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Why we mix metaphors (and mix them well): Discourse coherence, conceptual metaphor, and beyond

Michael Kimmel

University of Vienna, Dept. of English and American Studies, Austria

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Abstract

The paper explores the phenomenon of metaphors that occur in close textual adjacency, i.e. as metaphor clusters, but do not share a similar cognitive basis. Clusters frequently mix ontologies and are thus devoid of coherence that can be explained as emerging from a single *conceptual metaphor*. Evidence to that effect comes from a British corpus (*Sun* and *Guardian*) of 675 newspaper commentaries covering the 2004/05 EU referenda (in all, 2574 metaphors). First, it turns out that journalists combine metaphors into complex, yet well-formed arguments on a regular basis, with 39% and 62% of all metaphors respectively occurring in clusters. Even more strikingly, the data reveals that ontologically mixed metaphors account for 76% of all clusters and that almost all of these are straightforwardly comprehensible. This challenges the view of mixed metaphor as awkward language usage. I argue that mixing works because metaphors are typically embedded in separate clauses situated at different temporal, causal, speaker, or belief-related conceptual planes. By consequence, no strong joint processing pressure arises that could result in a perceived clash of metaphorical imagery. Thus, felicitous mixing is a natural by-product of the shifting logic of clauses in complex argumentation. In addition, I present a qualitative typology of how clustering metaphors interact in argumentation. It calls into question the view that conceptual metaphors are the coherence-maintaining device *par excellence*. While conceptual metaphors may create ''internal binding'' in ontologically coherent clusters, complementary ''external binding'' models are needed to explain the mixed clusters (and ultimately for a full explanation of all kinds of metaphor-based argumentation).

Keywords: Mixed metaphor; Metaphor clusters; Political argumentation; Discourse coherence; Conceptual metaphor theory; Software-assisted metaphor analysis

1. Introduction

1.1. What is mixed metaphor?

Metaphors in journalism, politics, teaching, and even everyday conversations often occur in clusters in which metaphors of different types mix. The following quote represents this well:

> He [British Prime Minister Tony Blair] has had **to play his difficult hand** with due *diplomacy*, and not risk **finding himself too far in the vanguard**. So he was reluctant to say out *loud* that the British referendum on the constitution was **suspended**, let alone **dead**. Instead, he **worked** the Danes **- the next in the firing line** - to agree

E-mail address: michael.kimmel@univie.ac.at.

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that further plebiscites would be **masochism**, thus **countering** the French **view** that the referenda should *continue*. In the words of the former Foreign Office minister Denis MacShane: ''Even **lemmings** have got a right to **stop at the edge of a cliff**''. (*Guardian* PD 67)

The passage interweaves metaphors from the source domains of gambling, warfare, life and death, force-relations, visual perception, and journeys in a quite skilful way that supports a complex argument connected to EU politics. The metaphors satisfy the two basic conditions for mixed metaphor: (1) they occur in textual adjacency, i.e. within a single metaphor cluster, and (2) they do not (for the most part) share any imagistic ontology or any direct inferential entailments between them. Mixed metaphors like these have traditionally posed a challenge to theorists. Some have relegated them to the category of awkwardly used language, but that this is clearly not always (or even typically) the case will become fully apparent. What is it, then, that enables a speaker to array different metaphors in a complex way and ensure that they create and indeed strengthen an argument by their well-crafted interaction?

The apparent cognitive complexity underlying the production of mixed metaphors suggests that careful linguistic approaches can reveal general insights about metaphor in discourse, especially with regard to their conceptual role in shaping argumentation units of some length and complexity. The present paper will show that mixed clusters are much too frequent (at least in some text genres) to be ignored, but that no comprehensive model exists at present to explain them. For a better understanding of the patterns in which mixes occur I shall present a qualitative analysis of mixed metaphors in EU-related discourse, augmented through a new method for semi-automatically establishing the frequency of mixed metaphors. Based on this I will present an explanation for mixed metaphor and, in doing so, establish necessary prerequisites for a cognitive model of metaphor in relation to larger discourse structures.

1.2. The role of metaphor clusters in discourse

A review of studies of metaphor clusters in written text or dialog reveals that metaphor coherence and incoherence are both testified to. For instance, while there is evidence pointing to the tendency of figurative expressions in clusters to be coherent and to share a cognitive root (from 67% to 95%) in college lectures, classroom discourse, and Baptist sermons (Corts and Pollio, 1999; Corts, 2006; Corts and Meyers, 2002), there is also evidence to the contrary. Quinn (1991) found that metaphors in marriage-related interviews typically shift back and forth between different conceptual mappings fluidly, without this getting in the way of discourse coherence itself. Shen and Balaban (1999) found, more specifically, that non-signaled metaphors in journalism, i.e. those that are not strategically introduced in advance as the lynchpin of an argument, typically go with mixed clusters rather than coherent ones.

Metaphor clusters fulfill three kinds of functions. First, they are attention-grabbing and thus a relevance-producing device, as Koller's (2003) explorative study of metaphors in marketing and corporate mergers discourse suggests. Kyratzis' study of Greek politics-related discourse (1997:119) credits clusters with the creation of efficient discourse, saying that ''[m]etaphors working in combination can be more effective''. Second, clusters seem to occur ''where the action is''. Corts and Pollio (1999) and Corts (2006) show that clusters of figurative language including metaphors are bound up with the main topics and are used to shed light on complex and unfamiliar subject matters. Cameron and Stelma (2004:33–34) similarly claim that metaphor clusters are the sites of ''intensive interactional work linked to the overall purpose of the discourse'' and Cameron (2003) reports clustering especially when classroom assignments are specified, activities are summarized or rounded off, when feedback is provided, and when the students have to be controlled by the teacher. Finally, metaphor clusters connect and dynamize discourse. They occur because interlocutors cross-link, extend, reject, limit or elaborate metaphors brought up earlier, as Liebert demonstrates (1997). Similar patterns of extending, elaborating, exemplifying, questioning or negating between metaphors are illustrated by Kyratzis (1997).

1.3. What allows mixed metaphor clusters to become effective discourse devices?

Mixed metaphor clusters pose a quandary. Cognitive linguists have made a powerful case for cognitive production and reception schemas for linguistic metaphors dubbed ''conceptual metaphors'' (Lakoff and Johnson, 1980). Yet, the demonstrable ubiquity of conceptual metaphors in language and thought provides no real explanation for metaphors that mix successfully. What then allows adjacent metaphors not sharing a conceptual root to join forces in an argument, as in the quote at the beginning? Put simply, I will claim that the binding principles that integrate metaphor clusters may involve the imagery and entailments of a conceptual metaphor, but need not do so. When such affinities are absent

we have to look at conjunctive devices that help create a complex ''speech plan''. Other kinds of discursive meso- and macrostructures, for example such inherent in argumentation or narrative logic, may ''bind'' the ontologically incompatible metaphorical expressions together and create a meaningful discourse unit.

