# Aspectual Composition in Idioms[1]

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**Abstract**

*Idiomatic utterances contribute by virtue of their aspectual class to the temporal structure of discourse – hence it is essential that theories of aspect derivation and discourse structure should encompass them. A recent claim has been made (McGinnis 2002) that the aspectual class of idiomatic expressions can be derived compositionally, by the same process as in literal language. We examine this claim carefully, and show that while aspect may in principle be derived compositionally at least in one class of idioms, Nunberg, Sag and Wasow's 'idiomatically combining expressions', this does not mean that an expression will necessarily have the same aspectual class on both an idiomatic and a literal interpretation. We present examples of expressions where aspect differs between these interpretations, and we explain this in terms of the differing inputs to the process of aspectual composition in the idiomatic and literal cases. By employing a notion of aspectual composition which includes thematic relations (Krifka 1992), and allowing for the fact that the thematic relations in question may differ between the idiomatic and the literal interpretations of a given expression, we can explain the mismatch between aspectual class in the idiomatic and literal interpretations, while maintaining that the broad process of aspectual composition is the same in both cases. Certain idioms, however - those identified by Nunberg, Sag and Wasow as 'idiomatic phrases' – may best be regarded not as undergoing aspectual composition but as being listed as phrases in the lexicon with their aspectual information attached.*

## 1. Idiom aspect

Jackendoff (2002:167) observes that, while idioms have been traditionally treated by grammarians as a relatively marginal phenomenon, there are probably as many of them as there are adjectives, and theories of linguistic structure and processing had therefore better pay heed to them. One particularly interesting feature of idioms is way that their aspect (or aspectual class) is determined, and the contribution that this

makes to sentential aspect and hence to the temporal structure of discourse. In this paper we will take a close look at idiom aspect and how it is derived, while seeking to dispel some misconceptions and, at least, make clear the need for further study.

It has recently been argued (McGinnis 2002, 2005) that the aspect of an idiomatically interpreted verb phrase is derived by a process of aspectual composition, just as in the non-idiomatic cases. This conclusion has been used as a basis for various theoretical arguments involving the lexical properties of idioms and their constituents, and their interaction with syntax. We wish to take a step back and examine the original claim more closely.

McGinnis (*op. cit.*) appears to assume, first of all, that if aspect were compositional in idioms then we would expect a verb phrase used in an idiomatic sense to have the same aspectual class as if it were used in a non-idiomatic sense. We will call the non-idiomatic sense, for simplicity, the 'literal' sense, while acknowledging that this opens up an (idiomatic) can of worms concerning literal meaning that we will not attempt to deal with here.  We take issue with McGinnis' assumption, arguing that it *is* possible to view aspect as being compositional in at least some idioms, while at the same time allowing for the *result* of the aspectual composition to be different in the idiomatic and the literal cases. This enables us to explain the observation that, in a number of cases, the aspectual class of a verb phrase used idiomatically is different from that of the same verb phrase used in a literal sense – while being able to maintain that idiom aspect can, at least in some of those cases, be regarded as compositional.

Consider, firstly, the verb phrase 'paint the town red', which is often used idiomatically and means, according to the Longman Dictionary of Idioms (Longman 1979), "have a very enjoyable time, esp. in a lively and noisy manner". This phrase, according to our intuitions and those of our informants[2], combines readily with temporal *for*-adverbials to form sentences such as:

1.  Mary and her friends painted the town red for a few hours [id].

Note that '[id]' indicates that 'paint the town red' receives an idiomatic interpretation in this example.

We looked for examples of this idiom combined with a temporal *for*-adverbial in a web search using the Google© search engine. An example found is:

2.  Board the Chiva Arubanita Party Bus … and paint the town red for six hours [id]. (http://travel.discovery.com/destinations/fodors/aruba/tips.html, consulted 6/05/03).

Our intuitions confirm the acceptability of this example, and thus we judge that it is possible to combine the idiomatic use of 'paint the town red' with a temporal *for*-adverbial.

