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The explanatory function of metaphor scenario in the Serbian pro-vaccine discourse

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Abstract

Metaphor has been established and extensively examined as one of the tools experts deploy to explain, simplify and transform complex scientific discourse into the knowledge suitable for the audience of non-experts. However, relatively little research has been conducted on metaphor scenario (Musolff 2006, 2016a) and its role in this process. Therefore, in this paper we explore how metaphor scenario is used to explain Covid-19 vaccines' safety and effectiveness to the population in an understandable manner in order to speed up the immunization process in Serbia. By analysing a data set gathered from various Serbian electronic news media sources (NovaS, NI, Danas, Vreme, Večernje novosti, Mondo, Politika, Telegraf, Krug) published from January to December 2021, we aim to explore (1) how the three metaphor scenarios, COMBAT, CONTAINER and MOVEMENT, may help simplify complex scientific concepts in the pro-vaccine discourse; and (2) how the conceptual elements of these scenarios and their interconnected relations are used for this purpose. The findings showed that these conventional scenarios manifest their explanatory potential by means of several sub-scenarios, whose conceptual elements establish useful mappings relying on rarely used components of source domains. The results confirm that metaphor scenarios may be used strategically by medical experts as an apt explanatory tool to simplify challengingly complex scientific concepts to the general public. The paper contributes to current research on the role that metaphor and other cognitive instruments play in science popularization.

Key words: metaphor scenario, popular medical discourse, COVID-19 vaccination, explanatory function, Serbian

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Объяснительная функция метафорического сценария в сербском дискурсе в поддержку вакцинации

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Аннотация

Метафора активно изучается как один из инструментов, используемых специалистами для объяснения, адаптации и преобразования сложного содержания научного текста в информацию, доступную широкой аудитории. Тем не менее, немногочисленные работы посвящены изучению метафорических сценариев (Musolff 2006, 2016a) и их роли в этом процессе. В статье рассматриваются особенности реализации метафорических сценариев для разъяснения вопросов о вакцинах против Covid-19, их безопасности и эффективности с целью ускорения процесса иммунизации в Сербии. Источником материала выступили новостные электронные медиа Сербии (NovaS, N1, Danas, Vreme, Večernje novosti, Mondo, Politika, Telegraf, Krug) за период с января 2021 г. по декабрь 2021 г. Цель работы – установить (1) как метафорические сценарии «ВОЙНА», «КОНТЕЙНЕР» И «ДВИЖЕНИЕ» помогают представить сложные научные понятия про-вакцинного дискурса в упрощенной форме; (2) как используются концептуальные элементы сценариев и их синтез для достижения этой цели. Результаты анализа показывают, что рассматриваемые конвенциональные сценарии реализуют свой объяснительный потенциал с помощью нескольких подсценариев, концептуальные элементы которых находятся в смысловых взаимосвязях, базирующихся на нечастотных компонентах сферисточников. Анализ подтверждает, что метафорические сценарии могут использоваться специалистами для упрощения сложных научных понятий и объяснения их массовому адресату. Статья вносит вклад в изучение роли, которую метафоры и когнитивные механизмы играют в популяризации научных знаний.

Ключевые слова: метафорический сценарий, массовый медицинский дискурс, вакцинация от COVID-19, объяснительная функция, сербский язык

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1. Introduction

Serbia was one of the first countries in Europe to offer its citizens the possibility to get a Covid-19 vaccine in January 2021, amid the still ongoing pandemic. However, until May 2021, only about 22% of Serbia's seven million inhabitants had been given two jabs, despite its President Vučić's expectations that Serbia would have vaccinated at least 55% of the country's population with one dose by the end of May. Obviously, very soon after the initially successful vaccination campaign the Serbian Government faced a waning public interest in the vaccination process and increasing scepticism in this regard. This was, among other

124

¹ https://www.euronews.com/2021/05/05/serbia-in-world-first-as-citizens-offered-25-to-have-covid-vaccine

things, due to a very influential anti-vaccination lobby, who continually fuelled distrust in vaccination by touting dangerous anti-vaccine rhetoric not only in social media but also on some of the mainstream media. At the same time, the members of the Ministry of Health and the national Covid-19 crisis response team were heavily criticized for initially ignoring education at the expense of obtaining the vaccines as soon as possible and not promoting strongly enough their safety and effectiveness. Together with the doctors, scientists and health professionals critical of the Government and gathered around an informal association called "United Against COVID", they urgently needed to fight the aggressive anti-vaccine rhetoric. In an attempt to combat misinformation and offer viable explanation to the population of the benefits of vaccination in an understandable manner and encourage the sceptics in order to speed up the immunization process, they exploited metaphors as one of the tools of simplifying and popularizing medical scientific discourse and its transformation into "everyday' or 'lay' knowledge" (Calsamiglia & Van Dijk 2004: 370).

