of coordinate conjoined idioms tend to take a complement on only one of the conjuncts:

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**Table 11.**

- 47. see neither hide nor hair of NP**
- 48. the life and soul of the party**
- 49. play cat and mouse with NP**

**3.1.1.3 The conjuncts of coordinated complements do not themselves contain complements. They are, in most cases, just heads of phrase constituents:**

**Table 12.**

- 50. after all is said and done**
  - 51. in dribs and drabs**
  - 52. all's fair in love and war**
- But**
- 53. come hell or high water**
  - 54. between the devil and the deep blue sea**

where they are NPs.

These apparently unconnected constraints are all a function of a constraint we have already alluded to, namely the constraint which limits the operation of recursion in idioms. Each of these three constraints further limits recursion in idioms by limiting it in the conjuncts of idioms. It also seems to result from another less clear property. Idioms appear to be rather minimal in their syntax. They make do with little modification and embedding.

### **3.2. Softer constraints on the conjuncts of coordinated idioms**

The conjuncts of idioms with coordinate conjoined structure are subject to a number of soft constraints, i.e. constraints with some exceptions. These soft constraints are on the phonological, lexical, syntactic and semantic representations of the conjuncts. In all cases the soft constraints have to do with nonarbitrary and uncompulsory relationships between the two conjuncts usually in the form of similarity of patterning in the two conjuncts.

#### **3.2.1 Phonological constraints:**

A great many coordinate conjoined idioms have phonological parallelisms between the two conjuncts. This may be in the form of assonance, allitera-

tion, rhyme, syllable count, syllable structure, usually in a number of these together:

**Table 13.**

- 55. the birds and the bees
- 56. by guess or by God
- 57. hatches, matches and dispatches
- 58. through thick and thin
- 59. by hook or by crook
- 60. come hell or high water

### **3.2.2 Lexical parallelism:**

Many idioms have repetition of words in the two conjuncts:

**Table 14.**

- 61. day/year/week in day/year/week out
- 62. the be all and end all
- 63. easy come, easy go

### **3.2.3 Syntactic parallelism:**

Many coordinated idioms have the same structure in both conjuncts:

**Table 15.**

- 64. show me a(n) NP<sub>1</sub> and I will show you a(n) NP<sub>2</sub>
- 65. the spirit is willing but the flesh is weak
- 66. hewers of wood and drawers of water

### **3.2.4 Semantic parallelism and relatedness:**

Many idioms have conjuncts which are related by non-arbitrary semantic relationships.

**Table 16.**

- 67. dos and don'ts
- 68. dead and buried



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- 69. by leaps and bounds
- 70. in fear and trembling
- 71. cut and thrust
- 72. sink or swim

### **4. Conclusion**

**4.1** We have shown that there are hard constraints on the syntactic representations of idioms with coordinate conjoined structure either as a whole or as a constituent. These constraints limit the class of possible idioms to those which have only a very limited amount of recursion both in the operation of the coordination rule itself and in the amount of embedding permitted in the conjuncts. We have also shown that there are soft constraints which place constraints on the kinds of conjuncts one finds in coordinated idioms. These soft constraints are of the kind that prefer various forms of parallelism and other relatedness in the conjuncts of CIs.

**4.2** We now offer an explanation for these constraints based on the theory of formulæ and idioms sketched in Haggio and Kuiper (1983) and draw some implications from this theory both for the idioms examined here and for the class of binomials described in Lambrecht (1984).

In Haggio and Kuiper (1983) it was suggested that idioms can be viewed as having lexical entries in a full entry theory of the lexicon where their structure is represented as a labelled bracketing. The constraints on structural representations of coordinated idioms which we have so far mentioned can be either general constraints on idiom structure or specific constraints on coordinate idioms as such. We have suggested that in part they are the latter. We also suggest that they are not purely performance constraints since they are clearly structure dependent and we have no evidence that such a low limit on recursion is a necessary property of memorability, although it may be.

What of the soft constraints? Here there are clear parallels with other lexical phenomena, specifically with compounding. In Kuiper (1984) it is shown that the class of dvandva compounds, i.e. those with coordinate conjoined readings, is restricted in ways in which coordination in general is not. Such compounds share lexical and semantic features, frequently have the same

morphological structure and are frequently parallel in their phonological and semantic representations<sup>7</sup>.

