Metaphoricity is Gradable

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Abstract

The relationship between metaphor and literal meaning is often discussed in terms that imply that the distinction is absolute: a statement either is a metaphor or it is not. This paper adduces evidence in support of analysis of metaphors by reference to stereotypical usage, and concludes that some metaphors are more metaphorical than others. At the present time, sharply defined boundaries of categories in linguistics are being questioned in the light of empirical evidence, and metaphor is no exception. Theories that invoke partial or full matching to 'best examples' of categories – norms or prototypes – seem to explain linguistic phenomena more adequately than theories that invoke necessary conditions and sharp distinctions. The question then arises, how to handle fuzzy sets, to which an empirically well-founded theory of metaphor can itself offer useful answers. Two detailed case studies are offered as a contribution to the study of metaphor in this context. Against those who argue that metaphor is merely a diachronic phenomenon, the paper shows that metaphor is a useful synchronic, empirical semantic classification, although its boundaries are fuzzy and a distinction must be made between dynamic metaphors (ad-hoc coinages) and conventional metaphors.

Introduction

In Hanks (2004) I proposed that the distinction between conventional metaphors and literal meanings is less important than the distinction between dynamic metaphors and conventional metaphors. Dynamic metaphors are coined ad hoc to express some new insight; conventional metaphors are just one more kind of normal use of language. I pointed out that at least some metaphors are associated with particular sets of syntagmatic realizations, which contrast with the patterns of other, more literal uses of the same words. In that paper, I showed that one of the most basic ways of realizing a metaphor in English involves use of a partitive or quantifying *of* construction. The metaphoricity here is conventional, i.e. it represents a normal (though secondary) use of the words

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concerned. In literal contexts, ***storm*** denotes a kind of atmospheric phenomenon; ***torrent, mountain, lake,*** and ***oasis*** denote kinds of geographical locations. But all these words have regular secondary patterns of use which (unlike other kinds of secondary meaning), can be usefully classed as metaphorical. They activate what Max Black (1962) called 'resonance' between the literal meaning potentials of two words. ***A storm of protest, a torrent of abuse, a mountain of paperwork, a lake of blood, an oasis of sanity*** are conventional metaphorical patterns, which can be recognized in corpora and contrasted with other uses of these words that are not metaphorical. When the metaphor is dynamic (i.e. when it is coined ad hoc, e.g. "*a storm of stars across the heavens*"), we can say that the conventional partitive *of*, signalling a metaphor, is being exploited dynamically. Needless to say, the word *of* has many other uses besides signalling a metaphor and there are, of course, many other ways of forming metaphors beside using a partitive *of*. However, metaphorical use of *of* features quite prominently in English, and it provides a good starting point for an investigation of syntagmatic aspects of metaphor.

Are Metaphors Secondary Meanings of Words?

There is a strong folk notion of metaphor as a semantic entity that is intuitively satisfying, though people still argue over its definition. It is hard to define metaphor, but easy to point to examples of text fragments that almost everyone agrees are metaphorical. To take one example, Max Black (1962) cites Wallace Stevens's metaphor "Society is a sea." Everyone knows that this is a metaphor, with the exception of a few hardy systemic linguists who deny the very existence of metaphor or who assert that metaphor is nothing more than a diachronic concept. If there is general agreement that at least some metaphors can be easily recognized in text, then it is up to linguistic theoreticians to say what conditions determine metaphoricity.

More difficult to pin down is the truth-conditional view that all metaphors are false, like lies, and that metaphor therefore has nothing to do with semantics[2]. Davidson (1980) says: "Metaphors mean what the words, in their most literal interpretation, mean, and nothing more. [...] The central mistake [...] is the idea that a metaphor has, in addition to its literal sense or meaning, another sense or meaning." He asserts or takes it for granted that words have literal meaning The present paper, developing a theme first mentioned by Fillmore (1975), denies that words, strictly speaking, have meaning at all. It takes the view expressed in the Theory of Norms and Exploitations (TNE; Pustejovsky and Hanks 2002, Hanks 2004, Hanks forthcoming) that words only have meanings when they are put into context. In isolation, they have meaning potentials, which are composed of any number of rather fuzzy semantic components, some or all of which are activated when the word is used (Hanks 1994). The term 'literal meaning of a word' is nevertheless useful, provided that not too much theoretical weight is put on it. It can be regarded as a shorthand term for those aspects of a word's meaning potential that are activated when it

[2] Metaphorical interpretations are relegated by Davidson from semantics to pragmatics. To do this is to overload the semantic notion of literal meaning with conditions that very few normal discourse utterances fulfill.

is used in its most normal contexts. Thanks to the availability of large corpora and statistical tests such as Mutual Information (MI; see Church and Hanks 1989), normal contexts can now be measured. It is therefore possible to say that conventional metaphors are secondary senses insofar as they activate only certain elements of the meaning potential of at least one of the words involved.