So what role does that relegate conceptual metaphor to, which has often been credited with considerable powers of shaping discourse? A key assumption of this paper is that the power of conceptual metaphors has to be evaluated on two separate, but easily conflated fronts. Why a metaphor in a slot is chosen as appropriate is somewhat different from the issue of how and why all the metaphors hang together. Going back to the example again, if Blair ''has had **to play his difficult hand** with due diplomacy'', the reason for choosing this metaphor is to emphasize strategic difficulty. In the next discourse slot, the metaphor ''and not risk **finding himself too far in the vanguard**'' emphasizes the right time to address a difficult issue. Both expressions issue from highly conventionalized conceptual metaphors (POLITICAL SKILL IS STRATEGY AT GAMBLING and POLITICAL ACTION IS A WAR PARTY) that are part of the journalist's and his audience's established cognitive schemas for producing metaphors. Both metaphors are in that sense logically self-sufficient and autonomous. On the other hand, why these two metaphors become connected in a single sentence is a separate issue that the conceptual metaphors involved do not really help explain. Apparently, two separate features of a complex state of affairs are added up or described in parallel to each other. Both metaphors depend on the contextual knowledge that Blair wanted to cater to his electorate by not holding a British EU referendum, while trying not to irritate other European statesmen who expected that of him, and both add a certain twist to that. My key point is that on what basis a metaphor fits into its discourse slot (i.e. *metaphor selection*) need not explain what integrates several metaphors into a larger discourse unit (i.e. *metaphor binding*). It would invite a grave misunderstanding to say that conceptual metaphors can fully explain how entire arguments with complex metaphor mixes in them come about, although conceptual metaphor theory superficially read may be understood to be claiming this. On the other hand, conceptual metaphors are established enough for us not to discard them from theorizing about discourse and cognition. Instead we should ask what kinds of constraints we can expect from them, and when.

In this paper I will attempt to do three things. I will show that metaphor clusters come in various kinds and lead to various degrees of metaphoric coherence. Concomitantly, I will present data showing that mixed metaphor is frequent and explain why this hardly ever results in incoherent discourse. Finally, I will reconsider the issue of conceptual metaphor in the light of this, maintaining that it may be active in metaphor selection, but less frequently in metaphor binding. As a starting point, I will briefly introduce my corpus as well as the methods that were customized to put my claims to the test in an empirically sound manner.

2. Corpus and methods

2.1. Corpus

As part of a comparative study on media coverage of the EU referenda (Mokre et al., 2006), commentaries and reports from a 14-month period between June 2004 and September 2005 from on-line versions of the UK newspapers ''*Sun*'' (tabloid) and ''The *Guardian*'' (quality paper) were analyzed. Articles were selected when they contained the keywords ''constitution'' and/or ''EU''. A self-imposed restriction of 1 article per day and 5 per day in peak periods surrounding referenda, national ratifications and EU-meetings was decided upon.

2.2. Coding methodology

Using the software ATLAS.ti 5.2, metaphors were identified and categorized by one coder manually and with contextual sensitivity (rather than lemma-based preselections of hits).[1] Basically, all expressions with a more basic reference (spatio-physical, sensory or otherwise more basic) than the expression's contextual meaning were tagged (cf. Pragglejazz Group, 2007).[2] The metaphor units were usually a sentence at the most, seldom less than a clause long, unless a clause included several units. All linguistic realizations of metaphors were considered, with the restriction that

[1] Due to the time intensive process of two-tier coding (see below) employing more than one rater was not feasible, even though inter-rater reliability checks are desirable.

[2] Diverging slightly from the method proposed by the Pragglejazz Group, this operational definition discounted cases in which the abstract meaning may be felt to be the currently prototypical meaning of the word. This decision probably sacrifices a firm criterion for inter-rater reliability for more faithfulness to actual metaphor processing. In any event, this concerns a low number of cases only.

Table 1
Articles, words, and metaphors.

	Number of coded articles	Total number of words	Words per article on average	Total of coded metaphors	Metaphor codes per article on average	Metaphor codes per word on average
Guardian	501	321,411	642	**1588**	**3.2**	**0.005**
Sun	174	41,704	240	**986**	**5.7**	**0.024**

they fully had to relate to the target domains EU or other politics-related topics. Contextually unspecific metaphors (''it is **striking** that''), the inevitable ontological metaphors (''he is **in** a state of'') and phrasal verbs (''**raise** doubts'') did not enter the analysis because they reveal nothing discourse-specific.[3]

Each identified metaphor was assigned two specific codes to define the metaphor's source and target domain (from the combination of which the mapping can be reconstructed). For example, the expression ''the EU is at a cross-roads'' was tagged with ''target: EU'' and ''source: paths''. Metaphors were tagged with as many items as fitting from a set of 27 image schemas and a set of 54 rich source domains, in addition to one of 33 possible target domains revolving around EU politics.[4]

Importantly, a two-tier system was applied to source domain codes to allow for multiple similarity groupings of metaphorical expressions. Put succinctly, metaphor sources typically involve both an *imagistic core* that ''carries'' the event ontology (cf. *Invariance principle*; Lakoff, 1990) and an *exemplar* that adds richer knowledge to it. For example, the expression ''the EU constitution gets the axe'' evokes an image-schematic scenario in which an entity gets destroyed through a decisive and swift force motion, thus specifying the event ontology (quick manner and finality). Knowledge about axes and the execution scenario adds a second cognitive layer (executions concern animate beings, are cruel and put an end to their life). Hence, the metaphor may be legitimately grouped with all further metaphors in which swift and strong forces occur or with all further punishment-related metaphors, quite independently of forces (e.g. ''jailed''). It will become apparent that this two-tier coding strategy is essential to a key task of this paper, namely to exclude all metaphors that share something in common from the full set of all metaphors, to arrive at the truly mixed clusters.

3. Quantitative results

3.1. General frequency data

All in all, 2574 metaphor units were found. Note that a great many more metaphors (an estimated 30% more) would have been identified, had metaphors with non-EU-related targets domains been included. For a first overview, Q3 metaphor density per article and per words was calculated (Table 1).

Despite the much higher word count for the *Guardian*, which is both due to higher article length and a larger number of articles, the metaphor count itself turns out to be much more even. In other words, the *Sun* often makes up for short articles with highly dense metaphor packages and an almost twice as high per article average.

Next, I had the software search for all adjacent metaphor units that give rise to clusters. The tagged units spanned at least clauses so that the actual vehicle words (cf. Cameron, 2003) did, of course, not have to be fully adjacent to qualify here. The following table shows the frequency of metaphor clusters in proportion to metaphor singles by paper (Table 2).

Of all identified metaphors 39% and 62% respectively are part of a cluster.[5] Clusters up to sixes are found in the *Guardian*, and up to nines in the *Sun*, although doubles and triples are by far the most frequent.

[3] Including this steady ''metaphoric noise'' into the analysis would render my method of checking for ontological similarity between adjacent metaphors on a pair-by-pair basis rather uninformative. It would intrinsically result in a very low degree of similarity, as the database of EU- and politics-related metaphors would get heavily ''diluted''. (By consequence, the similar metaphors among the thematically relevant ones could appear three or four code units apart, thereby creating a hurdle for my counting procedure.) More generally, coding in a topically unconstrained way after the fashion of Cameron and Stelma (2004) is incompatible with a meaningful analysis of theme-related coherence. We would not expect these – from a functional viewpoint ''special status'' – metaphors to be coherent, as their use is *a priori* unconstrained by theme-specific discourse devices.

[4] Further keyword codes for recurrent idiomatically fixed expressions such as ''red tape'', ''streamline'', ''superstate'', ''hand over [. . .] powers'' (16 for the Sun and the Guardian each) play no further role in the present study.

[5] The discrepancy between the newspapers probably is a result from the *Sun's* higher general metaphor density and its much shorter texts (Table 1: metaphor to word ratio). The *Sun's* short articles tend to deploy metaphor in a more tightly packed manner and tend to eliminate factual non-metaphorical passages found in a quality paper like the *Guardian* in favor of repeated flashy and persuasive metaphor fields (cf. Mokre et al., 2006).

Table 2
Cluster frequencies.