Let us suppose therefore that these are all properties of lexical representations, of listemes. First: the syntactic representation of lexical entries is constrained by lexical rules. Some of these will be the rules of word formation which will be in part specific to the lexicon. Other rules, namely the rules of the syntax, generate the syntactic representations of idioms while still further systems constrain the class of possible structural representations of idioms by, for example, constraining the operation of recursive rules. The phonological and semantic representations of idioms may also be influenced by the fact that such representations are held in Long Term Memory. The prevalence of parallel structure suggests that humans tend to memorize some idioms in preference to others. This explains the soft constraints on both coordinate idioms and dvandva compounds such as *priest-king*, *prince-archbishop* and *fighter-bomber*.

Is there any support for such suggestions? We propose that the German binomials of Lambrecht (1984) provide some independent evidence for the same range of properties. Lambrecht (1984) provides a very full description of a class of idiom-like structures in German called binomial expressions, after Malkiel (1959), which are not generable by the phrase structure rules of German and which also have additional syntactically unpredictable properties.

The main properties of Lambrecht's binomials are as follows:

- a) Binomials do not take determiners, making them ungrammatical. For example, in *Recht und Freiheit* 'justice and freedom' to use one of Lambrecht's examples, the conjuncts would require determiners when used on their own, where in the binomial they do not.
- b) They are morphologically frozen not taking expected inflexions. For example the binomial *Vater und Sohn* 'father and son' cannot take a genitive.
- c) In the frequency of occurrence of coordinators *and* is the most frequent followed in that order, and a long way back, by *or* and *nor*.

<sup>7</sup>Lambrecht also points out these similarities between his binomials and compounding.

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d) The conjuncts generally consist just of heads of phrases. Thus adjectives in the NP conjuncts of binomials are rare, as are numerals, for example one does not find, again using Lambrecht's examples *\*Haus und zwei Autos gehören dem Direktor*. 'House and two cars belong to the director.'

e) Binomials do not take distributive adverbs, e.g. *\*Stock und Hut beide steht ihm gut*. 'Stick and hat both suit him.'

f) PP binomials normally take a single preposition with two coordinated NPs as complements and not two full PPs, e.g. *mit Müh und Not* 'with pains and trouble.'

g) Parallels of syntactic structure and phonology and relatedness of semantics of the conjuncts are very common.

Lambrecht's binomials appear to be either coordinated idioms, fully lexicalized with words in all the right places or coordinated idioms with gaps in their structure. The gap is just the head of phrase category N. This is fillable subject to the soft constraints which Lambrecht proposes. But Lambrecht makes one more observation which can be generalized. He suggests that pragmatic factors play a crucial role in the interpretation of binomials. This case for idioms in general was made in Kuiper and Haggio (1984) and Haggio and Kuiper (1983).

In Haggio and Kuiper (1983) it was proposed that idioms and formulæ differ from non formulæ in having non-redundant pragmatics. In some cases this is minimal, such as being able to state the level of formality of an idiomatic or formulaic expression. In others it is very complex, such as in the politeness phenomena described in Coulmas (1981).

We have therefore provided support for the hypotheses about idioms proposed in Haggio and Kuiper (1983). These are (minimally) that:

1. Idioms have constrained syntactic representations. These constraints are a deductive consequence of a general constraint limiting recursion in idioms and perhaps other constraints such as that mentioned earlier on the control properties of PRO in idioms.

2. Idioms have soft constraints on their phonological and semantic representations. These constraints may be a function of the fact that idioms are

in Long Term Memory, and that storage and retrieval from it is enhanced by patterning of any kind which can act as a mnemonic. Phonological patterning in particular may be functional in retrieval processes. (Fay and Cutler 1977, Hurford 1981).

3. Idioms have unpredictable conditions of use, that is to predict that each idiom or formula entered into a mental lexicon must have a set of conditions of use lexicalized with it that define the circumstances in which it can be appropriately used, and at least some of the social factors involved in its use<sup>8</sup>.

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<sup>8</sup>Kuiper and Tan (to appear) provide an analysis of the conditions under which the formula *He's old enough to be your father* may be appropriately used in UK and NZ culture.

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