"In the depths of the world's credit crisis": Compelling Synergies between Conceptual and Grammatical Metaphor in a Corpus-assisted Study of the British and Italian Financial Press

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Abstract
One of the central tenets of Conceptual Metaphor Theory is that metaphor is pervasive in both language and thought. While *lexical* metaphors (non-standard uses of lexical units) have been widely studied as surface realisations of conceptual metaphors, less attention has been paid to the Systemic Functional theory of grammatical metaphor, which posits that metaphorical variation also involves grammatical structures. With the focus placed on nominalisations as grammatical metaphors in two *ad hoc* corpora of articles from *The Financial Times* and *Il Sole 24 Ore*, I show that: a. linguistic (lexical) realisations of conceptual metaphors and nominalisations tend to co-occur, and b. they tend to work in a cohesive fashion. I identify and discuss three main patterns of synergy on the basis of qualitative analysis through select examples.
Keywords: Metaphor: conceptual/lexical/grammatical, financial crisis.

1. Introduction

This contribution focuses on the synergies between linguistic instantiations of conceptual metaphors (henceforth CMs; Lakoff and Johnson 1980; Lakoff 1993) and nominalisations, a key characteristic of the Systemic Functional account of grammatical metaphor (henceforth GM; Halliday 1985; Halliday and Matthiessen 1999), as they emerge from analysis of the metaphorical representation of the global crisis in the 2008 financial press. The study is a follow-up to a PhD research project, for which I built an *ad hoc* corpus of articles from a British and an Italian financial newspaper (Luporini 2013). The findings at that first stage of research highlighted a strong tendency to construe the crisis and its effects in metaphorical terms, through both CMs and GMs; in addition, qualitative analysis

spotlighted a potential compatibility between them, to be further investigated: a point I now address in this second stage.

The paper is organised as follows: the rest of this introductory section provides a non-exhaustive overview of the two theoretical models and their main points of convergence. Section 2 sketches the methodology of corpus construction and analysis, and presents the main results. Finally, Section 3 offers some tentative conclusions and suggests potential directions for further future research.

1.1. At the crossroads: CM and GM

One of the main tenets of Conceptual Metaphor Theory (hereafter CMT) is that metaphor is ubiquitous "not just in language, but in thought and action" (Lakoff and Johnson 1980: 3). From this perspective, linguistic metaphors – long considered as purely ornamental or stylistic devices (see Johnson 1981) – are treated as evidence for/consequence of deeper systematic mappings across conceptual domains, structuring our conceptual system and playing a key role in meaning construction and social action (cf., e.g. Lakoff and Johnson 1980; Lakoff 2002; Semino 2005; Kövecses 2015a). As Gibbs (1994: 7) puts it, "metaphor does not just help us see things in new ways. Metaphor constitutes much of our experience and helps constrain the way we think and speak of our ordinary lives".

Another central assumption in CMT which is particularly relevant to this study is that abstract domains (called *target* domains) tend to be metaphorically understood in terms of concrete *source* domains linked to physical experience. A straightforward illustration is provided by the so-called category of *orientational metaphors* (Lakoff and Johnson 1980: 14ff): an expression like "his income *fell* last year" shows that a physically-grounded, orientational source concept is mapped onto the abstract target concept QUANTITY, yielding the CM LESS IS DOWN[1]. This shows that "[t]he domain of experience that is used to comprehend another domain is typically more physical, more directly experienced, and better known than the domain we

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[1] Here and in what follows, conceptual domains involved in metaphorical mappings are conventionally indicated in small capitals. Linguistic realisations of metaphors (conceptual/grammatical) are in italics.

wish to comprehend, which is typically more abstract, less directly experienced, and less known" (Kövecses 2015b: 2)[2].