Not all secondary senses (uses) of words are metaphors: indeed, very few are. According to dictionaries, the word ***realization***, for example, has three main senses: 1) a sudden or growing awareness of something; 2) the act of fulfilling or achieving some plan or concept; 3) the act of converting an asset into money. As far as I know, no one has ever proposed that any of these senses is a metaphorical exploitation of either of the other two; indeed it would seem bizarre to attempt to do so. Truth conditionalists claim that there is a basic, underlying meaning 'to make real', uniting all three senses, and may then argue that the way the word is actually used is a matter of pragmatics not semantics, but this seems unhelpful when it comes to understanding the meaning of words in texts.

There is a vast literature on metaphor, but the writers do not always state clearly what they think a metaphor is. A standard view, following Black (1962) and Lakoff and Johnson (1980), is that metaphor is an interaction between two concepts which enables us to interpret the one in terms of the other. Thus, a storm of protest is not only a lot of protest, but a lot of protest perceived in terms of a violent atmospheric disturbance. Lakoff and Johnson's basic thesis about metaphor is that its function is to enable us to interpret concepts (especially abstract concepts) in terms of familiar, everyday cognitive experiences. This is broadly satisfactory, though we might be tempted to substitute 'perceptual experiences' for 'cognitive experiences', and common sense forces us to acknowledge that the 'everyday experience' in question is that of the language community at large, not each individual. (Even people who have never visited an oasis know what oasis is supposed to be like, stereotypically, and can use and interpret metaphors that exploit this literal notion.)

Which Words are used to make Metaphors, and How?

Not all words can be used metaphorically. It is hard to imagine what a metaphorical use of the noun ***idea*** or the verb ***imagine*** would be like, and even harder to think of one involving nouns such as ***alteration*** or ***quantity.*** Abstract nouns are not normally (if ever) used to make metaphors. A first shot at distinguishing word uses that are conventional metaphors from other secondary senses would take account of at least the following parameters:

> **1. Semantic class.** Particularly productive sources of metaphor are nouns denoting types of physical location (***mountain, desert, jungle, sea, ocean, torrent***), including types of locations whose physical existence is debatable (***heaven, hell***), and nouns and verbs denoting certain types of event (***storm, attack, drown, burn***). An empirically well-founded classification of the nouns, adjectives, and verbs of a language according to the degree of their participation

in metaphorical constructions would be a valuable addition to the literature.

2. Salient cognitive (or perceptual) features. Words that are readily used to make metaphors usually denote some class of entities with at least one striking salient cognitive feature – in particular the way that it strikes human perceptions: mountains are high, deserts are dry, jungles are impenetrable, seas and oceans are vast expanses; heaven is nice, hell is nasty; storms are violent, attacks are damaging, drowning is slow death, burning is quick destruction, orgies are unrestrained. This salient cognitive feature is often the focus for a cluster of contributory but less salient features.

3. Resonance. Unlike other secondary senses, secondary senses that are classed as metaphors 'resonate' (see Black 1962) with some other term (the primary subject) in the immediate context in a text. The reader interprets the primary subject in the light of the salient features of the secondary subject.

4. Collocations. Resonance is not restricted to the term that explicitly realizes the secondary subject. Terms that collocate significantly with the secondary subject may also be activated, to create a veritable symphony of resonance, whether or not they are explicitly present in the text. This seems to be the foundation of extended metaphors, as well as a good reason for objecting to the dissonance of mixed metaphors.

5. Register and domain. It may be that words normally used in a highly technical register are rarely used metaphorically. Thus, there is no evidence that ***appendicitis***, a medical term, is ever used metaphorically, whereas ***pain in the gut*** is.But terms change register over time. Often, once a technical term has been accepted into the general register, it becomes available for metaphorical exploitation. An interesting contrast in this respect is presented by the cognate pair of English words ***orgy*** and ***orgasm***. ***Orgy***, whose basic meaning is "a wild party, especially one involving excessive drinking and indiscriminate sexual activity" (NODE), is often used metaphorically, as in 1 and 2 below. On the other hand, there are no metaphorical uses of ***orgasm*** in BNC. (The adjective ***orgasmic*** is a different matter: it is often used as a kind of vague intensifier, as in 3, which comes from a text referring to shoes). No doubt it is theoretically *possible* to use ***orgasm*** in a metaphorical way, but the point is that it is not *normal* to do so. This is because the word is still generally perceived as a technical term belonging to the domain of physiology, even though nowadays it is in regular general use.

1. an ***orgy*** of denunciations and evasions of responsibility.
2. a veritable ***orgy*** of statistical analysis.
3. an airy whirl of ***orgasmic*** delight.

6. Frequency. Metaphorical uses cannot be too frequent. Frequency breeds literalness. Note that the reference here is to absolute frequency, not to comparative frequency within uses of the word in question. A ***torrent of abuse***

may still be perceived as metaphorical, even though this particular pattern (torrent + of + [[Language]]) is no less common than the use to denote raging flow of water in a watercourse. This perception of metaphoricity is possible because the word itself is comparatively infrequent.

