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## Visual, Auditory, and Verbal Modes of the Metaphor: A Case Study of the Miniseries *Chernobyl*

### ABSTRACT

The article examines the multimodal metaphors which actualise the concept of CHORNOBYL in the five episodes of the miniseries *Chernobyl*. The procedure of the analysis includes identifying and selecting the multimodal metaphors following the Filmic Metaphor Identification Procedure, construing and describing the structure of key and sub-metaphors with the target domain CHORNOBYL, distinguishing the modes of the domains, interpreting the meanings and attitudes that are mapped onto the target domain. The source domains DETECTIVE STORY, ESPIONAGE, DISEASE, HOSPITAL are cued via the combination of visual, auditory (sonic and musical), and verbal (written and spoken) modes.

Keywords: multimodality, conceptual metaphor, Chernobyl, visual mode, auditory mode, verbal mode

### 1. Introduction

Many decades have already passed since the Chernobyl disaster, but it still occupies its multifaceted space within social consciousness, producing its own myths, assumptions, and implications. Despite having been kept in secret for years, Chor-

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Chornobyl issues penetrated into the global popular culture, finding their representation through different media. Though Chornobyl's presence in USSR and Post-Soviet media discourse was rather distorted and disconnected from the mainstream culture, it found its way into the literary works by not only Ukrainian writers (Kostenko, 2012; Sirota, 2013; Zabuzhko, 2020) but also foreign authors (Alexievich, 2005; Higginbotham, 2019; Leatherbarrow, 2016). Thus, "Chornobyl discourse" has appeared and it includes "the numerous official and unofficial proclamations, rumours, witness testimonies, and documental and fictional works about Chornobyl" (Hundorova, 2019, p. 6). It serves as a means of rethinking the traumatic experience which seeks new forms of expression. For example, using the nuclear apocalypse, the popular video game trilogy S.T.A.L.K.E.R. forms a different approach to how Chornobyl memory is constructed.

The denotation of "Chornobyl" is threefold. It stands for 1) the city near Kyiv; 2) the Chornobyl Nuclear Power Plant; 3) the catastrophe itself (Oxford Reference, 2006). In our research the concept name "Chornobyl" amalgamates all three definitions, gaining its connotation in cinematic context through the multimodal metaphors. The word "Chornobyl" has at least two ways of its spelling: Chornobyl and Chernobyl, the former being the Romanisation of the Ukrainian spelling and the latter – of the Russian one. In our research, we stick to the variant Chornobyl, still using Chernobyl when referring to the film under study.

HBO's five-part miniseries *Chernobyl* (2019) reintroduced the world to the nuclear catastrophe, renewing public interest to the cultural memory of Chornobyl. The events of the film take place around the Chornobyl disaster that happened at the Chornobyl Nuclear Power Plant in 1986. The five episodes of the series encompass the time a few minutes before the explosion and a two-year period after it describing the liquidation efforts that followed. The miniseries depicts the stories of the people of different backgrounds – plant workers, the authorities, scientists, firefighters, miners, and Prypiat locals. The film offers a powerful combination of expert analysis with real facts and dramatic plotlines featuring personal stories. Such representation of the Chornobyl disaster reinforced by vivid computer graphics and sound effects makes the film especially appealing and thought provoking.

The Chornobyl disaster is studied in different fields of research but it received little investigation in cognitive linguistics. As multimodal metaphor is a powerful tool to explore concepts in films, this paper aims at to construct the CHORNOBYL concept via multimodal metaphorical expressions in a five-part miniseries. The study focuses on analysing the stance-constructive meaning of each metaphor with a view to establishing a wider range of perceptions evoked by the target domain CHORNOBYL. Moreover, the multimodal metaphor theory is highly implemented in studying TV commercials and the Internet memes (Koller, 2009; Urios-Aparisi, 2010). The world's perception of the Chornobyl catastrophe is

construed not only by purely scientific records but also by dynamic and vivid cinematic images which together with sonic and verbal manifestations feature strong emotional load. This research is a contribution to multimodal studies as it provides an in-depth analysis of modes and their combinations construing the multimodal metaphors with the CHORNOBYL target domain in HBO's miniseries *Chernobyl*. What is more the study will help to deepen the understanding of so sensitive an issue as the Chernobyl tragedy.

