

Metaphorical scenarios in business science discourse

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Abstract

Metaphor has been shown to play an important role in business science discourse. Yet, previous corpus-based studies only investigated a pre-selected list of metaphoric expressions, potentially rendering the analysis incomplete. Furthermore, some studies which only focused on lexis did not analyse how the lexical items may construct business concepts in terms of scenarios. The purpose of this research is to investigate metaphor used to construct business concepts in business research articles. 42 business research articles published in 2009-2010 from five journals ranked in the top-ten according to the 2007 journal impact factors (Thompson Reuters, 2008) constitute the data of this study. Semantic annotation software USAS (Rayson, 2008) was used to assist in the retrieval of metaphoric expressions. Furthermore, manual analysis of concordances was done to find metaphorical expressions that had not been captured by the semantic tags. The analysis of these metaphoric expressions was based on Conceptual Metaphor Theory (Lakoff & Johnson, 1980) and Metaphor Scenario (Musolff, 2006). Data analysis indicates that metaphor constructs business concepts as scenarios which have participants performing actions to reach their goal according to the SOURCE-PATH-GOAL schema of the source domains. At the centre of these scenarios, the BOUNDED SPACE source domain serves as a conceptual space or a setting for each scenario. Other source domains, which are WAR, SPORT, GAME, JOURNEY, MACHINE, LIVING ORGANISM, BUILDING and PHYSICAL FORCES, project the scenarios onto the space, forming interconnected and coherent scenarios of business discourse.

Keywords: metaphor, discourse analysis, corpus linguistics, business discourse, cognitive linguistics.

Resumen

Escenarios metafóricos en el discurso de los negocios

La metáfora juega un papel fundamental en el discurso de la ciencia de los negocios. Sin embargo, los estudios previos basados en corpus solamente han investigado una lista pre-seleccionada de expresiones metafóricas, por lo que el análisis es potencialmente incompleto. Además, otros estudios solo centrados en el léxico no han analizado ítems léxicos que pueden construir conceptos de negocios mediante escenarios. El objetivo de este estudio es el de investigar la metáfora utilizada para construir conceptos de negocios en artículos de investigación de este ámbito. Para el desarrollo del estudio se tomaron 42 artículos de investigación publicados en 2009-2010 de cinco revistas de entre las 10 mejor clasificadas en el JCR 2007 (Thompson Reuters, 2008). Se utilizó el software de anotación semántica USAS (Rayson, 2008) para extraer las expresiones metafóricas. Asimismo, se realizó un análisis manual de las concordancias para identificar expresiones metafóricas que no se identificaron mediante el procedimiento automatizado de etiquetas semánticas. El análisis de estas expresiones se basó en la teoría de la metáfora conceptual (Lakoff & Johnson, 1980) y del Escenario de Metáfora (Musolff, 2006). Los datos indican que la metáfora sirve para construir conceptos específicos mediante escenarios en los que los participantes realizan acciones para alcanzar sus objetivos siguiendo el esquema de FUENTE-TRAYECTORIA-OBJETIVO de los dominios fuente. En el núcleo de estos escenarios está el dominio fuente de ESPACIO LIMITADO, que sirve como espacio conceptual para crear cada escenario. Otros dominios fuente, como GUERRA, DEPORTE, JUEGO, VIAJE, MÁQUINA, ORGANISMO VIVO, EDIFICIO y FUERZAS FÍSICAS, proyectan los escenarios en un espacio, formando escenarios interrelacionados y coherentes en el discurso de los negocios.

Palabras clave: metáfora, análisis del discurso, lingüística de corpus, discurso de negocios, lingüística cognitiva.

Introduction

A wealth of metaphor studies have shown that metaphor plays an important role in business discourse. Research in economics indicates that metaphor is used to construct new theories (McCloskey, 1995). Linguistic research has shown that metaphor is a crucial tool for communicating ideas (Herrera-Soler, 2008; Silaški & Đurović, 2010; Skorczynska, 2014) and managing interpersonal relation (Handford, 2010).

Recently corpus linguistics has an important role to play in the study of metaphor in discourse, allowing metaphor research to be grounded in strong empirical data (Charteris-Black, 2004; Deignan, 2005). Nevertheless, corpus studies of metaphor use in business sciences (cf. Skorczynska & Deignan, 2006; Alejo, 2010; Skorczynska Sznajder, 2010) have been based on searches for the preselected strings of metaphoric expressions, potentially rendering the analysis incomplete. In addition, some studies (e.g. Skorczynska Sznajder & Deignan, 2005) solely investigate how the source domains generate particular business lexis. However, the focus on lexis alone might not fully capture the nature of metaphor in discourse.

Bruner (1991, cited in Musolff & Zinken, 2009: 5) argues that the target concepts can be meaningfully comprehended when they are embedded in “metaphorical narrative in a discourse community”. Previous studies such as Koller (2004) and Musolff (2006) have shown that metaphor forms a scenario locally when metaphoric expressions occur in close proximity and globally across a corpus. The source domains that are connected to each other are found to be instantiated in metaphoric expressions clustering near each other (Koller, 2004; Kimmel, 2009). It is therefore important to investigate metaphoric expressions, arrive at the narratives which they form and examine whether there is a link between different source domains.