Popular science discourse, in which rigorous scientific knowledge is simplified for the benefit of lay audience, inevitably involves a close link between scientific experts, journalists and the general public. They take part in the three types of processes involved in transferring knowledge across different communication settings - re-formulation, re-contextualization, and re-conceptualization (Anesa 2016, Boginskaya 2020, Calsamiglia & Van Dijk 2004, Ciapuscio 2003, Gotti 2014). According to Ciapuscio (2003: 210), the production of a text which popularizes science involves "recontextualizing and reformulating one's source in such a way that it is comprehensible and relevant for a different kind of addressee, in a discursive context that, though predictable, differs from that of the original source." Thus, in the re-formulation process discourse i.e., language is redrafted or "remodelled to suit a new target audience" (Gotti 2014: 19). It is one of the explanatory strategies (Calsamiglia & Van Dijk 2004) whose main communicative goal is to convey specialized knowledge in a simplified manner. Recontextualization refers to the process in which scientific knowledge, which was originally produced in specialized contexts not easily accessible to lay public, is transferred to a different context, mainly that of mass media (Calsamiglia & Van Dijk 2004: 370–371). More specifically, re-contextualization implies constructing knowledge first in a specialized context and then "recreating" it in a different communicative situation for the lay audience (Williams Camus 2009: 466). Finally, re-conceptualization means replacing a conceptual representation and its linguistic expression with another one "that is felt by the expert (scholar or professional mediator) to be more in line with the world of his/her intended addressees – semiexperts or the lay-audience" (Bondi, Cacchiani & Mazzi 2015: 9).

Medical discourse in particular is one of the specialized discourses that has received extensive attention from the scholars dealing with the topic of science popularization (Balteiro 2017, Boginskaya 2022, Ervas, Salis & Fanari 2020, Joffe & Haarhoff 2002, Maci 2014, Navarro i Ferrando 2021, Nerlich & Halliday 2007,

Williams Camus 2009). This topic is important as ordinary people are interested in becoming familiar with a discourse pertaining to their different medical conditions so as to make the right decisions or because they simply want to broaden their knowledge on certain matters affecting their physical or mental health. In addition, the emergence of increasingly frequent far-flung diseases, marked with huge mortality rates, prompts medical experts to transform their knowledge and tailor their communicative practices "for an audience of non-specialists" (Gotti 2014: 16) to enhance the prevention and the containment of the disease, and to initiate changes in people's patterns of behaviour. Furthermore, the development of digital media has affected the traditional ways of disseminating information so that today's lay public actively look for medical information online. This, in turn, further heightens the need to make this specialized discourse comprehensible to them (see e.g., Maier & Engberg 2023).

Since medical science operates with domains mostly unfamiliar to the laypeople, there is a need for simplification and explanation. Metaphor is one of the types of the discursive activity of explanation (Calsamiglia & Van Dijk 2004: 372), and explanatory and informative functions of metaphor particularly come to the fore in popular medical and health discourse. Due to their ability to establish a "common ground" between scientific and non-scientific discourses, metaphors are perhaps "the only way for nonprofessionals to understand abstract scientific issues [...] which, otherwise, would not have been successfully 'popularized', transmitted or translated to them" (Balteiro 2017: 212). Thus, focusing on discourse representation of different diseases such as Ebola (Balteiro 2017, Joffe & Haarhoff 2002), avian flu (Nerlich & Halliday 2007), foot and mouth disease (Nerlich, Hamilton & Rowe 2002), SARS (Wallis & Nerlich 2005), swine flu (Maci 2014), cancer (Sontag 1978, Williams Camus 2009), AIDS (Sontag 1989), scholars have pinpointed different roles that metaphor serves depending on the target audience, and at times on the intended purposes. This is attributed to its "bridging function" (Pramling & Säljö 2007: 277) – it bridges the gap between scientific and popular knowledge, between the discourse communities of medical experts and the lay audience.

The outbreak of a highly contagious Covid-19 viral disease in the Chinese city of Wuhan in December 2019, when the event stormed the media, also urged the need to enhance the communication between experts and the laypeople with the aim of explaining the ways of protecting against the virus duuring the pandemic. Even a brief look at media texts in the three-year period to come shows that the pandemic has also been heavily metaphorically represented. A number of studies investigating the metaphorical conceptualization of Covid-19 and its portrayal in various types of the media (Ervas et al. 2020, Pérez-Sobrino et al. 2022, Semino 2021, Silaški 2023, Silaški & Đurović 2022a, 2022b) carry important implications for the issue of simplifying scientific Covid-19 discourse.

Despite widespread and attested use of metaphor as one of the vehicles of explaining, simplifying and transforming scientific discourse into the knowledge

suitable for the general audience, relatively little research has been undertaken on metaphor scenario and its role in this process. Therefore, in this paper we investigate how metaphor scenarios (Musolff 2006, 2016a) were exploited as a tool of explanation in the Serbian pro-vaccine discourse to render complex scientific knowledge about vaccines in a more accessible manner to aid understanding. Analysing a data set gathered from several Serbian electronic news media sources, we focus on the ways "revitalized" (Ervas et al. 2020) and enriched conventional metaphor scenarios are used to help simplify complex medical knowledge and promote vaccine effectiveness. Our analysis shows that various metaphor scenarios were employed by medical experts in an attempt to depict several related aspects of the Covid-19 viral disease to the target audience in a more intelligible way. They refer to protecting our body health, i.e., our immune system; the functioning of the RNA and DNA; the benefits of the Covid-19 vaccine as a medical response to the virus, etc. These aspects are communicated through metaphor scenarios or "clusters of individual terms or concepts in the texts" (Koteyko, Brown & Crawford 2008: 245), thus providing a range of source material for conceptualizing the given topic. The source domains to which metaphor producers resort serve as explanatory or informative guidelines for the target concepts, the VIRUS, the VACCINE, or the PROCESS OF VACCINATION. It turned out that in addition to several fairly idiosyncratic metaphor scenarios (LIFE BELT, SEAT BELT, TRAFFIC LIGHTS, COOKING/FOOD), produced by individual health experts and scientists, the most notable ones in our data were conventional metaphor scenarios. In what follows we aim to address two research questions:

- (1) how do the three metaphor scenarios, COMBAT, CONTAINER and MOVEMENT, help simplify complex scientific concepts related to the Covid-19 vaccine?
- (2) how are the conceptual elements of the scenarios and their interconnected relations used for this purpose?

