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Idioms, metaphors and syntactic mobility[1]

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Jackendoff (1997), whose analysis of idioms is based, in part, on work by Nunberg, Sag & Wasow (1994), discusses VP idioms and addresses the question of mobility. Both works identify fixed idioms, such as *kick the bucket*, and mobile idioms, such as *spill the beans* and *take advantage of*. Fixed idioms are ones whose NP objects are impervious to syntactic operations, as illustrated by the unacceptability, in their idiomatic sense, of sentences like **The bucket was kicked by Bill*; while mobile idioms occur in sentences like *The beans were spilled by Fred* and *Advantage was taken of Bill*. Jackendoff correlates the mobility of VP idioms with a property that he refers to as metaphorical semantic composition. However, he observes that this property is not a sufficient condition for mobility.

I will argue that the property of metaphorical semantic composition be replaced by a property of thematic composition, and that this property is a sufficient condition for mobility. A closer inspection of mobile idioms that have thematic composition reveals that they fall into two subtypes: expressions that have a property of 'transparency of interpretation', and ones that do not have this property.[2] I refer to members of the first subtype as METAPHORS. I will demonstrate that there are no idiosyncratic constraints on their syntactic mobility, and will conclude that they need not be encoded in lexical entries as phrasal idioms. In these respects, they are distinct from members of the second subtype, whose degree of mobility is more limited, and which must be encoded in lexical entries as phrasal idioms. Finally, I will address the question of the necessity of thematic composition for mobility. Throughout the paper, I will assume that phrasal idioms are appropriately encoded in lexical entries of the types proposed by Jackendoff for fixed and mobile expressions.

1. JACKENDOFF'S ANALYSIS OF FIXED AND MOBILE EXPRESSIONS

Jackendoff (1997), who credits Nunberg, Sag & Wasow (1994), along with Wasow, Nunberg & Sag (1984) and Ruwet (1991), for providing the key to his proposal, observes that mobile expressions have a property that he calls

[1] I wish to thank Geraldine MacNeill, Alan Libert and two anonymous referees for *Journal of Linguistics* for helpful comments on both the content and organization of the paper. Any shortcomings, of course, are my responsibility alone.

[2] My notion of transparency is distinct from that employed by Nunberg et al. For them, transparent idioms are ones for which 'speakers can wholly recover the rationale for the figuration [they] involve' (p. 496 and fn. 9). Thus *saw logs*, which is a fixed expression, is considered by them, but not by me, to be transparent.

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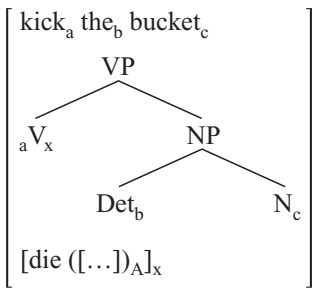
'a sort of metaphorical semantic composition' (p. 168). He states that idioms having this property 'can be partitioned into chunks that correspond to the "sub-idiomatic" readings of the syntactic idiom chunks'.[3] Fixed expressions, on the other hand, lack this property. Some examples of the well-known and much-discussed class of fixed idioms appear in (1) below, and examples of mobile idioms appear in (2).

(1) (a) Bill kicked the bucket.
(b) We shot the bull all evening.
(c) The bad guys flew the coop.

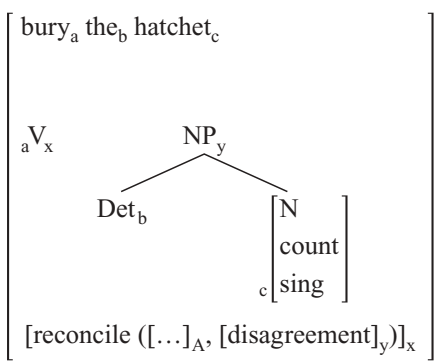
(2) (a) Fred spilled the beans.
(b) Bill let the cat out of the bag.
(c) The Government drew the line with Milosevic.
(d) Bill pulled strings to get the promotion.
(e) They buried the hatchet after years of fighting.
(f) They shall beat their swords into plowshares.

Jackendoff assigns fixed expressions lexical entries of the type shown in (3a) and mobile expressions lexical entries of the type shown in (3b).

(3) (a)



(b)



[3] This appears to be similar to the property of composition proposed by Nunberg et al. For them, if an idiom is compositional then elements of its interpretation can be assigned to its various components 'in such a way that each constituent will be seen to refer metaphorically to an element of its interpretation' [after the meaning of the idiom is known] (pp. 496, 499).

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In entry (3a), the entire expression is encoded as a single, VP, unit and in entry (3b), the verbal and nominal elements of the expression are encoded as separate constituents. Jackendoff attributes the difference in syntactic behavior between the fixed and mobile expressions to the difference in the way that they are encoded in lexical entries. Independent justification for the need for these two types of representation comes from the fact that they correspond to the absence and presence, respectively, of the property of metaphorical semantic composition. For Jackendoff, expressions like those in (2) and the following, shown below with their interpretations, have this property, and are therefore assigned lexical entries like (3b).

(4) (a)	bury the hatchet	[reconcile/end/settle][a disagreement]
(b)	break the ice	[break down][a fragile/rigid barrier to social interaction]
(c)	draw the line	[establish][a limit], [make/enforce] [a distinction]
(d)	let the cat out of the bag	[reveal][a secret]
(e)	beat swords into plowshares	[forge][offensive weapons][into] [peaceful tools]

Example (4c) comes from Nunberg et al. (1994: 500). I have added the brackets to the interpretations for clarity.

Expressions like those in (1), in contrast, do not have metaphorical semantic composition, as illustrated below. Thus these are assigned lexical entries like (3a).

(5) (a)	kick the bucket	[die]
(b)	shoot the bull	[engage in trivial conversation]
(c)	fly the coop	[escape]

The expressions in (4) occur in a range of contexts that I will use as a diagnostic for mobility. This includes passive sentences. In this regard, they contrast with examples like those in (5), which do not occur in these contexts. Thus the examples in (6) below contrast with the examples in (7), which are ungrammatical in their idiomatic interpretations.

(6) (a) The cat was let out of the bag.
(b) The hatchet was finally buried after years of fighting.
(c) After a few beers, the ice was broken.
(d) The line was finally drawn regarding Kuwait.

(7) (a) *The bucket was kicked by all of the bad guys.
(b) *The bull was shot all evening during the party.
(c) *The coop was flown by the cat thief.

In appropriate places, I will also utilize the following additional sentence types to illustrate the range of mobility of the relevant expressions: raising

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structures (with verbs like *seem*), such as *The line seemed to be drawn regarding Kuwait* and *The ice appeared to be broken after everyone had drunk a few beers*; and *tough*-movement structures, such as *The ice was difficult to break, but a few beers did it*.

Jackendoff notes that metaphorical semantic composition also applies to the following expressions, supplied to him by Postal (personal communication).

(8) (a) raise hell [cause][a serious disturbance]
(b) give the lie to (X) [show] (X) [to be a falsehood]

According to Jackendoff, these expressions have this property. On this basis, they should exhibit mobility, and be assigned lexical entries with structural representations similar to the one in (3b). However, Jackendoff observes that these expressions are non-mobile, as shown in (9a, b) (Jackendoff's examples (25) and (26), respectively).

(9) (a) *Hell was raised by Herodotus.
(b) *The lie was given to that claim by John.

Jackendoff tentatively concludes that metaphorical semantic composition is not a sufficient condition for mobility, and further notes (p. 170) that this concurs with Ruwet's (1991) conclusion. When we look at additional data, we find a larger number of such expressions, which provide more evidence that metaphorical semantic composition is not a sufficient condition for mobility. Some examples are the following:

(10) (a) grasp the nettle [confront][an unpleasant situation]
(b) chew ass [administer/deliver][a reprimand]
(c) kiss ass [curry][favor]
(d) screw the pooch [bungle][a task]
(e) catch hell [receive][a stern reprimand]
(f) hit the hay [go (to)][bed]

These expressions, like those in (4) and (8), have metaphorical semantic composition, and like the examples in (8) are nevertheless non-mobile, as shown by the unacceptability of (11) in their idiomatic interpretations.

