



This work is licensed under a Creative Commons Attribution 4.0 International License
<https://creativecommons.org/licenses/by/4.0/>

<https://doi.org/10.24833/2687-0126-2021-3-4-9-20>

METAPHOR VARIATION IN ECONOMIC DISCOURSE

Tatiana V. Andryukhina

MGIMO University (Moscow, Russia)

anaitat@yandex.ru

Abstract: This integrated cognitive-discourse study looks at the role of context in the variation of conceptual metaphor in economic discourse, which abounds in metaphors. The study is motivated by a general current interest in situational aspects of metaphorical conceptualisation in different professional discourses. The first research question is to test the relevance of metaphor variation for economic discourse and to investigate conceptual evolution of biological, mechanical and path/journey metaphors in this discourse type. Another research question is to determine particular types of context and contextual factors inducing metaphor variation in economic texts. The theoretical framework of the study is formed by the seminal theories of conceptual metaphor, conceptual evolution, knowledge framing and recent abundant research sharing an integrated cognitive-discourse approach to studying metaphor. The investigation revealed the salience of metaphor variation for economic discourse in a broad social context of its production: scientific, technological, career development, and discrimination at work contexts. The study adds to the understanding of the role contextual factors play in metaphorical meaning making and processing discourse. It can also have implications for further metaphor investigation in different professional discourses. Awareness of metaphor variation mechanisms in meaning making can also be instrumental in English for Specific Purposes pedagogy.

Keywords: metaphor variation, contextual factors, conceptual evolution, economic discourse, professional discourse, media texts.

How to cite this article: Andryukhina T.V. (2021). Metaphor Variation in Economic Discourse. *Professional Discourse & Communication*, 3(4), pp. 9–20. <https://doi.org/10.24833/2687-0126-2021-3-4-9-20>

1. INTRODUCTION

G. Lakoff and M. Johnson's "Metaphors We Live By" [1980] was a breakthrough theory suggesting that metaphor serves not only rhetorical aims but is also a cognitive tool used by the human mind to conceptualize reality by means of establishing analogy between two different cognitive domains. The conceptual metaphor theory demonstrates how the human mind perceives one phenomenon in terms of another one looking at non-contextualized sets of metaphorical phrases produced intuitively. However, an integrated cognitive and discourse approach to language study

shared by most linguists now seems to be more relevant for conceptual metaphor research because meaning making depends not only on the universal principle of embodied cognition but also on the effect of context. That is why “the metaphor analyst needs to work with knowledge of the whole discourse event and usually combines metaphor analysis with other types of discourse analysis” [Cameron et al., 2009, pp. 13-14].

This study applied an integrated cognitive and discourse framework to the analysis of metaphor variation in economic discourse. The analysis of conceptual metaphor in the context of a certain communicative situation involves considering the components of the communicative situation such as addresser, addressee, topic, intention, knowledge of the situation, social and cultural context of communication, etc. Traditionally, most often based on political discourse data, the pragmatic aspect of conceptual metaphor use was considered from the point of view of creating a manipulative effect [Perrez et al., 2019] produced by metaphorical language in communication, “as a means to change meanings, and hence, to change social and political attitudes” [Musolff, 2016a, p. 136]. However, this paper suggests that metaphor’s immediate linguistic and wider extra linguistic social context can motivate other changes in the conceptual metaphor structure that induce its variation in other discourses, including economic discourse.

This study shares the opinion that “the conceptualist/cognitive approach to the analysis of political metaphors needs to be complemented by pragmatic and discourse-historical methodologies” [Musolff, 2016b, p. 9] and considers it equally applicable to metaphorical evolution research in economic discourse.

The choice of economic discourse for the study of the ways a broader communicative context affects metaphor variation is an acknowledgment of the fact that economic discourse has been shaped by the scores of metaphors used. There are numerous accounts of metaphor ubiquity in economic language and metaphor salience in shaping economic ideas and theories, establishing and passing major economic concepts through the history of economic theory, analyzing the current economic situation and predicting perspectives for future economic development, that is constructing economic discourse as such. Better metaphor workings understanding in general and in economic discourse in particular can facilitate processing, interpreting, and understanding metaphors in economic discourse in which metaphor variation seems to perform a systemic heuristic function.

Drawing on Musolff’s theory of metaphor conceptual evolution in political discourse, this study suggests that metaphorical evolution or modification is equally relevant for economic discourse. It is also hypothesized that social context most often serves as a source of conceptual evolution in economic discourse.

