

Article

Framing Nuclearity: Online Media Discourses in Lithuania

Natalija Mažeikienė^{1,*}, Judita Kasperiušienė² and Ilona Tandzegolskienė³¹ Faculty of Social Sciences, Vytautas Magnus University, 44191 Kaunas, Lithuania; E-Mail: natalija.mazeikiene@vdu.lt² Faculty of Informatics, Vytautas Magnus University, 44404 Kaunas, Lithuania; E-Mail: judita.kasperiušiene@vdu.lt³ Academy of Education, Vytautas Magnus University, 44248 Kaunas, Lithuania; E-Mail: ilona.tandzegolskiene@vdu.lt

* Corresponding author

Submitted: 4 November 2020 | Accepted: 13 January 2021 | Published: 6 April 2021

Abstract

This article refers to the concept of nuclearity as a broader technopolitical phenomenon that implies a political and cultural configuration of technical and scientific matters. The nuclear media discourses become a site of tensions, struggles, and power relations between various institutions, social groups, and agents who seek to frame nuclear issues. The Bourdieusian concept of a field as a domain of social interaction is employed by the authors of this article seeking to reveal interactions and power configurations within and between several fields: journalism and media, economy, politics, and cultural production fields (cinematography, literature, and art). Commercial and political pressures on media raise a question about the autonomy of this field. Media coverage of nuclear issues in Lithuania during the period 2018–2020, includes media framing produced by different sponsors of the nuclear media discourses and agents from the above-mentioned fields of journalism, nuclear industry, politics, cinematography or arts. The media coverage includes the news and press releases produced within PR and public communication of the atomic energy industry by representing the decommissioning of the Ignalina Nuclear Power Plant, articles written by journalists about the atomic city Visaginas, and challenges faced by the local community due to the closure of the Ignalina Nuclear Power Plant. The nuclear discourse includes debates by politicians around the topic of the lack of safety of the construction of the Astravyets Nuclear Power Plant in Belarus, and media coverage of the HBO series *Chernobyl* representing a strong antinuclear narrative by portraying the Chernobyl disaster crisis and expressing strong criticism of communism. The authors of this article carried out a qualitative content analysis of media coverage on nuclear issues and revealed features of the discourse: interpretative packages, frames, framing devices (Gamson & Modigliani, 1989), and dominating actors and institutions supporting the discourse.

Keywords

Astravyets nuclear power plant; Chernobyl; framing theory; Ignalina nuclear power plant; nuclear culture; nuclear imagery; nuclear media discourses; nuclearity; Visaginas

Issue

This article is part of the issue “Critical Theory in a Digital Media Age: Ways Forward” edited by Robert E. Gutsche, Jr. (Lancaster University, UK).

© 2021 by the authors; licensee Cogitatio (Lisbon, Portugal). This article is licensed under a Creative Commons Attribution 4.0 International License (CC BY).

1. Introduction

The article analyses the nuclear media discourses that proliferated on four news portals in Lithuania from 2018–2020. During this period, the debate on nuclear energy intensified around several topics. In recent years, nuclear discourse has been developed around the issue of the decommissioning of the Ignalina Nuclear Power

Plant (INPP), the only Lithuanian nuclear facility. This nuclear power plant with an RMBK-style reactor began operating in 1983. The INPP units were shut down in 2004 and 2009, while the dismantling process will last until 2038. The decision to close INPP was a precondition for Lithuania to enter the EU. The nuclear facility with RBMK-1500 reactors (the same as in Chernobyl) in Lithuania was considered by international experts

to be unsafe due to potential nuclear accident risks. In 2012, during a referendum on the construction of a new power plant, citizens did not support the idea of building a new nuclear power plant (NPP). The closure of the INPP has affected the situation of the 'atomic' town Visaginas which was established to accommodate atomic industry specialists and their families. The city comprises an exceptional multi-ethnic background for Lithuania—in the 1970s, nuclear industry experts, engineers, and construction workers from other republics of the Soviet Union were sent to Lithuania to establish the atomic industry. Following the closure of the INPP and the commencement of the dismantling process, Visaginas and its inhabitants have undergone a painful change of place identity; from mono industrial atomic town to the post-industrial and post-nuclear stage.

During the period of analysis which is the concern of this article, 2018–2020, new topics have appeared in the media discourse: media coverage of the Chernobyl accident and the HBO miniseries *Chernobyl*, which was filmed in Lithuania and the territory of INPP, and the growing political discourse on the lack of safety of the Astravyets NPP (ANPP) in Belarus on the border with Lithuania. The emergence of these four major topics evokes a discussion of how media framing takes place by involving nuclear media discourse sponsors from different social and professional fields: media and journalism, nuclear industry, politics, cinematography, and art. Nuclear discourses are interpreted and conceptualized in this study by using theories describing the phenomenon of nuclearity (Hecht, 2009, 2012). Additionally, inspiring insights are gained from Bourdieu's Field Theory (Bourdieu, 1993, 1996, 1998), which explains the distribution of power in various social spheres and fields, their peculiarities and interactions.