(11) (a) *The nettle was grasped by Bill.
(b) *Ass was chewed by the boss.
(c) *Ass was kissed by most of the employees.
(d) *The pooch was really screwed by Joe this time.
(e) *Hell was caught by every employee of the company.
(f) *The hay is hit by Fred every night at 8:00 PM.

2. Thematic composition and mobility

We can properly distinguish fixed expressions like those in (1), (8) and (10) on the one hand and mobile expressions like those in (2) and (4) on the other, if

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we replace Jackendoff's property of metaphorical semantic composition with a property of 'thematic composition'. An expression has thematic composition if the thematic structure of the verb in its literal sense and that of the verb in its idiomatic sense are identical. I define thematic structure as the set of semantic roles that a verb assigns to its NP arguments. For example, as we saw above, *let the cat out of the bag* means [reveal] [a secret]. The act of letting out some object results in that object becoming visible, or being revealed. Thus *let out* in its literal sense and *let out* in its idiomatic sense [reveal] in this expression assign the same semantic role to their NP objects. The other expressions in (2) and (4) have this property. In the expression *draw the line*, the verb *draw* in its literal sense assigns the same semantic role to its NP object as does *draw* in its figurative sense. When one literally draws a line, one establishes or delineates a physical boundary or limit, and when one figuratively draws a line, one establishes or delineates an abstract boundary or limit. *Break the ice* exhibits the same property. When one literally breaks the ice, one breaks a hard, concrete entity, and when one figuratively breaks the ice, one breaks (down) an abstract rigid entity. *Pull strings* [set in motion] [influencing factors] also has this property. When one pulls strings in the literal sense, one physically sets them (and whatever is attached to them) in motion. When one pulls strings in a figurative sense, one sets something in motion in a more abstract way.[4] Finally, consider *bury the hatchet*. When one literally buries something, one physically removes, eliminates (or hides) it. When one figuratively buries something (e.g. a disagreement), one removes, eliminates or ends it in an abstract sense.

The expressions in (1), (8) and (10) do not have the property of thematic composition. Consider, for example, *grasp the nettle*. Grasping something involves taking hold of it, but confronting something does not involve the same sort of action. Thus *grasp* in its literal sense and *grasp* in the sense of [confront], the corresponding verbal element of the interpretation of the expression, assign different semantic roles to their object NPs. The same is true of *screw the pooch* and *chew ass*. The NP object of *screw* in its literal (slang) meaning (not to be confused with *screw up*) and that of [bungle] are related to their respective verbs in quite different ways, as are the NP object of *chew* in its literal sense and that of [administer] or [deliver]. In the expression *raise hell*, *raise* in its literal sense and [cause/bring about] have different thematic structures. The same is true for *give* in its literal sense and [show] in the expression *give the lie to*. Finally, in the expression *hit the hay*, *hit* in its literal sense and [go (to)] have different thematic structures.[5]

[4] The definition of this expression that I use here is more general than the one suggested by Nunberg et al. (p. 496): [exploit][personal connections] (my bracketing).

[5] A *JL* referee has pointed out that it is not so clear that *hit* and *go to* have different thematic structures. S/he suggests that 'hit X' = (in part) 'go to X with force'. However, *John hit the hay* means simply that John went to bed and not that John went to bed with force. In any case, the relationship between 'hit X' and 'go to X with force', even if it were applicable

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Expressions like those in (1) differ from those in (8) and (10) in that their collective idiomatic interpretations cannot be divided into components that can in turn be paired with the lexical components of the expressions. The meaning of *kick the bucket* is [die], a single component, while the expression itself contains three components. Moreover, the thematic structures of the idiomatic and literal interpretations of these expressions are quite different. For example, *die* in its literal sense is an intransitive verb, and it assigns a single semantic role to its subject. *Kick*, in contrast, in its literal sense, is a transitive verb that assigns a semantic role to its object as well as its subject. Thus the thematic structure of *kick* in its literal sense is very different from the thematic structure of *kick* in the sense used in this expression, if indeed the verb alone can be said to have any thematic structure at all. The situation is similar for *shoot the bull*, which means [converse/engage in trivial conversation]. The verb *shoot* in its literal sense and *shoot* as used in this expression have different thematic structures, if, as with *kick* above, *shoot* in this expression has any thematic structure at all. In spite of their other differences, we see that in all of the non-mobile expressions, the meanings, and thus the thematic structures, of the verbs in their literal senses differ in unpredictable ways from the meanings and consequent thematic structures of the corresponding verbal elements of the interpretations of the expressions.

Now, we can modify Jackendoff's framework to account for the behavior of the relevant data. Mobile expressions are ones that have thematic composition and are assigned lexical entries like (3b), in which the verbs and NP objects are encoded as two separate constituents. Non-mobile expressions are ones that lack thematic composition and are assigned lexical entries like (3a), in which they are represented as VPs rather than separate constituents. The differences in syntactic behavior between fixed and mobile idioms may be attributed, as in Jackendoff's analysis, to the differences in the structural representations in the lexical entries of the expressions.

Additional fixed expressions are the following: *make a face* [distort][one's facial features], *make a great show of* [demonstrate][dazzling expertise] (*The performers made a great show of their trapeze act*), *make no bones* (*about*) [be frank/candid (about)] (*Fred made no bones about his racial prejudices*), *take a look* [inspect/look at], *take a shit* [shit (V)], *take a piss* [piss (V)], *take a bath* [bathe]. These all lack thematic composition. In the expression *make a great show*, *make* and [demonstrate] have different thematic structures. The verb *take* in the last four expressions is semantically empty and thus has no thematic structure at all.[6] These expressions have lexical entries like those in (12) (for *make a face*, *make no bones* and *take a bath*).

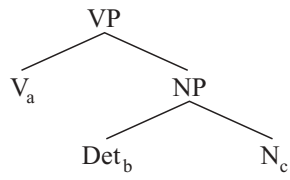
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to this expression, is rather more tenuous than the relationship between the literal and idiomatic meanings of the verbs in the mobile expressions.

[6] A reader has observed that in the expression *make a face*, *make* in its literal sense, [create], and [distort] may not have different thematic structures. However, *create* means something

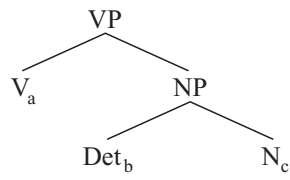
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(12) (a) [make$_a$ [a$_b$ face$_c$]



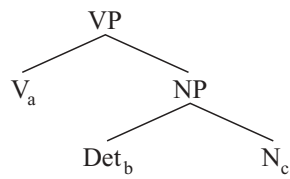
distort ([…]$_A$, [one's facial features]]

(b) [make$_a$ [no$_b$ bones$_c$]



be frank ([…]$_A$)]

(c) [take$_a$ [a$_b$ bath$_c$]



bathe ([…]$_A$)]

In their discussion of idiomatically combining expressions, Nunberg et al. employ a concept that at first glance appears to be similar to thematic composition. For them, such expressions are compositional in the sense that 'the conventional mapping from literal to idiomatic interpretation is isomorphic with respect to certain properties of the interpretations of the idiom's components' (Nunberg et al. 1994: 504). The following expressions, which occur as examples in this discussion, apparently satisfy this criterion: *add fuel to the flames/fire* [introduce][additional provocative factors][to a situation], *open the floodgates* [open (remove)][barriers], *lose one's mind* [become][insane], *get off one's ass* [stop resting/become active], *go to heaven* [die], *keep one's cool* [remain][composed], *blow one's cool* [become discomposed], *step on someone's toes* [offend (someone)], *drop a bomb* [introduce][an unpleasant surprise] and *start the ball rolling* [begin work/a project] (the definitions are mine). However, a closer look at the data reveals that some of these

like [bring into being] and distorting involves modifying an already existing entity in a particular way. Consequently, this expression also lacks thematic composition.