The details of these parameters are not yet worked out, and it must be acknowledged that some cases are undecidable. Consider the word ***area,*** for example. Is the use of ***area*** in 5 a metaphorical exploitation of its 'normal' or 'literal' use as in 4, or should these be categorized as two separate senses? Certainly, it is possible and maybe even helpful to perceive a group of research activities in terms of a district or neighbourhood, which argues in favour of the metaphor view, but against that, the use of ***area*** to denote an abstract domain is very well established, very frequent, and so the cognitive salience of the resonance is very weak.

4. Both youths stated that they were from the Nottingham ***area***.
5. This therefore appears to be a very fruitful ***area*** for research.

Gradability

The argument in this paper is that some metaphors are more metaphorical than others. In the most metaphorical cases, the secondary subject shares fewest properties with the primary subject. Therefore, the reader or hearer has to work correspondingly harder to create a relevant interpretation. At the other extreme, the more shared properties there are, the weaker the metaphoricity. Let us look at an example. In 6 the primary subject, ***railway tracks,*** shares the property of physical location with the secondary subject, ***desert,*** so that resonance between the two is more readily established than in 7 and 8, where the primary subject is an abstract quality. Thus, 7 and 8 are more metaphorcial than 6. The semantic resonance of 7 and 8 is greater than in 6, because of the greater semantic distance between the two concepts.

6. A desert, that's what it is – a ***desert*** of railway tracks.
7. … seeking to bring some awareness of spirituality to those mostly brought up in a spiritual ***desert***.
8. I walked in a ***desert*** of barren obsession.

In 8, resonance is amplified by the metaphorical use of the verb ***walk*** and by the explicit application of the adjective ***barren*** to the primary subject, ***obsession,*** even though in English at large ***barren*** is more associated with ***desert*** (there are 8 hits for 'barren+desert' in BNC) than with ***obsession*** (only this one hit in BNC).

Metaphorical interpretation evidently does not depend on semantic frequency or preference matching. Thus, it seems intuitively obvious that example 8 is a metaphor about someone's state of mind, not a statement about the physical condition of a particular desert location. However, it contains three terms associated with physical locations and only one associated with an abstract quality, so why do we not conclude

that the noun ***obsession*** is being used metaphorically? The most plausible answer is that abstract nouns such as ***obsession*** cannot be used metaphorically.

Case Study 1: *Sea*

There are 11,565 occurrences of ***sea*** in the British National Corpus. Within this vast mass of data, I tried to find examples that, prima facie, are clearly metaphorical, both by random spot checking and by systematic searching for known idiomatic patterns. The random spot checks were not very successful. I read thousands of lines without seeing a single metaphor. Systematic searches, looking for particular structures, e.g. *a sea of N* and *N PREP … sea*, were more productive.

BNC contains 301 metaphorical uses of the construction *'a sea of [NP]'*. It is well known (see e.g. Sinclair 1991) that, in the pattern *N1 of N2* ,where N1 is a partitive noun or a quantifier, it is not the semantic head. This is true of traditional partitive constructions such as *a piece of wood* and *a slice of bacon* and traditional quantifiers such as *a lot of nonsense* and *a great deal of hope*. Is it also true of metaphorical partitives and quantifiers such as *a torrent of abuse* and *a sea of faces*? In most cases, the answer seems to be yes. Faces and people can ***watch*** something, but seas don't. Hands in a classroom can ***shoot up***, but seas don't. You can ***shake hands with*** people, but not with a sea. Therefore, the head noun (semantically) of 9, 10, and 11 is not ***sea***, but ***faces, hands,*** and ***people*** respectively.

9. She glanced up with dread and peered into the ***sea of faces*** that was watching her with curiosity.

10. "How many people think this project ought to be stopped right now before it goes any further?" Immediately a ***sea of hands*** shot up.

11. He … leaped down into the crowd and shook hands with ***the sea of people*** almost engulfing him.

An apparent exception is 12, where one might expect 'burned' rather than 'drowned'.

12. … drowned in the surrounding ***sea of fire***.

However, 12 is not as clear-cut as at first sight appears. On closer examination, we find that it is in a discussion of a disaster on a North Sea oil platform, in which the oil spilling into the surrounding sea caught fire. So the sea of fire here is literal—or maybe it would be more correct to say that a standard metaphor is being reverse-exploited to form a literal meaning. This property of fuzziness, once believed to be a defect of natural language, is now seen as an essential design feature, enabling speakers to capture precisely the right degree of vagueness and indeterminacy that is relevant, as well as to maintain discourse fluency.