Although the theory in its first formulation was not immune to criticism (see Tay 2014), and several refinements, but also alternative accounts, have been proposed (see Kövecses 2011 for a review), it naturally gave rise to a wealth of linguistic research, much of which exploits corpus methodologies to identify linguistic instantiations of CMs in naturally occurring language (among others, Charteris-Black 2004; Deignan 2005; Stefanowitsch and Gries 2006; Steen *et al.* 2010). Corpus findings, in a circular fashion, feed back into the theory, strengthening it (cf. Deignan 2008). In recent years, in particular, numerous studies have addressed the metaphors used to frame economic and financial issues in the press (cf., e.g. Charteris-Black and Musolff 2003; Rojo López and Orts Llopis 2010; Fusari 2011).

On the whole, in CMT, *lexical* metaphors (LMs) – i.e. non-literal uses of lexical units – have been widely investigated as linguistic markers of conceptual mappings, as different word classes (nouns, verbs, adjectives, adverbs and even prepositions, cf. Lindstromberg [1998] 2010) exhibit a metaphorical potential, although with possible differences in frequency across registers/semantic fields (cf. Cameron 2003; Deignan 2005).

The approach to metaphor developed within Systemic Functional Linguistics (SFL), in contrast, assumes that metaphorical variation often goes beyond lexical selection, affecting *grammatical* structures: "there is also such a thing as grammatical metaphor, where the variation is essentially in the grammatical forms, although often entailing some lexical variation as well" (Halliday 1985: 320). As with LMs, meaning is *transferred* from the linguistic element that

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[2] Kövecses observes that source concepts can be mapped onto target concepts on the basis of two main criteria: some perceived structural *similarity* (as in LIFE IS A THEATER PLAY), or some *embodied* experience (as in INTENSITY IS HEAT, linked to the increase in body temperature accompanying energetic physical activity or strong feelings) (2015b: 21ff). The shift from abstract to concrete characterising metaphorical mappings (one of the key points of convergence between CM and GM/nominalisation, as I clarify below) holds in both cases (on the notion of *embodiment* in CMT, see, e.g. Lakoff and Johnson 1999; Gibbs, Lima, Francozo 2004; Kövecses 2008, also addressing some criticisms raised against it, and Kövecses 2010).

is most naturally associated with it to a different one. In fact, in the same way as lexical units have literal meanings, so grammatical structures are said to have *congruent*, default functions within the system of a language[3].

The framework includes distinct types of GM (ideational, interpersonal and, according to some scholars, also textual), corresponding to the *metafunctions* played by language in context identified by SFL (Halliday 1985 and subsequent editions). The rest of this section focuses on the category dealt with in this study, that of *ideational* metaphors, and especially on nominalisation; comprehensive accounts can be found in, e.g., Halliday and Matthiessen (1999; 2004), and Thompson (2014).

The ideational metafunction accounts for the fact that speakers use language "to make sense of their experience of what goes on around them and inside them"; from this perspective, the clause is "a means of representing patterns of experience" (Halliday 1985: 101). The lexico-grammatical system that concretely realises such representation is that of TRANSITIVITY[4], which includes options to construe the factual content of the message through configurations of activities or states (*processes*), entities involved (*participants*), and optional circumstantial information, as in "a little drama" (Halliday and Matthiessen 1999: 128). Processes, which are classified in terms of six main categories (behavioural, existential, material, mental, relational, verbal), are congruently encoded in the language as verbal groups (VGs); they may also involve the qualities being ascribed to entities or facts, which are congruently encoded as adjectival or adverbial forms. Participant roles, varying with the process type, are congruently realised by nominal groups (NGs). The most productive and studied form of GM in this realm is nominalisation: the use of a nominal form to encode a process or quality meaning; in the words of Halliday and Matthiessen, "turning *processes* and *qualities* into *things*" (1999: 314, my emphasis). The key point here, it is essential to note, is the contrast emerging between semantics

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[3] The hypothesis that congruent grammatical structures are primary in language evolution is confirmed by studies in language acquisition (e.g. Painter, Derewianka, Torr 2007). Congruent structures also tend to be primary in the unfolding of discourse (Halliday 2007: 106).
[4] Systems are conventionally indicated in small capitals in SFL.