This peculiarity of media coverage raises the question of how the properties of the fields (nuclear industry as a specific economy, politics, media, cinematography, television) determine the specific traits of the nuclear discourses they produce. A study of nuclear media discourses falls within the realm of critical theory when discussing how social actors and institutions with greater power construct dominant discourses and how some participants with less power remain invisible and voiceless. It is important to identify the key actors in the nuclear discourse and the narratives they produce. At the same time, the very concept of nuclearity is scrutinized from a critical perspective, revealing how processes in the nuclear energy industry deal with the configuration of power.

2. Nuclearity, Nuclear Media Discourses and Bourdieu's Field Theory

In our study, we refer to the notion of nuclear media discourses (Entman & Rojecki, 1993; Gamson & Modigliani, 1989) as a form of framing and social construction applied to representations of nuclear issues. Media

discourses contribute to constructing the meaning of nuclear issues by providing interpretative packages utilizing frames as central organizing ideas (Gamson & Modigliani, 1989). Gamson and Modigliani (1989) determined the historically competing packages on nuclear issues—the pro-nuclear frame of *progress* as the society's commitment to technological development and economic growth, counterthemes of *runaway* and *soft paths, not cost-effective*, the ambivalent frame of *devil's bargain*. Other authors identified themes of technological and social progress, economic growth, political aspects, environmental concern, conflict, etc. (Zukas, 2018). Framing in media is influenced by social norms and values, organizational pressures and constraints, the pressure of interest groups, journalist practice and political orientations (Scheufele, 2000, as cited in Mercado-Sáez, Marco-Crespo, & Álvarez-Villa, 2019, p. 4). Nuclear issue-specific frames are promoted by sponsors engaged in the production of meaning and facilitating the articulation and spread of the interpretative packages through advocacy, public relations, advertising, and other tangible activities: interviews with journalists, articles, etc. (Gamson & Modigliani, 1989). Studies of media coverage on nuclear issues in different countries (Balkan-Sahin, 2019; Mercado-Sáez et al., 2019) reveal how powerful stakeholders and interest groups (politicians, government and other officials, nuclear industry companies) become the sponsors of pronuclear discourses and express their political and economic interests in the media. Stakeholders from environmental movements (citizens, organizations) express environmental concerns on nuclear issues in media discourse. As research on nuclear media discourse demonstrates, politicians and government officials tend to dominate coverage of the issue while environmental activist sources are less referenced. In many countries, the anti-nuclear discourse remains marginal.

One more important element distinguished by scholars is media norms and practices in which journalists and media companies play a prominent role; they become an important medium between sponsors of discourses and audiences.

Gamson and Modigliani (1989), while discussing how issue cultures are produced, point out the main determinants of this process: cultural resonances (larger cultural themes and support of broader cultural discourse), the activity of sponsors, and media practices (journalistic working norms and practices). In some cases, journalists actively participate by contributing their own frames and inventing their own catchphrases. Zukas (2018) notes that journalists choose rather the role of a messenger than an active producer of the nuclear discourse by applying certain strategies: obtaining information from political and government officials and the energy industry, citing sources from experts holding official titles and degrees and fall under the influence of strategic communication and public relations of nuclear companies. Peculiarities of framing are related to the nature

of journalism as a field. The Bourdieusian concept of a field provides a conceptualization of journalism as a field of power, a domain of social interaction and social practice that is co-constituted with social structures (Bourdieu, 1998). The theoretical framework provided by Bourdieu enables us to discern interactions and power configurations within and between several fields—journalism and media, economy, politics, civic society—and could enable a greater understanding of how nuclear discourses are constructed. On the one hand, the journalistic field is defined as relatively independent from politics and the economy and has its own logic, on the other hand, commercial and political pressures on the media raise a question about the autonomy of this domain, especially under the conditions of growing marketization of media (Brown, 2013). Analysis of various fields (politics, journalism, nuclear industry) reveals the main participants in the fields (journalists, experts, academics, intellectuals) and the nature of knowledge and practices they exercise in the field. In the shift to online journalism, journalism is undergoing a change as dependency on the market and subsidies from stakeholders is growing. Journalists acquire new professional roles, norms, practices, and new routines have been emerging (Zukas, 2018).

The authors describing nuclear energy point to the concept of nuclearity which embraces a broader area of nuclear matters: human-made isotopes, nuclear industry, a nuclear state, nuclear citizenship, and nuclear discourse (Hecht, 2009, 2012). The field of nuclear industry is not simply an ordinary and banal industry; it is a broader technopolitical phenomenon that implies a political and cultural configuration of technical and scientific matters. Thus, the concept of nuclearity reflects the interconnection of different fields: science and technologies, industry, politics, and cultural production (including media), medical and health care. Nuclearity is described as a techno-political regime dependent upon power relations in national politics and transnational networks.