The noun in the N2 slot is not only the head of the phrase but also the primary subject of the metaphor. The noun in the N1 position (in this case sea) is being used metaphorically and, in Max Black's phrase, 'resonates' with the primary subject. A wide range of semantic categories of N2 are found resonating with ***sea***. These include mass substances (in particular, *mud* and *blood*), physical objects (in particular, *people, faces, heads,* and *hats*), abstract nouns, and even events. The selected examples in Table 1 (20% of the total hits) are arranged in order of metaphoricity, with a view to showing the gradability of the metaphor. The semantic feature of ***sea*** that is exploited systematically in these metaphors is its vastness. All these metaphors share the property of being perceived as a vast expanse of something that is not salt water, and not necessarily liquid. (The expanse may in reality be quite small – it's the perception that matters.) If N2 denotes a liquid, the metaphor is less metaphorical than otherwise, because of course the sea, too, is liquid. In addition to being liquids, *mud, blood,* and *mutton broth* share with the literal sea the property of being liquids and mass substances, though in each case the "vast expanse" is a considerable overstatement compared with real seas such as the Baltic, the Caribbean, or the Caspian. Exaggeration is a typical feature of metaphor: the secondary subject (***sea***) is, as it were, perceived from a far distance.

When the primary subject denotes an abstract entity or an event, the metaphoricity is greater, because there are no shared features other than a postulated (and usually exaggerated) vast expanse. It is also noteworthy that the metaphor is extended much more often (with words and phrases such as ***drown, adrift, swim, fish, boats, turn turtle, go down with all hands, anchor, plunge in, sail***) in the most highly metaphorical uses than in the less metaphorical ones. Some extended metaphors continue to be exploited for many sentences after the initial resonance has been established. More work will b e needed to establish whether this inverse relationship between extended metaphors and high degree of metaphoricity is systematic in the language.

This is as good a place as any to mention the intertextuality of metaphor. Metaphors do not merely exploit the literal semantics of two terms: they also exploit references to key phrases in the artistic literature of the language. Some metaphors coined by poets and other writers become established points of reference for subsequent users of the language. The phrases "the sea of faith" and "a sunless sea" in the examples in Table 1 exploit the whole tenor of the poems, by Matthew Arnold and Samuel Taylor Coleridge respectively, in which these phrases were first used.

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sea of [[Substance]] (76 hits)

s incomplete entrance steps and the sea of mud and rubble that surrounds the
 living in squalor, surrounded by a sea of mud, because a council ca n't reho
enty five she has to wade through a sea of mud to get to her council home at
f 1857 which had been put down in a sea of blood. Hang without mercy, hang
 further and further into a boiling sea of mutton broth. In the kitchen, with
shores of an island surrounded by a sea of acid. At the island 's summit is t
houses we passed were floating in a sea of snow. There was so much snow that
most wonderful I can recall, as the sea of cloud broke up only on gaining the
ation or drowned in the surrounding sea of fire. Such disasters with heavy lo
rying to find her children. It 's a sea of fire. Everyone has gone. Children
te flowers like tiny sails amidst a sea of dark green glossy foliage. Spikes
lms reaching gigantically above the sea of foliage. She heard her name again,
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ntry to Crane Beach wound through a sea of sugar cane in undulating waves ten
left onto it, through an undulating sea of purple heather up to Golden Height
re like coral reefs looming above a sea of hostile jungle. Kefalov bulged lik
e a sensation like drowning under a sea of the sweetest, stickiest honey. Sev
ng there, surrounded by a veritable sea of paper; memoranda, notes, bills, le

sea of [N-PLURAL[PhysObj]] (121 hits)

he platform, she looked down upon a sea of faces, rows and rows of black-stoc
time out she had seen nothing but a sea of faces, so hard had she been concen
azing how welcome they were in that sea of faces. And they too seemed glad to
d up with dread and peered into the sea of faces that was watching her with c
ht his eye, waved at him across the sea of heads, abandoned him to the tide:
 see him, bobbing his way through a sea of heads. As soon as she saw him look
go home # Clasper looked out at the sea of open mouths which chorused against
it goes any further." Immediately a sea of hands shot up, waving, and Gerrard
acher 's questions are greeted by a sea of waving hands and shouts of the tea
 the Princess of Wales. There was a sea of dinner-jacketed dignitaries and a
al observer team, Ortega parted the sea of cameramen and journalists and appr
nto focus, one is aware of a rising sea of people and their vehicles which de
 is fine this even creates a waving sea of people; many bidding, many just en
 the crowd and shook hands with the sea of people almost engulfing him. The b
ly along the island 's roads amid a sea of obese Americans on mopeds. Can it
o hear him; the crowd was a bobbing sea of black and white cowboy hats. The f
ts of old clothes. The square was a sea of flat caps, all tilted upwards towa
 in the open under a gaily-coloured sea of umbrellas. The Queen also stood br
d buses blast their way through the sea of bicycles by liberal use of their h
ossom, and over in Tingle 's Wood a sea of bluebells rose out of the morning
orm that was surrounded by a frothy sea of pink and white azalea plants. She
grant disappeared into a bottomless sea of cigarettes and beer with hardly en
 command modules jutting out over a sea of computer screens and flashing ligh
plunged irretrievably into the vast sea of photographs for raw material. Down

sea of [[Colour | Light]] (19 hits)

ine # St Patrick 's Cathedral was a sea of blue for the funeral. It was a Pol
p, mild winters. The gardens were a sea of dripping green, the roses and late
football 's Premier Division amid a sea of red and white yesterday. Middlesbr
mpionship, when Twickenham became a sea of gold and black and when London bec
airo. We found the courtyard a wide sea of light. At midday we climbed the mi
on and a high wind. The night was a sea of darkness and the unknown. The wind

sea of [[Abstract]] (50 hits)