By contrast, the idiom 'paint the town red' does not, according to our intuitions and those of our informants, combine readily with temporal *in*-adverbials. Thus (3) is very difficult or impossible to interpret:

3.  ?? Mary and her friends painted the town red in a few hours [id].

(We ignore here the inceptive reading where 'in a few hours' measures the time between some contextually defined instant and the beginning of the painting.)

Similarly, we see that (4) is not at all easy to interpret, on an idiomatic reading.

4.  ??It took Mary and her friends a few hours to paint the town red [id].

According to standard tests for aspectual class (e.g. Vendler 1967, Dowty 1979),  the eventuality described by 'Mary and her friends painted the town red'[3]  is, therefore, an activity rather than an accomplishment. Now compare a *literal* interpretation of 'paint the town red':

1a.   ? Mary and her friends painted the town red for a few hours [lit].

(Note that '[lit]' conveys that 'paint the town red' is interpreted literally here.)

Since it may be difficult for the reader to ignore the idiomatic interpretation and focus on the literal one, we will replace 'red' in (1a) by 'green'. In order to make the scenario more plausible and even more clearly non-idiomatic, we will also replace 'town' by 'shed', assuming that the aspectual class of the eventuality described by the literally-interpreted sentence is not thereby affected.

1b.   ? Mary and her friends painted the shed green for a few hours [lit].

It is now clear that (1b) is unacceptable or, at best, marginal. (1c), on the other hand, is perfectly acceptable:

1c.   Mary and her friends painted the shed green in a few hours [lit].

We see, therefore, that 'Mary and her friends painted the town/shed  red/green' on a literal interpretation describes an accomplishment and not an activity. Thus we have an example of a phrase which has, when interpreted literally, a different aspectual class from when it is interpreted as an idiom. This is, we believe, a clear counter-example to McGinnis' claim (2002) that aspectual class is the same in literal and idiomatic interpretations. However, since McGinnis (2005) disputes the conclusions we draw from these examples, as presented in our earlier paper (Glasbey 2003), we will now address her objections in detail.

McGinnis (2005:9) accepts that there *is* an aspectual difference between the idiomatic and non-idiomatic readings in the above examples, but she claims that this difference is "accidental and pragmatic, not a difference in principle". She claims that an example like (1b) becomes acceptable in the context of a scenario where painting something green (or red) is regarded as an activity with no salient endpoint.  This, she states, is "unusual in ordinary life", but examples may be constructed, she claims, where the activity reading becomes acceptable. She offers such an example – a scenario where workers are painting a large stage set and one of them says 'We painted the set red for a couple of hours, but then the director realised it looked boring'. While McGinnis regards this example as acceptable, we and our informants find it quite odd and difficult to interpret. McGinnis claims that the syntactic context licenses both the telic and atelic readings here, and that it is a matter of pragmatics whether either is excluded. We contest this: while agreeing that there are verb phrases

which license both telic and atelic readings ('climb the mountain' is a much-discussed example), we do not believe that this is the case with 'paint the shed green' and similar resultative constructions. Resultatives are generally taken to be telic (see, for example, Levin & Rappaport Hovav 1996:70) and we see no reason to question this.

Moreover, our claim that aspectual class may differ between idiomatic and non-idiomatic interpretations is not based solely on this one example. We offer a number of examples in the remainder of the paper where, once again, aspectual class differs between the two interpretations. McGinnis (2005) does not attempt to explain these observations.

Let us now consider how to interpret our findings.

Since the aspect conveyed by the literal interpretation is presumably derived by the conventional process of aspectual composition (as described by Krifka 1992, Smith 1991/1997 and others), one possible conclusion is that the aspectual class associated with the idiomatic interpretation is non-compositional, i.e., not derived by the usual process of aspectual composition. This, however, is not the only possible conclusion, as will be seen shortly.