## 2. Material and Methods

### 2.1. The Overview of Chernobyl Legacy

Personal accounts of the Chernobyl tragedy were firstly presented in *Voices from Chernobyl: The Oral History of a Nuclear Disaster* (titled *Chernobyl Prayer: A Chronicle of the Future* in the UK) by Svetlana Alexievich (2005), the winner of the Nobel Prize in Literature. The book consists of interviews taken from people affected by the explosion, revealing personal emotions, attitudes, memories which they still live with.

Serhii Plokhyy presented a great insight into the Chernobyl catastrophe in his book *Chernobyl: History of a Tragedy* (2018) from the very meltdown in 1986 to 2018 when the new shelter over the ruined reactor was constructed. Studying embodied and engendered writing after nuclear disaster, Emily Jones (2017) states that narrative structures in Christa Wolf's *Accident: A Day's News*, "an atomized narrative that both criticises and lauds technology's ability to shape human life" (p. 93), represent the repercussions of the disaster in its entirety. Tamara Hundorova explores the topic of Chernobyl in the context of the "post-Chernobyl library" which she sees as a number of varied texts that mark a "postapocalyptic narrative" in Ukrainian literature (Hundorova, 2019). Using a great deal of theoretical approaches and frame works in her doctoral dissertation, Haley J. Laurila analyses "how memory of nuclear disaster is conditioned in a variety of ways through multimodal and multifaceted interactions and encounters with Chernobyl in film, literature, tourism, and memorial practices" (Laurila, 2020, p. 276). The latest research on the Chernobyl disaster by Vardanian focuses on the investigation of how the cultural memory and traumatic experience are presented in children's fiction via its imagery (Vardanian, 2021, pp. 1–17).

### 2.2. Multimodal Metaphor Studies

Within the framework of film study, the works on multimodal metaphor are still sparse (Bort-Mir, 2019; Eggertsson & Forceville, 2009; Fahlenbrach, 2016; Whittock, 1990). The developing interest in the analysis of metaphors in movies is stimulating due to fact that the latter are a great source of material for cognitive research.

The paradigm of Conceptual Metaphor Theory (CMT) introduced by Lakoff and Johnson and developed in more recent scholar researches (Bilyk, Bylytsia, Doichyk, Ivanotchak, & Pyliachyk, 2022; Bystrov, 2014; Cammaerts, 2012; Kövecses, 2002) underlies the cognitive approach to studying metaphor, multimodal in particular. Following Lakoff and Johnson, metaphor is cognitive by nature and it emerges when one concept is understood in terms of another. This understanding is based on metaphorical mapping which is “a set of systematic correspondences between the source and the target in the sense that constituent conceptual elements of B correspond to constituent elements of A” (Kövecses, 2002, p. 6).

Before analysing multimodal metaphor, it is necessary to distinguish between the notions of monomodal and multimodal metaphor. Unlike monomodal metaphors in which both domains are presented in the same mode, multimodal metaphors are those “whose target and source are each represented exclusively or predominantly in different modes” (Forceville, 2009, p. 24). The key argument here is that “exclusively or predominantly” is essential as target and/or source domains may be simultaneously cued in more than one mode (p. 25).

According to Elisabeth El Refaie (2013), multimodality gives unique opportunities for construing metaphors by using the abilities of the various modes (p. 236). Despite the absence of exact definition of “mode”, the following modes are distinguished: 1) pictorial signs; 2) written signs; 3) spoken signs; 4) gestures; 5) sounds; 6) music; 7) smells; 8) tastes; 9) touch (Forceville, 2009, p. 4). Taking into account the list of modes, the target and source domains of multimodal metaphor in films can be recognizable visually, sonically, musically, in spoken and written language. In the current study, we refer to the following five modes: 1) if a domain is visually depicted, it is either itself portrayed or its elements metonymically related to it are portrayed; 2) if a domain is sonically depicted, a non-musical, non-verbal sound is used to cue its meaning; 3) if a domain is musically depicted, some music is used to cue its identification; 4) if a domain is depicted in spoken language, it is identified by on-screen characters or voice-overs; 5) if a domain is depicted in written language, it or its elements are presented onscreen in written form. This approach to creating and distinguishing multimodal metaphors combines the modes in unexpected ways.