and realisation (what truly qualifies nominalisation as a GM): in the case of a nominalised process, in particular, this implies that the relationship between (metaphorical) noun and (congruent) verb need not be explicitly signalled in morphology, as long it is clearly identifiable. Indeed, a. *derivation* proper (involving suffixation), b. *conversion* (involving morphologically identical nouns/agnate verbs), and c. cases in which there is no agnate verb, but the noun nonetheless indicates a process (e.g. *trend*, *memory*) are equally treated as instances of nominalisation in the SFL literature (see, e.g., Halliday and Matthiessen 1999; Thompson 2014: Chapter 9; Banks 2003; Halliday and Matthiessen 2004: 639ff). The following examples illustrate a congruent → metaphorical shift through derivation and conversion, respectively:

1)   The taxpayers are anxious, because the government passed a new bill → The *passing* of a new bill caused *anxiety* among taxpayers (Devrim 2015: 11)
2)   People fear more strongly because the King is ailing → *Fears* mount for ailing King (Thompson 2014: 241)

As can be seen, nominalisation has a knock-on effect on ideational semantics in the whole clause: meanings and wordings are compressed; nominalised processes/qualities are *reified*, i.e. metaphorically portrayed as *things*, so they become atemporal, de-personalised, and less open to negotiation (Thompson p. 245).

At least three main areas of convergence between CMT and (ideational) GM emerge, even from this too-brief overview: firstly, in both frameworks metaphor is a second-order phenomenon, resulting in a *tension* (Taverniers 2006) or a *marked association* (Mikoli Yužni 2012) between wordings and semantics; secondly, metaphor (be it grammatical or lexical) is a fundamental strategy for expanding our meaning-making potential; thirdly, and most notably, both CM and GM imply "a shift towards the concrete, a move in the direction of objectifying", in the sense of "making like an object" (Halliday and Matthiessen 1999: 233; cf. also note 2 and Thompson's comment on reification above). Indeed, possible overlaps between the two frameworks have attracted scholarly attention of late (see Koller and Davidson (2008) on social exclusion as CM/GM in British policy-making texts; Ritchie and Zhu (2015) on the contribution of GM

to CMT in discourse analysis). In what follows, I aim at shedding further light on this point, using a corpus-assisted approach, and focusing on a text-type (financial reporting) and a combination of languages (English/Italian) both of which, to my knowledge, have not yet been investigated from this perspective. In analysing corpus findings, I am mainly interested in the third area of convergence identified above (abstract to concrete shift), although the former two provide an essential backdrop for the discussion.

2. Two roads, same direction? Methodology and select findings

2.1. Methodology in first and second research stage

As mentioned, this study further develops a PhD research project in which I used a specially built corpus of articles from the 2008 issues of *The Financial Times* and *Il Sole 24 Ore* (hereafter FT and S24O) to analyse patterns of CM/GM used to refer to the crisis, then at its onset. The year was chosen for the significance of its financial events, including the infamous Lehman Brothers crash, which led to a worldwide spread of concerns about the apparently worsening slump. The newspapers were selected for their authoritativeness and national/international circulation. The sampling was based on the type of article: for each issue, the main first page article and the leader were stored in electronic format. The final corpus amounted to 863,277 words and included four sub-corpora: *FT_First_page + FT_Leaders* (154,408 + 152,773 words) and *S24O_First_page + S24O_Leaders* (311,640 + 244,456 words)[5]. The corpus was uploaded to the online Corpus Query System *Sketch Engine* (Kilgarriff *et al.* 2004), lemmatised, and PoS-tagged.