This study aims to further the investigation of metaphor use in business science discourse via the integration of corpus linguistic methods and discourse approach to metaphor. Semantic annotation software is employed to assist in retrieving metaphoric expressions in a corpus. Metaphor scenario (Musolff, 2006) is applied to shed further light on the discursive construction of the target concepts as well as the connection and coherence of source domains (Kimmel, 2009), which may in turn contribute to a better insight into the nature of metaphor in business science discourse.

Theoretical frameworks

Among several paradigms in metaphor study, Lakoff and Johnson’s (1980) conceptual metaphor theory has assumed paramount importance and become a predominant approach that has been used by several studies (cf. Kövecses, 2002; Koller et al., 2008). According to this theory, metaphor involves conceptualizing one thing in terms of another. Instantiated in metaphoric expressions, conceptual metaphor derives from a cross-domain

mapping from the source domain onto the target domain at the cognitive level (Lakoff, 1993: 203). This is evidenced in conventional metaphoric expressions such as “waste my time”, “spend your time”, and “invest a lot of time” (Lakoff & Johnson, 1980: 7-8) which show that humans conceptualize time in terms of money and thus it can be wasted, spent or invested. Lakoff and Johnson (1980) argue that humans’ cognition is metaphorical in nature – a claim which they supported with prevalent metaphoric expressions in language. Although widely applied, conceptual metaphor theory has been criticized for being too static and decontextualized. As this theory is based on data generated from introspection, the socio-cultural context in which metaphor occurs is disregarded (Koller, 2005: 199-200). In addition, it does not address how differing lexicalization results in different interpretation (Musolff & Zinken, 2009: 2-3).

In contrast, a discourse approach to metaphor ascribes high importance to the communicative activities and the social context in which metaphor occurs, emphasizing that metaphor is an on-going process of negotiation involving different parties who employ metaphor to shape the social reality of a specific topic or a social domain such as economics, politics or education (Musolff & Zinken, 2009: 1-4). By drawing associations between two concepts and structuring one from the other, metaphor can be employed to “explain, persuade, reason, theorize and offer new conceptualizations of reality” (Semino, 2008: 31). This is fundamental to the construction and communication of new knowledge as metaphor can provide access to complex ideas through the structure of a more familiar and well-delineated one (Albritton, 1995: 43, cited in Deignan, 2005). In the domain of economics, for instance, research indicates that metaphor is an essential tool by which economists construct theories, offer new conceptualizations of economic phenomena and communicate their ideas (Henderson, 1994).

Furthermore, the discourse approach recognizes that an important factor influencing metaphor understanding is the narrative in which metaphor is situated (Musolff & Zinken, 2009: 5). To show how metaphor becomes meaningfully embedded in narratives, Musolff’s (2006) concept of metaphor scenario seems to be a potential framework. The concept of “scenario” is developed from Fillmore’s notion of conceptual scene and Lakoff’s concept of scenario which is structured by SOURCE-PATH-GOAL schemata (Musolff, 2006: 27-28). A scenario involves the rich correspondences between the source domain and the target domain in terms of actors, their

interactions, results of those interactions and evaluations which together form a narrative that structures the target concept (ibid.). One source domain might also combine with other source domains to form a narrative (ibid.: 26).

The emphasis of the discourse approach on naturally occurring data (Semino, 2008) can be enhanced by a corpus linguistic approach which provides a strong empirical grounding and allows the extraction of metaphoric expressions from a large pool of data (Deignan, 2005). In particular, the use of semantic annotation software such as USAS (Rayson, 2008) has been shown to enable a semi-automated retrieval of metaphoric expressions in a corpus as evidenced in works by Semino et al. (2009). By employing semantic annotation software – an approach which allows for the more open-ended search for metaphoric expressions (Semino et al., 2009) – it is hoped that this study will retrieve metaphor from a corpus more thoroughly.

Data

The data comprise a corpus of 42 business research articles. The articles (492,880 words in total) were published in 2009-2010 in journals ranking in the top-ten according to the 2007 journal impact factors (Thomson Reuters, 2008). The details of the corpus composition in terms of the name and the rank of the journals, the number of texts and the number of words from each journal are summarized in Table 1. The journal ranked second, *Academy of Management Review*, is excluded because it contains only review articles. To control the genre, only research articles were included in the corpus.

| Journal title | Rank | Number of texts | Word counts |
|----------------------------------|------|-----------------|-------------|
| Academy of Management Journal | 1 | 8 | 97,208 |
| Marketing Science | 3 | 9 | 98,557 |
| Journal of Marketing | 4 | 9 | 97,120 |
| Administrative Science Quarterly | 5 | 7 | 96,039 |
| Strategic Management Journal | 6 | 9 | 103,956 |
| TOTAL | - | 42 | 492,880 |

Table 1. Composition of the corpus.

Methodology

After compiling the corpus, semantic annotation software, USAS (Rayson, 2008), was employed to identify potential metaphoric expressions. To use this software, the corpus was uploaded into the web-based Wmatrix program (Rayson, 2008), in which USAS is embedded. Then the software assigned a semantic category based on a Longman Lexicon of Contemporary English (McArthur, 1981, cited in Semino et al., 2009) to words and multiword expressions in the corpus.