2. LITERATURE REVIEW

Conceptual metaphor theory has been revised and elaborated since its appearance. In linguistics, the emphasis has shifted from metaphorical cognitive mechanism to the analysis of conceptual metaphors in naturally occurring language or dynamic discourse. Metaphors play a salient role in cognition and communication because they are believed to reflect and express different ways of making sense of particular spheres of life. This central function of metaphor is often defined by the term “framing” because a frame is understood as “a remembered framework to be adapted to fit reality by changing details as necessary” [Minsky, 1975, p. 211] or, in other words, it is “a cognitive as well as a linguistic schematization of information about situations, objects, and events” [Sullivan, 2013, p. 20]. Thus, framing means selecting some aspects of real-life situations and making them important for understanding other situations or objects. That is why metaphorical frames are

used to consider framing process and framing effects in both cognitive [Lakoff & Johnson, 1980] and discourse-based studies [Sullivan, 2008; Semino, 2008] which aim to explain how metaphor selection or choice can facilitate reasoning and understanding in specific contexts.

The classic conceptual metaphor theory suggests that conceptual metaphors are kept in our mind and arrive helpfully whenever we need them in communication. However, such aspects of this theory as its emphasis on concepts rather than words, on universal bodily experience and the lack of attention to the interaction of body and context, etc. have often been challenged [Kövecses, 2008].

Researchers observe some changes in mappings from the source domain to the target domain of conceptual metaphors. Interestingly, some aspects of the source domain seem to become more prominent than others, become more productive and are frequently exploited in discourse [Musolff, 2004]. In this respect Zoltán Kövecses argues for “a broad conception of context in metaphorical conceptualization – one that covers our cognitive interaction with various elements and properties of the situation of discourse, the discourse itself, the conceptual-cognitive background, and the body of the speaker and hearer” [Kövecses, 2020, p. 93].

This approach is pivotal for the present research which takes an integrated cognitive and discourse approach to studying metaphor variation in economic discourse. The dynamic approach to metaphorical meaning making in multiple discourse contexts is sustained by a growing number of researchers who have determined a shift from creating a theoretical framework for explaining what conceptual metaphor is to linguistically demonstrating the way metaphor functions in discourse. Researchers concluded that to understand metaphor workings, it is important “to take discourse data seriously” [Zinken & Musolff, 2009, p. 3] and provide plentiful empirical data by grounding metaphor in socio-cultural context of discourse.

Explaining the cognitive mechanism of metaphor evolution, A. Musolff highlights the role of “mininarratives or scenarios” [Musolff, 2006, p. 36] that construe the source and target domain and become evident in discourse. The scholar sees the cause of metaphor’s specific framing ability in the mapping of source scenarios onto the target domain in the process of conceptualization. He argues that different discourses (for example, national ones) can share some mappings but their different source scenarios tend to foreground different points in conceptualizing the target domain, revealing scenario-based socio-cultural differences that affect metaphor workings and understanding. Thus, the researcher sees specific social and cultural context of metaphor development in discourse as one of the factors motivating metaphor evolution in national discourses. His research has led to incorporating historical and ethical dimensions in metaphor evolution research as a reflection of an attitudinal evolution in political discourse.

Studying metaphor variation in discourse, Zoltán Kövecses [2015] gives a comprehensive analysis of a range of different contextual factors that account for metaphor evolution, namely, some lexical elements of discourse surrounding a metaphor, previous discourse, ideology, cultural, historical and physical environment, interests and concerns of the participants, etc. Emphasizing a large-scale priming function of different contexts, the researcher imagines them as “frames that are nested in one another, such as the physical setting as the outermost frame includes the social frame that includes the cultural frame and so on, where in the “innermost” frame we find the speaker/conceptualizer, and the topic, as well as the diagram for the flow of discourse (functioning as the immediate linguistic context) [Kövecses, 2015, p. 7]. The researcher shows how well-known “off-line” conceptual metaphors are used in discourse “on-line”, producing some pragmatic effect, creating new metaphors, mixing metaphors, etc. [Kövecses, 2020].