          Claudia was drowning in a sea of sensations so strong that she want
ir brightest students drowning in a sea of output. The second stage in the ha
 In the end we are all drowned in a sea of schmaltz. Warner Home Video, 15, &
cro-economists would be adrift in a sea of unorganized data # Samuelson and N
y Unix boxes each year. Adrift in a sea of virtual reality # Little more than
ed not only to be able to swim in a sea of uncertainty but also to resist pan
swam like a blind earless fish in a sea of sedation, where there was no time
urring in an island set in a leaden sea of even greater misery, in a world wh
 burnt my boats, turned turtle in a sea of heartbreak or gone down with all h
ines provide an anchor in the rough sea of life, who does not switch his alle
eone who had plunged fully into the sea of life than with someone who had sto
ore tipping them over into an angry sea of debt. Making your fortune while yo
ts, after many hours in the sunless sea of bafflement, apology and flopsweat,
annel, thought of Sophocles and the sea of faith that had since receded. I th
hich its comparative isolation in a sea of illiteracy gives it in earlier epo
ell him his secrets, get rid of the sea of misery he felt bathing his body, d
se receded, leaving them alone in a sea of passion. His fingers dispensed wit
 released, leaving her rocking on a sea of pleasure of such width and depth t
ation like islands of richness in a sea of poverty. Moreover, by adopting too

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 hance and drifted into the Sargasso Sea of EFL work. Yet here I was, in sedat

sea of [N-PLURAL[Event]] (16 hits)

mic historians are cast adrift in a sea of events: they possess the potential
 were like a peaceful island in the sea of activity that constituted the cent
d flick her tail and swim away in a sea of lies -- or seeing her pop like a b
ingleton chuckled. All sailing on a sea of Italian misadventures." End of She
e 'islands of conscious power' in a sea of market transactions. This idea of
, you would not only wade through a sea of wrongs, but through hell itself, t
an nature above that which it is, a sea of flowings and ebbings, and of all m
dom was preferable to the deep blue sea of reform. Even in 1856, however, the
ve avoided that almost overwhelming sea of troubles which resulted from harml
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TABLE 1: "sea of [NP]": selected examples arranged by degree of metaphoricity

In addition to these metaphorical uses of 'sea of', there are three occurrences in BNC (13-15) of the expression 'a sea of water'. This apparently pleonastic expression deserves closer examination. It is what Hanks (1999) calls a "nearly literal metaphor".

13. this would be very expensive: a mere K537,000 had been allocated for capital expenditure —"just a drop in ***a sea of water***".
14. The idea … was to trap German forces with Americans in front and ***a sea of water*** behind them.
15. But he floated into the midst of ***a sea of water*** stretching as far as he could discern on every side around him.

13 is merely a variant wording of the idiom 'a drop in the ocean'; the context clearly has nothing to do with water. In 14 and 15, the sea of water does indeed contain water, but with this difference: a sea (literal meaning) is a permanent location. In 14 and 15, the sea is temporary, the result of flood water (in 14, it is the intended result of a bombing raid on a dam in wartime). This corresponds precisely to the semantics of the metaphor 'a torrent of water', as in 16 and 17.

16. They hung on until the battering ceased, then ran, slithering in the sluicing ***torrent of water*** until they reached the hatch that led below decks.
17. A ***torrent of flood water*** swept through a North Wales hospital last night when a freak rain storm brought havoc to parts of North Wales.

In each case, the *torrent of water* is not where it ought to be: in a watercourse. The semantics of the literal meaning of both words (***sea*** and ***torrent***) requires that the denotatum must a) contain water and b) be in a particular location. Displacement of the LOCATION component allows the writer to exploit the WIDE EXPANSE component of ***sea*** and the FORCEFUL FLOW component of ***torrent***, but then if the expanse or flow really does consist of water, it seems to be necessary to re-state this explicitly in order to indicate that some other semantic component or property is being set aside in order that the word may be exploited metaphorically.