According to the generally-accepted process of aspectual composition, the aspectual class of (the eventuality described by) a complete sentence is derived by combining, in an order specified by the grammar,  properties of the verb, its tense (etc.), its object argument(s), any specified resultative state ('green' in (1c)), its subject argument, any adverbial modifiers, and various 'thematic relations' between the object and the eventuality (see later). An analysis such as that of (Krifka 1992) predicts, correctly, that 'Mary and her friends painted the shed green' describes an accomplishment. McGinnis' claim is that the aspectual class of idiomatically-described eventualities is also compositional. As discussed above, she apparently takes this to mean that the idiomatic 'Mary and her friends painted the town red' would also describe an accomplishment – i.e., that the aspectual class is the same under an idiomatic interpretation as under a literal interpretation (McGinnis 2002:668).

Our example (1) therefore suggests that *either* aspect is not compositional for expressions interpreted idiomatically, *or* that the process of composition, for some reason, may lead to different results in the idiomatic and the literal cases. We will eventually decide in favour of the latter, and we will explain what the 'for some reason' entails.

As mentioned above, we have identified a number of additional examples where aspectual class differs between idiomatic and literal readings. We will now present these, beginning with some which fall into the class described by Jackendoff (1997a) as 'fake object resultatives'. Syntactically, these appear to be resultatives, but the resultative state, on the idiomatic interpretation, is not "real". Examples include:

5.  I cried my eyes out for some time and then I went back to work.
    (http://members.aol.com/wolfie1030/instinct.html, consulted 30/4/03).

'I cried my eyes out' here describes an activity – hence  its compatibility with the temporal *for*-adverbial. Yet 'I cried my eyes out', would, if taken as a literally-interpreted resultative, be expected to describe an accomplishment. That is, if

aspectual class were derived by the usual compositional processes, with the usual inputs, we would expect an accomplishment. However, no examples were found in a web search in which 'cried X's eyes out' combines with a temporal *in*-adverbial. We are aware, of course, that negative data from a web search is not to be relied upon; however, this finding is backed up by other data such as the fact that 'I cried my eyes out [id]' fails standard tests for accomplishments, such as '??It took me two hours to cry my eyes out [id]'. Intuitively, the reason for this is that there is no clearly-defined natural endpoint to an eventuality of (idiomatically) crying one's eyes out. That is, there is no time point in the domain described by the idiom which corresponds to the point at which, in the domain described by the literal interpretation, one's eyes actually fall out as a result of the crying. In order to be an accomplishment, of course, an eventuality must have such a clearly defined natural endpoint. The lack of such an endpoint makes the eventuality an activity instead. The idiom 'to cry one's eyes out' does not convey such a natural endpoint – it simply means, according to (Longman 1979), "to cry a great deal".[4]  Once again, then, we have a mismatch between the aspectual class of the eventuality on a literal interpretation (henceforth 'literal eventuality') and that on an idiomatic interpretation (henceforth 'idiomatic eventuality').

We make similar observations with a number of other idiomatically-interpreted expressions, where, in each case, corpus usage and speaker intuitions strongly suggest an activity, while literal interpretation would give an accomplishment.

Consider 'sang X's heart out [id]'. Examples such as (6), found in our web search, show that this idiom can be combined with a temporal *for*-adverbial:

 6. Patsy sang her heart out for over two minutes.
      (http://www.patsyclinehta.com/excerpts.htm, consulted 6/05/03).

However, no examples were found where 'sang X's heart out' combines with a temporal *in*-adverbial, and indeed such a construction sounds very odd:

7.   ?? Patsy sang her heart out in two minutes/hours/days.

Once more, then, we have a construction which describes an accomplishment under a literal interpretation and an activity under an idiomatic interpretation.

The idiomatic expressions 'yelled X's head off' and 'poured X's heart out' behave in a similar way. But note, interestingly, that it may be marginally acceptable to say:

8.   ?Patsy poured her heart out in two hours, on the phone to her sister.