2. Theoretical framework

In the paper we rely on the tenets of Critical Metaphor Analysis (CMA) (Charteris-Black 2004, 2021, Musolff 2006, 2016a), whose developers hold that by using a specific metaphor discourse participants may reveal the motivation lying behind the choice of that metaphor over another, since by changing the metaphor we may change the way that we think and feel about a particular aspect of social or political life. Therefore, metaphors in this paper are regarded as discursive means which may aid in understanding certain social and political processes. They can thus be labelled *discourse metaphors*, those which are "conceptually grounded but whose meaning is also shaped by their use at a given time and in the context of a debate about a certain topic", highlighting "salient aspects of a socially, culturally or politically relevant topic" (Koteyko & Ryazanova-Clarke 2009: 114), in this case the vaccination process in Serbia. They are regarded "as relatively stable metaphorical mappings that function as key framing devices within a particular discourse over a certain period of time" (Nerlich 2011: 116). Our analysis, however,

is predominantly informed by Musolff's (2006, 2016a) analytical tool of *metaphor scenario*, a discourse-based conceptual structure which contributes to the coherence of a particular discourse by offering "a pragmatically loaded perspective for inferences about the target topic" (Musolff 2016b: 64), here Covid-19 vaccination. Therefore, basing our analysis on the use of metaphor in a specific discourse through the prism of the analytical category of metaphor scenario allows us to connect discourse and cognitive approaches to metaphor (see e.g., Semino, Demjén & Demmen 2018).

Musolff (2006, 2016a) understands metaphor scenario as an apt means by which conceptual elements of source domains are combined to form mini-narratives with a very rich and complex conceptual structure. This mini-narrative offers "a whole little scene" (Musolff 2006: 27) specifying

"the characterization of the participants in terms of their roles, intentions, and states of minds, as well as the assessment of their actions in terms of chances of success, are in fact highly specified. The readers are not only provided with a general schematic frame to understand the order of events and a few causal links between them, but rather with a whole little scene, complete with the presumed "interests" and "biases" on the part of the participants and an evaluative interpretation." (Musolff 2006: 27)

The fact that metaphor scenario is characterized by some prototypical, densely distributed and highly context-sensitive elements of the source concepts such as participants, story lines or default outcomes adds to the coherence of a particular discourse, with those prototypical elements simultaneously being ethically evaluated, thus offering a particular characterization of the target topic (Musolff 2016a). They provide "focal points for conceptualizing the target topic" (Musolff 2006: 23). This means that "scenarios establish the different ways a source domain can be exploited depending on the metaphor users' evaluation of the topic" (Augé 2021: 5, see also Đurović & Silaški 2018 and Silaški & Đurović 2019). The inferences that are established in this way may not be binding in the cognitive or a logical sense. Rather, they are "a set of assumptions made by competent members of a discourse community" about those prototypical elements of the source concepts, which are grounded in "social attitudes and emotional stances prevalent in the respective discourse community" (Musolff 2016a: 64). Metaphor scenarios are therefore characterized by a coherent and interconnected structure of elements, which arises when lexical items exemplifying those scenarios are clustered and occur in close proximity with one another in the text. They

"enable the speakers to not only apply source to target concepts but to draw on them to build narrative frames for the conceptualisation and assessment of sociopolitical issues and to 'spin out' these narratives into emergent discourse traditions that are characteristic of their respective community." (Musolff 2006: 36)

Several studies center on the role of metaphor scenario in media discourses in order to determine what function a specific metaphor scenario then fulfills. Koteyko et al. (2008) and Nerlich (2011) not only show how the metaphor scenarios of WAR, HOUSE and JOURNEY are intertwined, which affords the formation of discursive metaphor clusters, but also how the prominence of a particular scenario changes commensurate with the perceived risk of the disease. More specifically, they demonstrate how the JOURNEY shifts to the WAR, i.e., to the FRONTLINE scenario to communicate the aspect of the immediate danger (Nerlich 2011) or how one specific scenario (e.g., that of JOURNEY) changes in terms of its narratives, depending on the perceived proximity of the virus (Koteyko et al. 2008). Primarily addressing the aspect of aptness of certain metaphors to talk and reason about the concept of Covid-19, Semino (2021) convincingly shows why the FIRE scenario and some of its narratives can be a more appropriate conceptual tool to structure and explain the target domain compared to the prevalent WAR frame. Focusing on the WAR metaphor and the three main aspects of the Covid-19 pandemic, body health, medical solutions, and the global impact of the pandemic, Augé (2021) adopts a metaphor scenario approach to argue that the way in which the various properties of the WAR source domain are exploited in scientific texts mainly serves to foster the ideological evaluations of the target topic. The 'pedagogical' role of this scenario, on the other hand, is exhibited in offering metaphorical explanations of scientific findings. Finally, exploring metaphors as a strategic communication instrument in the Serbian pandemic discourse, Silaški (2023) points out that every medical expert tends to deploy their own set of metaphor scenarios that they believe are the most apt for simplifying and popularizing medical scientific knowledge, which attests to metaphors' great explanatory value in this kind of discourse. As "[c]itizens' understanding of how vaccination works should be considered fundamental in institutional communication, especially during pandemic times" (Ervas et al. 2022: 2), metaphor scenario as a conceptual structure appears to be a very suitable and useful instrument of explanation in medical scientific discourse pertaining to vaccination as well.