Semino et al. (2009) argue that the semantic categorization of this software more or less accords with source domains of conceptual metaphor theory and thus investigation into key semantic categories which are unlikely to appear in a particular text type is likely to yield metaphoric expressions. In consequence, following these authors, I compared this corpus against the BNC sampler education corpus to determine salient semantic categories in the domain of business sciences, especially those unlikely to be found in business research articles. Due to space limit, only the top five semantic tags that have the highest log-likelihood value are shown in Table 2 to briefly illustrate the comparison results.

| Semantic tags | Log-likelihood value |
|---------------------------------|----------------------|
| I2.2 Business: Selling | 2277.87 |
| A2.2 Cause & Effect/ Connection | 1868.23 |
| Z5 Grammatical bin | 1606.41 |
| S5+ Belonging to a group | 1091.08 |
| I2.1 Business: Generally | 1076.36 |

Table 2. The top five semantic tags which have the highest log-likelihood value.

As seen in the table, there are some semantic tags that can potentially lead to metaphorical expressions because they are either related to the source domains listed in previous studies or the target domains. These are: 1) I2.2. Business: Selling, 2) S5+ Belonging to a group and 3) I2.1 Business: Generally. Consequently, I investigated these semantic tags as well as others to search for metaphorical expressions. Unlike Semino et al. (2009), I did not specify the cut-off point and looked at semantic tags which might be relevant to source domains and target domains of business concepts so as not to miss metaphoric expressions which have low frequency. The selection of semantic tags to be investigated was informed by related literature but I looked for some other semantic domains that seemed incongruent with the discourse of business science as well.

Once the concordances from each semantic tag were generated, node terms and their linguistic environment were examined to decide whether or not they are metaphorical, based on the metaphor identification principle (Pragglejaz Group, 2007). The instructions for determining metaphor are as follows:

1. Read the entire corpus of a text to gain general comprehension.
2. Dissect the lexical units in the texts.
3. Determine the contextual meanings of each lexical unit and consider if it has a more basic meaning, that is, “more concrete, related to bodily action, more precise and historically older”.
4. If there is a more basic meaning of that lexical unit, examine if there is a relationship between the meaning in context and the basic meaning.
5. If the answer is yes, the lexical unit is metaphorical (Pragglejaz Group, 2007: 3).

These metaphoric expressions were then analyzed according to conceptual metaphor theory (Lakoff & Johnson, 1980) and metaphor scenario (Musolf, 2006) to examine the conceptual mappings and to determine if metaphors found across the corpus globally form a narrative and how they are related to each other.

Metaphor scenarios in business research articles

Based on the analysis of metaphoric expressions, a rich set of correspondences between the source domains and the target domains of business/economics is identified. The application of scenario (Musolf, 2006) reveals that several source domains help construct business concepts in terms of interconnected narratives or scenarios with participants, interactions and purposes. I argue, following Alejo (2010), that the bounded space source domain creates a conceptual space onto which other source domains project the scenarios. Below I first explicate the properties of each source domain and exemplify aspects of each source domain which together construct business scenarios with metaphoric expressions in italics. The number in round brackets following metaphoric expressions are frequencies

of their lemma. If there is no number, the metaphoric expression occurs only once.

Bounded space

The central element of the business scenarios is the BOUNDED SPACE source domain. There are 692 metaphor tokens of the bounded space source domain in the corpus. This source domain serves as a setting or conceptual space which is integrated with other source domains that have a SOURCE-PATH-GOAL schema (Alejo, 2010: 1142). As an elaboration on the container metaphor (which corresponds to what is termed bounded space metaphor in this article) in terms of its origin and function in discourse, Alejo (2010) argues that in economics/business sciences CONTAINER is used to conceptualize consumers and the business transaction in general which is lexicalized in the term *market*. *Market* as an exchange of goods and services derives from the metonym PLACE FOR ACTION. Such a concept of *market* is further abstracted because nowadays not only can business transaction be done in the marketplace but also online and indeed sometimes *market* refers to the economic system in general. This abstraction is made possible by the conceptual metaphor A MARKET IS A CONTAINER (Alejo, 2010: 1146). The container metaphor has been argued to be integrated with other source domains such as war and other source domains which involve movement and physical forces (Kimmel, 2009).

Based on the metaphoric expressions identified, it is argued that the source domains of WAR, SPORT, GAME, JOURNEY, MACHINE, LIVING ORGANISM, BUILDING and PHYSICAL FORCES project actors and their interaction with each other onto the conceptual space. This space is also adjusted to suit the entities, actions, relations and purposes.

The manifestation of the bounded space source domain can be detected in metaphoric expressions such as “in the electronic market”, “out of business” and “in the industry”. As a result, this source domain is mapped onto market, business and industry. For instance, the term “market” in many cases seems to refer to consumers or the business transaction, which do not have a boundary. This term therefore provides a boundary to this abstract concept because the spatial property of a market is used to conceptualize them. Furthermore, the bounded space metaphor allows this concept to be entered or exited, which can be seen in phrases such as “entered the market”, “gone out of business” and “access the market”. Also, entities in the area

seem to try to claim ownership of the space. This is shown in the phrases “market expansion” and “market overlap”, which illustrates that participants try to own the same area. Moreover, entities in the area attempt to prevent others from entering the area as indicated by “entry barriers”. Market is in consequence bounded and limited space and business actors struggle to gain entry and own the area inside.