We did not, however, find any such examples in our web search. But notice that (9) sounds much better:

9.   It took Patsy two hours to pour her heart out, on the phone to her sister.

Why should (8) and (9), at least according to our intuitions, be marginally acceptable? We suggest that it is because it is marginally possible to identify a natural endpoint to the process of (idiomatically) pouring out one's heart. Taking the idiom to mean

(following Longman) "to tell all one's personal worries, problems, feelings, etc" then we can, at least in principle, see this process as having a natural endpoint when all the worries, problems, feelings and so on have been expressed. Thus there is, perhaps, a weak counterpart in reality to the contents of the sufferer's figurative heart. This provides, in turn, a counterpart to the end of the literal process of pouring out the contents of that figurative heart. This may be enough to make 'pour X's heart out [id]' describe, at least in some contexts and for some speakers, an accomplishment, and therefore be acceptable in combination with an *in*-adverbial.

It is interesting to note that the addition of 'completely' improves both (8) and (9), at least on our judgement. We are not sure why this should be. Perhaps 'completely' emphasises the fact that an endpoint is salient. But notice that the addition of 'completely' does not make (7) any more acceptable – suggesting that the eventuality must already have a potential endpoint, which is merely emphasised, rather than being 'introduced', by 'completely'.

All the examples considered so far have been cases of Jackendoff's (1997a) class of 'fake resultatives'. There are other idioms, however, which do not belong to this class and which also show an aspectual mismatch between the literal and the idiomatic interpretations.

Consider the idiom 'drive one's pigs to market', which means, according to (Longman 1979), to "snore". According to Krifka (1992) and others, the presence of the location adverbial 'to market', pinpointing the endpoint of the journey, makes 'Fred drove his pigs to market', interpreted literally, an accomplishment. And indeed, if we take the literal interpretation, then we can readily say:

10. Fred drove his pigs to market in two hours [lit].

Compare (11), which is not acceptable:

11. ?? Fred drove his pigs to market for two hours [lit].

On the other hand, (10) is not good on the idiomatic interpretation – if the sentence refers to Fred's snoring, then (11), rather than (10), is acceptable. Thus we have another example where the idiomatic interpretation gives rise to an activity, while the literal interpretation gives an accomplishment. We might speculate at this point (we return to this later) that the reason for this mismatch is that there is no counterpart in reality to the destination described in the pretence world as 'to market'. There is no inherent, natural endpoint to the process of snoring.

Interestingly, there is an idiom 'to saw logs' that means "to sleep" (or sometimes "to snore") mentioned in (Nunberg, Sag & Wasow 1994:497). Here, the aspectual class of 'Fred sawed logs' is the same on both the literal and idiomatic interpretations. In either case, 'Fred sawed logs for two hours' is acceptable and 'Fred sawed logs in two hours' is not – i.e., in both cases we have an activity. But the reason that the literal interpretation gives an activity is because 'logs' is a bare plural – the process of sawing logs, as opposed to that of sawing "six logs", does not have a natural endpoint. Thus it appears almost accidental or coincidental here that the literal and idiomatic eventualities have the same aspectual class.

Another idiom where the aspectual class differs between the literal and idiomatic interpretations is 'drowned X's sorrows'. This appears to describe an activity rather than an accomplishment on its idiomatic interpretation. There is no literal interpretation, of course, since sorrows are not in reality living things which can be drowned.

12. Fred drowned his sorrows for a few hours.

13. ??Fred drowned his sorrows in a few hours.

According to our intuitions and those of our informants, (12) is acceptable but (13) is not. Now compare 'drowned X's rats'[5], interpreted literally, which appears to describe an accomplishment:

14. ? Fred drowned his rats for a few hours.

15. Fred drowned his rats in a few hours.

Unfortunately, we were unable to find any such examples in our web search, so our claims here rest only upon our own judgements and those of our informants. The majority of the latter agreed with us in finding (14) unacceptable, but a minority found (14) marginally acceptable or even (in one case) fully acceptable, on the assumption that Fred had a very large number of rats. This is why we label (14) with a single '?'.

Taking the majority view, and leaving aside the interesting issue of why not all informants agree in this case, we have here another example of a mismatch of aspectual class. A similar "explanation" presents itself – there is no natural endpoint to the process of drowning one's sorrows, given that the idiom means (according to Longman) "to seek escape from one's sadness, distress, etc., by drinking alcohol". Unless we can envisage the drinking process as having an inherent endpoint at which the final sorrow disappears[6], then 'drowning one's sorrows' appears to describe an activity. This contrasts with 'drowning one's rats', where there is presumably a natural endpoint corresponding to the ending of the life of the last rat.