Another strand of metaphor research focuses on metaphorical language in a variety of discourse types. The ways conceptual metaphor instantiation can be affected by context are most

thoroughly investigated in political discourse [Musolff, 2004; 2006; 2016a; 2016b; Zinken & Musolff, 2009; Semino, 2008] but also in specialist [Littlemore, J. 2015], scientific and medical discourse [Semino, 2008; Semino et al., 2016] as well as poetic language and humorous discourse [Kövecses, 2015].

At present, more and more light is shed on the role of conceptual metaphor in economic discourse. Honesto Herrera-Soler and Michael White [2012] underline a specific metaphor's function in economic discourse and note that metaphor is not only abundantly used by economists but "is systemic to economic discourse itself" [Herrera-Soler & White, 2012, p. 4]. The scholars believe that social change triggers the evolution of metaphor creation and usage. Social, historical, economic needs and cultural differences cause metaphorical economic notions modification, demonstrating the "situatedness of metaphor usage" [Herrera-Soler & White, 2012, p. 6].

Drawing on conceptual evolution research in different discourses and pointing out a lack of relevant empirical data on metaphor dynamics in economic discourse, this research aims at bridging the gap by collecting evidence of metaphor variation in economic discourse, finding out what contexts and contextual factors mostly motivate conceptual evolution and how specific they are to this type of discourse.

3. MATERIAL AND METHODS

In line with the objective of this study, a cognitive-discourse approach was also relevant for material selection. The data for the research were linguistic actualizations of conceptual economic metaphors *economy is a living organism*, *economy is a mechanism*, *career is a path/journey* collected from a corpus of 67 media texts from reputable economic newspapers and magazines or economic sections of quality daily newspapers (The Economist, Business Week, The Financial Times, Forbes, The Wall Street Journal, The Guardian, The New York Times, HuffPost) and their sites and blogs devoted to microeconomics (microeconomic theory, professional and career development, working environment, gender-related economic issues, company culture and technological change). Analyzing media texts on business, management and economics as representative of economic discourse, we shared the inclusive approach of H. Herrera-Soler and M. White who hold that the term "economic discourse" ranges "from the highly specialized journal through academic books and into journalism and broadcasting" [Herrera-Soler & White, 2012, p. 2].

A limited in size corpus of texts allowed for a manual search of metaphors based on the method of metaphor identification (MIP) created and described by the Pragglejaz Group [2007]. The metaphor identification procedure actually involved comparing the contextual meaning of the lexical unit in discourse with its basic meaning. "If the lexical unit has a more basic current/contemporary meaning in other contexts than the given context, decide whether the contextual meaning contrasts with the basic meaning but can be understood in comparison with it. If yes, mark the lexical unit as metaphorical" [Pragglejaz Group, 2007, p. 3].

Out of all the metaphors found as a result of MIP procedure, only metaphorical models *economy is a living organism*, *economy is a mechanism*, *career is a path/ladder* representing the world of work were further selected and subjected to analysis as most clearly demonstrating conceptual evolution in economic discourse in the material of this research.

A number of contemporary cognitive-discourse methods were applied to investigate the evolution of metaphors in economic discourse. Among those was critical discourse analysis [Wodak & Meyer, 2016], which is attentive to the structures of discourse, cognition and society as integrated factors of meaning making; Teun A. van Dijk's cognitive context models in discourse

[Dijk, 2008]; conceptual metaphor analysis and elements of the discourse dynamics approach to metaphorical frames in discourse, which proposed the notion of discursive metaphorical frames to capture the complex systematic metaphorical representations prominent across discourse [Cameron & Maslen, 2010].

4. RESULTS AND DISCUSSION

This study hypothesized that though conceptual metaphors are contained in our cognitive system that is based to a great extent on embodiment, they are not used by people as unchanged ready-to-use cognitive tools, but modify their conceptual structure in real situations of discourse depending on the context. Our analysis of conceptual metaphors in economic discourse showed the evolutionary character of metaphorical framing in the field of economics and enabled us to identify some sources of metaphorical evolution in economic communication.

4.1. Scientific context of metaphor variation

Conceptual metaphor variation usually occurs historically, culturally and developmentally [Kövecses, 2015, p. 52]. Metaphor evolution is found to be strongly dependent on the level of general knowledge and economic thought in a particular period of time. The analysis of the developmental dimension of metaphor use in this research supported the previous findings. It seems that a salient feature of conceptual metaphor in science is its ability to catch and reflect prevailing scientific and philosophical views as well as a specific metaphorical paradigm used by the academic community to shape new theoretical concepts [Davidko, 2013]. Modern linguistics recognizes the heuristic role of mechanical and biological conceptual metaphors in construing economic theory at particular stages of its development. As an illustration, the economic science knows the names of economists who did not only use biological metaphors to develop their economic theories during the time of the rapid development of evolutionary biology but also made the suggested metaphor-based economic terms an object of their theoretical economic analysis [Herrera-Soler & White, 2012, pp. 1-23].