3. Data and methodology

The data for our analysis was gathered from various electronic news media sources (NovaS, NI, Danas, Vreme, Večernje novosti, Mondo, Politika, Telegraf, Krug) published in Serbian in the period January-December 2021. The data were collected in this way: firstly, a Google search was conducted in which the queries were based on the following key words, assumed by the authors as the native speakers of Serbian to be most salient in the vaccination discourse: koronavirus ('coronavirus'), pandemija ('pandemic'), kovid-19 ('Covid-19'), vakcina ('vaccine'), vakcinacija ('vaccination'), zdravlje ('health'). This enabled us to extract topically relevant texts for the analysis. Then, in a subsequent search, koronavirus ('coronavirus') and vakcina ('vaccine') were combined with the expressions zamislite ('imagine') and zamislimo ('let's imagine'), as these

discursive means, i.e., metaphor markers were also used in some examples to signal "potential cross-domain mappings" and serve to alert the language recipient that some form of comparison is at play (Steen et al. 2010: 40). This proved to be effective in rendering more lexical items exemplifying metaphor scenarios, especially those functioning as an explanatory tool.

The obtained texts, totalling around 30,000 words, were then read carefully in order to identify the source domains used to structure the VACCINE and the PROCESS OF VACCINATION target domains and form a mini-narrative. As far as metaphor identification method is concerned, we recognize the need for a discourse-oriented approach to the analysis of metaphors to be more liberal and loose when establishing the presence of metaphoricity (see Silaški & Đurović 2022a), especially compared to, for our qualitative analysis, perhaps not entirely suitable dictionary-based word-by-word analyses. Therefore, we employed a procedure for metaphor identification put forward by Pragglejaz Group (2007), which did not presuppose consulting the dictionaries for each lexical unit, but rather entailed focusing on words or phrases and even longer stretches of text metaphorically-used in the specific context in an authentic data set. This is in line with a discourseoriented approach to metaphor analysis (see Cameron & Maslen 2010, Cameron et al. 2009, Semino 2008) which posits that "metaphoricity depends on the evolving discourse context, and that we can only understand metaphor in discourse by examining how it works in the flow of talk (or text)" (Cameron et al. 2009: 71).

Upon establishing the contextual meaning of lexical units,² deciding if it has a more basic contemporary meaning (defined as that which is more concrete, related to bodily action, more precise, as well as historically older), it was determined whether the contextual meaning contrasts the basic meaning but can be understood in comparison with it. If these questions were positively rated, in the last step the lexical unit was marked as metaphorical³ (see Pragglejaz Group 2007: 3, also Breeze 2017: 72–73). Upon deciding on the presence of metaphoricity, we identified the mini-narratives or scenarios, following the procedures in Musolff (2006, 2016a) and Breeze (2017), which consisted in searching for "recurring argumentative, narrative and stance-taking patterns" (Musolff 2016: 133) in the given data set.⁴

Finally, it should be noted that most examples of metaphor scenarios originated from interviews with doctors or scientists, or alternatively from opinion articles,

² A "lexical unit" refers not only to individual words but also to multiword expressions (Semino 2008: 12).

³ This process was also informed by the procedure for identifying linguistic metaphors in Serbian (Bogetić, Broćić & Rasulić 2019), as Serbian, similarly to other Slavic languages, exhibits a very complex morphological structure "with flexible word order and complex fusional inflectional morphology" (Bogetić et al. 2019: 204).

⁴ The same method of data collection and analysis has already been deployed in our previous research on metaphors in the Covid-19 discourse in Serbian (Silaški 2023, Silaški & Đurović 2022a, 2022b).

which may have affected the results of our analysis and slant them towards idiosyncrasy.

4. Findings and discussion

4.1. The COMBAT metaphor scenario

The COMBAT scenario remains the most familiar area of experience from which the transfer of conceptual elements and the relations between them occurs to explain the target domains in question. The selection of these elements from the combat source knowledge, however, is not random - rather, it is "a particular set of presuppositions that are chosen for specific argumentative purposes (e.g., with the aim of declaring victory)" (Musolff 2016a: 31). This has been attested by various battle-related lexical items in our data which not only contribute to explaining the complex scientific concept but also to imparting positive or negative evaluations of the concepts at play. A clearly delineated knowledge structure of the COMBAT scenario (Breeze 2017), in previous research most frequently referred to as the WAR metaphor (e.g., Balteiro 2017, Boginskaya 2022, Nerlich et al. 2002, Williams Camus 2009), or as a CONFRONTATION scenario (Musolff 2021: 640), makes it so prevalent in the field of popular medical discourse. The urgent need to explain how Covid-19 vaccines function necessitated the reliance on the stereotypical COMBAT scenario which maps the fight between two conflicting sides onto the conceptual space perceived as the battlefield. The territory over which the battle between the virus and the antibodies is fought is our body, i.e., our immune system, which reveals the co-occurrence of the scenarios of COMBAT and CONTAINER. The interconnectedness of these two scenarios is dealt with in more detail in the next sub-section (4.2.). As demonstrated in examples (1), (2), and (3), coronavirus is associated with aggressive, war-like expressions, while coping with the coronavirus disease is represented in terms of the default victory-defeat outcome of the COMBAT scenario. Yet, a fairytale-like portrayal of Covid-19 and vaccines via the image of the medieval battles and characters in example (1) helps to mitigate the belligerent character of the COMBAT theme.