### 2.3. Data and Methodology

Our sample consists of 7 multimodal metaphors manifested in 5 episodes of the HBO’s miniseries *Chernobyl* (“1:23:45”, “Please Remain Calm”, “Open Wide, O Earth”, “The Happiness of All Mankind”, “Vichnaya Pamyat”) lasting 347 minutes.

The metaphors were selected according to the following criteria: 1) the amalgamation of components (the target and source domains are presented in different

modes); 2) the frequency of occurrence (the metaphor emerges several times in the film). The multimodal metaphor study results related to the CMT have enabled utilising the following methodological procedure for analysing multimodal metaphors in the HBO's miniseries:

- Identifying and selecting the multimodal metaphors following the Filmic Metaphor Identification Procedure (FILMIP) which consists of two phases (Bort-Mir, 2019). The first phase presupposes content analysis according to which the film may be divided into different shots, scenes and sequences; identifying and describing modes; establishing general understanding of the messages of the material under study. The second phase comprises metaphor identification itself.
- Construing and describing the structure of the metaphor by exploiting Lakoff and Johnson's model A is B (Lakoff & Johnson, 1980). It is taken into consideration that "if the target domain has little or no structure, a metaphorical coupling of this target with a richly-structured source domain can even import or impose structure on the target" (Forceville, 2013, p. 7). Thus, the target domain evolves in different ways depending on the meaning of its source domains. It should be noted that in our research, following Fahlenbrach's approach to the classification of audio-visual multimodal metaphors, the key and sub-metaphors are analysed (Fahlenbrach, 2016).
- Distinguishing the modes of the domains. It is crucial that both domains are cued in different modes within the multimodal metaphor theory. The keynote is as follows: though the target domain is the same – CHORNOBYL – it is represented in various modes.
- Analysing and interpreting the multimodal metaphor by discovering which meanings and attitudes associated with the source are mapped onto the target domain. The mapping of the features depends on the context in which the metaphor occurs (Forceville, 2013, p. 10), but at least one feature that is mappable from source to target should be identified.

### 3. Results and Discussion

As concepts are considered to be complex cognitive issues, it is typical of target domains to be comprehended in terms of more than one source domain (Kövecses, 2002, p. 84). The source domains DETECTIVE STORY, ESPIONAGE, DISEASE, HOSPITAL highlight different conceptual features of the target domain CHORNOBYL and enable the viewers to understand various aspects of the catastrophe. Hence, the structure of the CHORNOBYL concept is construed within the network of key and sub-metaphors (Fahlenbrach, p. 36). The key metaphor is characterised by the higher degree of structural richness of its source domain, thus enabling some additional mappings via sub-metaphors.

The target domain CHORNOBYL is cued verbally, visually and partially via auditory mode. The verbal mode is presented by spoken (characters referring to the concept name in dialogues, monologues, voices-over) and written language (topographic signs, final credits, newspaper headlines). It is worth mentioning that the very title of the series is a powerful verbal cue for the target domain and like a spoiler it evokes strong associations even before watching the film. The visual mode is rendered in numerous bird's-eye views of the plant, the city and the explosion. These two modes are supported by non-diegetic crackling sounds which are associated with radiation.