## 2.  Towards an explanation

McGinnis (2002) claims, as we have seen, that idioms show compositionality of aspect. We agree that at least some idioms do so – with some reservations to be discussed below – but for different reasons. McGinnis argues that if idiom aspect is compositional, then the aspectual class will be the same on idiomatic and literal interpretations. We will now show that this is not the case – that aspectual composition may still take place in idioms (although it is perhaps more naturally viewed as occurring in some kinds of idioms than others – see later)  but that the input to such aspectual composition, and therefore the results of it, may be different in the literal and the idiomatic cases.

We remarked earlier that in cases like 'paint the town red', we have a literal eventuality which has a natural endpoint – the point at which the town becomes completely red[7] - and an idiomatic eventuality which has no corresponding natural endpoint. Further to this, we observe that not only does the literal eventuality have a natural endpoint, but it has what Krifka (1992) calls the *gradual patient* property. This means that the "progress" or "temporal development" of the eventuality corresponds to a gradual change in the state of one of the participants of the eventuality – in this case the degree of redness of the town, measured, perhaps, as the proportion of the paintable area of the town which has so far been painted. Roughly speaking, as the painting proceeds, the town gets redder. There is no corresponding *gradual patient* property in the case of the idiomatic eventuality. Now, according to Krifka's (1992) account of aspectual composition, thematic properties such as *gradual patient* are part of the input to the process of aspectual composition. Such properties explain why 'Fred stroked the cat' is an activity, while 'Fred washed the cat' is an accomplishment. The subject NP, the object NP, and the verb tense are identical in the two cases. All that is different is the fact that washing the cat involves a gradual change of state of the cat, towards a state of cleanliness, whereas stroking the cat involves no such gradual change in the state of the cat. Or, perhaps we should say, no such *necessary* gradual change, since it is possible, of course, to envisage all sorts of things, such as that the cat gradually falls asleep.

Now, if we follow Krifka in assuming that the input to the compositional process involves not only properties of the subject NP, object NP, verb, adverbials, etc, but also thematic relations such as *gradual patient*, then the latter may well be different in the idiomatic interpretation of a phrase from that in the literal interpretation. We have just seen this in the case of 'paint the town red' – there is a *gradual patient* relation in the literal case but not in the idiomatic one.

Of course, for many idioms, the thematic relations may well be the same in the idiomatic and the literal interpretations. Consider:

16. Fred painted a bleak picture of the city.

This may be read either literally or as an idiom. In either case, it may be used to describe an accomplishment, given that we may add an *in*-adverbial on either interpretation.

17. Fred painted a bleak picture of the city *in a couple of hours* [lit, id].

Note, however, that on the idiomatic interpretation 'Fred painted a bleak picture' may also combine with a *for*-adverbial – for example:

18. Fred painted a bleak picture of the city for a few minutes, after which he turned to extolling its virtues.

Restricting ourselves to the accomplishment interpretation, we see that in both the literal and the idiomatic cases there seems to be a gradual patient relation between the state of completion of the "picture" (be it a literal picture or a verbal one) and the progress of the event of creating it. It is interesting to note, too, that the picture exists in both cases – on the literal interpretation there is a "real" physical painting, and on

the idiomatic interpretation there is something, such as a verbal description, which is described as a picture. Contrast this with 'paint the town red' where no equivalent of "the town" exists on the idiomatic interpretation[8].

This suggests, returning to our earlier idea, that some of the cases[9] where the idiomatic aspectual class corresponds to the literal aspectual class are those where

(a) counterparts exist in the domain of idiomatic interpretation to the objects in the domain of literal interpretation, *and*

(b) where the thematic relations between those objects and the eventuality are the same in the literal and the idiomatic cases.