   Given the research aim, my analysis focused on the lexemes *crisis* and *crisi*, for which I retrieved sentence-length concordances. I discarded irrelevant occurrences of the node lexemes, not referring to economic/financial issues, yielding a total of 1,356 concordances to be scanned for instances of CM and GM, through a combination of automated and manual techniques (cf. Luporini 2013; forthcoming). The criterion adopted in the analysis of nominalisation, in particular,

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[5] The English sub-corpora are smaller for reasons related to the total number and average length of the articles (details are given in Luporini 2013: 104).

involved the existence of a clear connection between the noun under scrutiny and a process/quality meaning. If necessary they were checked against an etymological dictionary. Thus, cases of derivation, conversion, and also less frequent cases of nouns clearly expressing a process meaning though lacking an agnate verb were *all* marked as metaphorical, in line with the literature on the topic discussed above (cf. Section 1.1).

The number and percentage of metaphorical concordances (i.e. concordances including at least one instance of metaphor involving *crisis/crisi*) in the four sub-corpora are provided in Table 1 below. The findings highlighted a significant percentage of metaphorical concordances, approaching, or – in most cases – exceeding 50%. Analysis also disclosed a slightly higher relative frequency of GMs in the English sub-corpora.

TABLE 1
Number/percentage of metaphorical concordances in FT and S24O

Sub-corpus	CM		GM	
	Total concordances	Metaphorical	Total concordances	Metaphorical
FT_First_page	180	95 52.8%	180	94 52.2%
FT_Leaders	177	102 57.6%	177	88 49.7%
S24O_First_page	514	282 54.9%	514	204 39.7%
S24O_Leaders	485	263 54.2%	485	201 41.4%

Finally, statistics were calculated for the specific types of CM (e.g. CONTAINER) and GM (e.g. ideational: nominalisation) realised in context.

Following a set of interesting patterns highlighted by first-stage qualitative analysis (Luporini 2013: 197ff), this new stage of research aims at demonstrating potential synergies between CM and nominalisation, starting with the sub-corpora of first page articles (examination of the leaders sub-corpora is planned). The new research question required several methodological adjustments:

first, as shown in Table 1 above, the data for CM and GM were kept separate in the first stage; moreover, the figures for GM did not exclusively concern nominalisation. Thus, the initial step of the second stage involved: a. narrowing down the focus to nominalisation in GM (process → thing or quality → thing shift); b. going through all the concordances that had been marked for CM and isolating those that *also* included at least one instance of nominalisation. Finally, manual analysis focused on the newly identified set of *bi-metaphorical* concordances, to see if/when CM and nominalisation could be said to play complementary functions.

2.2. Findings rundown

To be noted first is the considerable percentage of bi-metaphorical concordances, resulting from step (b) above: this indicates a tendency of CM and nominalisation to co-occur in the sub-corpora (especially in the English section), but, it is hypothesised also in the discourse type under analysis. Considering that Italian is often described as being inclined to use nominalisation (see Mikolič Yužnič 2012), the higher percentage of bi-metaphorical concordances in the English data seems particularly interesting. Details are given in Table 2.

TABLE 2

Number/percentage of bi-metaphorical concordances in FT_First_page and S24O_First_page

Sub-corpus	Total concordances	Bi-metaphorical
FT_First_page	95	70 73.7%
S24O_First_page	282	153 54.3%

As stated in Section 2.1, qualitative analysis aimed at marking off the concordances showing a correlation between the instances of CM and nominalisation (as opposed to the cases in which these addressed different, unrelated targets, which I discarded). The results, summarised in Table 3, show that in most cases CM and

nominalisation not only co-occur, but also work synergistically, in both the English and the Italian sub-corpus[6].