(1) Zamoliću vas da malo napregnete maštu i zamislite svoj imuni sistem kao srednjovekovni zamak.

Taj zamak opkolila je neprijateljska, nemilosrdna vojska korona virusa koja očajnički žele da se probije u njega. [...] Ako neutrališuća antitela u vašem telu uspeju da odbiju napade viralne armije, onda se telo nećete zaraziti. Ali ako se zidine sruše [...], onda je virus uspeo da uđe. Prodro je u zamak i vi ste sada inficirani. Ipak, još nije sve izgubljeno. I dalje ima vojske unutar utvrđenog uporišta u samom srcu zamka. To su vaše memorijske B i memorijske T ćelije. Poput vitezova na konjima, one mogu da okupe vojsku, povedu imunološki juriš i nateraju neprijateljske osvajače u beg. (BBC News na srpskom, 17 Nov 2021) ['I will ask you to stretch your imagination and picture your immune system as a medieval castle. That castle is surrounded by the merciless

coronavirus army of the enemy which desperately wants to break into it. [...] If the neutralizing antibodies in your body manage to ward off the attacks of the viral army, then your body won't get infected. But if the castle walls break down [...], then the virus managed to get in. It penetrated the castle and you are now infected. Still, all is not lost. There are still soldiers inside the enemy stronghold at the very heart of the castle. These are your memory B and memory T cells. Like white knights on horses, they can gather the army, lead an immunizing attack and make the enemy conquerors flee'.]

(2) Virusolog i mikrobiolog Veterinarskog instituta u Kraljevu Milanko Šekler za Nova.rs vakcinu slikovito poredi sa vojskom, a antitela sa "oružiem" kojim se puca na neprijatelja.

"To vam je kao da je vakcina dala uzbunu vojsci u državi. Uzbuna znači da je izvršena mobilizacija vojnika i da umesto, na primer, 5.000 vojnika Srbija sada ima 50.000 vojnika. Oni znaju odakle neprijatelj napada i koji su mu planovi i svi su spremni – to znači vakcina. Organizam tada poznaje protivnika, zna kako izgleda, zna koje su mu slabe tačke, zna kako će da ga napada i sprema oružje za to. To oružje, to su antitela", objašnjava tako kao da se rat protiv virusa odvija pred našim očima. (NovaS, 27 Mar 2021)

['The virusologist and microbiologist of the Veterinary Institute in Kraljevo Milanko Šekler for Nova.rs vividly compares the vaccine to an army and antibodies to a "weapon" used to shoot at the enemy.

"This is as if the vaccine had given an alert to the army in the state. The alert means that the mobilization had now been completed and that, for example, instead of having 5,000 soldiers Serbia now had 50,000 soldiers. They know where the enemy attacks from and what it is planning, and everyone is ready – this is what the vaccine means. The organism knows who the enemy is, it knows what it looks like, it knows its weak points, it knows how the enemy will invade and prepares the weapons for that attack. Those weapons, those are antibodies", he explains in such a way as if the war against the virus is happening before our own eyes'.]

(3) Virusi i vakcine – o čemu se radi i u čemu je razlika? Zamislite da je DNK neka knjiga recepata, a da je RNK samo jedan prepisan recept iz knjige recepata. Proteini su u tom slučaju jelo koje treba da se napravi po tom receptu. [...] Kakvu ulogu tu imaju vakcine? Vakcine, prema Babićevim rečima, uče imuni sistem da odmah prepozna napadača tako da – kada virus naleti – imuni sistem može odmah da reaguje, umesto da nedeljama proizvodi odgovor. (CINS, 15 Jan 2021)

['Viruses and vaccines – what's it all about and what is the difference between them? Imagine the DNA as a book of recipes and the RNA as just one recipe copied from this cookbook. Proteins, in this case, are a meal which needs to be cooked following this recipe. [...] What is the role of vaccines here? Vaccines, according to what Babić [a molecular biologist and neurobiologist] says, teach the immune system how to identify the invader so that – when the virus dashes forward – the immune system can react instantly, instead of producing the response for weeks'.]

The explanatory function of this scenario shows to be of dual nature -anattacker is being equated both with the virus and with our body (i.e., our immune system). The former carries negative overtones suggestive of the feelings of fear and despair, and invokes the image of people who, while defending their territory from the attacker, may potentially become victims. The latter reverses the previous scene into a positively-evaluated one, now depicting our body/immune system as an attacker who may win and destroy the invader. The conceptualization of the body's successful "battle", "war", "warding off the attacks" with its own "army of soldiers" (the memory cells) against the "attacker", the "invader", the "conqueror" contributes to fathoming better the beneficial effects of the vaccine. The need to get vaccinated is also effectively explicated in example (3), in which vaccines and our immune system are endowed with human qualities thus making it possible to reason about them "in terms of a human action" (Navarro i Ferrando 2021: 159) - hence the personified vaccines "teach", the immune system "identifies the invader" and "reacts". Personification used within the COMBAT scenario thus serves the purpose of simplification and explanation, which makes it a useful tool in popular medical discourse.