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expressions are mobile and others are fixed. The proposed analysis accounts for this. The mobile expressions *add fuel to the fire/flames* (as in *Fuel was added to the fire by his belligerent behavior*) and *open the floodgates* (as in *The floodgates were opened when they decided to admit minorities to the club*) have the property of thematic composition. The remaining expressions are fixed. None have the property of thematic composition. They must be encoded as VP units in lexical entries like (3a).

The proposed analysis extends without modification to expressions that Nunberg et al. (1994: 520) refer to as 'double passive' expressions. These include the following.

(13)	(a)	take advantage of	[acquire][a favorable position][at the expense of/by means of]
	(b)	keep tabs on	[retain][information][on]
	(c)	take care of	[assume][responsibility][for]
	(d)	make much of	[produce][an exaggerated response][to]
	(e)	make short work of	[achieve][a quick resolution][to]

These expressions have the property of thematic composition and are mobile, as illustrated by the grammaticality of the following:[7]

(14) (a) Advantage was taken of Fred by everyone.
(b) Tabs are kept on criminals by the FBI.
(c) Care was taken of all of the orphans.
(d) Much was made of their new wealth.
(e) Short work was made of the job.

In keeping with earlier analyses, Nunberg et al. note that these expressions occur in both inner and outer passive sentences. Thus, in addition to the sentences in (14), which they refer to as 'inner passive' sentences, these expressions occur in so-called 'outer passive' sentences like (15).

(15) (a) Fred was taken advantage of by everyone.
(b) Criminals are kept tabs on by the FBI.
(c) All of the orphans were taken care of.
(d) Their new wealth was made much of by the press.
(e) ?The job was made short work of by the investigators.

They assign such expressions lexical entries like those in (16).

(16) (a) V NP
(b) [V NP] PP

The first structure consists of a verb and an NP that functions as its object. Expressions that have this structure can occur in inner passive sentences. In

[7] The range of meanings of *take* and *make* in idiomatic and literal (non-idiomatic) contexts will be discussed in section 3.1 below.

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the second structure, the [V NP] sequence is an intransitive (complex) verb that occurs with a PP complement. The 'prepositional' passive, or pseudo-passive, formation process can apply to this sort of structure, under certain circumstances, and thus expressions that have this structure can occur in outer passive sentences. Expressions like those in (13), which occur in both inner and outer passive sentences, are assigned both structure (16a) and structure (16b).

Using Jackendoff's notation, we can assign expressions with structures like (16a) lexical entries with equivalent structures, like (17a), and expressions with structures like (16b), lexical entries with equivalent structures like (17b).

(17) (a) $\left[\begin{array}{l} \text{take}_a\ \text{advantage}_b \\ {}_aV_x \qquad NP_b \\ \text{acquire } ([\ldots]_A, [\text{a favorable position}])_x \end{array}\right]$

(b) $\left[\begin{array}{l} \text{take}_a\ \text{advantage}_b\ \text{of}_c \\ \quad \begin{array}{ccc} V & & PP \\ \diagup\ \diagdown & & \diagup\ \diagdown \\ V_a \qquad NP_b & & P_c \qquad NP \end{array} \\ [\text{acquire [a favorable position]}]\ ([\ldots]_A, [\text{at the expense of/by means of}]\ [\ldots]_B) \end{array}\right]$

The lexical entry in (17a), in which the verb and NP complement are encoded as separate constituents, is analogous to (3b) above.[8] That in (17b), in which the verb and NP complement are encoded as a unit, is analogous to (3a) above. I have included two arguments, A and B, in the semantic representation in (17b).[9] The passivization process, which applies to object NPs in general, can apply to the NP object in the structure in (17a) to form inner passive sentences like (14). The pseudo-passive formation process can apply to the object of the preposition (variable argument B) in (17b) to form outer passive sentences like those in (15).[10]

[8] A *JL* referee has observed that lexical entry (17a) does not specify that the preposition *of* occurs with *take advantage*. However, the structure in this lexical entry is based on the one proposed by Nunberg et al., shown in (16a). They considered the PP constituent to be optional with this expression and others of its type.

[9] I have attempted to extend Jackendoff's notation to these cases. However, in (17b), I have analyzed the [V NP] sequence as a V, following, among others, Williams (1997), who considers such sequences to be complex verbs. The idea for the representation of the object of the preposition as a second variable argument in the semantic representation of the expression, labelled B, is borrowed from Bresnan (1982), who analyzes the objects of the prepositions in this type of expression as well as certain [V P] expressions, such as *depend on*, which occur in pseudo-passive sentences, as arguments of the verb.

[10] The conditions under which the pseudo-passive formation process can apply, and the nature of this process, have been, and are, a matter of debate. See, for example, Bresnan

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Expressions like *lay siege to*, *make a fool of*, *make an ass of*, *make fun of* and *make light of*, in contrast to the ones in (13), occur in outer passive, but not inner passive sentences. This is illustrated below. (Some examples in (19) may be less odd than others, but all are worse than the good ones in (18)).

(18) (a) The castle was laid siege to by the Turks.
(b) John was made a fool of by the girls.
(c) Bill was made an ass of by Monica and her friends.
(d) Mary's sister was made fun of by Fred.
(e) The situation was made light of by everyone.

(19) (a) *Siege was laid to the castle by the Turks.
(b) ?*A fool was made of John by the girls.
(c) *An ass was made of Bill by Monica and her friends.
(d) *Fun was made of Mary's sister by Fred.
(e) *Light was made of the situation by everyone.

These examples do not have thematic composition. *Lay siege to* means [besiege], and *lay* has no thematic structure in the normal sense. (This is analogous to the situation with *kick the bucket*.) The same is true of *make fun of* [ridicule], *make light of* [belittle/downplay] and *make an ass of* and *make a fool of*, both of which mean [show to be incompetent or foolish].[11] Consequently, these examples are assigned lexical entries like that in (17b), as shown below for *make light of*.

(20) $\left[\begin{array}{l} \text{make}_a\ \text{light}_b\ \text{of}_c \\ \begin{array}{cc} \text{V} & \text{PP} \\ \text{V}_a\ \ \text{NP}_b & \text{P}_c\ \ \text{NP} \end{array} \\ \text{belittle}\ ([\ldots]_A, [\ldots]_B) \end{array}\right]$

This accounts for the ungrammaticality of (19). The sentences in (18) are produced by the pseudo-passive process as discussed earlier.

Two additional expressions of the same type are *take hold of* [grab/grasp] and *make use of* [use], as illustrated by the contrast between (21) and (22).

(1976, 1982), Chomsky (1981), Perlmutter & Postal (1984), Baltin & Postal (1996) and others. The resolution of this issue is not relevant to the present discussion, and I will not attempt to add to, or argue against, existing hypotheses. I have merely chosen one method, which does not depart from the analyses of Jackendoff and Nunberg et al. in any significant way, of representing those expressions that occur in pseudo-passive sentences and distinguishing them from ones that do not.

[11] *Lay siege to* contrasts with the mobile expressions *lay* (*down*) *a barrage* and *lay down a smoke screen*. The idiomatic interpretations of both of these expressions are metaphorical extensions of their literal, military interpretations. Both have thematic composition.

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(21) (a) The rope was taken hold of by Bill.
(b) Bill's skills were made use of by his teammates.

(22) (a) *Hold was taken of the rope by Bill.
(b) *Use was made of Bill's skills by his teammates.

Finally, the idiom *give X the sack* [fire][X] (e.g. *The company gave John the sack*) is analogous to those in (18). The sentence in (23a), which is grammatical in its idiomatic interpretation, contrasts with (23b), which has only a literal interpretation.

(23) (a) John was given the sack by the company.
(b) The sack was given (to) John by the company.

This expression, like those in (18), lacks thematic composition and is, therefore, non-mobile. In example (23a), the constituent that has been moved, *John*, is not an element of the idiom. In example (23b), the constituent that has been moved, *the sack*, is an element of the idiom. Note that no other permutations of the elements of this expression are possible. Thus the following have only literal interpretations.