The (a) cases appear to correspond at least roughly with those idioms that Nunberg, Sag and Wasow (1994) classify as *idiomatically combining expressions*. These are idioms "whose parts carry identifiable parts of their idiomatic meanings" (*op. cit.*: 497ff). Nunberg, Sag and Wasow give as an example 'John was able to pull strings to get the job', where 'pull strings' means something like "exploit personal connections", and 'pull' can be seen to correspond to 'exploit' and 'strings' to 'personal connections'.[10]

Idioms which do not have identifiable "parts" in this way are called *idiomatic phrases* by Nunberg, Sag and Wasow (1994). They include expressions such as 'to saw logs', where there is no identifiable equivalent in the domain of idiomatic interpretation (domain of reality) to the logs in the domain of literal interpretation (pretence domain). Nunberg, Sag and Wasow (henceforth NSW) suggest that these idioms must be entered in the lexicon as complete phrases, since, as a consequence of the fact that they do not have identifiable semantic parts, they cannot undergo passivisation, topicalisation, ellipsis and similar operations.

So, perhaps we want to think of certain types of idioms (NSW's *idiomatically combining expressions*) as undergoing aspectual composition, while others (*NSW's idiomatic phrases*) are in the lexicon as "complete phrases", with their aspectual class information attached.

But as Jackendoff (2002) points out, the idea of storing an idiom in the lexicon as a complete phrase is not a straightforward one. Idioms come in many shapes, sizes and forms. Some are complete verb phrases, such as 'saw logs' and 'kick the bucket', or complete sentences, like 'That's the way the cookie crumbles' (Jackendoff 2002:169, example 12(c)). Many others are incomplete verb phrases (or other parts of speech), such as 'take PRON's pigs to market', where PRON is a variable to be filled by a possessive pronoun, and 'V NP's head off', where V is a verb such as 'drink', 'talk', etc., and NP is a possessive pronoun (this example is taken from Jackendoff 2002:173). Idioms which are incomplete in this sense were named by Fillmore et al (1988) 'formal idioms', as opposed to 'substantive idioms' which are lexically complete. Croft and Cruse (2004) rename formal idioms 'schematic idioms' and it is their term that we will adopt.

Thus we see that for schematic idioms, idiom meaning must be stored in the lexicon in a manner that will allow further composition with the meaning of other linguistic

material. This has implications for the determination of idiom aspect, as we will show below.

If idiom meaning can further compose with meaning from other linguistic elements – as is clearly the case for schematic idioms – then, however the aspectual class of an idiomatic phrase such as 'take X's pigs to market' is determined, this aspectual information must be in a form capable of combining with further aspectual information from other parts of the sentence. For example, if the sentence has progressive aspect, as in 'John was taking his pigs to market' then the progressive aspect will contribute to the overall aspectual class of the sentence. Thus, when we speak of the possibility of the aspectual class of an idiom being 'stored in the lexicon' we need to be precise about what we mean. Rather than storing the aspectual class, as such, of a schematic idiom, aspectual features such as those employed in (Krifka 1992), would be needed.

We can now turn to the matter of whether we would, indeed, ever need to store the aspectual properties of an idiom in the lexicon. We saw above that, provided the correct thematic relations are used for the idiomatic interpretation, aspect can always be computed from the individual components of the idiom. But in the case of  (NSW) *idiomatic phrases* like 'take X's pigs to market', it seems rather strange to think of doing this. Assuming for a moment that the idiomatic meaning is associated with this phrase in the lexicon, then the individual meanings of 'pig' and 'market' do not take part in the meaning composition. Thus it seems odd to think of thematic relations (which, one imagines, must be somehow derived from world knowledge) existing between idiomatic pigs and an idiomatic market – when there are no counterparts in reality to the pigs and the market. We find it much more intuitive to envisage lexical storage of the aspectual class of this type of idiom, in a form which, as explained above, can combine with other aspectual information from elsewhere. Thus we tentatively suggest that, in the case of NSW's *idiomatic phrases*, it is more natural to think of  aspectual information being attached to the complete lexical phrase, i.e. stored in long term memory.  For NSW's *idiomatically combining expressions*, on the other hand, we can much more readily conceive of a process of aspectual composition, along the same lines as "normal" (non-idiomatic) aspectual composition, but involving potentially different thematic relations. Indeed, this might fit quite neatly with the suggestion in (Croft & Cruse 2004: 251-252), following (Nunberg et al 1994), that idiomatically combining expressions can be regarded as undergoing semantic composition, where the meaning elements to be combined correspond to the "idiomatic meanings" of the constituent parts.  This means that, for example, in composing the meaning of an idiomatically combining expression like 'spill the beans', one takes the idiomatic meaning of 'spill' (i.e. "divulge") and the idiomatic meaning of 'the beans' (i.e. "the information", or similar) and combines them to give the meaning of the complete idiom. Following this route would allow us to specify the thematic relation between the object and the event, as in (Krifka 1992), for the idiomatic use, without requiring it to be the same as the thematic relation between the object and the event in the non-idiomatic use. Further work is needed to establish to what extent thematic relations differ in this way between idiomatic and non-idiomatic uses – but we have shown that it happens in some cases, and therefore we need to deal with it.