In the COMBAT scenario, the antibodies and the Covid-19 vaccines are conceived of as a "weapon" (examples 4 and 5) that medical scientists use in "a counter-offensive" in order "to shoot at the enemy" (example 2):

- (4) "Počinjemo kontraofanzivu, počinjemo borbu sa oružjem u ruci, a to je u ovom slučaju vakcina", rekao je epidemiolog Predrag Kon 24. decembra prošle godine pošto je među prvima primio jednu od vakcina koje su u upotrebi u Srbiji. (BBC News na srpskom, 13 Jan 2021) ["We are starting a counter-offensive, we are starting a battle with a weapon in our hands, and in this case it is the vaccine", said the epidemiologist Predrag Kon on 24 December last year after being one of the first to get jabbed by one of the vaccines available in Serbia".]
- (5) Zato je vakcina idealno oružje, virus će polako gubiti svoju snagu, a mi ćemo povećavati svoju i na kraju kad se prilagodimo njemu on će postati jedan beznačajan virus kao, recimo virus svinjskog gripa. (KRUG portal, 4 Apr 2021)
 ['That's why the vaccine is an ideal weapon, the virus will gradually lose its strength and we will increase ours and eventually, when we become adapted to it, it will end up being a meaningless virus such as, say, the swine flu virus'.]

Here, the effects of the vaccine are again viewed through the *victory-defeat* dichotomy, where the underlying idea is that we (i.e., our body) are now armed against a possible attack and can have an active role in this war against a virus. The use of inclusive 'we' in both examples ([4] and [5]), referring to medical scientists, adds to portraying them as warriors belonging to the same side in this war.

In addition, the efficacy of the vaccine is communicated by metaphor producers by means of the BULLETPROOF VEST sub-scenario (Nerlich 2011), part of the wider COMBAT scenario, as the example (6) illustrates:

(6) Vakcina vam je kao pancir u vojsci. Kad ste na frontu, pancir će vas sigurno zaštititi i od metka i od gelera. I ako idete na metak, bolje da idete s pancirom. A ako idete na virus, bolje da idete sa antitelima koja će vakcina stvoriti – poručio je nedavno doc. dr Udovičić. (Telegraf, 6 Oct 2021) ['The vaccine is like a military bulletproof vest. When you are on the frontline, a bulletproof vest will surely protect you from both a bullet and a shrapnel. And even if you go against the bullet, you'd better wear a bulletproof vest. And if you go against the virus, you'd better do that with the antibodies which the vaccine will create – said recently assistant professor Dr. Udovičić.]

Unlike a rather conventional metaphorical representation of the vaccine (or, the antibodies) as a "weapon" in examples (2), (4) and (5) above, example (6) draws on our somewhat extended knowledge about wars and battles, which is based on the following image: people are on the frontline of the battle to stop the spreading of the virus perceived as "a bullet" and "a shrapnel", thus resulting in the GETTING VACCINATED IS WEARING A BULLETPROOF VEST mapping. The BULLETPROOF VEST sub-scenario thus engages 'open' (Breeze 2017: 70), idiosyncratic expressions used in a non-specialist text which metaphor producers find apt to clarify the concept of vaccination. These creative extensions of conventional metaphorical themes refer to "exploiting a normally unused element of the source domain of a conventional conceptual metaphor" (Pérez-Sobrino et al. 2022: 129). A wider text in which the metaphorical lexical items are situated serves as a guideline for 'reading' the message conveyed by the experts, that the vaccine can take the blow even though it does not offer total protection. Example (6) is also indicative of the interrelations between the three scenarios, COMBAT, CONTAINER (by means of HUMAN BODY IS A CONTAINER) and MOVEMENT (the lexical choice "go against the virus"), which contributes to the overall explanatory potential of such conceptual patterns.

4.2. The CONTAINER metaphor scenario

In our data, the CONTAINER metaphor scenario (Musolff 2015, 2016a) is realized by means of the following sub-scenarios: the MEDIEVAL CASTLE, the MEDIEVAL TOWN and the HOUSE. This also invokes the notion of BUILDING, particularly in terms of the structural properties of a building as a solid, enclosed, impenetrable space. All the three sub-scenarios rest on the CONTAINER image schema and the notion of "a bounded area protecting what is within from external danger" (Charteris-Black 2006: 563). More specifically, elements, participants and actions belonging to these three sub-scenarios are mapped onto either a more abstract entity (the immune system or a cell, as in examples 1 and 7 respectively) or a more concrete entity, the body (the bounded space) (example 8) protected from the outside danger or the enemy (the virus).

Nerlich's claim that "[t]he war scenario is in some sense a super-scenario that subsumes other scenarios or mini-narratives, which themselves can be connected to other scenarios and form discursive metaphor clusters" (Nerlich 2011: 118) is also corroborated by our data and the rooting of the vaccination concept in the MEDIEVAL CASTLE sub-scenario (example 1 above). The explanatory power of this sub-

scenario lies in the conceiving of our immune system (i.e., body) as an enclosed, bounded space, within another walled-city structure of the "medieval castle" "surrounded by" an enemy army that wants to "break into it". The infection with the coronavirus is described as "breaking down the [castle] walls", while the medical response to this attack via the Covid-19 vaccines is conceptualized as training the memory cells to react "inside the enemy stronghold at the very heart of the castle". These expressions reveal that the previously described COMBAT is linked with the CONTAINER metaphor scenario realized by means of the MEDIEVAL CASTLE sub-scenario, which may contribute to CONTAINER becoming "negatively connoted against the context of "war"" (Koteyko et al. 2008: 247). Yet, this triggers other elements of the attack-defence interplay; when the overlapping between the COMBAT, CONTAINER and MOVEMENT scenarios, as shown in example (1) above and instantiated by "make the enemy conquerors flee", renders a positive outcome – a defence of the body by means of a vaccine – the MEDIEVAL CASTLE sub-scenario usefully serves to map onto the target domain at play (IMMUNE SYSTEM), highlighting the notions of security and protection in a very vivid manner.