(24) (a) The company gave the sack to John.
(b) The sack appeared to be given (to) John.
(c) The sack was easy to give (to) John.

We can explain this by assigning *give X the sack* a lexical entry like (25), in which it is encoded as a single VP unit. (The precise nature of the internal structure of the VP is not relevant to the present discussion.) The unspecified NP constituent (in boldface) is analogous to the object of the preposition in the expressions in (18).

(25) $\left[\begin{array}{l} \text{give}_a\ \mathbf{NP}\ [\text{the sack}]_b \\ \text{VP} \\ \text{V}_a \quad \mathbf{NP} \quad \text{NP}_b \\ \text{fire}\ ([\ldots]_A, [\ldots]_B) \end{array}\right]$

We see, then, that the proposed analysis accounts for Jackendoff's data as well as additional data that he cannot account for. On the basis of this body of data, I suggest that thematic composition is a sufficient condition for mobility.[12]

[12] It might be argued that the complex verb analysis is inappropriate for expressions like *take advantage of* that have thematic composition. This follows the analysis of Nunberg et al., who provide arguments to support it; see Nunberg et al. (1994: 520). If two items are combined to form a complex verb unit, the matter of thematic composition is inapplicable.

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3. Transparency – metaphors and mobile idioms

Neither Jackendoff (1997) nor Nunberg et al. (1994) explicitly discuss further distinctions among types of mobile expression. However, if we look more closely at mobile expressions, we find that there are two subtypes: the first has an additional property that I will refer to as transparency and displays no idiosyncratic constraints on mobility; the second lacks the property of transparency and displays more limited mobility. In particular, the differences in mobility involve the occurrence of the NP elements as heads of relative clauses and as *wh*-elements in questions.

3.1 *Transparent expressions* (*metaphors*)

As examples of the first subtype, consider the expressions *pull strings*, *beat swords into plowshares*, *draw the line* and *jump on the bandwagon* [[join] [a cause/crusade]]. The idiomatic interpretations of these expressions are quite similar to their literal interpretations, and may be thought of as metaphorical extensions of these. In these expressions, 'strings' are abstract means of manipulation, 'swords' are offensive weapons in general, 'plowshares' are non-military tools in general, 'the line' is an abstract boundary and 'the bandwagon' is a cause/crusade. These NP complements occur in other environments, both idiomatic and non-idiomatic, with the same metaphorically extended meanings; some examples are: *There are no strings* (*attached*), *The pen is mightier than the sword*, *He who lives by the sword shall die by the sword*, *The two sides agreed that plowshares are preferable to swords*, *There are dire penalties for crossing/overstepping the line* and *He goes from bandwagon to bandwagon*. Furthermore, the meanings of the verbs *pull*, *beat*, *draw* and *jump* (*on*) in these expressions are transparent abstract extensions of the literal meanings that they have in other contexts (e.g. *He beat the red hot bar into a knife blade*, *The driver pulled the Ferrari out of the starting gate*, *Fred pulled the lever and the curtain opened*, *Bill drew lines in the margins of his notebook* and *John jumped on the train at the last minute*).

Thus the idiomatic interpretations of these expressions can be produced by normal grammatical processes that apply to combine the V and NP constituents in their metaphorically extended meanings. Such expressions have the property of transparency of interpretation. I will refer to these expressions as metaphors. We must, however, explain the fact that these expressions, as well as the additional metaphors discussed below, involve specific unpredictable, or at best semi-predictable, collocations of verb and NP object. Thus we say *jump on the bandwagon* rather than *get into the bandwagon* and *draw the line* rather than *inscribe the line*, as well as *take umbrage* (see below) rather than *make umbrage*. We can account for this by specifying these collocations in the lexical entries of the nouns (NPs) along with their metaphorical senses. For example, the lexical entry of *bandwagon* must specify its literal meaning and metaphorically extended meaning.

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The lexical entry can also specify that *bandwagon* in its metaphorical sense occurs as the object of *jump on*. Similarly, the fact that *umbrage* occurs as the object of the verb *take* can be specified in its lexical entry. Therefore the metaphors need not be encoded in lexical entries as phrasal VP idioms.[13]

Additional examples of expressions that have the property of thematic composition and are transparent are given in (26)–(28).

(26) (a) take umbrage
(b) take a stab
(c) take a stand
(d) take a hard line

(27) (a) make headway
(b) make progress
(c) make a mess
(d) make an appointment
(e) make (out) a check
(f) make a break

(28) (a) pay homage
(b) pay lip service
(c) pay attention

The verbs in these examples have a range of generalized meanings that are used in both concrete and abstract senses, in many contexts of which these expressions are a subset. The verb *make* in the sense of [create], [produce] or [achieve] occurs in its concrete senses in the following: *John made dinner*, *It is difficult to make a good apple pie*, *John made a purse from a sow's ear*, *The Lord made Adam from clay* and *One never makes a good mark without studying*. It has essentially the same meanings (albeit in more abstract senses) in the expressions *make progress*, *make headway* and the others in (27). The range of meanings of *take* in non-idiomatic contexts includes [acquire, capture] (*John took the suitcase from Bill*, *The platoon took the most strategic position*), [accept] (*Fred eagerly took the job*), [adopt], [assume], [perform] (*Hamlet took the part/role of a wronged man*, *We took full responsibility for our failure*) and [feel, experience] (*Bill took an unusual amount of pride in his work*). *Take* has essentially the same sort of meanings (or abstract extensions of them) in the expressions *take* [adopt/assume] *a hard line*, *take* [feel/experience] *umbrage* (a feeling of resentment), *take* [perform] *a stab* (an attempt) and *take* [adopt/assume] *a stand*. The verb *pay* means, among other things, [give (money)] (*He paid for the car in cash*, *He always pays his taxes*),

[13] The collocation question was brought to my attention by a *JL* referee. Specification of [V NP] collocations is no problem for fixed idioms like *kick the bucket*, *take a piss* and *make a wee wee*, on the one hand, and mobile idioms like *spill the beans*, on the other, since these are encoded in lexical entries as phrasal idioms.

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[dispense] (*The boss agreed to pay extra allowances/cash incentives to the workers*, *The sailors paid out the line*) and [bestow] (*He seldom pays compliments without a good reason*). This is the meaning of *pay* in the expressions *pay homage*, *pay lip service* and *pay attention*. The meaning [bestow] in these expressions is an abstract extension of the meanings [give] or [dispense]. We see, then, that the verbs in these expressions have either their literal meanings or transparent abstract extensions of these. In all cases, the intended meanings of these verbs in particular expressions of this sort (chosen from the range of meanings that each has) can be determined from the context (i.e. choice of NP complement) in the same way that the intended meaning of any word which has multiple meanings is determined from the context.

NP complements like *umbrage*, *headway* and *homage* do not have distinct literal and idiomatic meanings and therefore have the same meanings in all of their occurrences. Examples in which these NPs occur independently of the verbs in non-idiomatic contexts are: *Their umbrage at his remarks was understandable*, *Their headway on the problem was remarkable* and *No social ideal receives more homage than education*. The NPs *a hard line* [firm, uncompromising position], *a stand* [position], *a stab* [attempt], *lip service* [superficial support] and *break* [escape] are used in their metaphorical senses. However, like the previous NPs, they occur independently in non-idiomatic contexts with the same meanings, in examples like *A hard line will get you nowhere*, *His stand on that issue is untenable*, *A quick stab at the problem is all I have time for*, *I'm ready for another stab at the problem*, *Lip service is no substitute for sincerity*, *They engage in lip service only*, *Their break for freedom was successful*.[14] Finally, the NP complements of the other expressions in (26), (27) and (28) (*progress*, *a mess*, *a check*, *attention* and *an appointment*) are used in their literal senses, and can occur independently of the verbs.[15]

It is clear that the collective interpretations of these expressions can be derived by normal processes from the literal and/or metaphorical meanings that their verbs and NP complements have independently in other contexts. Moreover, their verbs display no deviant selectional or subcategorization properties. As with the earlier examples, there is no need to consider these

[14] *Take a stab* as a metaphor has thematic composition and contrasts with *take a stab* in its literal sense [stab], which does not. This is illustrated by the difference in grammaticality of the following:

(i) A stab was taken at solving the problem.
(ii) *?A stab was taken at Bill with a 12-inch dagger.