War

The conceptualization of business as war generates 877 metaphoric expressions in the corpus. The war source domain projects battles, soldiers, military tactics and fighting over territory onto the conceptual space which now becomes a territory or a battle field. Business people as well as business resources are warriors, business activities are war, while market/consumers are territory which companies fight over. Also, business resources are conceptualized as weapons in war. The purposes of war include survival in the battle and gaining more territory, that is, consumers. Moreover, there is a combination with romantic relationship metaphor projecting a scenario of political marriage between companies which then join forces in war.

Sample metaphoric expressions which indicate the conceptualization of business as war such as “battle(s)” (5) and “war(s)” (5) which occur in the phrases “an uphill battle” and “bidding war”. There are 27 instances of metaphor which show the connection between WAR and BOUNDED SPACE source domain. Examples include “entering a foreign market”, “face an uphill battle”, “survival in the NE market” (6) and “target consumer segments” (3). Apparently on the one hand the bounded space now becomes a battlefield where fight and survival take place. On the other hand, the phrase “target consumer segments” indicates that consumers are conceptualized as a bounded space – a territory that businesses fight to attain. This evidence supports my claim that the bounded space is adjusted to suit the scenario. The war scenario structures the concept of business processes as warfare between troops from different sides who fight each other for survival and more territory. Business personnel and companies are troops while consumers are territory.

Evidence to support that business personnel and other resources are conceptualized as soldiers is derived from the metaphoric expressions: “mobilize”, “mobilization”, “force”, “echelon”, “marshal” and “alliances”. The first two metaphoric expressions, that is, “mobilize” and “mobilization”,

were frequently found in the phrases “workers mobilize” (4), “worker mobilization” (3) and “mobilize necessary items for business”. The first two give a scenario of workers fighting the employers for their rights, thereby portraying the war between employers and employees who have competing interests. Yet, the last one shows the conceptualization of products as soldiers. The metaphoric expression “force” as in the phrases “sales force” and “task force” indicates that business persons are conceptualized as the troop of each firm. “Echelon” (19), a military term for an arrangement of soldiers or war crafts in a procession, shows the conceptualization of company leaders as soldiers because it appears in the phrase “upper echelon theory” which refers to how the cognitive processing of leaders can have an impact on a company. “Upper echelon” therefore refers to the leaders of business firms. Although the word “upper echelon” generally refers to people of higher status or rank, the metaphoric meaning of “echelon” might still play a role in the conceptualization of business leaders. The word “marshal” identified in the phrase “marshal sufficient financial resources” illustrates the conceptualization of resources as troops. The word “alliance” shows that to achieve business goals each firm can collaborate or join forces with other companies (Boddy, 2005: 699), in which case the business actors are conceptualized as troops of different sides in war.

There are 41 occurrences of romantic relationship metaphors which are combined with war metaphor as well. These were identified in metaphoric expressions such as “alliance break-ups”, and “alliance partners”. The word “break-ups” (19) is a dual metaphor which literally refers to breaking up a physical object but now used metaphorically for the end of a romantic relationship. This combination might suggest a conceptualization of business relationship as a political marriage in which two parties get married and join forces in war.

Having shown how the war source domain constructs participants, I now elaborate on the scripts that are metaphorically constructed by this source domain. Prior to launching an attack, business persons establish goals and plans. This results in the metaphoric expressions: “aim” (26), “mission” (17), “strategy” (202) and “strategic” (413). They frequently occur in phrases such as “business aims”, “company’s missions”, “pricing strategy” (3) and “strategic choice” (15). Subsequently, firms engage in a war with their rival companies. The actions which show the conceptualization of business as war include “target” (54), “fight”, “fire” (2), “threat” (14), “attack” (2), “campaign” (6), “championed”, “retaliate” (4), “defences” (3) and “entrenched” (4). There are

two ways in which “target” is used to conceptualize business. In the context of mergers and acquisitions “target” is found in the phrases “target firm” (3) and “acquisition target” (2). These show a war between a firm and other companies which are being acquired. In another case, “target” seems to show the conceptualization of business as a war to capture consumers because it was identified in the phrases “target market” and “target consumers” (7 instances of the lemma TARGET co-occurring with “consumers” or other similar terms). The defensive side of war is found in the phrase “defences such as impression management” and “entrenched wireless industry”. Other metaphoric expressions refer to the attack.

Weaponry in business includes products and money as indicated by “product launch” (6). The aggressiveness of business war is shown in phrases describing business activities such as “brutal standard war” (4), “fierce market-share battle” (7), “aggressive bidding” (27) and “hostile takeover”. In addition, the metaphoric expression “fierce price competition” can suggest the conceptual link with the sport source domain. In fact, Koller (2004) argues that sport metaphor provides a conceptual support to the war metaphor because they both create a concept of two opposites excitedly trying to subjugate each other. WAR and SPORT are thus closely related, which is possibly why they co-occur.