The explanatory potential of the CONTAINER scenario is also manifested in the MEDIEVAL TOWN sub-scenario (example 7).

(7) Ovoga puta malo o prvoj vakcini koja je izašla za bolest kovid 19. Prva je mRNA vakcina. Da krenemo prvo uopšte o tome šta je to RNA i DNA i gde se one nalaze. Radi lakšeg objašnjenja, zamislimo ćeliju kao srednjovekovni grad. Oko grada je veliki, neprobojni zid, a unutar tog zida se nalazi zamak. Između zamka i zida ima svega i svačega. Ima puno toga što nešto radi i proizvodi. U našem zamišljenom zamku se nalazi DNA (DNK). Svime komanduje DNA. (NovaS, 12 Jan 2021) ['This time a bit about the first Covid-19 vaccine. The first is an mRNA vaccine. Let's start from what the RNA and the DNA are in the first place and where they actually exist. For the sake of an easy explanation, let us imagine a cell as a medieval town. There is a big, impenetrable wall around the town, while inside that wall there is a castle. Between the castle and the wall there are all sorts of things. A lot of them do something and produce something. In our imaginary castle lives the DNA. It is a commander-in-chief'.]

The structure and the functioning of a cell, which is important for understanding the issue of the viable medical treatment of Covid-19 in the form of the vaccine, are described by means of the following components of the MEDIEVAL TOWN sub-scenario: "a big, impenetrable wall around the town" (the cell membrane), "a castle inside the wall" (the nucleus), and the space "between the castle and the wall" (the cytoplasm). Further re-formulation and reconceptualization of the concept of the DNA is achieved by emphasizing its vital role via the war-related expression "commander-in-chief".

Finally, the aspect of the vaccine efficacy is emphasized with a fairly novel extension of the CONTAINER metaphor scenario in our data, that of "the well-built house" (example 8).

(8) Da bi objasnila koliko je zaštita bitna, anesteziolog iz Kliničko-bolničkog centra Zvezdara dr Vladanka Stefanović je telo bez zaštite, odnosno antitela, poredila sa loše sagrađenom kućom. – Kad imate loše sagrađenu kuću i udari uragan, odneće je. Ako je kuća solidno napravljena, pa i ne mora da izgleda lepo, što vam je taj strah od vakcine, unutra nikome ništa ne fali. (Telegraf, 6 Oct 2021)

['In order to explain the importance of protection, the anesthesiologist from the Zvezdara Clinical Hospital Centre Dr. Vladanka Stefanović compared the unprotected human body, i.e. the one without antibodies, to a poorly built house. – When you have a poorly built house and a hurricane strikes it will be blown away. If the house is well built, even if it doesn't look nice, and this is that fear of the vaccine, everyone inside is just fine'.]

The following lexical items contained in the HOUSE sub-scenario and the HUMAN BODY IS A HOUSE metaphor — "a poorly built house" that can be "blown away" by "a hurricane" compared to a "well-built house" which may not look nice — serve to explicate the opposition between the people and the virus on the one hand, and between the people and the consequences of their reluctance to be vaccinated against the virus, on the other.

4.3. The MOVEMENT metaphor scenario

One of the most common structures emerging from our constant bodily functioning and the body's movement in space is the SOURCE-PATH-GOAL schema, characterized by the progress of the trajector from a starting point (SOURCE), along a trajectory (PATH) to a destination (GOAL) (Johnson 1987). In addition to manifesting itself in our literal physical movement, this schema, by resting on a number of mappings including particularly CHANGES ARE MOVEMENTS (INTO OR OUT OF BOUNDED REGIONS), ACTIONS ARE SELF-PROPELLED MOVEMENTS and PURPOSES ARE DESTINATIONS (Lakoff 1993), also structures our understanding of any purposeful activity. As one of the most accessible human experiences, this embodied goal-oriented motion also appears to be a very productive source domain in the popular medical discourse.

The use of the MOVEMENT scenario, as evidenced in our data, corroborates the already established interrelationship between the scenarios, important for grasping the meaning of the target topics in question. It also appears to offer different interpretations of some metaphors in context. Generally, this scenario tends to impart positive connotations associated with moving forward and reaching the goal despite the difficulties on the path. However, the lexical choices in our data which instantiate the MOVEMENT scenario and more importantly, the relations the participants in this scenario engage in, reveal that metaphors are context-dependent, and that the apparently positively loaded metaphors may become negative (and vice versa). Thus, in the examples (1), (3) and (6) above, the MOVEMENT scenario, intersected with the COMBAT scenario and the MEDIEVAL CASTLE sub-scenario, may