[15] A *JL* referee has pointed out that *make a mess* is not a phrasal idiom or even collocation (since we can say *create a mess*, *clean up a mess* and so on). This observation applies equally to *make an appointment* and *make* (*out*) *a check*. However, I include these because they appear in Nunberg et al., who list them as members of a large class of *make*-expressions.

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expressions to be phrasal idioms or to encode them as such in lexical entries like (3b).[16]

Many of the *make* and *take* expressions in Nunberg et al.'s appendices 1 and 2 are metaphors. Additional examples of this type are as follows.

a. *Take a back seat* [assume][a secondary role]
   The verb *take* [assume] in *take a back seat* has one of the range of meanings discussed earlier, and it occurs in non-idiomatic contexts with this meaning in sentences like *John took his place behind the podium*. The NP *back seat* also occurs independently in non-idiomatic contexts, in examples like *Clinton would never be happy in the back seat* and *The back seat is no place for Hillary* (*or perhaps it is*). This expression exhibits the syntactic behavior characteristic of metaphors, as illustrated by *A back seat was taken by Clinton during the election of 2000*, *A back seat seemed to be taken by the chairman of the board*, *A back seat is easy to take when surrounded by experts*, *?The back seat that Clinton took during the election was unprecedented*, *?We could never take the back seat that he took*, *?How much of a back seat did he take during the election*.
b. *Lay* (*down*) *a barrage*
   The idiomatic interpretation of *lay* (*down*) *a barrage* is a metaphorical extension of its literal, military, meaning in sentences like *The British forces laid down a barrage to begin the offensive*. The NP complement, *barrage*, has the same metaphorically extended meaning in non-idiomatic contexts: *The team opened the debate with a fierce barrage*.
c. *Lay down a smoke screen*
   Lay [put in position] occurs with a metaphorical extension of its literal meaning. It occurs in non-idiomatic contexts in sentences like *They laid a minefield in front of the church* and *The president laid a wreath at the shrine to the Holocaust*. The NP complement *smoke screen* has the same metaphorically extended meaning in non-idiomatic contexts, such as *That is just a smoke screen to confuse the competition*.

The following expressions are also metaphors: *swallow the line* [accept][a dubious proposition/claim] and *find skeletons in* (*one's*) *closet* [find][undesirable facts][about][one's past]. These occur in sentences like the following: *Too many skeletons were found in his closet*, *Skeletons are easy to find in Bill's*

[16] Nunberg et al. (1994: 532) briefly discuss idiomatically combining verb + argument expressions, each of whose constituents is perceived to refer figuratively to a concrete entity, particularly when the reference of the NP is an animate. Their example is *corral the strays*, used in a political context, [bring into line the nonconforming members of the party]. They observe that 'we would not be surprised to find each constituent having its idiomatic sense when used in isolation, as in *The majority leader will have to corral Senators Smith and Jones* and *The strays – Senators Smith and Jones – have so far refused to capitulate*'. They conclude that 'there is rarely a need to conventionalize a collocation like this one qua collocation; rather we conventionalize each of its constituents independently' (p. 532). Expressions like this appear to be a subset of the set of metaphors in the proposed analysis.

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closet, *Many skeletons appeared to be found in Hillary's closet*, *No one knows how many skeletons might be found in Bill's closet*, *There are no skeletons in Tipper Gore's closet*, *That line is as old as the hills* and *That line is easy to swallow*.

3.2 *Non-transparent expressions* (*mobile idioms*)

Examples of the second subtype of mobile expression are *spill the beans* [reveal/divulge][a secret], *let the cat out of the bag*, *bury the hatchet* and *break the ice*. The NP complements in these expressions do not generally occur in other contexts independently of the verbs with the idiomatic meanings that they have in these expressions. Thus *the beans*, *the cat*, *the hatchet* and *the ice* have only literal meanings in sentences like *Everyone knew the cat/the beans* [*the secret], *We are familiar with the hatchet* [*the dispute/disagreement] and *The ice at the party was unbearable*. These expressions do not have the property of transparency of interpretation. Their idiomatic meanings cannot be produced by normal grammatical processes and therefore they must be encoded as phrasal idioms in lexical entries like (3b).[17]

While the majority of mobile *take*- and *make*-expressions are transparent, a smaller number are not transparent. Two such expressions are presented in (29).

(29) (a) take up arms [engage in][military-like activity]
(b) take the rap [(wrongly) accept] [censure/punishment]

Both expressions have thematic composition and are assigned the following lexical entries.

(30) (a)
$$\left[\begin{array}{l} [\text{take up}]_a\ \text{arms}_b \\ V_a \qquad NP_b \\ \text{engage in } ([\ldots]A, [\text{military activity}]) \end{array}\right]$$

(b)
$$\left[\begin{array}{l} \text{take}_a\ [\text{the rap}]_b \\ V_a \quad NP_b \\ \text{(wrongly) accept } ([\ldots]_A, [\text{censure/punishment}]) \end{array}\right]$$

The verbal element *take up* [engage in] of the expression *take up arms* occurs in non-idiomatic contexts in the same sense in examples like *He took up*

[17] An additional expression of the same type is *leave no stone unturned* [leave][no possibility][unexplored]. This expression has thematic composition. Leaving something unturned in the literal sense means leaving it unaffected, in its original state. This implies that what is on the other side of it, or under it, remains unknown. Leaving something unturned in the abstract sense means the same thing. However, the constituents of this expression do not occur independently in their idiomatic meanings. The following, in which *stones* occurs without *no* or *unturned*, has only a literal interpretation: *Those stones were not important to the investigation*.

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painting as a form of therapy. The verb *take* in the expression *take the rap* is used in one of the range of meanings discussed above. However, the NPs *arms* and *the rap* do not occur independently with their idiomatic meanings. In the sentence *The arms were ineffective*, *arms* cannot mean military activity, but only refers to weapons. The distribution of *the rap* is severely limited and the following is ungrammatical: **The rap was Bill's rather than Monica's*.

3.3 *The range of mobility of metaphors and mobile idioms*

The transparency/non-transparency distinction correlates with differences in degree of mobility. Let us first consider the metaphors.

3.3.1 *Metaphors*

None of the transparent expressions displays anomalous syntactic behavior. They occur in a range of syntactic contexts in addition to simple passive sentences: *Strings seem to be pulled every time he applies for a promotion*, *With the signing of the treaty*, *swords seemed to be beaten into plowshares*, *The line seemed to be drawn regarding Kuwait* and *The bandwagon appeared to be jumped on by everyone in Hollywood*; as well as *Strings are easy to pull in a large bureaucracy*, *The Israeli–Palestinian conflict demonstrates that swords are difficult to beat into plowshares*, *The line was difficult to draw regarding Kuwait* and *That bandwagon was easy to jump on*.

The NP complements in these expressions can occur as heads of relative clauses: *We were surprised at the strings that were pulled to get Joe's promotion*, *Bill pulled the same strings that Joe pulled to get the promotion*, *Swords that are beaten into plowshares cease to be a threat*, *The line that the US Government drew regarding Kuwait was unfair*, *?We would never draw the line that the Government drew regarding Kuwait*, *The bandwagon that everyone jumped on ran out of steam quickly* and *Everyone jumped on the bandwagon that most of Hollywood supported.* The NP complements can also be questioned: *How many strings did he pull to get the promotion? What sort of line has the Government drawn concerning Kuwait? How many swords are never beaten into plowshares?* and *Which bandwagon will Fred jump on this week?*

The *take*, *make* and *pay* expressions in (26), (27) and (28), respectively, occur in the same range of structures. They occur in raising sentences and *tough*-movement sentences like the following: *Homage seemed to be paid to Vietnam veterans when the memorial was dedicated*, *Umbrage appeared to be taken at his remarks*, *Headway appeared to be made when they discovered uranium*, *Progress is difficult to make under those circumstances*, *A mess appeared to be made while he was rearranging his books*, *A stab seemed to be taken at the problem by the research team*, *Umbrage was easy to take at his remarks*, *A stand is difficult to take on some issues*, *Headway is generally hard to make when dealing with terrorists* and *Lip service is always easy to pay*.

