Let's Paint the Town Red for a Few Hours: Composition of Aspect in Idioms

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Abstract

It has recently been claimed that aspect is compositional in idioms, just as it is in literal language (McGinnis 2002). We show that, although this is true for many idioms, there appear to be a number of interesting exceptions. We present examples of idiomatic expressions where aspect is not derived compositionally – or at least, not in McGinnis's sense. Many (but not all) of these exceptions fall into a class described by Jackendoff (1997a) as 'fake object resultatives'. We draw some tentative conclusions about the nature and classification of those idioms which show apparent non-compositionality of aspect. Furthermore, we suggest that such idioms might be regarded as aspectually compositional, if aspectual composition is taken to include as part of its input Krifka's (1992) 'thematic relations'.

1 Aspectual class of idioms

Consider the idiomatic verb phrase 'paint the town red' (meaning, according to the Longman Dictionary of Idioms (1979), "have a very enjoyable time, esp. in a lively and noisy manner"). This phrase, according to our intuitions, and examples found in a web search using the Google© search engine, 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**: '[id]' conveys that 'paint the town red' here receives an idiomatic interpretation.)

An example found in the web search 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).

'Paint the town red' does not, however, combine readily with temporal *in*-adverbials, making (3) difficult or impossible to interpret:

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

According to standard tests for aspectual class (see, e.g., Vendler 1967, Dowty 1979), this shows that the eventuality described by 'Mary and her friends

[1] 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.

painted the town red'[2] is 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**: '[lit]' conveys that 'paint the town red' is here interpreted literally.)

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, 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].

'Mary and her friends painted the town/shed red/green', on a literal interpretation, is clearly, therefore, a description of an accomplishment and not an activity. Thus we have an example of a phrase which, when interpreted literally, has a different aspectual class from when it is interpreted figuratively, *contra* (McGinnis 2002). Since the aspect conveyed by the literal interpretation is presumably derived by the usual process of aspectual composition (as described by Krifka 1992, Smith 1991 and others), we may conclude, at least for the time being, that the aspectual class conveyed by the idiomatic interpretation is non-compositional, i.e. not derived by the usual process of aspectual composition. According to this process, the aspectual class of the eventuality described by the full sentence is derived by combining 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's claim is that the aspectual class of idiomatically-described eventualities is also compositional – thus 'Mary and her friends painted the town red' would describe an accomplishment. If McGinnis's claim were correct, then presumably the aspectual class would be the same under an idiomatic interpretation as under a literal interpretation (McGinnis 2002, p.668).

We have identified a number of other related examples, all of which fall into the class described by Jackendoff (1997a) as 'fake object resultatives'. That is, syntactically they appear to be resultatives, but the resultative state, on the idiomatic interpretation, is not "real". Examples include:

4. 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).

Clearly 'I cried my eyes out' describes an activity (hence its compatibility with the *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, 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. Moreover, 'I cried my eyes out [id]' fails other standard tests for accomplishments (e.g. '??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 – 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 end-

[2] We take aspectual class to be a property of eventualities – an eventuality being a cover term for an event or state.

point 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 the Longman Dictionary of English Idioms, "to cry a great deal".[3] Once again, then, we have a mismatch between the aspectual class of the literally described eventuality (henceforth 'literal eventuality') and that of the idiomatically described eventuality (henceforth 'idiom eventuality').

Similar observations are made with a number of other idiomatic expressions, where in each case corpus usage and speaker intuitions strongly suggest an activity, while literal interpretation would give rise to an accomplishment.

Consider 'sang X's heart out [id]'. Examples such as (5), found in the web search, show that this idiom can be combined with temporal *for*-adverbials.

5. Patsy sang her heart out for over two minutes.

(http://www.patsyclinehta.com/excerpts.htm, consulted 6/05/03).

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

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

Once more, then, we have a construction which describes accomplishments under a literal interpretation, and activities 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 that it may just about be acceptable to say:

7. 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.)

[3] As one of the reviewers for the ACL workshop points out, expressions like 'cry X's eyes out' may be seen as "conventionalized hyperbolae" or exaggerations.

Why should (7), at least according to our intuitions, be marginally acceptable? We suggest that the reason is that it may be 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 it is possible, at least in principle, to see this process as having a natural endpoint when all the worries, problems, etc, have been expressed. Thus there is some 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 heart. This may be enough to make 'pour X's heart out [id]' describe, at least in some contexts, an accomplishment, and therefore be acceptable in combination with an *in*-adverbial.

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 lack compositionality of aspect.

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

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

But (9) is not acceptable:

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

On the other hand, (8) is not good on the idiomatic interpretation. If the sentence refers to Fred's snoring, then (9), not (8), 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 may be 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 ‘saw logs’ that means “to sleep”, mentioned in (Nunberg, Sag & Wasow 1994, p.497). Here, the aspectual class of the eventuality described by ‘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. Here, 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, here, almost “accidental” that literal and idiomatic interpretations give the same aspectual class.

Another idiom where aspectual class does not seem to be compositional is ‘drowned X’s sorrows’, which appears to describe an activity rather than an accomplishment:

10. Fred drowned his sorrows for a few hours.

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

On our intuitions and those of our informants, (10) is acceptable but (11) is not.

Now compare ‘drowned X’s rats[4]’, interpreted literally, which appears to describe an accomplishment:

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

13. Fred drowned his rats in a few hours.

Unfortunately we were unable to find any 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 finding (12) unacceptable, but a minority found (12) marginal or even fully acceptable, on the assumption that Fred had a large number of rats. This is the reason for the single ‘?’ with which we label (12).