Max. distance 3	GUARDIAN		SUN	
	Clusters of this type	Metaphors in cluster type	Clusters of this type	Metaphors in cluster type
Singles (non-clusters)	967	**967 (60.89%)**	372	**372 (37.7%)**
Met. doubles	183	**366**	125	**250**
Met. triples	57	**171**	46	**138**
Met. quadruples	12	**48**	27	**108**
Met. quintuples	6	**30**	8	**40**
Met. sixes	1	**6**	3	**18**
Met. sevens	0	**0**	5	**35**
Met. eights	0	**0**	2	**16**
Met. nines	0	**0**	1	**9**
Sum of metaphors in clusters (=all without metaphor singles)		**621 (39.11%)**		**614 (62.3%)**
Total of metaphors		**1588**		**986**

3.2. Frequency of mixed metaphors within clusters

To evaluate the importance of the phenomenon of mixed metaphors, it is desirable to know how frequent it is. A one-by-one manual rating of all metaphor pairs would do full justice to each context, but is time-consuming and can be circumvented by drawing on the source and target-related tags that each metaphor received in the basic coding procedure.

3.2.1. How can mixed metaphors be operationalized?

The proportion between *conceptually "affine" metaphors* and *conceptually "mixed" metaphors* in metaphor clusters can be established using a semi-automated search procedure in ATLAS.ti 5.2. Quantitative indicators are furnished by my code system to which we may apply searches using Boolean set theory in ATLAS.ti: Two adjacent metaphors may be taken to be conceptually coherent if they either share some source domain ontology, some target domain ontology, or both. If not, they can be counted as mixed metaphor. Based on this definition, by scanning all relevant adjacent pairs we get an overall calculation of the frequency of metaphor mixing.

The main theoretical hurdle for the proposed strategy lies in categorizing metaphor sources as same or different. No grouping of codes can ever capture the full range of possible conceptual similarities between two metaphorical expressions. Acknowledging this, my task here will be to spell out a way of grouping metaphor codes into meaningful sets that is sensitive to multiple dimensions of similarity. Technically, matters are rather simple. Each similarity-defining category is implemented in ATLAS.ti by grouping codes with similar ontological properties into sets called *Code Families*. Thereupon, mixed metaphors are calculated by *substracting from all possible adjacent metaphor pairs those pairs for which any kind of shared ontological property can be found*. I will therefore now explain the check procedure to detect the shared ontologies.

3.2.2. Defining sets of source domains with a similar ontology

To count mixed clusters, the most important thing to exclude is that no source-domain similarity obtains between metaphors. Such similarity can be of an image-schematic kind or relate to rich domain knowledge, i.e. the first and second metaphor in every pair can share similarities at either or even at both levels. This highlights the importance of my decision to tag every metaphor with both code types, which is exploited for the following analysis.

Regarding ontological families among image-schematic source domains a shared topological structure defines similarity. We may follow the rough guidelines of Quinn (1991), Cienki (1997) and Oakley (2007), who argue for schematic hierarchies that are FORCE-, ENTITY-, CONTAINER-, or PATH-related and establish similarity relations between different kinds of image schemas. In constructing my hierarchy, I allowed for multiple classifications both because

image schemas like PATH are both related to LINK and to FORCE and because some code categories such as ''movements, paths and object transport'' or ''objects intact and object destruction'' were quite broad to begin with. From a methodological perspective this decision heightens the likelihood of finding pairs that belong to the same family. I decided to group my codes into the families **''path-force'', ''entity'', ''directional'', ''axiological pairs of the non-kinesthetic/non-proprioceptive sensory modalities''**, and **''temporal contours''** (all of which can, in principle, involve further items not found here). Italics indicate items that occur under multiple rubrics.

Note that I created an alternative evaluation option by introducing two broader super-families. Using these as a kind of looser similarity constraint increases the likelihood of finding coherent metaphor pairs, which may benefit some researchers who find my categories over-differentiated (Table 3).

Next, for grouping rich source domains such as ''life and death'', ''social relations'', ''games and play'', ''warfare'' and ''emotions'', associatively structured semantic fields define the ontology. Here the similarity of the inferential structure defines equivalence. As with the image schemas, one super-family (''social relations'') suggested itself here (Table 4).

In both tables, the families exclude the few hard to classify special codes, which appear in the last column of each table. They were treated as ''other'' and just as the fixed idioms discarded from the further analysis.

Third, we may optionally want to exclude from the count of mixed metaphors all metaphor pairs with similar target domains. Targets can become a source of ontological similarity just as sources do. However, in the present study this indicator must be accorded lesser weight. First, while my source domains tend to refer to all elements in the knowledge landscape, distant ones included, my targets were all inherently EU- or politics-related and the differentiations may be considered overly fine by some. Second, metaphors that belonged to non-EU targets were inherently barred from the analysis. The results for coherent clusters reported below are artificially high for both of these reasons. For those who still want to include targets ontological sets can be straightforwardly created (even without involving subtypes): (1) The EU, (2) the EU constitution, (3) the campaign and debate, (4) the post-referendum crisis, (5) specific political protagonists, and (6) political processes and agents in general (Table 5).

3.2.3. Results: frequency of metaphor mixing

The most important adjacent metaphor pairs to deselect from the count are those with coherent metaphor *sources*. What percentage shares a common ontology within 1 of the 9 image schema families or 1 of the 14 rich source domain families just defined? Table 6 answers this. The left and central columns represent consistent pairs in the image-schematic and rich domains, respectively. In the rightmost column, both measures were combined with a Boolean OR query to calculate a meaningful overall figure of consistent pairs. The two lines reflect my use of two levels of similarity constraints, i.e. (a) the more differentiated sub-codes with a stricter similarity criterion, and (b) the looser similarity criterion of higher-level super-codes (where FORCE and PATH, for example, are treated as belonging to a single ontological type). The more meaningful level of ontological similarity is the more differentiated level. Hence, the data I will use are from the bottom right two cells (Table 6).

The results are unequivocal: the right column indicates that consistent ontologies – based on the stricter similarity constraint – do not reach a quarter of all metaphor pairs in either paper.[6] The mixed source domain ontologies are vastly dominant, both in the rich image and image schema categories and, if either one or the other are considered, make up 76% of the metaphors. An interesting second observation is that mixed metaphor incidence is almost identical in both newspapers despite their earlier mentioned divergence in size and metaphor density. Thirdly, the less differentiating calculation by super-families, as expected, yields fewer mixed metaphors, but has no extreme impact and multiplies the coherent hits by a moderate factor of about 1.2–1.5.

As to the six target domain sets, the unsurprising finding is that target domain coherence in adjacent pairs is more frequent than source domain coherence, because speakers tend to stick to a topic they talk about, even when using different (source-domain-related) kinds of metaphors for it (Table 7).

[6] The procedure provides a rather conservative measure of mixed metaphors and a rather generous measure of consistent metaphors. Some pairs appearing as consistent in a manual check will turn out to share no actual entailments in cases where codes are broadly defined. The figure of consistent pairs probably includes so-called type 1 errors or ''false positives''. Type 2 errors (oversights of consistent metaphors) are only likely if I failed to define metaphor codes or overlooked relevant ontological similarities when I created the family sets. This is unlikely, given the multiple family groupings and large number of basic codes. These precautions justify the found clear dominance of metaphor mixing.

Table 3
Image schema families.