The goals of business that are constructed by the war scenario include surviving the battle and acquiring more territory. The first is derived from the metaphoric expression “survive” (15) and “survival” (127), which appear in the phrases “firms survive” and “survival in NE markets”. The second is shown in metaphoric expressions such as “market expansion” (8), “market coverage” (13) and “market entry” (37). Also, there are metaphors related to fighting which do not fit the schema, i.e. “empire building” and “build empires” which are also identified in previous studies such as Koller (2004). This refers to the behaviour of leaders who work for their own benefit at the expense of the company’s development.

Sport

The sport source domain has 452 metaphor tokens. Here business people are conceptualized as sports players who compete against each other and the bounded space becomes a sport tournament that each player participates in. The goal is to win the competition and get the prize. This is also related to the game source domain as it is very difficult to decide whether some

metaphoric expressions, such as “players”, belong to sport or game metaphor.

The sport source domain is evidenced in metaphoric expressions indicating the conceptualization of business persons as sport players such as “market players” (30 instances of the lemma *PLAYER* with metaphoric meaning) and “player firm”. “They were jockeying for their position” (3) is a horse riding metaphor which shows that business persons are conceptualized as jockeys. Also, the metaphoric expressions “team up” and “team” (193) indicate the concept of team in sport which is used to conceptualize business.

In the sport scenario, business people or firms are competing against each other in a sport event, as shown in “compete in the same industry” and “firms competing in markets with NE” (54 instances of the lemma *COMPETE*). Here it seems that market and industry are conceptualized as a sport tournament and at the same time a bounded space due to the preposition “in”. These metaphoric expressions lend further support to the argument that the bounded space metaphor integrates with other scenarios by functioning as a setting for interaction. Moreover, the sport metaphors “organizational goal” and “financial goal” (61 occurrences of the lemma *GOAL* with metaphorical meaning related to business activities) portrays business as a goal-oriented activity. Metaphoric expressions indicating antagonistic competition are “compete with the P2P market” and “vying for dominance” (4) which involve players going against each other as in football (but these are not football metaphors). There are other sport metaphors related to non-antagonistic competition such as “catch up to rivals” and “catch up with Apple” (3 instances of the lemma *CATCH UP*) which are a racing metaphor. Apart from competing, there is a metaphoric expression “business coaching” which derives from the training aspect of sport. Finally, winning is the purpose of business competition which is indicated by “winner-take-all market outcomes”.

Game

There are metaphoric expressions from the concept of game theory and other games such as chess are also evidenced in the corpus. They are used to conceptualize business persons as players who play a game to win or to solve the game. The game involved, such as chess, requires strategy which therefore overlaps with war. 57 instances of game metaphor are identified.

There are several metaphoric expressions displaying the conceptualization of business persons as players such as “key industry players”, “market players” and “how stakeholders play the game” (3 occurrences of the collocation “play” + “game”). Apparently, these overlap with sport metaphor because the metaphoric expression “player(s)” (4) can be classified as sport metaphor as well. Following Koller (2004), I sorted these into both source domains owing to the difficulty in distinguishing them.

There are many metaphoric expressions associated with games such as enter a “multi-period bargaining game”, “end game”, which is from chess, and “stakes”, which derives from gambling. What is more, game theory is used as a source domain which generates terms, namely, “cooperative game”, “entry game” and “two-stage game”. The purpose is to successfully complete the game as in “to solve the game” or “we use backward induction”.

Journey

The journey metaphor has 198 occurrences in the corpus. The business scenario according to this source domain involves business people who are conceptualized as travellers selecting the route to their destination, i.e. the market. They then travel in a vehicle, which also shows a conceptual link with the machine source domain. Along the way, they encounter obstacles but eventually reach the market. Other companies also make the same journey to the market. Consequently, this scenario shifts to war in which the pioneer tries to fight off later entrants to protect their territory.

Sample metaphoric expressions indicating the conceptualization of business people as travellers are “pioneer” and “market pioneer” (179 occurrences of the lemma PLAY). The travellers need to choose a route before travelling, resulting in the metaphoric expression “path” (5) as in “founders may opt for this path”.

There are various types of journey identified in the corpus. A sea journey occurs in the lemma NAVIGATE (6). “Navigating” occurs in “there was no map for navigating this territory”, conveying the conceptualization of establishing a new business as exploring a new land. Another metaphoric expression related to the sea journey is “helm” as in “having a family CEOs both at the helm and as board chair”. Here the company is conceptualized as a ship travelling in a sea journey with the person at the helm who controls the direction. On the other hand, the lemma FREE RIDE shows an on-land journey and portrays an exploitation

situation when passengers do not pay the fare. There is also an upward journey as in “establish footholds in the geographic or product markets”. The lemma NAVIGATE and the term “helm”, which suggest the conceptualization of a company as a ship, show the connection with the machine source domain in the sense that the machine source domain provides a means of transportation for the journey source domain.

While travelling along the journey, companies encounter various types of obstacles. The first one is heavy traffic, which is instantiated in the metaphoric expression “bottleneck”. This is actually a dual metaphor from the image metaphor, a neck of a bottle which is narrow and thus hard for liquid to pass through. There are also accidents such as “derail” and “the crash of the technology stocks” which are one-off metaphors. The first show train accident while the second might be car crash or air crash. The words “derail” and “crash” indicate the conceptual link between the journey source domain and the machine source domain because both portray an accident during a journey which involves the use of vehicles.