Taking the majority view, we have here another example of non-compositionality of aspectual class for an idiom. 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[5], then drowning one’s sorrows seems 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.

Although we have given a number of examples of idioms with non-composition of aspect, we do not wish to claim that there is a multitude of such examples. Indeed, examples of idioms lacking compositionality of aspect were not particularly easy to find. The majority of idioms *do* appear to show such compositionality. We now need an explanation of why this should be the case, while also accounting for the exceptions.

2 Towards an explanation

McGinnis (2002) claims that all idioms exhibit compositionality of aspect. We have shown that although many idioms do so, there is a significant minority which do not.

McGinnis takes 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*, where the structural component interacts with the syntax, and the idiosyncratic component makes fine-grained distinctions irrelevant to the syntax. In McGinnis’s words (McGinnis 2002, p.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

[4] Apologies to rat lovers.

[5] This may just be possible, but on our judgement it is stretching things. It would involve being able to “count one’s sorrows” and to envisage their being 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 about it, as though the idiom is being deliberately stretched too far.

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 noncompositional 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 (CS) and syntactic structure. RM has both structural and idiosyncratic meaning encoded at CS, with the result that both type of meaning will be subject to arbitrary mapping – thus predicting that aspect will be non-compositional in idioms.

If we are required to choose between RM and DM, then the fact that most idioms appear to show aspectual composition offers support for the former theory. However, we are more concerned with the need to account for the idioms we have identified where aspect is not compositional. Let us now return to these exceptions and examine what is "different" about them.

We remarked earlier that in the cases like 'paint the town red', we have an eventuality in the domain of literal interpretation (let us call this the 'literal eventuality') which has a natural endpoint (the state of redness of the town), and a eventuality in the domain of idiomatic interpretation (henceforth the 'idiom 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, whereby the progress 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. Roughly speaking, as the painting proceeds, the town gets redder. There is no corresponding gradual patient property in the idiom 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.

This may give us a way of "rescuing" the idea that all idiom aspect is compositional. 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 interpretation but not in the idiomatic one.

Now, for many idioms, thematic relations may well be the same in the idiomatic interpretation as in the literal one. To take just one example:

14. Fred painted a bleak picture of the city.

This may, of course, be read literally or as an idiom. In either case, it appears to describe an accomplishment, given that we may add an *in*-adverbial but not a *for*-adverbial on either interpretation.

14a. Fred painted a bleak picture of the city
*in/*for a couple of hours* [lit, id].

In both cases there seems to be a gradual patient relation between the state of completion of the "picture" (be it a literal picture, say on a canvas, 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" picture, 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.

This suggests, returning to our earlier idea, that the cases where the aspectual class of the idiom eventuality corresponds to that of the literal eventuality are (at least roughly) those cases where counterparts exist in the domain of idiomatic interpretation to the objects in the domain of literal interpretation, and where the thematic relations between those objects and the eventuality are the same in the literal and the idiomatic cases. These cases appear to correspond 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" (p. 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'.[6]

Idioms which do not have identifiable "parts" in this way are called *idiomatic phrases* by Nunberg, Sag and Wasow. They include expressions such as 'saw logs', where there is no identifiable equivalent in the domain of idiomatic interpretation to the logs in the domain of literal interpretation. These idioms, Nunberg, Sag and Wasow suggest, must be entered in the lexicon as complete phrases. In general, according to these authors, they cannot undergo passivisation, topicalisation, ellipsis and similar operations, as consequence of the fact that they do not have identifiable semantic parts. We are suggesting that, for the same reasons, they do not show compositionality of aspect.

It seems, then, that we have found a way to characterise those idioms which do not undergo aspectual composition (or, at least, not in the sense of McGinnis, where the aspectual class is the same on the idiomatic interpretation as it is on the literal one).

3 Conclusion

We may conclude that a certain class of idioms show compositionality of aspect in the sense of (McGinnis 2002) – meaning that the aspectual class is the same on the idiomatic interpretation as it is on the literal one. This class of idioms we may tentatively identify as those that Nunberg, Sag and Wasow (1994) call *idiomatically combining expressions*. (We need to be careful here, however, as it is possible that there may be idioms which are idiomatically combining expressions, but where the thematic relations differ in the literal and idiomatic interpretations. We are not clear at present whether or not this may be the case – further work is needed to investigate this.) Idioms which do not belong to this class (the ones that Nunberg, Sag and Wasow call *idiomatic phrases*) are able to describe eventualities of a different aspectual class from the eventuality described in the literal interpretation. (Of course the aspectual classes may, as we saw earlier, be the same, purely by coincidence. This is true of 'Fred sawed logs', which describes an activity on both the literal and the idiomatic interpretation.)

We have also suggested that, if we take the process of aspectual composition to include, as in (Krifka 1992), thematic relations such as *gradual patient* as its input, then idioms which are not idiomatically combining expressions can also be said to undergo aspectual composition. The difference here is that, because the thematic relations may be different in the idiomatic interpretation than in the literal interpretation, the result of the aspectual composition may also be different. Thus, although these idioms can be said to undergo aspectual composition, they will describe eventualities which have an aspectual class that may be different from the aspectual class described on the literal interpretation. This may have the interesting consequence that, provided we identify the necessary thematic relations for these idioms, we may not need to list their aspectual class in the lexical entry for the idiom, but instead we may be able to derive their aspectual properties via the same kind of compositional process as for the first class, the idiomatically combining expressions. All that will differ is the thematic relations. It will be necessary, however, to explore this idea in more detail in future work. Such work will need to involve the detailed investigation of a wide range of idioms and the exact process of their aspectual composition.

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

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