Movement (super-family)		Entity (super-family)						
Path	Force	Object dynamism	Object partonomy and relations	Containment (object space)	Directional	Axiologies (other senses)	Temporal contours	Other codes not considered
Movements, paths and object transport	Forces	*Animate being/agent*[a]	*Center–periphery*	*Containment, engulfment, breach*	Front–back	Hard–soft	Cycle	New–old
Link Straight–crooked *Together–apart*	Force–momentum Balance *Animate being/agent*	*Containment, engulfment, breach* *Movements, paths and object transport*[b]	*Link* Part–whole *Together–apart*	Full–empty	Up–down *Near–far* *Center–periphery*[c]	Loud–silent Light–dark Temperature (hot–cold)	*Balance*	
Near–far	*Containment, engulfment, breach*		Structure–lack of structure Objects: intact objects and destruction Large–small *Near–far*			Stinky		

[a] This rich domain code is also defined by an image schema code here, because agentivity involves an image of a force-imbued self-propelled entity.
[b] The latter two sometimes occur in construals where the dynamic changes of an object are mentally profiled.
[c] This can be a movement from center to periphery in a dynamic construal.

Table 4
Rich source domain (=thematic field) families.

Life processes	Agents	Social relations (super-family)					
		Relations	Emotions	Conflict	Power and interests	Art, activities and organizations	Misdeeds
Life and death Birth Health and disease Plants and growth *Body*	*Body* Personification Animal Animate being/agent Creation/monster Ghost *Vehicles, drivers and journeys*	Social relations and groups Family relations *Love affair* *Sex*	Embrace *Love affair* *Sex*	War and aggression *Weapon* Rape and forced action Threat and fear *Tyranny* Revolution/uprising Surrender *Competition* Raspberry	Business *Possession* Sign away/hand over *Competition* *Betrayal* *Tyranny* *Diktats* *Superstate* Empire Watchman	Sports, games and play Theater Dance Religion, ritual and sacrifice	Crime and conspiracy Poison Punishment and execution Trial

Internal states	Communication	Disasters	Artifacts	Livelihood	Other codes not considered
Insanity Dream and sleep	Conversation *Betrayal* Story	Weather Natural forces Fire and explosion Catastrophe	Buildings Machinery and technology Table Fabric/clothes *Vehicles, drivers and journeys* Weapon *Possession*	Food Hunting and fishing	Alcohol Chemistry Magic/wizard Chivalry Masterplan Red lines Red tape Tidying

Table 5
Target domain families.

EU	EU constitution	Referendal campaign/ debate	Referendum and subsequent crisis	Political protagonists	Political processes
EU is …	Constitution (as entity) is …	Campaign/ debate is …	The referendum is …	A people is …	Political agents in general are …
EU-functions/ functioning are …	Constitution's contents are …		Reactions to the NO are …	A politician or party is …	Political institutions in general are …
EU-idea is …	Constitutional process is …		Solutions to the crisis are …	Nation state in EU is …	Political processes in general are …
EU-institutions are …	End of constitution is …		The course of the crisis is …	Elite is …	Political beliefs or emotions are …
EU-integration is …	Outcome or function of the constitution is …		The outcome of the crisis is …		Political messages are …
EU-economy is …			The post-referendum crisis is …		Political pursuit of interest and action …
EU-enlargement is …			The reasons for the crisis are …		

Table 6
Percentage of consistent (i.e. non-mixed) ontologies among adjacent pairs.

SOURCE DOMAIN TYPE	(a) Image schema ontologies		(b) Rich schema ontologies		(a) OR (b)	
Name of newspaper	*Guardian*	*Sun*	*Guardian*	*Sun*	*Guardian*	*Sun*
Base sum of adjacent metaphor pairs (100%)	353	397	353	397	353	397
Undifferentiated super-codes used, where applicable (i.e. fewer, more inclusive families)	66	56	59	67	124	117
	18.7%	14.1%	16.7%	16.8%	**35.1%**	**29.5%**
Subcodes differentiated (i.e. more less inclusive families)	46	40	37	62	84	97
	13.0%	10.1%	10.5%	15.6%	**23.8%**	**24.4%**

Table 7
Percentage of consistent target domains among adjacent pairs.

Name of newspaper	*Guardian*	*Sun*
Adjacent metaphor pairs (100%)	353	397
Consistent target domain ontologies among these	164	118
Percentage	**46.6%**	**29.7%**

I cannot conclusively account for the rather striking percentage difference between the two newspapers here. We can only surmise that the *Sun's* flamboyant style includes many metaphors that digress from the EU topic or alternate between rhetoric registers.[7]

3.2.4. Conclusions to this section

My earlier count revealed that clusters account for 39% and 62% of all metaphors, respectively. In this section I took these metaphor clusters as my sub-corpus and analyzed how many of them are ontologically mixed. It turned out that by the (more central) criterion of mixed source domains the lion's share of adjacent metaphors involve mixed ontologies.

[7] Some caveats in interpreting these results are required. First, two factors could bias *towards* high consistency. Certain ontologically basic metaphors (''**in** a state of shock'', etc.) as well as wholly EU-unrelated metaphors in the text (''it is **striking** that'', etc.) remained ineligible for analysis. A third aspect, however, may offset this high-consistency bias, as certain targets identified as mixed may lack a subjective feel of difference in some contexts (e.g. the EU itself and the EU constitution or the style of debate and the evaluation of politicians manifesting that style). Thus, some results listed as target mixing may be felt to be related to an approximately similar target domain. Consequently, the target related part of the analysis should only be seen as a heuristic.

My results are consonant with the findings of Quinn (1991) and Shen and Balaban (1999), although not with Corts (2006), possibly due to genre differences. A vital insight emerges from my data. If fluid shifts between metaphor ontologies are that frequent and if "metaphor logic" proper fails to explain why they are able to create a single well-formed text passage metaphor theorists are in need of a more encompassing perspective. The remainder of the paper thus discusses why mixed metaphors occur and are usually not found awkward or deviant.

4. Qualitative types of metaphor interaction in newspaper discourse

The frequency data already alerts us to the fact that metaphor clusters are to be accounted for in more detail. Although it is obvious that metaphors in a given cluster are almost always conjoined thematically by the context, does this already entail coherence at the level of metaphor ontologies? The answer is no; this cannot be automatically assumed. For a more fine-grained understanding of the data, we can roughly distinguish three degrees of conceptual connectedness between two or more adjacent metaphors: *(1) conceptual complementation and elaboration; (2) conceptual overlap; (3) no apparent conceptual coherence at the level of metaphor proper.* I will exemplify each category in turn.

4.1. Conceptual complementation or elaboration

The category of conceptual complementation includes different cases in which metaphors enrich each other conceptually. The tightest possible complementation occurs when two metaphorical expressions emanate from the same conceptual metaphor and express two inherently necessary aspects of it. In the following case of EUROPEAN INTEGRATION IS A JOURNEY, one metaphorical expression refers to direction, the other to speed, and the third to the goal and the driving intentionality of the agent, all of which are essential to any journey.