One of the key metaphors construed in the course of the film is CHORNOBYL IS DETECTIVE STORY. The task of the scientists is to find out the reason for the explosion which is not easy as the responsible people try to conceal the facts. The truth about Chernobyl is deliberately distorted, hidden from the public view and it is substituted by a calming lie. The title of Episode 2 "Please, remain calm" speaks for itself. As in any detective story there are protagonists – detectives – who investigate the case (Legasov, Khomyuk) and antagonists who cover up the tracks telling lies (the authorities, Dyatlov). The first moment to exemplify this metaphor is the episode when Dyatlov leaves the control room to investigate the situation at the plant after the explosion. While walking along the corridor he notices something burning. The camera focuses on chunks of graphite burning on the ground. Dyatlov's facial expression makes it clear to the viewers that he realises the danger of the situation. The non-diegetic crackling static sound proves that we deal with radiation. However, Dyatlov's stoic face and unemotional behaviour back in the control room show that he is hiding the truth. Even seeing Toptunov's affected by the radiation red face, he lies by saying, "*He's delusional... He'll be fine. I've seen worse*". As a result, CHORNOBYL IS DETECTIVE STORY is construed through visual, auditory, and verbal modes.

In Episode 4 "The Happiness of All Mankind", the secrecy of a detective story is revealed in two scenes. The first one is set in the Moscow University Library Archive where Khomyuk asks the librarian to give her some documents from the secure reference section. Being invited by the librarian, the KGB agent takes the list and returns it with every single request crossed out except for one. The viewers see that the library is empty. In the total silence of the reading room every little diegetic sound – pen clicking, paper rustling, shoes clattering – together with dismal music (non-diegetic) act as a representation of the source domain DETECTIVE STORY implying secrecy. The visual manifestation of secret is also rendered through a close-up of the crossed out list of documents (Figure 1), the verbal mode is expressed by a short phrase she can have that one, uttered by the agent. Consequently, the DETECTIVE STORY source domain is represented in visual, verbal and auditory (sonic and musical) modes.

The second scene is no less expressive though it employs only verbal and visual modes. Hence, we may follow the conversation between Legasov, Khomyuk

and Shcherbina in an abandoned building which is about possible causes of the explosion. When the truth comes out Shcherbina as the representative of the authorities offers to keep it secret. His words

The KGB classified it as a state secret. You leave this information out in Vienna, and they quietly allow us to fix the remaining reactors

allow for CHORNOBYL IS DETECTIVE STORY to be inferred. The verbal mode of the source domain is amplified by a visual mode represented by a damaged wall poster behind Shcherbina. We notice that a woman in the poster is without the mouth because of the torn out piece of paper, which makes her look unable to speak like a crime witness who is afraid to utter the truth (Figure 2). In sum, these verbal and visual modes indicate the multimodal metaphor CHORNOBYL IS DETECTIVE STORY.

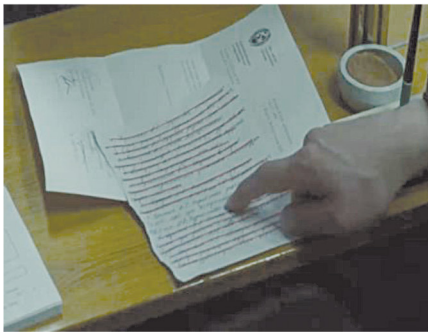


Figure 1: Cross out List of Documents

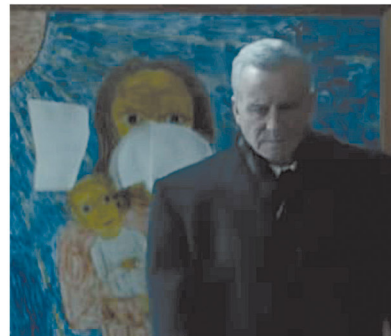


Figure 2: 'Silent' Woman in the Poster

This metaphor develops into a sub-metaphor CHORNOBYL IS ESPIONAGE. The very beginning of the series (Episode 1 “1:23:45”) introduces the viewers to the metaphor CHORNOBYL IS ESPIONAGE. Under disguise of darkness Legasov leaves his flat in an attempt to hide the cassettes in a small air vent in a dark alley next to his building. He quickly passes through the beam of a streetlamp to avoid being noticed by a man from the surveillance car parked nearby. The source domain is recruited visually – by darkness, subdued light, and Legasov’s furtive behaviour – and it is reinforced by the suspenseful tunes of the musical mode.