We accept, however, that the question of whether and when such aspectual information is stored in long term memory and whether and when it is computed in working memory (or similar) during processing is a vexed one, and it may be impossible to answer. Jackendoff (2002) suggests that the pertinent question is "What aspects of an utterance *must* be stored in long term memory [i.e. in the lexicon] and what aspects *can* be constructed online in working memory?" (Jackendoff 2002:152). Jackendoff is not speaking in particular about aspect, but the principle seems applicable. In that case, perhaps the best we can do is to say that we have no reason to believe that idiom aspect cannot be determined online, at least for one class of idioms (NSW's *idiomatically combining expressions*), provided that the appropriate input in terms of thematic relations is available to the process of aspectual composition.

As a final complication, consider the following example;

19.   John will saw logs until the cows come home [id].

Taking 'until the cows come home' to have the idiomatic interpretation "endlessly; for an immeasurable period" (Longman 1979), we would presumably need to combine the atelic aspect of 'saw logs [id]' with the 'until' phrase to give a verb phrase with overall telic aspect. This is an interesting case of aspectual information from one idiom being required to compose with that of another. We see no reason why this is not compatible with the idea of the aspectual class of 'X saw logs' and that of 'until the cows come home' being stored lexically, but care would need to be taken to ensure that the results of the composition are correct.

Having pointed out some possible complications associated with lexical specification of the aspect of idiomatic phrases, we will leave further discussion of this matter for future work. The main point to be taken from our analysis is that aspectual composition does appear to be possible in principle for at least a subset of idioms. How well this meshes with other types of semantic composition requires further investigation.

Also worth considering are the implications of our findings for theories of the lexicon and its interaction with syntax, especially as this issue is addressed by McGinnis (2002). McGinnis takes what she regards as the compositionality of idiom aspect to support Halle and Marantz's (1993) theory of Distributed Morphology (DM). DM uses Levin and Rappaport Hovav's (1998) division of meaning into two components – *structural* and *idiosyncratic*. The idea is that the structural component interacts with the syntax, and the idiosyncratic component makes fine-grained distinctions irrelevant to the syntax. In McGinnis's words (2002:667):

"…[DM] maintains that the structural components of meaning are bundled into lexical items manipulated by the syntax, while idiosyncratic components are added post-syntactically… This … predicts that the syntactic derivation of idioms has semantic consequences."

One of these consequences, McGinnis argues, is that aspect is predicted to be compositionally derived in idioms. In her words again (p.668):

> "…it predicts that even if a VP has a non-compositional idiosyncratic meaning, it will have a compositional structural meaning. Specifically, it will have the same aspectual properties as any VP with the same syntactic properties".

McGinnis contrasts DM with Jackendoff's (1997b) theory of Representational Modularity (RM), which treats idioms as involving an arbitrary mapping between conceptual structure and syntactic structure. RM has both structural and idiosyncratic meaning encoded at the level of conceptual structure. This means that both types of meaning will be subject to arbitrary mapping – thus predicting that aspect will be non-compositional in idioms.