The destination is the market, as evidenced in “pioneer’s entry” (2), which means entering the market. The story, however, does not end there because there are followers. Hence, the pioneer wages war against other companies to protect their territory. The scenario is therefore shifted to war, which is shown in “pioneers deter potential entry” (2) and “pioneers’ survival advantage” (39).

Machine

In the mechanistic conceptualization which instantiates 128 metaphor tokens, business resources, firms and other business entities are conceptualized as a machine. The scenario involves human agents – business people or companies – starting and controlling this machine to keep it working in perpetuity where money is often conceptualized as liquid for the functioning of the machine. However, there might be an accident that stops it.

There are several metaphoric expressions indicating the conceptualization of businesses as machines, namely “mechanism” (82), “inputs” (11), “outputs” (29), “rewiring” (17), “engine” and “helm”. The metaphoric expression “mechanism” illustrates the functioning aspect of a machine which is mapped onto business and companies as it appears in the phrase “dynamic pricing mechanisms appear in the market”, conceptualizing the market as a machine of which price is a part. “Inputs” and “outputs” found in the phrase

“converting innovation inputs into outputs” conceptualizes the process in which a firm turns resources into goods and services as machine producing outputs, showing the conceptual metaphor COMPANIES ARE MACHINES. The lemma REWIRING in the phrases “trigger rewiring” and “rewiring of effective cross-BU collaboration” also instantiates this metaphor, describing the company as containing wires that can be rearranged. “Engine” demonstrates the conceptualization of products as machines because it appears in the phrase “handbags are the engine that drives luxury brand today”. The word “helm” conceptualizes a company as a ship whose direction is controlled by the leader as discussed earlier in the journey metaphor section.

There are some instances of liquid metaphor such as “cash flows” (12) and “liquidity” (19); I argue that liquid is used in the control of machine. Previous studies such as Skorczynska and Deignan (2006: 93) classified such metaphoric expressions as belonging to the mechanistic conceptualization of business. In addition, Alejo’s (2010) research investigates the container metaphor in economic textbooks and found the conceptual metaphor ECONOMY IS A CONTAINER in which liquid, that is, money, goes through different parts, which is derived from the Circular Flow Model. Alejo (2010) states that the historical development of economics shows the shift from the organic model conceptualizing money as blood circulating around the human body, to a mechanical conceptualization of the economic system as liquid circulating around a pipe system container. This is also in line with Henderson (1994) who also argues that liquid is part of the mechanistic conceptualization of economy as money enters and exits the economy like liquid entering and exiting a pipe system. These, coupled with the fact that money is needed to run a business, might indicate a possibility that money conceptualized as liquid is used to control business, which is conceptualized as a machine.

The mechanical conceptualization of business seems to highlight the humans’ control over business. This is supported by the metaphoric expressions “trigger” (4), “drive” (6), “accelerating” (2) and “steer” as in the phrases “trigger rewiring”, “driving the market”, “an accelerating growth in DTC advertising” and “steered state pension fund investment”. Here company, market, the growth of a business campaign and money are machines which seem to be under the control of human agents. The start is instantiated in the lemma TRIGGER, whereas the rest are evidenced of the control process. The accidents which may disrupt business “derail” and “crash” appear in the phrase “a significant challenge that can derail successful and timely project completion” and “the crash of the technology

stocks”. These are also discussed in White’s (2003) study on the conceptualization of growth in economic discourse in which he proposes the schema of the mechanical collocates of growth comprising of “mechanical source, ignition, process, control and accident” (page 145).

It should also be noted that the phrase “an accelerating growth in DTC advertising” illustrates the hybridization of machine metaphor “accelerating” and the living organism metaphor “growth”. Alejo (2010: 1148) attributes the mixing of metaphors from two different domains to the historical development of economics, since there is a paradigm shift in economic theory from organic to mechanic conceptualization. White (2003: 142-143) argues that the prevalence of mechanistic metaphor in everyday life and the central role that machines play in an economic system might contribute to the coexisting metaphor. In addition, he adds that the use of mechanical metaphor might exhibit humans’ aspiration to control the economic development.

Living organism

The living organism metaphor has 134 occurrences in the corpus. This source domain constructs the scenario of gardeners – business people – growing their companies or other business entities which are conceptualized as plants or animals. These plants or animals then grow and once they grow enough, business people can harvest the produce.

A number of metaphoric expressions manifesting the conceptualization of business entities, excluding business persons, as living organism were found. The metaphoric expressions “product life cycles”, “product life span” and “industry life cycles” indicate the life cycle aspect of business. There are 7 instances of “life cycle” and 1 instance of “life span”. Growth is shown in the phrases “revenue growth”, “in evolving market”, “seeing the program grow” and “economic growth”, conceptualizing money, market, business project and economy in terms of a living organism. There are 66 occurrences of the lemma GROW. Also the growth of a plant that can grow branches is realized in “branch office”. What is more, business entities can grow from youth to maturity as in the phrases “young company”, “a fledging organization” and “mature desktop PC market”. The aspect of health and illness was found in the metaphoric expression “financial health” (2).