Metaphor, Phraseology, and Idioms

Before leaving ***sea***, we can take a look at another conventional phrase in which this word participates, which will serve to illustrate the relationship between metaphor, phraseology, and idioms. There are 763 occurrences of the expression ***at sea*** in BNC. The vast majority of them denote, quite literally, the situation of being a ship (or people on board a ship) somewhere far from land. The conventionality of the phraseology is important and not open to a reductionist interpretation: the preposition ***at*** is not being used in any of its conventional senses. A more logical compositional expression would be ***on the sea***. This phrasing is indeed found, but not with the same meaning. ***At sea*** is used to denote the location of a ship or of people as sailors or voyagers; ***on the sea*** is used much more narrowly, typically to denote a physically contiguous relationship between a physical object (which may, of course be a ship) and the surface of the sea. The second thing to notice about the conventional expression ***at sea*** is the absence of a determiner. ***At the sea*** is also found, though rather rarely; but again, with a different meaning. ***At the sea*** denotes the situation of people on land beside the sea: it is synonymous with ***at the seaside***.

The distinctions discussed in the previous paragraph have nothing to do with metaphor, for metaphor is defined as a resonant semantic relationship between a primary subject and a secondary subject, and there is no resonance between the sea and the people or things that are at the seaside, on the sea. The previous paragraph is about phraseology, not metaphor. However, ***at sea*** may be different. Should it be classified as an idiom? This is to some extent a matter of taste. Typical, best-example idioms (for example, ***keep one's head above water***) are frozen phrases that were originally metaphors (even when, as in the case of the much-quoted example ***kick the bucket***, the original metaphor is lost, obscure, or disputed). There is nothing metaphorical about the most normal uses of ***at sea***, so it is best to class it as a phraseological phenomenon rather than as an idiom.

The expression ***at sea*** has, however, given rise to an idiom, the canonical form of which is ***all at sea.*** In this form (with ***all***) it never means voyaging on the ocean. It means baffled or confused. Why is this classified as an idiom, not phraseology? The main reason is that it is an expression consisting of more than one word, having a canonical form, and expressing a fixed meaning that is not compositional. No doubt the idiom arose as a result of the bewildering technical complexity of sailing ships and nautical jargon that confronted landlubbers needing to make a voyage, or pressed into naval service, in times gone by, but it is not necessary to know this to understand the meaning of the expression. It is an idiom, not a conventional metaphor, because its meaning is fixed and does not depend on resonance between primary and secondary subjects. The fact that the resonance just alluded to is *historical* is a reason for classifying it as an idiom, not a metaphor. If the resonance were still active at the present day, it would be more tempting to classify it as a metaphor.

The canonical form of the idiom (which occurs 15 times in BNC[3]) tells only part of the

[3] Figures obtained from automatic processing of this phrase in BNC are,

story. Automatic recognition of the idiom in text would require a sophisticated procedure for recognition of at least seven alternations (14 tokens) on the canonical form: *completely at sea* (X 5), *totally at sea* (X 2), *utterly at sea, rather at sea* (X 2), *quite at sea* (2), *a bit at sea, somewhat at sea.* Unfortunately for lexicographers, there is a further alternation, in which the quantifier *all* is omitted altogether, as in the last four lines of Table 2. This results in a local ambiguity that cannot be resolved by analysis of the immediate context. Is a person who is "at sea" located in a ship out on the ocean, or is he or she baffled and confused? A combination of genre classification and wider context generally serves to resolve the ambiguity. For example, the Indian batsmen ("the Indian batting" – a metonym) mentioned in the very last line of Table 2 are most unlikely to be on board a ship. In fact, this fragment comes from a newspaper report of a cricket match, a fact that resolves the ambiguity before it even arises. The psycholinguistic claim that all meanings of a word or phrase are activated in the mind of a reader or hearer and then the right one is selected seems questionable, therefore. More probably, the wrong meanings simply lie dormant and are not activated at all: i.e. no reader of a report on a cricket match suddenly starts thinking of ships at sea when the context requires that the text should say how well or badly the cricketers performed.

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 class structure, but seemed all at sea with his Bond spoof, Modesty Blaise
us man, Sean. You 've got me all at sea indeed # Contraband, Michael. That 's
reak caught the home defence all at sea, giving the visitors the lead. Hindhe
ever, when you find yourself all at sea, you may wonder whether you 've chose
 rowers left the competition all at sea in South Africa recently. At a regatt
ke this lad, who clearly was all at sea and did n't know how to light the fla
swept United away. They were all at sea as Neil Matthews took aim and fired i
ssed by spin and Graeme Hick all at sea whenever Merv Hughes targeted his che
 the Swedish second seed was all at sea in the 32-minute opening set, losing
heir chances and ended up at all at sea. Blackpool are riding high in Divisio
hed from the world or completely at sea. Later comes a point of being unable
ubcultures he will be completely at sea outside his own milieu unless he take
ay leave our students completely at sea. TASK 7 Here is another chapter openi
hich hearing folk are completely at sea in their ideas about what is right an
17. He appeared to be completely at sea again when I asked why primary school
nd 's biographers would be quite at sea if the editors had not marshalled, de
# I 'm so bad at names and quite at sea about your relationship # She # told
ut these new lps find him rather at sea. Most often he falters by trying to s
ient about the office and rather at sea about the home. I, she thought discon
enient benchmarks, I 'm somewhat at sea. It 's a little like describing the t
cise rigid control or be totally at sea in the house. It can take a long time
indergarten teacher felt totally at sea in the deferential hierarchy of Bucki
nce 's distress she felt utterly at sea and did n't know how to help her. She
band 's consent. So we are a bit at sea. I do n't suppose you know of anyone
  experience and find ourselves 'at sea', not knowing what to do. The existen
uld have been the poorer." "I 'm at sea, Mr Wycliffe." "Then let me be more
   For our emotions, too, can be at sea unless the authority of God 's word
Indian batting, though, was often at sea, and their selectors will have much
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TABLE 2: selected uses of the idiom ***all at sea*** and its variants