> The European project now has a good chance **to go in another, more cooperative direction** - if the French and German governments, which **set the pace on European integration**, ***take to heart*** the questions and doubts their voters have raised about Europe's own social and economic conditions. That would mean concentrating on economic reform and liberalisation at home instead of **chasing more abstract and distant *shadows*** of American power. (*Guardian* PD 97)[8]

In many cases, tightly integrated metaphor clusters let us imagine a causal or temporal progression in a single mental microworld. In such metaphor scenarios there are various variants of the continuation of an action, including causal chains, counterfactual reasoning or suggestions for resolving a problem in the future, and weighing action alternatives (on the role of scenarios in argumentation see Musolff, 2004):

> Newly re-elected and about to **take the wheel at the EU presidency**, he has all the theoretical power needed to **steer it out of a crisis**. As a potent, proven political force, he should be ready to ***knock sense into the clowns*** who have **driven "The Project" to the brink of disaster**. (*Sun* PD 67)
>
> Whether it is about enlargement or planning the constitution or finances, it always follows the same method: first decide what to do, then create the justification. **It always tries to take the second step before the first**. No wonder then **that integration just stumbles along**. (*Guardian* PD 15)
>
> AFTER Labour's ***sound beating*** in the European and local elections I believed, naively perhaps, that Mr Blair would be **forced to sit up** and take notice. **Instead, he stumbles blithely on** with no regard for our feelings, in the vain belief he can make us change our minds. (*Sun* PD 165)
>
> Tony Blair, right, will now ***mothball*** his offer of a UK vote in case EU leaders come up with **a way of keeping the constitution alive**. But privately the PM knows the treaty is **dead in the water**. Ironically, he is likely to be in charge of the EU when heads of state finally **read the constitution its last rites**. (*Sun* PD 68)

Lakoff and Turner's (1989) principles of metaphor extension and elaboration also occur in metaphor scenarios, usually with the purpose of introducing evaluations or attributes that go beyond what is conventionally shared. In the

[8] The words in italics are vehicle words that do not contribute to my present discussion although they are clearly metaphoric. This convention will be followed throughout the paper.

next example the conventional metaphor scenario THE CONSTITUTION'S END IS ITS DEATH is elaborated into a specific agent interaction through which the constitution receives the attributes of a vampire:

> TONY Blair last night **drove a stake through the heart** of the EU Constitution. But the Prime Minister **failed to declare his victim finally dead**. Foreign Secretary Jack Straw announced only that the British referendum on the treaty ''would not proceed at this moment''. It was left to Tory Liam Fox, a former doctor, to **check the hated constitution's pulse**. (*Sun* PD 29)

Speakers also frequently compose two in principle independent metaphorically conceived aspects of an event in to a mini-scenario such that the two images complement each other in a single or closely connected clauses. Here two or more images flesh out a compact mental representation in a non-conventional way. I dub this dense and (at least in journalism) highly frequent type of metaphor interaction a *non-conventional metaphor scenario*. In the following example a metaphorical noun and a metaphorical verb are integrated syntactically and may be imagined as a coherent mental mini-scenario:

> the **mountain of red tape** which **swamps** business, the European Court and the human rights laws (*Sun* PD 150)

In the terms of Langacker's (1987) theory of phrase formation, the metaphors will probably become part of a single mental *elaboration site*, a mental sketchpad on which elements are inscribed. Making metaphors partake of a single imagistic scene in this fashion tightly integrates them. Note that despite their syntactic complementation, the two metaphors are more independent at a conceptual level than the complementary entailments of a single conceptual metaphor would be. Although they flesh out a mental action frame together, each individual expression would be complete as metaphor outside that frame as well.

4.2. Conceptual overlap

Somewhat looser kinds of conceptual overlap between metaphors come in various kinds, many of which are treated by Goatly (1997: ch. 9). In one case the semantic fields of the source domains are non-identical but overlap, while the target domain is the same. Conceptual links can draw on image-schematic affinity and on rich semantic fields and shared inferences alike, as the following examples illustrate.

> This would, of course, represent a startling **volte-face** for Tony Blair. And yet the prime minister's particular skill is the performance of the **graceful U-turn**, couched in the language of the moral imperative. His current **crusade** is to make African poverty history. Let him start by **withdrawing** from the two commitments most harmful to that continent: the EU common policies on overseas aid and agriculture. (*Guardian* PD 97)

> Meanwhile, by **deft footwork** on his part and clumsiness by France's Jacques Chirac, **he turned a dud card on Europe into a winning hand**. (*Sun* PD 6)

In the first example all metaphors concern Tony Blair's actions, all use the source domain PATH, but differ in two respects. The third metaphor is different in that ''crusade'' contributes the additional mapped attributes of religious fervor and belligerence, thus enriching the image-schematic domain of path. In addition, the specifics of the path differ (REVERSAL, STRAIGHT PATH, PATH REVERSAL FROM CONTAINER). In the second example, the first metaphor of politics and the politicians work probably comes from boxing and the second from poker or gambling. Although non-identical at a more concrete level, the two sources share several of their general inferences and lead to a similar picture of politics in terms of being a matter of skill, good stratagems, and perhaps will power and endurance.

A highly frequent case is that metaphors have wholly different source domains, but share the same target domain. Metaphors are, as it were, *aligned "to tell a story"* about the target, which they describe from different angles (cf. Goatly, 1997 on ''diversification with different grounds''):

> Over the past few years, the EU has become **something of a juggernaut** and I fear it has become **so concerned with navel-gazing** that it has actually **lost touch with** the populations of Europe. (*Guardian* PD 214)

> BRITAIN'S referendum on the EU treaty will be **shelved** on Monday - after Holland last **night drove the final nail into its coffin**. (*Sun* PD 13)

Here, within the same sentence, we have the EU IS A MONSTER, the EU IS A BODY seeing itself and THE EU IS AN ENTITY THAT WAS PREVIOUSLY IN CONTACT WITH ANOTHER ENTITY, BUT IS DISTANT NOW. The metaphors, it seems, are combined to shed light on various aspects of the same topic, the EU (the EU's growth, internal behavior and external behavior). In the second example, again, a single target, the EU constitution, takes on different source domains (THE CONSTITUTION IS A LEDGER VS. THE CONSTITUTION IS A LIVING BEING)

The probably loosest kind of semantic overlap results from metaphors for different targets that take on similar sources, however. We might call this an associative strategy of partial priming of one metaphor through another that may give rise to ''a sense of equivalence'' between the different targets (Goatly, 1997:258):

> Old Etonian Mr Cameron, below, fears years in the **wilderness** for the party if either **"Big Beast"** Mr Clarke or Mr Davis wins. (*Sun* PD 170)
>
> The answer is that ***the wind has changed*** and **our chameleon Prime Minister** has ***spotted an opening***. If that means ***shedding*** his image as an ardent European, so be it. Mr Blair is happy **in any camouflage that gets him through the day**. But he should be **watched like a hawk** as he spends his remaining time as PM manoeuvring through **the EU jungle, changing colour under every new leaf**. (*Sun* PD 45)

In the first example the two targets are different (''party crisis'' and ''political leader''), nor are the sources connected by any direct entailment or inference. The connection is vaguer than that, by simply introducing two aspects of the semantic field ''wildlife''. In the second example, the mapping A WILY POLITICIAN IS A CHAMELEON (CHANGING PROFESSED OPINIONS IS CHANGING COLORS), we find a relatively tight combination of three metaphors in the non-conventional scenario THE EU IS A JUNGLE as well as a looser associative overlap of these with the idiom ''watch like a hawk''.

4.3. No conceptual coherence between metaphors

We have now seen several cases in which the conceptual interaction of metaphors is solely based on a continued target o based on the rarer case of related source domains that get applied to unconnected targets. Many clusters involve even less conceptual interaction than this. They share neither sources nor targets in the narrower sense, and are not syntactically connected in a strong way either. The metaphors in subsequent sentences about the EU may simply belong to the same argumentative context, but share no logic beyond this.