Since we agree that at least some idioms appear to undergo aspectual composition, at least in principle, then we could see our account as offering support for DM. But the proviso must be made that, as we have seen, thematic relations may differ between the literal and the idiomatic interpretations, and the resulting aspectual class may therefore differ, too. And if we choose to regard NSW's *idiomatic phrases* as not undergoing aspectual composition but as having their aspectual information stored in some pre-computed form in the lexicon, then our conclusions only partially support DM and there may be a class of idioms that are best regarded as exemplifying RM. We suspect, however, that the division may not be quite as clear-cut as this and that both theories may require revision in the light of future investigations on idioms in general and idiom aspect in particular.


## Conclusion

Our main conclusion is the relatively simple one that aspectual class may differ between literal and idiomatic interpretations of the same phrase or sentence – *contra* (McGinnis 2002). But we have shown that this need not necessarily be taken to mean that aspect in idioms is never compositional. Provided we use the correct thematic relations, then idiom aspect can, at least for one class of idioms, be seen as determined by a process of composition. We remain agnostic, and may have to do so indefinitely, about whether and when such information is stored rather than being computed online. Perhaps psycholinguistic investigations will eventually give some answer to this question, or perhaps there is no answer even within the same individual, since for various reasons such information could perhaps on some occasions be "computed" and on others "looked up". Certainly, one can readily accept differences between individuals, or individuals at different stages of development, in this respect. But we see no reason, in principle, to rule out aspectual composition for at least one class of idioms. Further details of this compositional process, together with the deeper implications for competing theories such as Marantz's DM and Jackendoff's RM, remain to be explored.

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# Notes

[1] Many thanks to John Barnden, Alan Wallington and Mark Lee for helpful comments and discussion. I appreciate also the comments and questions from participants at Chronos VI, Geneva, September 2004. This paper is a development of some of the ideas in (Glasbey 2003).

[2] In a small, informal survey, to which no statistical significance can possibly be attached.

[3] We take aspectual class to be a property of eventualities – an eventuality being a cover term for an event or state. Also, note that we use 'aspectual class' to classify both eventualities and the verb phrases (or larger linguistic constructions ) that describe them. While this strikes us as somewhat unsatisfactory, it is line with conventional uses in the literature, and is done for ease of expression. We trust it will not cause any confusion.

[4] As a reviewer points out, expressions like 'cry X's eyes out' may be seen as "conventionalised hyperbolae" or exaggerations.

[5] Apologies to rat lovers for the unfortunate content of this example.

[6] This may just be possible, on our judgement. It would involve being able to "count one's sorrows" and to envisage their being dissolved or consumed, as a gradual process (though not necessarily one by one) as the drinking proceeds. Presumably one would then be able to say, at a certain point 'I have drowned all my sorrows now'. This does not seem impossible, but has some feel of a joke, or a creative metaphorical extension, about it, as though the idiom is being deliberately stretched too far. Such extensions are very interesting, but we will not investigate them here.

[7] Clearly, whatever is meant by 'completely red' will be influenced by pragmatic considerations such as which objects/buildings are capable being painted and/or seen as conventionally being painted.

[8] Perhaps this is not entirely true. It has been suggested to us that the idiom 'paint the town red' may be inappropriate when the celebratory activity is not seen as taking place in, at least, some "centre of social activity" such as a town or city. Consider, for example, trying to use the phrase to describe a riotous evening of celebration among a group of friends at home. Perhaps, at least, the act of "going out somewhere" is required. Do we have a partial breakthrough of literal meaning into the idiomatic meaning here? If so, this raises the issue of how the worlds of literal and idiomatic/metaphorical description interact. For discussion of this matter from a rather different perspective, see (Barnden et al 2004).

[9] But only some of them…in others, as we saw earlier, the aspectual class is the same purely by coincidence.

[10] Nunberg, Sag and Wasow (1994) reject the term 'compositional', used previously by them and others to refer to such idioms, on the grounds that it can be interpreted in a variety of different ways and may cause confusion.