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The NP complements of these expressions can occur as heads of NPs that contain relative clauses in examples like *The headway that they made was surprising*, *We could never make the headway that they made on the problem*, *The umbrage that they took at his remarks was understandable*, *The stand/hard line that they took was insupportable*, *The mothers of America could never take the hard line that Reagan took*, *The lip service that they paid was meaningless*, *Our dream was to get away with paying the lip service that they paid to the boss*, *The mess that he made whenever he ate annoyed us*, *We would never have made the mess that he made* and *The break that they made for freedom took the guards unawares.* They can also occur in *wh*-questions, such as *How much headway did they make? What sort of stand did they take on Kuwait? How much of a mess did he make? ?How much lip service did they pay to the boss?* and *What degree of homage did they pay to the Vietnam veterans? How much umbrage did they take at his remarks?*

3.3.2 *Mobile idioms*

In contrast, the degree of mobility of the non-transparent mobile idioms is more limited. Like the metaphors, they occur in passive sentences like those in (6) as well as raising sentences like *The beans appeared to be spilled when he opened his mouth*, *?The cat appeared to be let out of the bag*, *The ice seemed to be broken* and *After years of fighting*, *the hatchet appeared to be buried by the Israelis and Palestinians*. They also occur (albeit less readily in some cases) in *tough*-movement sentences, such as those included in the following list: *?The beans were easy to spill*, *?The cat was easy to let out of the bag*, *The ice is sometimes difficult to break at formal dinner parties*, *The hatchet is impossible for the Arabs and Israelis to bury*, *Arms were taken up against Saddam*, *Arms did not appear to be taken up against Russia*, *Arms are not easy to take up against a formidable foe*, *The rap was taken by Monica for Bill's transgressions*, *The rap seemed to be taken by Monica* and *?The rap was not difficult for Monica to take*.

However, the NP complements in these expressions do not occur as heads of relative clauses or in *wh*-questions. Thus the following only have literal interpretations: *The beans that Joe spilled caused us a lot of trouble*, *We would never spill the beans that Joe spilled*, *We couldn't break the ice that Fred broke*, *The cat that he let out of the bag got us in trouble*, *Which beans did Joe spill? How much ice did he break?* and *Which cat was let out of the bag?*[18] Similarly, in the following examples, *arms* cannot mean military activity, but only

[18] The expression *leave no stone unturned* has the same distribution as the other non-transparent mobile expressions such as *spill the beans*: *No stones were left unturned*, *No stones appeared to be left unturned by the Warren Commission* and *He declared that no stones would be too difficult to leave unturned.* The following have only literal interpretations: *Which stones did they leave unturned? The stones that they left unturned should not be tampered with* and *We left the same stones unturned that they left unturned.*

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refers to weapons: *?The arms that they took up against Saddam were ineffective*, *?The arms that we took up against Saddam were not the same as the arms that they took up against Saddam* and *Which arms were used against Saddam?* (The first two examples are questionable because the verb *take up* generally does not occur with *arms* in its literal sense [weapons].) The following are ungrammatical, or at least unacceptable in the idiomatic sense: **What kind of rap did she take?* **The rap that Monica took was really Bill's* and **?Bill would never take the rap that Monica took*.

3.4 *Double passive expressions*

Turning to the double passive expressions in (14) and (15) above, we see that *take advantage of* and *take care of* are transparent. The verb *take* occurs independently with the meanings that it has in these expressions, as do the NP elements, as illustrated by *It is always a good idea to gain some advantage over one's opponent* and *Their care of the infants was crucial to their survival*. These expressions occur in the full range of contexts that we have looked at: *Advantage seemed to be taken of Bill*, *Advantage is difficult to take of strong opponents*, *How much advantage did they take of Bill?* and *?The advantage that they took of Bill determined the outcome of the trial*, as well as *Adequate care is difficult to take of sickly infants*, *Great care seemed to be taken of the refugees by the Government*, *The care that they took of the infants was more than adequate*, *How much care did they take of the infants?*

The expression *keep tabs on* differs somewhat from these in that the NP *tabs* has a quite restricted distribution. However, this expression occurs in raising sentences and *tough*-movement sentences, and the NP element can occur as the head of a relative clause, as shown by the following: *Tabs seemed to be kept on dissenters by the FBI*, *Tabs are easy to keep on vocal dissenters* and *The close tabs that were kept on him prevented him from escaping*. *Wh*-questions involving *tabs* also occur: *?How close tabs were kept on him by the FBI?*

These expressions, however, differ from the metaphors in that they occur with obligatory PPs, whose prepositions must be specified. (For example, we say *take advantage of* and not *take advantage over*, *take care of* and not *take care with* and *keep tabs on* and not *keep tabs for*.) In addition, there are idiosyncratic restrictions on choice of determiner. (We do not say **take the advantage of* or **take some care of*.) Therefore they must be encoded as phrasal idioms in lexical entries like (17b).

In contrast, the expressions *make much of* and *make short work of* are not transparent. The NP complements in these expressions do not occur independently with their idiomatic meanings. As expected, these expressions occur in raising sentences. The following examples illustrate this: *Short work seemed to be made of that job*, *Much appeared to be made of his lack of education*. Their NP elements do not occur in *wh*-questions or as heads of

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relative clauses. This is illustrated by the ungrammaticality of *?*The short work that they made of the job surprised us*. The NP *much* in the following sentence has a different meaning than it does in the expression *make much of*: **Much that was made of his wealth was trivial*. However, these expressions differ from other mobile expressions in that they do not occur in *tough*-movement sentences. I will return to this in section 4.1.

4. Thematic composition as a necessary and/or sufficient condition for mobility

4.1 *The sufficiency of thematic composition for mobility*

We have seen that all of the expressions that have thematic composition are mobile to some extent. However, the more limited mobility of the non-transparent expressions suggests that thematic composition is not a sufficient condition for unrestricted mobility. In fact, the apparent lack of correlation between thematic composition and unrestricted mobility can be explained by independent factors that have nothing to do with thematic composition or movement per se. A number of factors tend to obscure the relationship between thematic composition and mobility. Let us first look more closely at the differences in distribution of the metaphors and the non-transparent mobile idioms. Consider the following sentences, in which the NP elements of two typical mobile idioms occur as heads of relative clauses. These sentences do not have idiomatic interpretations.

(31) (a) [The ice that we broke] was of great use to us.
(b) [The beans that Harry spilled] were not the same as the ones that we spilled.

(32) (a) We could never break [the ice that Harry broke].
(b) John almost spilled [the beans that Harry spilled].

As we saw earlier, the NP complements of the mobile idioms do not occur with their idiomatic meanings in other contexts independently of the verbs. In examples (31a, b), *ice* and *beans* are the heads of complex NPs that occur in non-idiomatic contexts, [… *was of great use to us*] and [… *were not the same as the ones that we spilled*]. Therefore these NPs, and their head nouns, can only have their literal meanings.

Mobile idioms are encoded in lexical entries that specify the content of their components. The sentences in (32) contain different NPs than the ones specified in the lexical entries of *spill the beans* and *break the ice*. Therefore these sentences can only be produced by combining the complex NPs [*the ice that they broke*] and [*the beans that Harry spilled*] with the verbs *break* and *spill*, respectively, to form non-idiomatic VPs whose interpretations are produced by normal grammatical processes. Consequently, these sentences have only literal interpretations, as do the following: *Joe couldn't break*

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[*the ice that Bill stole*] and *Harry spilled* [*the beans that were on sale at the supermarket*] as well as *Joe couldn't break* [*the glacial ice*] and *Harry spilled* [*the lima beans*].