Similarly, our material revealed a tendency towards conceptualizing economic realities establishing analogies with other break-through contemporary sciences, which reflects the interdisciplinary character of modern science in general. For example, our data demonstrate a noticeable conceptual interdisciplinary integration in the process of construing management science in terms of advanced genetic science, the contemporary branch of evolutionary biology. The following extract (1) from an economic article contains an analysis of the contemporary theory of mergers and acquisitions (M&A). The author construes the M&A practice on the basis of the economic metaphor *economy as a living organism*, likening business competition to species competition, which surfaces in the expressions *evolutionary processes*, *survival of the fittest*, *nature*, *eco-system*, *landscape*. However, in the economic discourse dealing with the theory and practice of mergers and acquisitions, the primary biological metaphor is modified reflecting the latest advances in genetics, the leading edge of evolutionary biology. This modified metaphor in M&A theory discourse activates the whole cluster of genetic metaphors: *genetic code*, *ancestry*, *phenotype*, *genotype*, *encode*, forming a scenario based on the knowledge structures that were taken from the source domain of genetics and mapped into the target domain of the mergers and acquisitions theory. Example (1) illustrates the evolution of the metaphor traditional for economic discourse, i.e. the biological metaphor, as a result of priming the genetic component in its structure and framing the metaphor

according to the genetic scenario. Supporting the previous metaphor research findings, it also reveals that mechanical and biological metaphors form the conceptual basis and are often integrated in economic discourse, as illustrated by the expression *ancestry mechanism*:

(1) “A corporation’s M&A track-record in that sense, say the authors, represents its genetic code. Whereas financial and economic data represent the phenotype, ancestry is analogous to the genotype, as it encodes the relevant past evolutionary processes that determine the probability for an institution to become the acquirer of another business. This is demonstrated by testing the ancestry mechanism against data from several countries, industries and timescales using a variant of a preferential attachment agent-based model. As in nature, survival of the fittest is the key force at hand. But unlike nature, however, the resulting eco-system which emerges from the free-market M&A landscape is mostly bimodal in structure” [The corporate M&A genotype theory. The Financial Times, Sept. 12, 2014].

Example (1) shows that a broader non-linguistic context of numerous astonishing advances in genetics and the immediate scientific context in this piece of discourse make a priming effect on the biological metaphor and foreground its genetic aspect.

4.2. Technological context of metaphor variation

Investigating where metaphors come from, Z. Kövecses [2015] distinguishes the memory of the given discourse community as one of the sources of metaphor conceptual evolution in discourse. The memory of certain historical events is encoded into the language. In this respect Herrera-Soler and White [2012] pay tribute to the role of the mechanical metaphor in economic discourse calling their book “Metaphor and Mills” and invoking the vision of the industrial revolution in England with its mills as the main driving technological force of industrial development. In the authors’ opinion, in the historical context of the first industrial revolution the title “Metaphor and Mills” can be figuratively understood as “metaphor and economy”.

As our research revealed, the historical context of metaphor variation in economic discourse is often represented by its technological variety. Metaphor variation becomes evident when context relates the first English industrial revolution and the modern technological revolution. The English speaking community keeps in memory many advanced technologies associated with the first industrial revolution. One of them is producing wrought iron as one of the iron processing techniques. The word *wrought* keeps the meaning “(of metals) beaten out or shaped by hammering” [Oxford Dictionary of English, 2005] in only a few collocations, e.g. *wrought iron, metal, steel, etc.* but it is more frequently used in the meaning of “made or done in a careful or decorative way” or in the meaning used only in the Past Tense or as the Past Participle “to cause something to happen” [Cambridge Advanced Learners Dictionary, 2008]. This latter meaning is metaphorical (or rather metonymical) wherein causing change is likened to hammering. In our examples of metaphors in economic discourse about revolutionary economic changes, the context of the first industrial revolution does not only activate in one’s mind the past bodily experience of hammering iron, but also modifies the scenario of the old hammering technique by naming the latest technological innovations. Drawing on Kövecses [2015], we consider “embodiment of metaphor as a contextual feature, which is a reinterpretation of the bodily basis of metaphor” [Kövecses, 2015, xi]. Extracts (2) and (3) exemplify the “reinterpretation” of the *wrought* frame in the context of the third and fourth industrial revolutions with their specific digital innovations (*Digital Revolution*,

velocity, scope and systems impact, cyber-physical systems, the Internet of Things and the Internet of Systems, computer power, connectivity and data ubiquity, iPhones and the Internet):