This metaphor also surfaces in Episode 2 ‘Please Remain Calm’. During the telephone conversation Khomyuk and her colleague from Kurchatov Institute use coded language to refer to the accident in Chernobyl. While discussing the fire extinguishing process they use children’s names and age – Boris (5) and Simka (14) – to identify chemical elements. The viewers become aware of this due to the

symbols B (5) and Si (14) from the periodic table which appears on the screen. Thus, the source domain is cued both verbally and visually.

In the above mentioned scenes the scientists Legasov and Khomyuk are perceived as spies whose aim is either to reveal or to find out the secret information about Chornobyl. The features of spies' behaviour map onto the scientists: they are very careful in their words and actions, use coded language, and arrange meetings in discreet places.

The multimodal metaphor CHORNOBYL IS DISEASE is mostly established through visual and auditory modes. The pictures of injured people appearing throughout the film make a strong effect on viewers. One of the most salient scenes is that of Lyudmilla and Vasily in hospital in Episode 3 "Open Wide, O Earth". The first thing that draws attention is a horrible shriek of pain echoing from a hospital ward. In a moment we see Vasily covered in lesions on a hospital bed and some nurses trying to inject morphine (Figure 3). Judging by open bleeding sores all over his body, he is in agony. The verbal manifestation of the source domain is represented by Lyudmilla's words "*You are hurting him!*", and the interaction of auditory, visual, and verbal modes triggers CHORNOBYL IS DISEASE.



Figure 3: Vasily's Suffering in Hospital

Any disease involves not only physical pain and wounds, which are visible, but also emotional suffering. The multimodal metaphor CHORNOBYL IS DISEASE implying mental pain is especially vivid in Episode 3 when Lyudmilla is in hospital near Vasily who endures unbearable physical pain while she suffers from no less strong mental anguish. Her pain is constantly developing during the course of the episodes (Vasily's death and funeral) and reaches its climax when Lyudmilla loses her newborn baby. The domain of disease is cued visually by the pictures of Lyudmilla's face (Episodes 3 and 4) bearing a wide range of emotions starting with genuine sympathy, deep fear, bitter tears, inconsolable grief, and finally finishing with total indifference. Lyudmilla's disturbing emotional condition is highlighted by the sounds of crying babies in a maternity ward and sad background music (auditory mode).

As any disease requires a cure, it is natural that the target domain is viewed through the source domain HOSPITAL of the sub-metaphor CHORNOBYL IS



HOSPITAL. In the film, the treatment process is metaphorically pictured through different measures taken to overcome the consequences of the explosion. The meeting of the authorities in Kremlin Conference Room resembles the meeting of doctors in hospital discussing a disease (Episode 3 “Open Wide, O Earth”). Being an expert in the field of nuclear physics, Legasov stands out as the ‘chief doctor’ who offers the most appropriate ‘treatment’ strategy:

This entire region must be completely evacuated... All animals still surviving within the zone... must be presumed contaminated, and will have to be destroyed to prevent the spread of radiation and disease. We will have to raze forests. And we will have to rip up the top layer of earth, and bury it under itself.

The radiation is perceived as the infection affecting humans. This verbal mode is supported by a visual one in Episode 4 “The Happiness of All Mankind”. The scene opens with the picture of bulldozers ripping off the upper layer of the cabbage field like medical instruments removing an infected skin (Figure 4). The men spraying the road in protective suits with hoods drawn tight and gas masks resemble medieval plague doctors (Figure 5).



Figure 4: Ripping up the Fields



Figure 5: ‘Doctors’ Disinfecting the Streets

#### 4. Conclusions

We have analysed 5 episodes of the miniseries *Chernobyl* in order to identify the multimodal metaphors actualising the concept of CHORNOBYL. In addition, the stance-constructive meaning of each metaphor has been brought into view to reveal the emotional potential of the multimodal metaphors under study.

In the research, such multimodal metaphors have been singled out: CHORNOBYL IS DETECTIVE STORY, CHORNOBYL IS ESPIONAGE, CHORNOBYL IS DISEASE, CHORNOBYL IS HOSPITAL. This list is not ultimate as the metaphors which occurred rarely in the miniseries are not included in it. The actualisation of metaphors also depends on the subjective perceptions, and consequently, the viewers of the same film may construe different multimodal metaphors.