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unfortunately, distorted by the fact that a racehorse called All At Sea is mentioned frequently in some of BNC's newspaper texts.

Case Study 2: *Oasis*

Only half of all uses of ***oasis*** are literal. How can such a statement be made, and how can it be justified? If half of all uses are non-literal, then should they not be classified by all right-thinking empirical linguists as separate literal senses in their own right? This is indeed the position taken by many dictionaries (e.g. *Collins English Dictionary:* see below) and by some linguists (e.g. John Sinclair (p.c.)). However, it is unsatisfactory because such uses do not constitute a coherent unity of their own. The *New Oxford Dictionary of English* takes a different view, and explicitly uses the label *figurative* to denote secondary senses that have the status of conventional metaphors.

> **oasis** ... **1.** a fertile patch in a desert occurring where the water table approaches or reaches the ground surface. **2.** a refuge; haven..
> – *Collins English Dictionary* (1979)

> **oasis**… a fertile spot in a desert, where water is found.
> - figurative. a pleasant or peaceful area or period in the midst of a difficult, troubled, or hectic place: *an oasis of calm in the centre of the city.*
> – *New Oxford Dictionary of English* (1998).

No doubt because it has great resonance, 'Oasis' is a popular name for hotels, sports and leisure centres, and other buildings. It is also found in trade names, in particular the name of a kind of water-absorbent silicon foam used by florists. All of these uses must first be cleared out of the way before analysis can begin. All of these uses have been ignored. Headlines and mentions are likewise set on one side. The remaining 240 uses of ***oasis*** in BNC were analysed in some detail.

The Wasps statistical analyser (Kilgarriff and Tugwell 2001; http://wasps.itri.bton.ac.uk/) shows very few significant collocations with an MI score greater than 9 for this word in BNC. The ones that exist are as follows:

> oasis in … desert (X 13; MI score 20.8)
> oasis of calm (X 7; MI score 14.1)
> oasis of greenery (X 3; MI score 9.6)

These are highly suggestive of the semantic properties of this word. The fact (if it is a fact) that, in reality, many oases are noisy, smelly places full of honking car, roaring trucks, careering buses, grumbling camels, and shouting people is irrelevant. As far as the conventions of English are concerned, oases are calm and green.

There is a cline of metaphoricity in the usage of this word, which (I claim) is typical of all words that are frequently used to make metaphors. At one extreme, about 50% of the collocates (in particular place names and contrastive use with ***desert***) make it clear that oasis is a referring expression referring to a location in a desert where water and vegetation are found (the 'literal' sense). The resonance of this use is indicated by further collocations (albeit not statistically significant ones) with words such as *peace, calm,*

cool, lush, luxurious, green, pool, water, trees, palm trees, etc. (The calm and charming unity of these resonances is sadly shattered by occasional collocation with terms of warfare in British English texts referring to World War II.)

Related to this use are other uses of ***oasis***, where it is also a referring expression denoting a location, but now not a location in a (literal) desert, but rather a location in an area regarded figuratively as a wasteland or desert:

18. An oasis of calm in the centre of Leeds
19. one of several splendid oases of green in the city
20. Stoke Mandeville station is a little oasis; clean and bright and friendly

18 and 19 are metaphorical because, although cities are regularly referred to (explicitly or, as here, by implication) as deserts, they are not deserts. They do not have any of the basic attributes of deserts: they are not, for example, hot, sandy, arid, or uninhabited. In these examples, the resonance is extended to terms that may or may not actually be present in the text, but which are significant collocates: ***desert***, ***calm,*** and ***greenery.*** This is achieved by the strong statistical association of these words with ***oasis***.

In several such metaphors, the 'of' structure singles out a property of ***oasis*** (its 'formal' to use Pustejovsky's (1995) term: *calm, serenity*, and *greenery* in examples 21-24) as a basis for contrastive resonance with some other term or concept: *the hurly-burly, the crowded pavements of the city centre, the bustling city,* or *the ceaseless grind and roar* of traffic, as the case may be.