> There is a way of looking at the acrimonious failure of the **European summit** as a great triumph for Tony Blair. The rebate is preserved. The **last rites have been performed** over the European constitution. A **vicious bust-up** with Jacques Chirac excites approving headlines about the Prime Minister **bulldogging for Britain**. Tony Blair has finally **turned into Margaret Thatcher**. (*Guardian* PD 128)
>
> Tony Blair's criticism of EU regulations [. . .] would be laughable if it were not so two-faced. While **preaching the pro-business gospel**, he has done nothing **to stop the tide of EU rules and red tape** from **choking Britain**. (*Guardian* PD 175)
>
> No doubt Labour and the Lib Dems would like to **see some wind in the UK Independence party's sails** to keep the Tories **on the defensive**; but **winds can be changeable**, so all three parties seem to have concluded that the European issue is **best kept in its box** until after polling day. (*Guardian* PD 225)

The latter quote represents a hybrid case. While the first and third metaphors cohere in a single scenario, they share neither source nor target with the metaphors 2 and 4. Note that all the metaphor clusters discussed so far seem perfectly normal and do not exemplify mixed metaphor in any negative sense of the word. This changes at the extreme end of the cline. Here, albeit rather rarely, we find infelicitous metaphor clusters that produce a strong sense of imagistic clash:

> Together, these values and goals, embedded in the EU constitution's charter of fundamental rights, represent the **woof and warp** of a **fledgling European Dream** and the beginnings of a global consciousness. (*Guardian* PD 329)
>
> More than a year after enlargement, **gridlock is the dog that didn't bark**. (*Guardian* PD 34)

How jarring such a clash of images becomes in someone's perception probably depends on the depth of metaphor processing (Gibbs, 1999), as will be discussed later.

5. Explaining mixed metaphors in complex argumentation

Let us take stock. The quantitative part has demonstrated a high number of discursive metaphors pairs that are not ontologically related by source domain, and even in terms of unrelated target domains many are found. The qualitative part has now distinguished various types of metaphors interaction and made evident that positing a catch-all cognitive mechanisms underlying them all will not do. Specifically, concerning the type of metaphor cluster we called 'mixed' cognitive linguists face a key challenge. As the examples have demonstrated, mixed metaphors in newspaper commentaries cannot usually be put down to incoherent or out of the ordinary argumentation patterns. This brings a purely metaphor-based analysis of argumentation to certain limits and calls for new theoretical tools.

The challenge of providing a fuller account requires combining conceptual metaphor with other conceptual discourse devices. Meeting this challenge is well beyond the scope of this paper, because modulating devices come in great number (cf. Koller, 2003; Hart and Lukeš, 2007) and need a thorough foundation in discourse theory. I can do no more than to provide some basic observations on the role of conceptual metaphors as cognitive, but perhaps not fully discourse-governing conceptual structures.

5.1. Metaphor analysis alone cannot fully explain meaning units with metaphors

Metaphor clusters without coherence based on entrenched conceptual metaphors or other kinds of semantic overlap need to be tackled from the viewpoint of the larger meaning units that they form part of, in other words what we colloquially refer to as ''argumentation''. Let me begin with two important, but easily overlooked observations that only emerge when we look at whole arguments.

First of all, analysts will invariably take into account aspects of text that are not part of the metaphors proper when identifying the general *topos*, argumentative thrust or speaker's persuasion. An argument's meaning is not fully specified by what a metaphor in the strict sense entails, not even in the simplest cases like metaphor negation:

> It's a negative vote, but **Europe will not stop** (*Guardian* PD 178)

This negation of a metaphor (an ''anti-metaphor'') switches its argumentative valence into its opposite, i.e. whether Europe ''goes on'' or ''stops''. Here one might claim that the negated metaphor rests on the same conceptual core mapping as the statement and simply instantiates a different metaphor scenario that spins off from it (Musolff, 2004). While this may be true, we should not overlook that non-metaphoric linguistic devices invariably blend into metaphor processing. Analysts will typically also consider the grammar and co-text. Devices that modulate metaphors can be discussed in terms of resources from functional linguistics (Koller, 2003:96–104) and include hedges, explicit signaling of metaphor, and downtoners. Furthermore, various kinds of linguistic framing devices play a role, including (but not being limited to), mood, belief-status, perspective and attitude. For example one possible case is that ''if a metaphorical expression is embedded in a clause showing pejorative attitude, this might indicate that the text producer rejects the metaphor, thus perhaps providing cohesion [sic] by negating and earlier metaphor'' (p. 97). Finally, the textual position of a metaphor in the textual macrostructure also influences its salience, e.g. when slotted in an argument to set the agenda or sum up. We should thus not be deceived to believe that the information contained in linguistic metaphors is identical with the full structure of the argument or the discursive unit of interest.

Metaphors typically do not constitute full analytic units for another, related reason. No matter how fruitful metaphor analysis in itself is to understand the rhetoric and cognitive impact of discourse, the basic logical units shaping the frame of the argumentative whole often span passages larger than a single metaphor:

> Tony Blair's criticism of EU regulations [. . .] would be laughable if it were not so **two-faced**. While **preaching the pro-business gospel**, he has done nothing **to stop the tide of EU rules** and **red tape** from **choking Britain**. (*Guardian* PD 175)

Although no conceptual integration at the level of metaphor logic exists, all five metaphors in the passage seem to contribute to a coherent argumentative unit. Each captures an aspect of a multi-faceted politics-related frame (here: AGENT ACTS BY DOUBLE STANDARDS; or more specifically: A POLITICIAN CLAIMS NEO-LIBERAL ATTITUDE, BUT DOES NOT OPPOSE OVER-REGULATION). By consequence, the analysis has to move to the level of the embedding frame to understand how and why the metaphors are deployed. For this reason we need to bring to bear various devices of discourse analysis focussing on a larger text unit.

Methodologically speaking, the discourse levels of metaphor and argumentation have affinities to different analytic tools. A comparative study of metaphor analysis and qualitative content analysis (Kimmel, 2009) points to different cognitive functions that each method sheds light on. Metaphors tend to convey summarizing, emotional and evaluative aspects of cognition, while holistic and complex causal reasoning is revealed at the level of topos-specific argumentation, which is what content analysis – as one of several qualitative methods – focuses on (cf. Schmitt, 1995). Complex causal arcs results from what occurs around and between metaphors in the larger argumentative unit. Complex reasoning patterns in their entirety are more appropriately understood through content analysis, as the method is situated at the level of these larger conceptual units.

5.2. Clause structure determines coherence pressure

Let us now return to the specific question of why mixed metaphors are cognitively successful. In my view, many mixed metaphors are processed unproblematically because the grammatical structure of the passage exercises little pressure to integrate them conceptually, and simply lets us interpret them as referring to different ontological levels. I claim that what influences metaphor cluster processing most directly are the relations of the clause units in which they occur. We can answer major parts of the mixed metaphor riddle by paying attention to how adjacent metaphors are distributed over clauses and what degree of grammatical integration these clauses show. Three major possibilities can be distinguished In some cases metaphors co-specify each other within a single clause; sometimes they occur in rather tightly connected clauses, and sometimes they only belong to a larger rhetoric structure spanning more loosely connected clauses. All three levels of integration can be illustrated by analyzing the constituent ''packages'' of the passage from the *Guardian* that we looked at last:

> Tony Blair's criticism of EU regulations [. . .] would be laughable if it were not so **two-faced (A)**. While **preaching the pro-business gospel (B)**, he has done nothing **to stop the tide of EU rules (C)** and **red tape (D)** from **choking Britain (E)**.