(2) “While in some ways it’s an extension of the computerization of the 3rd Industrial Revolution (*Digital Revolution*), due to the *velocity, scope and systems impact* of the changes of the fourth revolution, it is being considered a distinct era. The Fourth Industrial Revolution describes the exponential changes to the way we live, work and relate to one another due to the adoption of *cyber-physical systems, the Internet of Things and the Internet of Systems*. [...] Indeed, one of the greatest promises of the Fourth Industrial Revolution is to improve the quality of life for the world’s population. [...] The technologies of the Fourth Industrial Revolution might even help us better prepare for natural disasters and potentially also undo some of the damage *wrought* by previous industrial revolutions”. [The 4th Industrial Revolution Is Here - Are You Ready? Forbes, Aug. 13, 2018].

(3) “*Technological* revolutions are best appreciated from a distance. The modern digital revolution – with its hallmarks of *computer power, connectivity and data ubiquity* – has brought *iPhones and the Internet*. [...] In fact, our fathers and grandfathers experienced, in some ways, even more revolutionary change – the one *wrought* by the industrial revolution”. [Wealth without workers, workers without wealth, the Economist, Oct. 4, 2014].

Examples (2) and (3) show the motivating effect of technological context and the influence of the immediate linguistic context on metaphor dynamics in economic discourse.

4.3. Career development context

At present, economic discourse has gradually evolved from scientific and philosophical one into public discourse. Economy affects all spheres of life and, conversely, social transformations – shifts in collective consciousness of a society – impact the economy, which is reflected in the modification of key economic metaphors. One of the examples is the evolution of the *path* metaphor that has traditionally construed the social pattern of professional and career development in economic discourse. Until quite recently, one’s professional career was traditionally conceptualized as linear and forward/vertical movement (*career is a path, career is a ladder*). From social behavior point of view, it meant getting a degree or acquiring professional skills once in a professional lifetime and gradually moving to higher rungs of one’s career ladder. From the corporate perspective, the *career is a ladder* metaphor construed the world of work in which power and rewards were tied to the rung each employee occupied, which corresponded to the predominantly hierarchical company structure. Contemporary complex information society has made this career metaphorical frame ineffective and called for a new frame and scenario of its actualization in discourse. The new *lattice career* metaphor seems to be more appropriate for the changing career environment. It is actually a modification of the *career path/ladder* metaphorical frame because it represents a different mode of movement, which is not vertical but horizontal. The career lattice metaphorical frame is also multidirectional, not unidirectional, which makes it better suited to fit the varied nature of modern workplace allowing workers to look for flexible career alternatives throughout their careers.

Extracts (4) and (5) exemplify both the conventional *career path/ladder* frame (*career ladder, hierarchy, a straight path, straight shots up, rungs, upward moves*) and the way the changing social context modifies it into the lattice career scenario by priming in the immediate linguistic context the multidirectional mode of movement (*fluid, following a zigzag, varied*

paths, progress horizontally and diagonally, flattening organizational structures, breadth and depth):

(4) [...] “the *career ladder* model dates back to the industrial revolution, when successful businesses were built on economies of scale, standardization and a strict *hierarchy*. [...] Career paths are becoming *fluid*, with many *following a zigzag* rather than a *straight path*. The corporate *lattice* model provides more opportunity and more possibilities to be successful”. [Five ways work will change in the future. The Guardian, Nov. 29, 2015].

(5) “Let’s face it, careers are no longer *straight shots up* for the majority of us, women and men alike; instead they *zig-zag*. [...] the *lattice* [...] recognizes more *varied paths* of customized learning and growth that are in step with individuals’ career-life goals at various *stages in their lives*. It formalizes opportunities to *progress horizontally and diagonally*, which benefits organizations and individuals alike as *flattening organizational structures* mean fewer *rungs* and a smaller supply of possible *upward moves*. And as people acquire more transferrable skills, the *lattice* model helps organizations develop the *breadth and depth* of capabilities that they need to compete in today’s fast-paced and ever-changing marketplace”. [Replace Corporate Ladders with Lattices. huffingtonpost.com. May 25, 2011].