The unacceptability of examples like (31) and (32) in their idiomatic interpretations has nothing to do with movement (e.g. relative clause formation) or the mobility per se of phrasal idioms of this type, but rather is a consequence of the limited distributions of the V and NP elements of these expressions in their idiomatic senses, and the fact that there are no grammatical processes that can apply to substitute other V or NP constituents for the components specified in their lexical entries. Because the NP complements of mobile expressions have no idiomatic meanings independent of the verbs, they can have no independent reference in their idiomatic meanings and cannot be questioned as independent constituents. Thus examples like (33) have only literal interpretations.

(33) (a) Which/how much ice was broken at the dinner party?
(b) Which/what kind of hatchet was buried by the Israelis and Palestinians?
(c) Which beans did Harry spill?

Again, the unacceptability of examples like (33) in their idiomatic senses has nothing to do with the overall mobility of these expressions, but is a consequence of the properties of *wh*-questions.

Some expressions that have thematic composition do not occur in passive sentences. One example is *get a bum rap* [receive][false blame]. The following sentence is ungrammatical.

(34) ?*A bum rap was gotten by him.

The reason for this is that the verb *get* does not readily occur in passive sentences, as examples like the following illustrate.[19]

(35) ?*A new book was gotten by Bill.

Some mobile expressions do not occur as readily in *tough*-movement sentences as in passive sentences and raising sentences. Two examples are *make short work of* and *make much of*. In other respects, these behave like standard mobile idioms. However, the following sentences are distinctly odd or ungrammatical:

(36) (a) ?*Short work is difficult to make of jobs that require skill.
(b) *Much is easy to make of Harry's newfound wealth.

The basis for an explanation of the more restricted distribution of these expressions may have to do with the fact that the NP elements *short work* and

[19] Both the analysis of *get a bum rap* and this account of its non-occurrence in passive sentences were supplied to me by a *JL* referee.

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much differ in at least two respects from the NP complements of the other mobile idioms we have looked at. Firstly, they have quite restricted distributions. Secondly, *much* does not conform to the standard NP pattern for English, and *short work* is a unique [A N] collocation. Thus the ungrammaticality of the sentences in (36) is arguably due to independent factors that have nothing to do with thematic composition or movement per se. However, I cannot explain why *tough*-movement sentences should be less tolerant of such expressions than passive and raising sentences.

There are no cases of expressions that have thematic composition but exhibit no mobility. I therefore conclude that thematic composition is a sufficient condition for mobility, the extent of which may be limited by independent factors.

4.2 *The necessity of thematic composition for mobility*

Nunberg et al. discuss an observation by Ackerman & Webelhuth (1993) and Schenk (1992) that in German and Dutch at least some idioms that in the proposed analysis lack thematic composition display syntactic mobility. Such data suggest that thematic composition is not a necessary condition for mobility. Two German examples are *den Vogel abschiessen* [steal the show] (literally: [shoot off the bird]) and *ins Gras beissen* [bite the dust (presumably [die])] (literally: [bite into the grass]). These expressions, like their English counterparts, lack thematic composition. However, they occur in examples like the following:

(37) (a) Hans hat den Vogel abgeschossen.
'Hans has stolen the show.'
(Lit: 'Hans has the bird shot off.')
(b) Den Vogel hat Hans abgeschossen.

(38) (a) Er hat ins Gras gebissen.
'He has died.'
(Lit: 'He has into the grass bitten.')
(b) Ins Gras hat er gebissen.

Nunberg et al. (p. 513) point out that these expressions do not occur in passive sentences, and observe that the above word order variations 'seem more like scrambling phenomena', which differ formally from the syntactic operations that I have discussed in this paper. This distinction can easily be incorporated into any statement of the correlation between thematic composition and mobility, and examples like these support no argument against the necessity of thematic composition for mobility. (I find this preferable to the alternative analysis of these data discussed by Nunberg et al. (p. 514).)

Additional data that, at first glance, appear to be more difficult to explain comprise expressions that lack thematic composition but nevertheless exhibit

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limited mobility, occurring in sentence types that I use as a diagnostic for mobility. One example is *eat humble pie* [to be humiliated/to be made to admit one's faults], which occurs in the following sentence:

(39) Humble pie is never easy to eat.

An expression that exhibits similar behavior is *eat one's words* [retract] [something that one has said]. This expression lacks thematic composition, and is of the same type as *screw the pooch* [bungle][a task]. In spite of this, the sentence in (40) is acceptable.

(40) One's words are never easy to eat.

However, when we look more closely at additional sentences that contain these expressions, we see that, for both, sentences of the same structural type as (39) and (40) have only literal interpretations, as we would expect. Such sentences are shown in (41).

(41) (a) Humble pie is impossible/difficult to eat.
(b) ?One's words are often impossible/difficult to eat.
(c) ?Bill's words were impossible/difficult for him to eat.

Example (41a) is relatively acceptable in its non-idiomatic sense because *humble pie* sounds like something that is edible, although few people know what it is.[20] Examples (41b, c) are odd because words cannot literally be eaten. Moreover, neither *eat humble pie* nor *eat one's words* occurs in the other syntactic contexts that I use as a diagnostic for mobility. Thus the following passive and raising sentences have only literal interpretations, as the analysis predicts.[21]

(42) (a) Humble pie was eaten by everyone at the conference.
(b) ?Humble pie seemed to be completely eaten by all of the participants in the demonstration.

(43) (a) ?Bill's words were reluctantly eaten by him.
(b) ?Bill's words seemed to be eaten by him without hesitation.

Furthermore, the NP complements of these expressions do not occur as heads of relative clauses, nor do the expressions occur in *wh*-questions, as illustrated by the following sentences that do not have idiomatic interpretations.

[20] The literal definition of *humble pie* according to the *American Heritage Dictionary of the English Language* (Morris 1969 edition) is 'a pie made from the edible organs of a deer (*humble* ultimately from Latin *lumbulus*/*lumbus* (loin))'.

[21] It might be argued that the oddness of the examples in (43) is due to the fact that they involve cross-over violations. However, the following passive sentences, of the same type, are acceptable:

(i) Bill's dinner was reluctantly eaten by him.
(ii) Bill's dinner was eaten by him without hesitation.

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(44) (a) The humble pie that Bill ate was not the same as the humble pie that we ate.
(b) How much humble pie did Joe eat?
(c) Which of Bill's words did he eat?
(d) The words that Bill ate were spoken in haste.

We see, then, that examples like (39) and (40) at best provide inconclusive evidence against the hypothesis that thematic composition is a necessary condition for mobility.

Jackendoff, after rather tentatively concluding that 'having a decomposition is a necessary but not sufficient condition for mobility of idiom chunks', refers to Abeillé (1995) 'for further complications that I do not pretend to understand' (p. 170). Abeillé (1995) claims, among other things, that there is a large set of French idioms that are mobile in spite of the fact that they are non-compositional (and thus in my analysis do not have thematic composition). Her conclusions are based on a huge corpus that contains some 2200 such expressions, of which she cites only a small number. Of the expressions that she quotes, the following plausibly lack thematic composition: *casser sa pipe* [break one's pipe [die]], *prendre une veste* [take a jacket [come a cropper]] and *casser du sucre sur X* [break sugar on X [put the blame on X]]. She offers the following as examples of the mobility of two of these expressions (pp. 18, 19). The English translations and glosses are hers.

(45) (a) C'est une sacrée veste que Paul a prise hier.
'John [sic] really came a cropper yesterday.'
(Lit: 'It is a real jacket that John [sic] took yesterday.')
(b) Combien de vestes a-t-il prises hier?
'How many times did he come a cropper yesterday?'
(Lit: 'How many jackets did he take yesterday?')
(c) C'est sur ton dos que Jean a cassé du sucre.
'It is on you that Jean put the blame.'
(Lit: 'It is on your back that Jean broke sugar.')