TABLE 3
Number/percentage of bi-metaphorical concordances showing CM-nominalisation synergy

Sub-corpus	Total bi-metaphorical concordances	Concordances showing synergy
FT_First_page	70	54 77.1%
S24O_First_page	153	111 72.5%

Evidence of synergy between the metaphors can be ascribed to three (not mutually exclusive) patterns, described below.

a) Nominalisation contributes to coherence in CM realisation

The most interesting pattern in the corpus data concerns the choice of a nominalised element to contribute to the coherent and effective linguistic realisation of a CM. Here, the abstract to concrete shift characterising CM and nominalisation alike (cf. Section 1.1) plays a pivotal role. On one hand, LM activates specific CMs that portray non-physical notions in physical terms; on the other, nominalisation provides the resources for construing various aspects of the event (i.e. participant roles or circumstantial information) in a way that is consistent with such shift:

3) **Crisis** *triggered* by geared mortgage *bets* [FT, subheading, February 29]
4) we are in the *depths* of the world's credit **crisis** [FT, April 19]
5) *Si proietterà* sul prossimo anno [...] *la durezza* dell'attuale **crisi**

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[6] Obviously, though subjectivity can be kept to a minimum through the development of rigorous classification criteria, it can never be avoided completely. This is true for metaphor studies in general, and especially for the analysis presented here. Between the cases in which the correlation could not be denied and those where the unrelatedness was equally clear, lay a 'grey area' where the analyst's own interpretation became essential. Indeed, a possible future development of this study involves inter-rater reliability testing.

finanziaria (The *hardness* of the current financial crisis [...] will *project itself* onto the next year) [S24O, December 17]

In (3), the LM *trigger* instantiates the CM THE CRISIS IS A (DANGEROUS) MACHINE (cf. *trigger a bomb/a weapon*). *Trigger* in SFL is a material process, i.e. a process of concrete 'doing', entailing a physical source of energy that brings about the deed, construed in/by the participant role *Actor*, and an entity that undergoes it, construed in/by the participant role *Goal* (Halliday 1985: 102ff). A nominalised process, being linguistically represented as an entity, can take on the role of Actor ("by geared mortgage *bets*"); at the same time, since the target concept CRISIS is 'objectified' via CM, the lexical unit *crisis* can function as Goal. Avoiding the GM would of course be possible, but certainly not easy; a more congruent wording would inevitably be less concise and 'eye-catching' (two essential qualities in a subheading). There is, however, another important 'side effect' to be taken into account: as nominalised processes are by definition de-personalised, the picture emerging from (3) is that of a world in which *bets* act, as it were, of their own accord, without any kind of human intervention.

Similarly, in (5), the LM *proiettarsi*, another material process, instantiates the CM THE CRISIS IS A PHYSICAL ENTITY, with the usual move towards concreteness; the nominalised quality *durezza* fits perfectly within this scenario in its role of Actor. It is important to observe that, here, the GM was hardly necessary: a more grammatically congruent wording (e.g., "Si proietterà sul prossimo anno l'attuale dura crisi finanziaria", with "the current hard crisis" as Actor), would realise the same CM. Yet, the nominalisation activates a contextually meaningful and almost 'perceptible' component of HARM/SEVERITY that makes the statement all the more effective.

Example (4) is an instance of LM/GM conflation. The lexical unit *depths* simultaneously instantiates a CM (THE CRISIS IS A CONTAINER) and a quality → thing shift. Again, the nominalised element not only works consistently with the scenario set up by the CM, construing the nominalised quality as spatial location, but actually reinforces it, contributing to the emergence of an additional property of the CONTAINER/CRISIS, i.e. its (literal) INESCAPABILITY. A two-fold analysis can thus spotlight subtle mechanisms underlying even highly conventional (but still powerful) metaphorical expressions.

b) Nominalised technical terms as a breeding ground for CM

The importance of nominalisation in the creation of specialised terminology has been amply demonstrated (see, e.g., Halliday and Martin 1993); the language of economics is no exception, as shown by terms like *recession*, *securitisation* (It. *recessione*, *cartolarizzazione*). On one hand, technical vocabulary created via nominalisation can undergo further metaphorical conceptualisation: for instance, both FT_ and S24O_First_page show widespread evidence of the CM RECESSION IS A CONTAINER. On the other, it may provide linguistic material for new CMs, as in (6) below, where the nominalised term comes from the field of nuclear energy:

6) After escaping being badly *hit* by the *fallout* from the US subprime mortgage **crisis**, the large eurozone economies have been slowed down [FT, August 15]

Fallout is a 'dead' nominalisation from the verb *fall out* in its literal sense, as a look at the etymological dictionary confirms: it refers to radioactive dust spreading in the air after a nuclear explosion. It is also, at the same time, an instance of LM, activating the CM THE CRISIS IS A NUCLEAR DISASTER: another case of conflation. Here too, the two types of metaphor work in a cohesive fashion: the 'thingified' process *fallout* (Actor) can *hit* (material process) *economies*, which are in turn objectified and function as Goal, creating a multiple-layered metaphorical scenario[7].

c) Nominalisation and CM: condensing information

As already noted in passing above, nominalisation and CM are also strategies to condense information:

7) The AIG **crisis** *fuelled* another day of *turmoil* on global markets yesterday *sparked* by the weekend *failure* of Lehman Brothers and the rushed *takeover* of Merrill Lynch [FT, September 17]

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[7] An interesting sub-pattern specific to the Italian sub-corpus – which, for reasons of space, cannot be discussed here – involves 'loan-nominalisations' available for further CM processing, as in "La **crisi** 'vincola' *lo shopping*" ("The crisis is 'putting the brakes' on *shopping*") [S24O, October 20].

8) I *timori* per l'*impatto* della **crisi** finanziaria sull'economia *pesano* […] sulle borse (*Fears* for the *impact* of the financial crisis *are weighing* […] on the stock exchange) [S24O, October 3]

In both (7) and (8), the nominalisations – *failure*, *takeover* (also technical terms), *timori*, *impatto* – and the CM-evoking LMs (e.g. *fuelled*: THE CRISIS IS AN INFLAMMABLE SUBSTANCE/THE FUEL OF A MACHINE) compress even highly structured information, enabling the writer to eschew longer phrasing (cf. Ritchie and Zhu 2015), while also giving a more vivid account of the events: this is particularly evident in (8), also a good example of the abstract to concrete shift cohesively brought about by the two types of metaphor (pattern (a) above). A major drawback of nominalisation emerging from this and the previous pattern, however, is that it can require 'unpacking' extensive background knowledge (e.g., the factors leading to the *takeover* of an institution – a complex and delicate procedure itself). Its widespread use, therefore, tends to marginalise uninitiated readers.

3. Conclusive remarks

Findings from this corpus-assisted study show a marked tendency of GM/nominalisation to couple with linguistic realisations of CM and suggest that, in most cases, such co-occurrence is motivated by a set of complementary functions.

   A qualitative analysis of corpus evidence highlighted three interconnected patterns of synergy between CM and GM. Firstly, and most importantly, GM emerges as an essential resource available to speakers/writers to construe fully coherent linguistic representations of CMs, through the shift from abstract to concrete characterising both. Secondly, nominalisation functions as a breeding ground for CM in the creation of technical vocabulary, which is then available for further metaphorical processing. Thirdly, nominalisation and CM can work cohesively as rhetorical strategies, enabling speakers/writers to compress complex information into more effective (though more 'hermetic') wordings.

   Overall, the results suggest that the motivated co-occurrence of CM and GM may be thought of as a *register-idiosyncratic* feature (Miller and Johnson 2013) of the language of financial journalism, in terms of information condensation, but also in providing a

representation of negative economic/financial events as *tangible* entities, thus foregrounding their disruptive potential.

Further implications remain to be tested. For instance, on the basis of quantitative data from this study, we may tentatively hypothesise that nominalisation can function as a convenient predictor of CM in corpus-assisted investigations. Another stimulating line of research would involve extending the two-fold analysis presented here to other text-types, which may display different, but equally compelling, patterns of CM/GM synergy.

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