The examples show that the changing social context, the development of postmodern approaches to social science and peoples’ experience and the resulting belief that careers may be socially constructed affect career practices and people’s mindset. In discourse, a more flexible *lattice metaphor* primes the new horizontal and multidirectional components of the *path/ladder* metaphor instead of originally vertical and unidirectional ones and causes metaphor variation in economic discourse. Both the experiential knowledge of career development practices and the immediate linguistic context serve as factors of metaphor evolution in economic discourse.

4.4. Gender discrimination context

As this research shows, the impact of social context on conceptual evolution of metaphors in economic discourse is quite diverse. Along with professional career development, another salient feature of modern socioeconomic context is gender discrimination in career development especially on the corporate level of senior managers. As this research demonstrated, gender discrimination context is quite productive in triggering changes in metaphor scenarios in economic discourse.

In this respect, it is interesting to look at the *glass ceiling* metaphor, which G. Lakoff described as a complex one, involving *purposes are destinations, more is up, less is down, linear scales are paths*, to name just a few. “All these metaphors are integrated into one conceptual scenario or narrative which needs unified understanding of each of the metaphors that apply independently” [Lakoff, 2015]. Another element of this conceptual scenario seems to be *career is a path/ladder* conceptual metaphor, which in this mininarrative means a dead-end job for female employees.

In modern economic discourse the *glass ceiling* metaphor reflects gender inequality in business and economy. This research data showed that the ongoing debate on one topic of glass ceiling produces numerous modified source domains related to the original one by each time specifying the material from which the ceiling is made. The knowledge of the specific social context of gender discrimination, the knowledge of specific information about the participants of the discourse and their physical environment serve as factors of metaphor variation in the gender discrimination context. The modification of the material of the ceiling in the source domain does not only motivate metaphorical evolution but also metonymically relates the modified metaphor to a certain sphere

of women's professional activities or specific national background, reflecting the gender issue across industries and categories of workers. Example (6) gives a number of different variations of the *glass ceiling* metaphor in one text:

(6) "However it started, the success of the phrase "glass ceiling" is indisputable, spawning many variations, such as "*bamboo ceiling*" (for Asian-Americans), "*celluloid ceiling*" (for women in Hollywood) and "*marble ceiling*" (for women in government). As a figure of speech, at least, the "*glass ceiling*" seems to be reaching new heights". [The Wall Street Journal, Apr.3, 2015].

As our analysis showed, different materials of the ceiling in the glass ceiling metaphor can also modify its original meaning to intensify negative assessment and pessimism about the possibility of better career prospects for women in the business world. In example (7) substituting concrete for glass construes the career scenario for women in a highly negative way:

(7) Women of Color Hit a '*Concrete Ceiling*' in Business Many women of color who have made it to the executive suite describe the process as breaking through not a *glass ceiling*, but a *concrete* one. [The Wall Street Journal, Sept. 27, 2016].

Numerous modifications of the *glass ceiling* metaphor across different situations of economic discourse on the same topic point to the role of previous discourses as well as experiential knowledge of the participants of discourse as sources of metaphor modification in the gender discrimination context.

5. CONCLUSION

The present study was conducted to find whether the metaphor conceptual evolution can be supported by conclusive evidence in economic discourse, and if so, determine contexts that motivate it and its contextual sources. The findings concerning the cognitive mechanisms of metaphorical evolution show that economic discourse displays mechanisms similar to those reported earlier [Musolff, 2004] in other discourse types. Namely, some elements in conceptual metaphors' source domains prime new elements in target domains and modify metaphors' original conceptual structure, which surfaces in dynamic discourse.

This study has concluded that in most cases the sources of metaphor evolution in economic discourse lie in the broad social context of its production, which mostly supports the findings of metaphor evolution research in other discourse types that name social, political, historical and cultural contexts as motivating metaphor modification. However, in economic discourse these contexts are represented by their specific varieties. It was found that the contexts inducing metaphor evolution in economic discourse, in contrast to political discourse, are devoid of political and cross-cultural attitudinal features and are mostly related to the level of social, economic and scientific-technological development of society during the current period of time.