render either a negative (examples 1 and 3) or a positive evaluation of MOVEMENT (examples 1 and 6). On the negative side, "the enemy" (the virus/the trajector) is depicted as "penetrating", "breaking into" (example 1) "a castle" (our body), i.e., it reaches the destination and fulfills the goal of the self-propelling movement; other expressions include "get in" (example 1), "dash forward" (example 3). They all serve to explain the character of the actions or processes between the participants in this scenario; our body and the virus, Positive connotations of the lexical items belonging to this scenario, on the other hand, stem from the reverse action, i.e., what happens when the virus has reached its destination. This triggers some lexical choices which are more in line with the defence strategy associated with the concept of vaccination, which eventually leads to the victory. This is instantiated in our data by the images of "the conqueror" who "flees" (example 1) and disappears, or our body that "goes against the bullet" (example 6). Therefore, the lexical items constituting the MOVEMENT scenario, embedded in the relevant context, facilitate the proper "reading" of the text and reveal that the motion of the virus is not a oneway activity which ends when it has reached the destination. Due to the vaccination, the path on which the virus moves is a bi-directional one as it is now warded off by the neutralizing bodies in our immune system. In addition, the vaccine itself is conceptualized both as an offensive and a defensive "weapon" – it simultaneously attacks the virus and defends the body.

The interconnectedness and the intertwinement of the COMBAT, CONTAINER and MOVEMENT scenarios that appear in our data is presented in Figure 1.

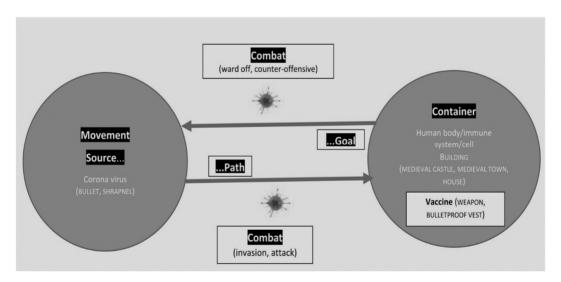


Figure 1. The interconnectedness of the COMBAT, CONTAINER and MOVEMENT SCENarios

The above analysis has demonstrated that a number of metaphor scenarios help construct the concepts of VACCINE and the PROCESS OF VACCINATION and their related aspects by way of "interconnected narratives or scenarios with participants, interactions and purposes" (Kheovichai 2015: 161). Specifically, the findings of our

study show that a rigorous scientific discourse dealing with the issue of vaccines may be simplified by means of the COMBAT, CONTAINER and MOVEMENT scenarios and their several sub-scenarios (e.g., BULLETPROOF VEST, MEDIEVAL CASTLE, MEDIEVAL TOWN) whose role in aiding the lay audience to understand the concepts of the coronavirus and the Covid-19 vaccine thus comes to the fore. As further attested by the analysis, this particularly became prominent in the cases when the explored scenarios and their respective sub-scenarios were bound together, thus causing their intertwinement and the expansion of one scenario onto the other. It also turns out that the co-occurrence of metaphor scenarios in the context-sensitive discourse may help metaphor creators, by means of the lexical choice made, to offer a particular evaluation of the source concepts (e.g., in the case when the CONTAINER scenario and the MEDIEVAL CASTLE sub-scenario may be negatively connoted when used against the context of the COMBAT), which may thus contribute to a better explication of the target concepts. The explanatory function of the metaphor scenarios and the related sub-scenarios was realized in our paper by a variety of lexical and phrasal items, some of them representing creative extensions of conventional metaphorical themes or the utilizing of some normally unused element of the source domain. This goes in line with Musolff's argument that different "lexical 'filling" could be chosen to suit a particular scenario and sub-scenario (Musolff 2016a: 87), which thus serves to depict the target concepts in a more intelligible way.

5. Conclusion

In this paper an attempt was made to investigate the explanatory function of metaphor scenario in the Serbian pro-vaccine discourse in a very sensitive period during the Covid-19 pandemic when there was an urgent need to communicate and simplify complex scientific knowledge about the value of the vaccines to the general public who, after a very enthusiastic initial rollout response, exhibited a high level of vaccine hesitancy, caused, inter alia, by an anti-vaxxer fearmongering influence. We have shown that the metaphor scenarios of COMBAT, CONTAINER and MOVEMENT, represented and reflected by topically-related sets of lexical items, and particularly their co-occurrence in the given discourse, are used as discursive framing vehicles by medical scientists to communicate the target concepts in a more fathomable manner. In addition, each of the sub-scenarios involved as integral parts of a respective metaphor scenario appears to additionally inform the target concepts and ease the explanation of their many aspects. Using the metaphor scenarios and their constituent sub-scenarios in the pro-vaccine discourse may therefore be regarded as an effective strategy of explanation which may "help [...] to overcome the incomprehensibility of expert discourse" (Boginskaya 2022: 42). This, in turn, may aid in understanding of the risks of Covid-19 by the lay public and the effectiveness of vaccines as a way of protecting against those risks and possibly affect the lay public's future course of action. This goes in line with the role of metaphors in this kind of discourse to "not only explain the situation, but also steer behavioral change" (Abdel-Raheem & Alkhammash 2022: 24).

Our paper confirms that metaphor scenarios may be used strategically by medical experts to explain and evaluate the complex scientific concepts to metaphor recipients, members of the lay audience, that would otherwise be inaccessible to them. It contributes to the existing body of research into the role of metaphor scenarios as one of the tools used in discursive strategies for the construction and negotiation of challenging topics, controversial issues and diverse social phenomena.

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