Evidence that business persons are conceptualized as gardeners is derived from the entailment of the phrases “CEOs may initially opt to grow their firms” (4), “prune the assortment of products” and “reap a competitive

advantage” (6 occurrences of the lemma REAP). Here, business persons nurture the companies and the products, which are conceptualized as plants. Since people looking after plants are gardeners/farmers, this entails that business people are conceptualized as gardeners or farmers.

After that, business persons can collect the product when business grows enough. This is instantiated in the metaphoric expression “reap” which were identified in phrases such as “reap gains” and also “cash cow”, which conceptualizes a profitable business unit in terms of a cow that produces a large amount of milk.

Finally, general animal and plant metaphors, namely, “inertial dinosaur”, “pet project”, “cannibalizing the profits of their supermarket” and “black sheep” were also detected. While others are quite self-explanatory, the term “cannibalize” deserves further elaboration. The Collins COBUILD English Dictionary (1995: 234) gives two definitions of this word. The first refers to bringing pieces from an old machine into a new one. The second describes the phenomenon in business when people buy new products instead of other products of a company. According to Solomon et al. (2009: 290) in a business context cannibalization refers to the situation when a company launches new products and this results in diminishing sales of its existing ones. This is because customers shift to new products instead of buying the old ones. From the context of my data, the second definition in the Collins COBUILD English Dictionary and Solomon et al.’s (2009) account seems to be the meaning of “cannibalization”. Consequently, this metaphoric expression suggests that the existing product income, which is being gobbled up by the new ones, is thus conceptualized as humans eating other humans.

Building

The building metaphor generates 36 metaphor tokens. It shows the conceptualization of business people as architects or builders. The scenario involves architects or builders designing or constructing a building, that is, a company. The result is that the building is designed or constructed.

The scenario in the construction or design of the building involves architects who design the building as in the phrase “architects of firm strategy”, which conceptualizes business persons as architects. The design/construction is indicated by the phrases “re-architect or patch their BU portfolio” and “firms that built on Kodak’s core OLED technology”, which convey the conceptualization of company as a building. The word “re-architect” is a one-

off metaphor, the lemma PATCH occurs twice while the lemma BUILD occurs 105 times. The building source domain provides structure to various business concepts and entities. This is evidenced in metaphoric expressions such as “different market structures”, “a coupled architecture” and “construct of rewiring”. These illustrate that market and company are conceptualized as buildings. Finally, the outcome of the design is shown in the word “blueprints” (4), which occurs in the phrase “industry category and founders’ blueprints”.

Physical forces

Physical forces metaphors conceptualize the interaction between business actors in terms of physical forces. 315 metaphoric expressions of the physical forces metaphor are manifested in the corpus. The scenario starts with sources of physical forces – business actors – exerting forces on force recipients – business persons, companies or customers – to cause them to change or bring balance to the force. There is also a conceptual link with other source domains since sometimes it involves mechanistic forces and fighting which connects with war metaphors.

The conceptualization of business as physical forces is manifest in the metaphoric lemma FORCE (37), in phrases such as “market-based forces” and “cohesive forces”. The exertion of power was identified in the phrase “leverage its brand”. The word “leverage” (18) relates to the machine source domain as well because literally it means using a lever such as when lifting a car. The forces’ recipients are evidenced in “firms suffer the triple blow of facing a less attractive environment” in which firms are force recipients of a physical force, that is, hitting. This metaphoric expression is thus also connected to war metaphors. Moreover, metaphor showing the reaction to the force is “elasticity” (133), which occurs in the phrases “budget share elasticity” and “price elasticity”. These conceptualize the reaction of consumer demand to price modification in terms of the rubber’s reaction to physical forces because price elasticity of demand is the sensitivity of consumers to the changes in prices (Solomon et al., 2009: 362).

The exertion of the force results in some change, as in “driving forces for change”. The force exertion may also create balance, which is evidenced in the phrases “equilibrium price” and “equilibrium states”. There is also a connection with game theory, as in “pure strategy Nash equilibrium”.

The scenarios of each source domain discussed above can be visualised in Figure 1. In the figure, the BOUNDED SPACE source domain is the centre

and functions as an area where other source domains project the scenarios, which are represented by arrows (→) which consists of a SOURCE-PATH-GOAL represented by block (⇔). For each source domain, the first text box is the SOURCE, the second is the PATH and the third is the GOAL. The links between different source domains are represented by dashes arrows (----->).