This research distinguished scientific, technological, professional career development and gender discrimination work contexts as varieties of social, historical and cultural context. As our examples show, scientific context in economic discourse reflects a more general interdisciplinary paradigm of modern science and once again reinforces an opinion that biology, mechanics and economics are to a certain extent complementary sciences (*corporate M&A genotype* theory) [Resche, 2012]. Historical-technological context in economic discourse reflects the evolution of the mechanical metaphor in economic discourse, which reflects the transition from one to another

leading technology – the driving force of economic development during a certain period of time (*wrought by digital revolution*). The cultural context in economic discourse in our examples has more to do with work context, the description of a diverse workforce profile (*a bamboo ceiling*), not with contrast of national cultures. Specific to economic discourse is career development context, which reflects the prevailing social mindset concerning professional career development (*career is a lattice*) and gender discrimination at work contexts (*glass ceiling*). It was found that metaphor variation in economic discourse provides a flexible cognitive way of conceptualizing new or changing phenomena in socioeconomic life. In the context of gender discrimination the original metaphor *career path* both modifies its conceptual structure and expresses a negative attitude (*glass, celluloid, marble, concrete ceiling*).

As for specific contextual factors of conceptual evolution in economic discourse, the results of this study indicate that usually a combination of different factors induce metaphor variation. Such factors as previous discourses of conceptual metaphor use, the knowledge of the participants and elements of discourse (the social and physical situation, background information, experiential knowledge, etc.), background knowledge of real-life situations are combined with the immediate linguistic context and induce metaphor variation.

The study of conceptual evolution in economic discourse is a promising line of research. It has a lot of potential for understanding the process of meaning making in discourse. Despite a limited scale of this study, its findings have implications for further investigation of why and how metaphor can evolve representing changing economic realities and contexts of economic discourse production. The study contributes to understanding the systemic role of metaphor conceptual evolution in economic discourse as a whole system of economic metaphors, whose variations form the cognitive basis of economic theory and discourse. The research findings can be integrated into general economic metaphor research. Considering the interest of pedagogic community to processing metaphor in academic environment [Piquer-Píriz & Alejo-González, 2020; Andryukhina & Kochkina, 2018], mastering metaphor variation mechanisms in specialist or scientific discourses can also be instrumental in English for Specific Purposes pedagogy.

Conflict of Interest

The author declares that she has no conflict of interest

REFERENCES

1. Andryukhina, T., & Kochkina, O. (2018). Second Language Cognitive-Linguistic and Discourse Competences Improvement Through Raising Metaphor Awareness. *ICERI 2018 Proceedings* (p. 8126-8135). Seville (Spain). DOI: <https://doi.org/10.21125/iceri.2018>
2. *Cambridge Advanced Learners Dictionary* (2008). 3rd ed. Cambridge University Press.
3. Cameron, L., Maslen, R., Todd, Z., Maule, J., Stratton, P., & Stanley, N. (2009). The discourse dynamics approach to metaphor and metaphor-led discourse analysis. *Metaphor and Symbol*, 24(2), 63–89. DOI: doi.org/10.1080/10926480902830821
4. Davidko, N. (2013). Metaphoricity in the History of Economic Thought (on the Basis of the 17th Century Economic Discourse). *Studies about Languages. Sociolinguistika / Sociolinguistics*, 22, 86-97. DOI: <https://doi.org/10.5755/j01.sal.0.22.4501>