CHORNOBYL IS DETECTIVE STORY and CHORNOBYL IS DISEASE are key metaphors as they appear throughout the film and their source domains render the conceptual features of CHORNOBYL. The sub-metaphors CHORNOBYL IS ESPIONAGE and CHORNOBYL IS HOSPITAL suggest additional mappings. Thus, the multimodal metaphor CHORNOBYL IS DETECTIVE STORY is reinforced by its sub-metaphor CHORNOBYL IS ESPIONAGE and they together reveal such features of the Chernobyl tragedy as secrecy, lie, and false facts. In the film there were characters who tried to get to the bottom of the truth by deep investigation of the case. One of the most powerful metaphors under study is CHORNOBYL IS DISEASE which presupposes the existence of not only physical but also mental pain. As any disease needs treatment and medical specialists the appearance of the sub-metaphor CHORNOBYL IS HOSPITAL is obvious. The key and sub-metaphors of the series have a stance-constructive potential, either enhancing or downgrading the intensity of Chernobyl negative perception.

We argue that the CHORNOBYL concept in the miniseries *Chernobyl* is an issue of multimodal manifestation of the metaphors, and the visual and verbal modes take part in construing all the metaphors under study. As the film provides a wide range of meaningful shots, the multimodal metaphors have the vivid visual manifestation. The language embodiment of the verbal mode depends on the context. Primarily it is presented by dialogues and extended sentences but in some cases a simple sentence in the whole scene may perform a nominative function being informative itself. Unlike the spoken mode, the written one is used for the actualisation of the target domain (e.g. headlines, posters, road signs, and final notes of the series) rather than for source domains. It is the auditory mode that adds new emotional meaning to the imagery. The sonic and musical modes make the multimodal metaphors more powerful in their influence on viewers. The crackling and beeping sounds, sirens, crying, and moaning together with songs and somber tunes contribute to the multimodal evocation of the metaphors.

The above results show how the perception of CHORNOBYL is interpreted through the prism of the multimodal metaphors functioning in the film. The title of the series is the “speaking” notion and the CHORNOBYL concept is initially associated with disaster, explosion, and destruction. Consequently, such metaphors as CHORNOBYL IS DISEASE, CHORNOBYL IS HOSPITAL are easily recognizable in the film. The multimodal metaphor CHORNOBYL IS DETECTIVE STORY and CHORNOBYL IS ESPIONAGE are quite unexpected to discover, mapping new conceptual features onto the target domain. This research may be further developed in the framework of comparative studies involving different discourses.