Single clauses in which multiple clause constituents involve separate metaphors usually lead us to process these metaphors integratively, because the clause specifies a propositionally integrated conceptual unit. Looking at the metaphor triple CDE above, ''red tape'' and ''choking'' are both grammatically tightly connected and conceptually so close that they invite a mental superimposition of the image, as are ''tide'' and ''choking''. A weaker kind of coherence is that between the clause containing CDE considered as a whole and the neighboring clause containing B. It is based on an adversative logical relation (cued by ''while''). Because of the two separate clauses no imagistic relation between the metaphors is invited. The connector ''while'' prompts a processing of the clauses and their metaphors as parts of a difference relation. Hence, in terms of an integrative processing of the metaphor ontologies little pressure is present. A still weaker coherence relation obtains between the two-clause sentence on the one hand and the equally complex sentence before it on the other hand (A vs. BCDE).

Based on this graded typology, I hypothesize that the tightness of connection of ''carrier'' clauses crucially affects our tendency to process the metaphors integratively or not. Only the close syntactic integration of two metaphors within a clause can enforce or foster a close integration of their semantic content *qua* imagery. Where mixed metaphors occur across clauses no ontological clashes will be felt to begin with and secondary mechanisms to keep the clash at bay are dispensable. If this is correct, making sense of mixed metaphors is a natural by-product of default clause processing. The fact that in newspaper commentaries mixed metaphor dominantly occurs across clause boundaries elegantly explains my earlier findings (although I will look at other cases below). When mixed metaphors are parts of different discourse slots that is reason enough for the fact that little, if any awkwardness arises.

5.3. Conceptual switching between ontological planes

Before spelling out my proposal in detail, a closer look at typical ontological shifts between the ''carrier'' clauses will be helpful. Although the theoretical intricacies necessitate a much fuller account,[9] a couple of examples will suffice to provide a flavor of the possibilities. First, mixed metaphors may not clash simply because they make sense as occurring in temporal succession (i.e. with one image occurring after the other has faded).

> THE **rumblings of a political earthquake** can be heard across Europe. More countries **chuck** the EU constitution **into the dustbin**. Humiliated French President Jacques Chirac is derided by his own countrymen as the **Sick Man of Europe** - the title the French once bestowed on Britain. (*Sun* PD 40)

Some arguments project the outcome of an event into the future in a conditional form and some are simply counterfactual:

> The controversial treaty - drafted by France - faces rejection in their referendum. That would almost certainly trigger a **wave** of other No votes across Europe, with Holland the **second domino to fall** three days later. A French **revolution** would **plunge** the European Union into crisis and put the **survival** of the European single currency in peril. (*Sun* PD 81)

> None has been willing to **deliver the last rites to the constitution** in public because they do not want to be blamed **for killing it off**. (*Guardian* PD 77)

Furthermore, there are a high number of complex inferential linkages between the clauses that metaphors are embedded in. One kind is causal, specifying a precondition for the event to happen (usually causality is of course also temporally sequenced as well):

> Meanwhile, by **deft footwork** on his part and clumsiness by France's Jacques Chirac, he **turned a dud card** on Europe **into a winning hand**. (*Sun* PD 6)

A related linkage is formulating a condition for something to happen:

> Unless we are allowed to **deliver** a decisive No - which is what all the polls indicate would happen - there will always be scope for **EU power brokers to strike deals** and **saddle us** with a **watered down** treaty. (*Sun* PD 60)

Changes of perspective on a topic also help explain why metaphors may be processed at different planes. For example, a metaphor cluster may begin with a mental space that is descriptive and episodic (''what have politicians done?'') and close with an evaluative space that is static and summarizing (''what is the significance of this?''):

> By astonishing good luck and smart timing, he has **opened a rift** between the **bullying** French-German alliance and the rest of the European Union. All of this coincided with the UK presidencies of the EU and the G8 group of rich nations - seen at first as **poison chalices** for a weakened leader. Now Tony Blair has the chance to drive change on all **fronts**, especially on EU reform and terror. **The lame duck is now cock of the walk**. (*Sun* PD 6)

Summing up, argumentation with embedded metaphors moves continuously between descriptions of what is, what might or what should not be, what someone believes or does not, how someone reacts to the other's beliefs, and how any or all of these are to be evaluated. It moves between what is now, what will be, and what might have been. It moves between what could happen under specific conditions, what happens unless something else happens, or events that are incompatible. Metaphors partake of this incessant shift between conceptual planes. The switching of planes precludes strong pressures to consider whether the imagery of metaphors is compatible so that no awkwardness arises. Hence, I propose the problem of mixed metaphor coherence *between* clauses can be resolved as follows:

(a) Metaphors are embedded in slots of grammatically/pragmatically signaled or contextually inferred discourse units, usually of clause size. These ''carry'' the metaphors.
(b) Metaphors occurring across clauses (or even sentences) are conceptually more distant than those in a single clause. When they relatively distant various conjunctive relations between the clause units will be present that include

[9] Note also that *mental space theory* (Fauconnier and Turner, 2002) and *rhetorical structure theory* (Mann and Thompson, 1988) are useful resources for analysis.

exemplification, summarization, concession, opposition, temporal, causal, or simply additive linkage. This, in turn, requires switching between ontological planes.

(c) All of these relations result in a default ''minimal processing standard'', i.e. *that the metaphors with regard to their imagistic meaning must be primarily understood within their proper clause units and not between the units*. In the absence of further cues, this makes the clause units the primary ground against which the figure of the metaphor is understood.

(d) Any switching of ontological planes inhibits joint processing of the imagery of the metaphors and tends to make mixing natural. (Note that this inhibition does not preclude the joint processing of *propositional* entailments from the metaphors. These unproblematically fit into in a common representational format, benefitting from its greater abstractness.)

To provide a brief agenda for future research, one should analyze in greater detail plane switches by looking at conjunctive discourse devices and what impact they have on coherence.

5.4. Mixed metaphors in a single clause

The one remaining case to address are mixed metaphors within a single clause, even if this is not quite as frequent. Here, nothing in grammar sets the ontological planes apart so that the cognitive pressure to process the metaphors together is higher. Let us consider what is usually castigated as mixed metaphor in the negative sense.

> [...] the European Union is **a network in permanent onward flux** (*Guardian* PD 265)
> By rights, the French and Dutch NO should have **stopped** the **ramshackle** EU constitution **in its tracks**. (*Sun* PD 33)

In the first case, the static and dynamic ontologies of ''network'' and ''flux'' clash in a very basic sense, because the network image emphasizes something rather static. The second case is similar because ramshackle structures are nothing usually applicable to vehicles. A sense of awkwardness then arises because the source domain microworlds of the metaphors are incompatible in a fundamental way. The grammatical cues for close integration (such as a noun-attribute relation) create a sense of imagistic incompatibility. A building simply will not move on a track, so this clash can only be counteracted by suppressing the imagery. This is what Gibbs (1999) calls ''shallow processing'' of metaphor, i.e. understanding them via their propositional meanings *only*, as opposed to dual processing where imagery may be active on top of that. Some readers will engage in shallow processing only and others will simply consider the metaphor mix infelicitous because they cannot avoid deep processing.

6. What does this imply for conceptual metaphor theory?

Since I expect CL readers to be interested in the implications of metaphor mixing for conceptual metaphor theory, here are a few conclusions and ideas pointing to future research.