21. … where people can escape the hurly-burly to an oasis of calm and do what they like best.
22. Visitors to the city may easily fail to chance upon Portugal Place, which remains an oasis of timeless calm only a few paces from the crowded pavements of the city centre.
23. Here the lush and peaceful courtyard with two ancient wells is an oasis of serenity amidst the bustling city.
24. Campden Hill Square lay in its midday calm, an urban oasis of greenery and Georgian elegance rising from the ceaseless grind and roar of Holland Park Avenue.

At the other extreme of the metaphoricity cline are uses where the oasis in question denotes an abstract entity:

25. These brief oases of super-wealth were a direct result of exploitation of the developing world.
26. It's about oases of control where there should be none.
27. These Sundays were the oases of human contact in the desert of my loneliness.
28. … Kenya, a country previously regarded as an oasis of economic success in east Africa.
29. She now regards her job as an oasis in a desert of coping with Harry 's lack of

direction.

These uses are highly metaphorical, because uses of *super-wealth, control, human contact, economic success,* and *job* have no features in common with the normal use and meaning potential of ***oasis***.

As in the case of *sea, torrent, jungle* and many other words denoting types of location, there is a wide variety of semantic types (in between the two extremes) fulfilling the N2 roles grammatically.

30. a little oasis of bottles, coffee pot and cheeseboard [on a dinner table].
31. He lowered his tongue and lips to the tiny oasis of moisture.
32. an oasis of life in the solar system.

It is also worth pointing out that although oases are typically found in hot deserts, this is not a necessary condition. There are also Antarctic oases, as in 33.

33. Shumskiy (1957) defines Antarctic oases as substantial ice-free areas separated from an ice-sheet by an ablation zone, and kept free from snow by ablation due to low albedo and radiation.

People who believe in the Aristotelian doctrine of essences would probably claim that this is a literal use of ***oasis***. The argument goes roughly as follows: the 'essential property' of an oasis is that it is a type of fertile location surrounded by a barren area. Heat, palm trees, a calm atmosphere, human habitation, etc., are merely 'accidental properties'. If the oasis in the Antarctic is fertile and the surrounding area is barren, then it is literally an oasis: it doesn't matter whether the barren area is barren because of snow and ice or because of sand, nor whether the weather is cold or hot. People who believe in prototype theory, on the other hand, would claim that prototypical oases are not only fertile and surrounded by barrenness, but also hot and lush and calm and inhabited by humans. Therefore, in the prototype theorist's view, an Antarctic oasis is a much less literal oasis that a Saharan one.

The lexicographer's dilemma is how to represent these facts. In a theoretical analysis, the problem can be solved by distinguishing typical literal meanings (oases in hot deserts) from possible literal meaning (oases in any kind of wasteland). But in a dictionary, the lexicographer has to decide whether to treat an expression as an idiom, with its own entry (however this may be arranged alphabetically) or as a metaphor, entered as a secondary sense.

Conclusion

This paper took as a theoretical basis for exploration Max Black's idea that metaphor depends on 'resonance' between at least two concepts, in which one (the primary subject) is interpreted in terms of the other (the secondary subject). It argues that resonance can be measured by studying actual uses of metaphors in corpora, and it proposes that there is

more resonance (i.e. more metaphoricity) when two concepts share fewer semantic properties. Some metaphors are more metaphorical than others. The prototypical oasis is in a hot desert, but there are also Antarctic oases, which are not prototypical and may or may not be classified as literal oases; an oasis in a big city is more metaphorical than an oasis in the Antarctic; an oasis in the mind is more metaphorical than either. The resonance is amplified and extended when other, related terms and concepts (significant collocates) are brought into play, and may even resonate with terms that are not explicitly realized in the text: for example, the citations mentioning oases in a city environment assign the role of the desert to the city, although in such cases the word ***desert*** is rarely explicitly present. Collocates that are significantly associated with the secondary subject seem to be destined inevitably to participate in secondary resonance of this kind.

The notion of semantic resonance is, of course, itself a metaphor, but rather that shunning it, we should embrace it, as many writers have done, as the only effective way of explaining this linguistic phenomenon. Furthermore, if words only have meaning in context and if the notion of literal meaning must be replaced by (or interpreted through) the notion of normal use, then metaphorical resonance has an important, and as yet unexplored, role to play in the interpretation of non-normal uses.

Many words, for example abstract nouns, are not used metaphorically at all. Those that *are* used metaphorically are normally realized as such in an apparently limited set of syntagmatic patterns, the full details of which remain to be elaborated. This paper has mentioned only a few of the syntagmatic patterns in which metaphors occur. It is already clear that different syntagmatic patterns are associated with different words used metaphorically.

Finally, we noted that, while metaphors are distinguished from normal, literal phraseology by their semantic resonance, on the other hand they are distinguished from idioms because the resonance of idioms is (in most cases) only historical.

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Note: This paper is not a literature survey; it is a report on one aspect of a new corpus-based approach to the analysis of metaphors. It therefore focuses on data and on ways of interpreting data in relation to a few theoretical and methodological milestones, rather than on a critique of the recent literature on metaphor.

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