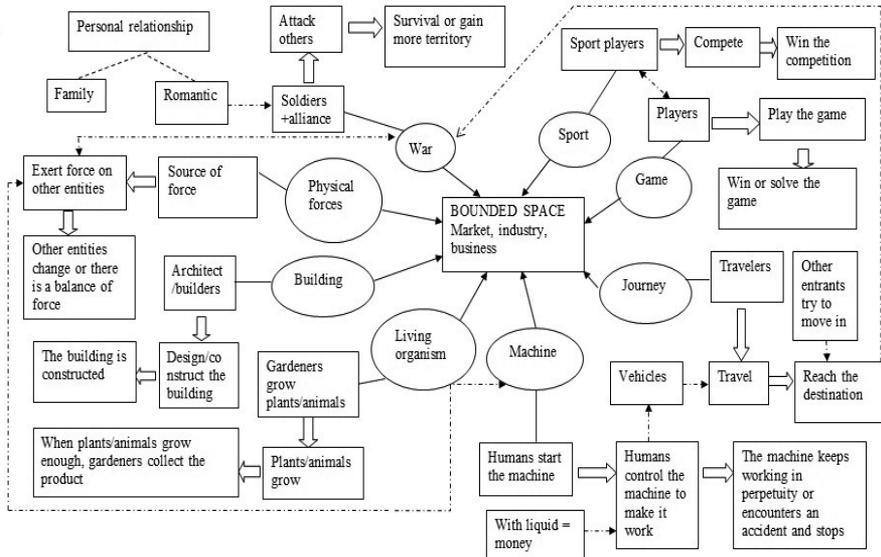


Figure 1. Conceptualizations of business scenarios.

In the Figure, the centre of the metaphorical scenarios is the BOUNDED SPACE source domain which serves as a conceptual space where other source domains project scenarios onto the BOUNDED SPACE source domain. A total of 8 source domains project scenarios onto the BOUNDED SPACE source domain. WAR projects a scenario of soldiers attacking others to survive or gain more territory. SPORT projects the scenario of sport players competing to win the competition. GAME projects the scenario of players playing a game to win or to solve the game. JOURNEY involves travellers who travel to reach their destination. However, other entrants may try to move in so the travellers have to fight, shifting the journey to the war scenario MACHINE projects the scenario of humans starting a machine and controlling it with money, which is conceptualized as liquid. This source domain is related to the JOURNEY source domain because in some cases companies are

conceptualized as a vehicle that a traveller uses in a journey. Regarding LIVING ORGANISM, business people are conceptualized as gardeners who grow plants or animals and collect the products once they reach maturity. BUILDING involves architects or builders (business people) designing or constructing a building (the company) until the construction is completed. PHYSICAL FORCES has a scenario of a force exerted on other entities to make them change or to result in a balance of the force.

The analyses reveal the source domains identified in previous studies, e.g. WAR, SPORT, GAME, MACHINE, and LIVING ORGANISM. The analysis also indicates the prevalence of the WAR scenario in business sciences discourse – a finding which concurs with other prior studies (e.g. Koller, 2004). Furthermore, the WAR source domain has a connection with various other source domains, namely, SPORT, JOURNEY, PHYSICAL FORCES and ROMANTIC RELATIONSHIP. Scenarios are all goal-oriented because of their SOURCE-PATH-GOAL schema, indicating the aggressive and goal-oriented nature of business discourse.

There are connections between different source domains which might be attributable to the conceptual link and the hybridization of different source domains owing to disciplinary development. Further, there are traces that theories in other disciplines are imported into business sciences, resulting in metaphoric expressions.

The application of the metaphor scenario, I believe, can capture the coherent links between source domains that construct business/economics concepts. Building on Alejo's (2010) notion of container metaphor and its relationship with SOURCE-PATH-GOAL schema source domains, I argue that bounded space metaphor functioning as a conceptual space is a centre that links other source scenarios. Then entities, actions and purposes, which can be derived from various aspects of these source domains, are projected onto this conceptual space to form a narrative of business sciences. These scenarios are related to each other and there is a scenario shift (from JOURNEY to WAR). Consequently, the concept of scenarios shows that each source domain contributes to the coherent story of business sciences. Furthermore, it situates metaphoric expressions in a meaningful narrative, in line with the argument made by Musolff and Zinken (2009), which accentuates the scenario-embedded character of metaphor during communication essential for metaphor meaning and comprehension.

Conclusions

The language of business journal articles contains a rich variety of source domains. The hypothesis is confirmed as I have shown that there are nine source domains that structure business concepts, including BOUNDED SPACE, WAR, SPORT, GAME, JOURNEY, MACHINE, LIVING ORGANISM, BUILDING and PHYSICAL FORCES. As hypothesised, WAR is the most prevalent metaphor in the business science discourse. The hypothesis that many aspects of each source domain will form a scenario is confirmed for the most part except for the bounded space source domain which does not form a scenario in itself but functions as a conceptual space for other source domains' scenarios. The rest form a scenario with entities, actions and results or goals. Yet, there are some metaphoric expressions which do not fit the schema, such as “black sheep” or “cannibalizing”, but these constitute only a minor part of the findings. After all, it can be expected that some metaphors from the general domain of English might appear in a corpus. Finally, most of the scenarios have conceptual links with some other source scenarios, except the BUILDING source domains, which is only connected to the BOUNDED SPACE (which is not a scenario).

To the best of my knowledge, this study is the first one to employ metaphor scenarios (Musolff, 2006) and semantic annotation (Rayson, 2008) to investigate metaphor in a business academic genre. Through a more open-ended search, this study might yield a clearer picture of metaphor use in business science discourse. The scenario shows the conceptual coherence between the source domains at the scenario level. I hope that this study might further enrich our understanding of metaphor in the specialized discourse and offer a contribution to the body of research on metaphor in business science discourse.

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