5. Dijk, T. A. van (2008). *Discourse and Context: A Sociocognitive Approach*. Cambridge: Cambridge University Press.
6. Herrera-Soler, H., & White, M. (2012). Metaphor and Mills: Figurative Language in Business and Economics. Introduction. In H. Herrera-Soler & M. White (Ed.) *Metaphor and Mills: Figurative Language in Business and Economics* (pp. 1-27). Berlin, Boston: Mouton de Gruyter.
7. Kövecses, Z. (2008). Conceptual metaphor theory: Some criticisms and alternative proposals. In *Annual Review of Cognitive Linguistics*, 6 (1), 168 – 184. DOI: <https://doi.org/10.1075/ar-cl.6.08kov>
8. Kövecses, Z. (2010). *Metaphor: A Practical Introduction*. (2nd Ed.). New York: Oxford University Press.
9. Kövecses, Z. (2015). *Where Metaphors Come From: Considering Context in Metaphor*. Oxford, UK: Oxford University Press.
10. Kövecses, Z. (2020). *Extended Conceptual Metaphor Theory*. Cambridge, UK: Cambridge University Press.
11. Lakoff, G., & Johnson, M. (2003). *Metaphors we live by*. Chicago. IL: Chicago University Press.
12. Lakoff, G. (2015). *The Glass Ceiling Metaphor explained by George Lakoff*. Retrieved from <https://www.youtube.com/watch?v=0WkFWNYQ2v8> (accessed: 9 September, 2021).
13. Littlemore, J. (2015). Metaphor in specialist discourse: Insights and implications for metaphor studies and beyond. In J. B. Herrmann, & T. B. Sardinha (Eds.). *Metaphor in Specialist Discourse* (pp. 299–314). Benjamins. DOI: <https://doi.org/10.1075/milcc.4.12lit>
14. Minsky, M. (1975). A Framework for Representing Knowledge. In P. Winston (Ed.). *The Psychology of Computer Vision* (p. 211-280). New York: McGraw Hill.
15. Musolff, A. (2004). Metaphor and conceptual evolution. *Metaphorik.de*. 7, 55-75. Retrieved from <https://pdfs.semanticscholar.org/2d55/b45cbe3ea2879612120489f6f11f71b34f80.pdf> (accessed: 9 September, 2021).
16. Musolff, A. (2006). Metaphor scenarios in public discourse. *Metaphor and Symbol* 21, 1, 23-38. DOI: doi.org/10.1207/s15327868ms2101_2
17. Musolff, A. (2016a). *Political metaphor analysis: Discourse and scenarios*. London, UK; New York, NY, USA: Bloomsbury.
18. Musolff, A. (2016b). What can Metaphor Theory contribute to the study of political discourse? (p. 9-28). In M. Degani, P. Frassi, & M.I. Lorenzetti (Ed.). *The Languages of Politics, I*. Cambridge Scholars Publishing, Newcastle upon Tyne. Retrieved from http://www.academia.edu/29557714/What_can_Metaphor_Theory_contribute_to_the_study_of_political_discourse
19. *Oxford Advanced Learner's Dictionary* (2005). Revised Edition. Oxford University Press. Retrieved from <https://www.oxfordlearnersdictionaries.com/definition/english/wrought?q=wrought>
20. Perrez, J, Reuchamps, M., & Thibodeau, P. H. (2019). *Variation in Political Metaphor* (Discourse Approaches to Politics, Society and Culture). John Benjamins Publishing Company.
21. Piquer-Piriz, A. M., & Alejo-González, R. (Eds.). (2020). *Metaphor in Foreign Language Instruction*. De Gruyter Mouton.
22. Pragglejaz Group. (2007). MIP: A Method for Identifying Metaphorically Used Words in Discourse. *Metaphor and Symbol*, 22(1), 1–39. DOI:10.1080/10926480709336752
23. Resche, C. (2012). Towards a better understanding of metaphorical networks in the language of economics: The importance of theory-constitutive metaphors. In H. Herrera-Soler, & M. White, (Eds.). *Metaphors and mills. Figurative language in business and economics* (pp. 77-102). De Gruyter Mouton.
24. Semino, E. (2008). *Metaphor in Discourse*. Cambridge: Cambridge University Press.

25. Semino, E., Demjén, Z., & Demmen, J. (2016). An Integrated Approach to Metaphor and Framing in Cognition, Discourse, and Practice, with an Application to Metaphors for Cancer. *Applied Linguistics*, 1-22. DOI:10.1093/applin/amw028
26. Sullivan, K. (2013). Frames and Constructions in Metaphoric Language. *Constructional Approaches to Language [CAL] 14*. Amsterdam/Philadelphia: John Benjamins.
27. Zinken, J., & Musolff, A. (2009). A discourse-centred perspective on metaphorical meaning and understanding. In A. Musolff & J. Zinken (Ed.). *Metaphor and Discourse* (pp. 1-8). Basingstoke: Palgrave-Macmillan.
28. Wodak, R., & Meyer, M. (2016). Critical discourse studies: history, agenda, theory and methodology. In R. Wodak & M. Meyer (Ed.). *Methods of Critical Discourse Studies*. (3d Ed.). London: SAGE Publications Ltd.

About the author:

Tatiana V. Andryukhina, PhD is Associate professor in the Department of the English Language #4 at MGIMO University (Moscow, Russia).