## References

- Alexievich, S. (2005). *Voices from Chernobyl: The oral history of a nuclear disaster* (K. Gessen, Trans.). New York: Picador.
- Bilyk, O., Bylytsia, U., Doichyk, O., Ivanotchak, N., & Pyliachyk, N. (2022). COVID-19 metaphorical blends in media discourse. *Studies about Languages*, 40, 17–33. <https://doi.org/10.5755/j01.sal.1.40.30155>
- Bystrov, Y. (2014). Fractal metaphor LIFE IS A STORY in biographical narrative. *Topics in Linguistics*, 14(1), 1–8. <https://doi.org/10.2478/topling-2014-0007>
- Bort-Mir, L. (2019). *Developing, applying and testing FILMIP: the filmic metaphor identification procedure*. Doctoral dissertation. Castellón de la Plana. <https://doi.org/10.13140/RG.2.2.18345.03688>
- Cammaerts, B. (2012). The strategic use of metaphors by political and media elites: The 2007–2011 Belgian constitutional crisis. *International journal of media & cultural politics*, 8(2), 229–249. [https://doi.org/10.1386/macp.8.2-3.229\\_1](https://doi.org/10.1386/macp.8.2-3.229_1)
- Eggertsson, G. T., & Forceville, Ch. (2009). Multimodal expressions of the HUMAN VICTIM IS ANIMAL metaphor in horror films. In Ch. Forceville, & E. Urios-Aparisi (Eds.), *Multimodal metaphor* (pp. 429–449). Berlin, New York: De Gruyter.
- El Refaie, E. (2013). Cross-modal resonances in creative multimodal metaphors: Breaking out of conceptual prisons. *Review of cognitive linguistics*, 11(2), 236–249. <https://doi.org/10.1075/rcl.11.2.02elr>
- Fahlenbrach, K. (2016). Audiovisual metaphors as embodied narratives in moving images. In K. Fahlenbrach (Ed.), *Embodied metaphors in film, television and video games: Cognitive approaches* (pp. 33–50). London: Routledge.
- Forceville, Ch. (2009). Non-verbal and multimodal metaphor in a cognitive framework: Agendas for research. In Ch. Forceville, & E. Urios-Aparisi (Eds.), *Multimodal metaphor* (pp. 19–42). Berlin, New York: De Gruyter.
- Forceville, Ch. (2013). *A course in pictorial and multimodal metaphor*. Retrieved June 2, 2022, from [http://www.researchgate.net/publication/228992597\\_A\\_course\\_in\\_pictorial\\_and\\_multimodal\\_metaphor/link/00b495371c46f10162000000/download](http://www.researchgate.net/publication/228992597_A_course_in_pictorial_and_multimodal_metaphor/link/00b495371c46f10162000000/download).
- Higginbotham, A. (2019). *Midnight in Chernobyl: The untold story of the world's greatest nuclear disaster*. New York: Simon & Schuster.
- Hundorova, T. (2019). *The post-Chornobyl library: Ukrainian postmodernism of the 1990s* (S. Yakovenko, Trans.). Boston: Academic Studies Press.
- Jones, E. (2017). Writing the hyper-disaster: Embodied and engendered narrative after nuclear disaster. *The comparatist*, 41, 93–117.
- Kostenko, L. (2012). *Madonna of crossroads*. Kyiv: Lybid.
- Kövecses, Z. (2002). *Metaphor: A practical introduction*. New York: Oxford University Press.
- Koller, V. (2009). Multimodal metaphor in corporate branding messages. In Ch. Forceville, & E. Urios-Aparisi (Eds.), *Multimodal metaphor* (pp. 45–71). Berlin, New York: De Gruyter.
- Lakoff, G., & Johnson, M. (1980). *Metaphors we live by*. Chicago: University of Chicago Press.
- Laurila, H. (2020). *Chernobyl's radioactive memory: Confronting the impact of nuclear fallout* (Doctoral dissertation). University of Michigan, Michigan. Retrieved June 21, 2022, from [http://deepblue.lib.umich.edu/bitstream/handle/2027.42/162952/hallauri\\_1.pdf?sequence=1&isAllowed=y](http://deepblue.lib.umich.edu/bitstream/handle/2027.42/162952/hallauri_1.pdf?sequence=1&isAllowed=y).
- Leatherbarrow, A. (2016). *Chernobyl 01:23:40: The incredible true story of the world's worst nuclear disaster*. Lancaster: Andrew Leatherbarrow.
- Mazin, C. (Producer), & Renck, J. (Director). (2019). *Chernobyl*. [Motion picture]. United States, United Kingdom: Warner Bros. Television Distribution.
- Plokhly, S. (2018). *Chernobyl: History of a tragedy*. London: Allen Lane.
- Sirota, L. (2013). *The Pripyat Syndrome*. CreateSpace Independent Publishing Platform.

- The Oxford dictionary of phrase and fable* (2nd ed.) (2006). Retrieved June 28, 2022, from <http://www.oxfordreference.com/view/10.1093/acref/9780198609810.001.0001/acref-9780198609810-e-1474>.
- Urios-Aparisi, E. (2010). The body of love in Almodovar's cinema: Metaphor and metonymy of the body and body parts. *Metaphor and symbol*, 25, 181–203.
- Vardanian, M. (2021). Reading the Chornobyl catastrophe within ecofiction. *Child lit educ.* <https://doi.org/10.1007/s10583-021-09437-w>
- Whittock, T. (1990). *Metaphor and film*. Cambridge: Cambridge University Press.
- Zabuzhko, O. (2020). *Planet Sagebrush. Selected essays*. Kyiv: Komora.