In example (45c), the constituent that has been moved is the PP, and not the V or NP element of the idiom. This example is analogous to the following English example, in which the object of the preposition in a fixed idiom has been moved: *It was Mary's sister that everyone made fun of*. Abeillé offers no examples illustrating the mobility of *casser sa pipe*. She claims that the non-occurrence of this expression either in cleft sentences and questions like the above or in passive sentences is due to factors independent of its lack of composition.

Abeillé cites the following additional expressions (accompanied by her glosses and translations) that she claims are 'opaque' but nevertheless occur in passive sentences (p. 24).

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(46) (a) prendre le taureau par les cornes [take the bull by the horns]
(b) mettre les bémols [attenuate (lit: put flat notes)]
(c) avaler des couleuvres [swallow an affront (lit: swallow snakes)]
(d) battre le briquet [strike a light]
(e) apporter de l'eau au moulin [be grist for the mill (lit: bring water to the mill)]
(f) mettre le feu aux poudre [light the powder keg (lit: set fire to the powder)]
(g) faire un carton [hit the bull (lit: make a card)]
(h) faire du foin [make waves (lit: make hay)]

On closer inspection, however, it can be seen that, with the possible exception of (46b, e, g), these expressions, in fact, have thematic composition.

In the appendix to her paper (pp. 39–40), Abeillé lists the expressions given in (47), below, but provides no examples to illustrate their syntactic flexibility. The English glosses are hers.

(47) (a) jeter l'éponge
'throw in the sponge'
(b) mettre de l'huile dans les rouages
'facilitate something'
(Lit: 'put grease on the cogs')
(c) mettre la main à la pâte
'lend a hand'
(Lit: 'set one's hand to the dough')
(d) être (pris) entre le marteau et l'enclume
'be caught between the devil and the deep blue sea'
(Lit: 'be caught between the hammer and the anvil')
(e) séparer/trier le bon grain de l'ivraie
'separate the wheat from the chaff'
(f) (re)serrer les boulons
'to be harder'
(Lit: 'to tighten the bolts')

The expressions in (47d, e) have thematic composition. The remaining four, arguably, do not. The proposed analysis thus predicts that the expressions in examples (47a, b, c, f) should not occur in passive sentences. Judgements obtained from three French speakers provide tentative support for this prediction. The following were judged to be questionable or ungrammatical in their idiomatic interpretations:[22]

(48) (a) ??L'éponge a été jetée par Jean.
(b) ?L'huile a été mise dans les rouages.

[22] I wish to thank Claudine Noel, Marie-Laure Vuaille and Marine Simplot for their help with the French data.

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(c) *La main a été mise à la pâte.
(d) *Les boulons ont été serrés.

Although most of Abeillé's examples do not argue against the necessity of thematic composition for mobility, there remains a residue of data, such as (45a, b) and the mobility of (46b, e, g), that I cannot explain. In light of this, and the fact that these examples may be representative of a much larger class of expressions, I leave open the question of whether thematic composition is a necessary condition for mobility.[23]

5. Summary and conclusions

The proposed analysis replaces Jackendoff's (1997) principle of metaphorical semantic composition, as well as the principle proposed by Nunberg et al. (1994), with the principle of thematic composition. In addition, it introduces a property of transparency that distinguishes two types of mobile expression, metaphors and mobile idioms, a distinction discussed neither by Jackendoff nor by Nunberg et al. This analysis accounts for all of the relevant data discussed by them as well as additional data that their analyses are unable to explain. (All the relevant data are listed in the appendix.)

The properties of thematic composition and transparency interact to define three classes of VP idiom: fixed idioms, mobile idioms and metaphors. Fixed idioms and mobile idioms must be encoded as phrasal idioms in lexical

[23] The following expressions from Abeillé (1995) behave as predicted by the proposed analysis: *briser la glace* [break the ice], *rendre justice à NP* [render justice to NP], *prendre garde à NP* [be careful about NP] and *faire état de NP* [mention NP]. The first two expressions have thematic composition and are mobile. This is illustrated by the following (Abeillé's examples (14) and (15), respectively):

(i) La glace a été brisée par l'arrivée de ce joyeux drille.
'The ice was broken by the arrival of this fool.'
(ii) Justice a été rendue à ce jeune homme.
'Justice was done to this young man.'

According to Abeillé, the last two expressions, *prendre garde à NP* and *faire état de NP*, do not passivize. These expressions, in the proposed analysis, do not have thematic composition.

An additional claim by Abeillé is that 'subject to subject raising … applies to all idiomatic subjects' (p. 19). She offers the following examples to illustrate this:

(iii) Des ailes semblent pousser à Paul.
'Paul seems to become ambitious.'
(Lit: 'Wings seem to grow on Paul.')
(iv) La page semblait devoir être bientôt tournée.
'The page seemed to be likely to be turned.'

The expression in (iii) appears to be a sentential idiom analogous to the English sentential idiom *The shit hit the fan*. The subjects of such idioms are generally mobile, as in *The shit seemed to hit the fan*. The expression in (iv), *tourner la page* [turn the page], has thematic composition.

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entries something like those proposed by Jackendoff, and shown in (3a, b). Metaphors need not be encoded in single lexical entries as phrasal idioms. The collocation properties of their V and NP components can be specified in the lexical entries of the latter.

All expressions that have the property of thematic composition are mobile to some extent, and with the possible exception of certain of the French idioms, all expressions that lack the property of thematic composition display, at most, severely limited mobility.

APPENDIX

The expressions discussed in the paper, and additional ones from Jackendoff (1997) and Nunberg et al. (1994), are listed below.

I. *Fixed idioms*

catch hell	keep one's cool	make no bones about
drop a bomb	kick the bucket	make use of
eat humble pie	kiss ass	raise hell
eat one's words	lose one's cool	screw the pooch
fly the coop	lose one's mind	shoot the bull
get off one's ass	make a face	start the ball rolling
give the lie to	make a fool of	step on someone's toes
give (someone) the sack	make a great show of	take a piss/shit/bath
go to heaven	make an ass of	take hold of
grasp the nettle	make fun of	
hit the hay	make light of	

The following fixed idioms, shown with their interpretations, are not discussed in this paper but may be found in Jackendoff (1997) and Nunberg et al. (1994).

fart/belch one's way*	[proceed while farting/belching]
make a (real) hit (with X)	[favorably present oneself]
make one's way*	[proceed]
make/score points with	[favorably impress]
take a look	[look/glance at]
take a rain check	[put off until a later date]
take note of	[note]
take stock	[evaluate][one's position/assets]

(*These idioms occur in sentences like: *John made his way to the door*, *Fred belched his way out of the restaurant*, *Bill farted his way past the distinguished guests*.)

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II. *Mobile idioms*

break the ice	make short work of	spill the beans
bury the hatchet	let the cat out of the bag	take the rap
leave no stone unturned	make much of	take up arms

The following idiom, from Nunberg et al. (1994), is not discussed in this paper and appears here with its interpretation:

take a dim view of [assume/adopt][a feeling of disapproval]

III. *Metaphors*

add fuel to the fire	make a pitch	swallow the line
beat swords into plowshares	make a play	take a back seat
draw the line	make an exception**	take a chance**
find skeletons in one's closet	make an impression**	take a hard line
get a bum rap	make arrangements**	take a stab
jump on the bandwagon	make headway	take a stand
keep tabs on	make progress	take action**
lay (down) a barrage	open the floodgates	take advantage of
lay down a smoke screen	pay attention	take an interest**
make a break	pay homage	take care of
make a fuss**	pay lip service	take umbrage
make a mess**	pull strings	

(**From the standpoint of their semantic properties, these *make*- and *take*-expressions are not, strictly speaking, metaphors since their NP complements have their literal interpretations. My remarks in footnote 15 apply here. I have included them primarily because they appear in Nunberg et al.)

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