What constraints on discourse can emerge from conceptual metaphors? My conclusion is that conceptual metaphors are, on a default basis, probably activated relative to discourse slots of clause size and not relative to larger units like whole arguments. A major pitfall for CL theorists is the assumption that a given conceptual metaphor in a specific discourse slot allows predicting adjacent metaphors that contribute to a higher discourse unit. The danger of this is empirically established by the present study as well as Quinn (1991) and Shen and Balaban (1999). Corts' (2006) more encouraging data, on the other hand, sits well with a smaller portion of my data in which metaphors are used consistently in adjacent discourse slots. Deploying a conceptual metaphor repeatedly over a stretch of discourse is clearly something speakers do (e.g. for driving home a point or elaborating an image), but simply not always or even usually. Text genre may influence how often this happens.

Second, a deeper insight arises here about the nature of conceptual metaphor that is too seldom made explicit. The data overwhelmingly shows that metaphors are embedded in multi-metaphor argumentation units with a great deal of non-metaphoric binding structures. Consequently, single conceptual metaphors cannot but have limited shaping power at the level of arguments when these get as complex as they tend to in journalism. Conceptual metaphors rarely structure large and complex speech plans fully, because patterns like REGULATIONS ARE A TIDE and POLITICAL SPEECHES ARE RELIGIOUS SERMONS are inherently ''middle-scope'', i.e. they are usually deployed for structuring knowledge at the level

of clauses (the same is true, for the most part, even for generic level metaphors like PROCESSES ARE PATHS and STATES ARE CONTAINERS). This middle-scope nature is not necessarily a weakness because conceptual metaphors are at the same time ''multi-use'', i.e. they can be flexibly deployed and are rather independent of a given episodic context. It explains, however, why in metaphor clusters manifestations of conceptual metaphors often get linked up in ''syntagmatic'' chains, while each of these conceptual mapping is found in a sizeable number of very different ''paradigmatic'' contexts. Conceptual metaphors are thus genuinely conceptual, but not usually productive of complex arguments when they remain solo. Two deeper reasons hold responsible for this. First, more typically metaphors join forces and thus may interact conceptually. When the entailments of a conceptual metaphor are compared to the propositional content of a whole argument it turns out that the entailments of one conceptual metaphor typically contribute parts of an inference chain, but seldom the full chain, as Quinn (1991, 2005) demonstrates convincingly. Second, as Koller (2003) explains in detail and I briefly argued above, non-metaphoric discourse devices are equally of essence to explain how the meaning of metaphors is contextually modulated.

My claims point to a differentiated research agenda. Studies should hold apart two kinds of cognitive constraints, namely those responsible for *metaphor selection* (in the respective discourse slots) and those responsible for *metaphor binding* (across slots). The issue of metaphor selection needs to be addressed, as it indeed has been, by psycholinguists from whom we know that conceptual metaphor frequently is a motivating source alongside others that may come into play (Gibbs, 2005). The issue of metaphor binding was addressed in the present study and by Quinn (1991). While Quinn's study denies the power of conceptual metaphor for the most part, my study results in a mixed empirical picture. In my view, we may think of a metaphor cluster in such a way that a given conceptual metaphor temporarily ''flashes up'' in the cognitive unconscious when the first metaphorical expression is processed. In some cases this activation – without being expectational in the strict sense – influences the selection of the subsequent metaphor(s), whereas in many other cases this activation fades or is overridden by other discourse devices. In that sense temporarily active conceptual metaphors are part of a field of multiple discourse attractors that vie for influence. *Qua* attractor, conceptual metaphors may exert constraints up to the meso-level of discourse, but rarely govern an entire discourse passage of four or five metaphors. It is therefore important not to throw out the baby with the bathwater. We need to recognize conceptual metaphors in discourse for what they are, namely something limited as full explanatory concept, but without denying their legitimate cognitive role. To clarify that role future studies will have to move towards a dynamic model of discourse production that explains selection and binding principles with reference to the speaker's wider context and beliefs, what she wishes to argue for, the available range of conceptual metaphors, as well as the pragmatic fit of possible expressions.

7. Conclusion and outlook

Mixed metaphors are frequent and they seem, in most cases, unproblematic to deal with when they complement each other and enrich the meaning of a text passage. Studying mixed metaphors casts an interesting light on the relation between metaphor and more inclusive and structurally complex discourse units like arguments. For an integrative picture, we may sum up the relevant insights as follows:

(1) Mixed metaphors do not result in fragmented discourse for the most part; most arguments with multiple embedded metaphors appear to be perfectly felicitous (rating studies to buttress this assumption would be an asset). Inferring discourse fragmentation from mixed metaphors would rest on the flawed assumption that discourse coherence requires metaphoric coherence.
(2) There is no one catch-all pattern for how metaphors in a longer argument unit interact conceptually. Both looser and tighter forms of integration rooted in source or target domain overlaps are found, as well as the absence of such integration. Certain speech plans favor the use of only one conceptual metaphor in an argumentative unit, such as driving home a point or elaborating a key metaphor. For many other rhetoric purposes, apparently the lion's share in my corpus, strong motivations exist for interweaving different types of conceptual metaphor.
(3) Looking at discourse coherence, some arguments with metaphors can be connected both through the logic of metaphor as well as the causal argumentation itself (''internal binding''), while others are connected *only* at the level of the argumentative logic (''external binding''). In the former case conceptual metaphor theory needs complementation, whereas in the latter some wholly different explanation is required.
(4) To explain arguments that are only externally connected I have drawn attention to the fact that most textually adjacent metaphors are distributed across clauses. My claim was that metaphors may ''inherit'' the coherence

relations of their respective clauses and that the fact of belonging to different clauses creates little cognitive incentive to blend metaphorical imagery. In other words, speakers just do not expect ontological consistency of metaphors when a complex argument interweaves meaning planes such as the mental spaces of agent belief, sub-agent (or recipient) belief, speaker's evaluation, factual background knowledge, and others. This is why mixed metaphor works for the most part. Intra-clause metaphor clusters exist, of course, and are more prone to be felt as awkward when mixed ontologies occur. I have provided no quantitative account of this, but assume on basis of my familiarity with the data that most intra-clause clusters in fact share ontological properties.

(5) No empirical data under scrutiny here compellingly calls into question the genuinely cognitive nature of metaphorical thought, its power to create concepts and shape parts of argument units. Yet, when conceptual metaphors become active we must envisage that (a) in most cases they do so locally, i.e. at the clause level, and (b) they usually do so conjointly with other cognitive principles of discourse production, which are not nearly well enough understood in their interaction.

Overall, I have presented an empirical method for addressing the issue of mixed metaphor that I hope will be applied to further corpora. I also hope to have demonstrated that there are perfectly acceptable cognitive explanations for the fact that mixed metaphor is not jarring or disruptive of discourse.

The explanation given here may certainly join forces with others. For example, Svanlund (2007:85) presents corpus data suggesting that source domains are not maximally activated in many typical metaphors, which would inherently reduce the perceived ontological clash. It would certainly be of interest to obtain statistical data from large, representative corpora that clarifies which types of metaphors appear in mixed clusters and which do so only rarely. This in turn could help clarify why certain text genres apparently involve a higher percentage of consistent metaphor pairs, as Corts' (2006) data tells us. For the purposes of genre comparisons rating measures and methods such as mine can fruitfully complement each other.

After this demonstration of why strong clashes between mixed metaphors are rare the next steps should lead to a deeper theoretical understanding of the conjunctive devices whereby mixed metaphors become mutually enriching and coherent within their wider discourse unit. What will have to move into focus is what holds responsible for ''external binding'' between metaphors. This task could be approached using tools from functional linguistics (Koller, 2003), rhetorical structure theory (Mann and Thompson, 1988), as well as certain aspects of mental space theory (Fauconnier and Turner, 2002) that specify in detail how ontological plane switches are effected.

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