According to Hecht (2012), nuclearity is related to nuclear exceptionalism—the implication that nuclear matters are unique, different from ordinary (*non-nuclear*) matters. It is related to a specific concentration of power and prestige in the field of nuclear research and industry. Nuclear exceptionalism is promoted in a broader cultural discourse. Since the 1950s, utopian dreams, atomic fantasies, and promises related to limitless and cheap electricity and visionary images of a better life have been disseminated (Hecht, 2012). The nuclear cultural discourse included four dominating ‘master tropes’—mystery, secrecy, potency, and entelechy (Kinsella, 2005). Mystification of nuclear science, theology, and hierarchy turned nuclear energy experts and specialists into ‘nuclear priests.’ According to Anshelm (2010), nuclear scientists are depicted as magicians and wizards whose work is a kind of ‘witchcraft,’ ‘atomic enchantment’ at the nuclear reactor as a ‘witch oven.’ These dominating themes supported nuclear

exceptionalism when nuclear was associated with something ontologically unique. At the same time, dominating themes of nuclear cultural discourse reveal the complexity of the interconnection of nuclear industry, science and technologies, politics, and culture works and how cultural production fields support the functioning of nuclearity as a techno-political regime.

Furthermore, because of the secrecy it entails, the nuclear energy industry is not a banal economy. The historic roots of secrecy can be traced to nuclear research around the creation of the atomic bomb and military use of nuclear energy. The mysterious and secret nature of the nuclear work created nuclear superiority and exceptionalism by substantiating the observation that “hierarchical structures that emerge under the nuclear sign privilege closed communities of technical, military, and government insiders” (Kinsella, 2005, p. 55). According to Kinsella (2005), nuclear science and technologies are widely portrayed as intellectually challenging and therefore cannot easily be grasped by ordinary people. Mystery and secrecy created a boundary between nuclear experts as representatives of the ‘hard sciences’ and the public, hence limiting public knowledge and disempowering the public by excluding them from decision making in the nuclear domain (Kinsella, 2005).

Nuclear disasters in Three Mile Island (1969), Chernobyl (1986), and Fukushima (2011) revealed the potential risks involved with the nuclear energy industry. Awareness of the risks posed by unsafe nuclear reactors has ushered in a new period of nuclear industry development. In the 1980s and 1990s, anti-nuclear attitudes intensified in many countries. New nuclear safety culture was introduced by raising and implementing new requirements and standards of safety and ensuring transparency and openness to the public. A broader cultural discourse turned from promoting an optimistic and utopian narrative on the future of nuclear energy to a pessimistic and even dystopian vision of the nuclear future. Many countries decided to curtail the role of the nuclear energy industry in national energy landscapes due to negative public opinion and the increased costs of the nuclear industry.

On the one hand, the accessibility of the nuclear industry to the public has been strengthened through public communication, the promotion of educational programs, and providing tours at the sites of nuclear reactors. On the other hand, it has been revealed that the nuclear industry employs communication strategies to convince the public of safety, reliability, and high professional standards. Authors analysing the discourse of public communication, tourism, memory work and heritagization produced by nuclear energy industry, point out a peculiarity of this discourse: A strong pro-nuclear narrative around the necessity of nuclear industry and safety, intending to shape a positive image of the industry, with an avoidance and reluctance to reveal potential risks posed by the industry and to mention nuclear incidents and catastrophes that have occurred

at the nuclear energy sites (Storm, Krohn Andersson, & Rindzevičiūtė, 2019). Stories of disastrous pasts are not told at the nuclear energy communication and memory sites—these narratives occupy other heritage arenas (Storm et al., 2019). Anti-nuclear attitudes and a discursively proclaimed safety myth are presented in museums, memorials, cinematography, literature, and arts. These cultural production sub-fields follow their own logic and are relatively independent of nuclear industry and the political field which usually supports nuclear energy and a pro-nuclear stance. At the same time, due to growing pressures from the economic and political field and increasing dependence on the market and subsidies from stakeholders, journalism, and the media domain have become a site of public relations for nuclear industry companies and strategic communication for state institutions (Zukas, 2018).

Discourses on nuclear matters in the cultural production field have specific features. Bourdieu provides a view of the broad field of cultural production and describes its sub-fields: television, journalism, literature, cinematography, arts (Bourdieu, 1993, 1996, 1998; Hesmondhalgh, 2006). According to Bourdieu, these areas are considered to be of the same nature, but there are some differences between them. Cochrane (2013) points out that cinematography differs from literature because emotion and sensation in cinematography are stronger in film viewing than in literature.

The miniseries *Chernobyl* exemplifies an overlapping of several cultural production sub-fields—television as mass production, cinematography as art, and literature. Additionally, film marketing in the media enhances the cultural consumption of the series. This field of cultural production is under heavy pressure from the economic field. These commercial television channels are watched by millions of viewers in the US, the United Kingdom, and around the world. At the same time, HBO represents a hybrid field where several sub-fields—television, cinematography, and digital space—interconnect. This series has been produced on television for mass consumption.

Applying the Bourdieusian framework of the field to the analysis of cinematography, this art form is regarded as a habitus and social practice of embodied spectatorship with several elements—the film on the screen, the viewing body, and the space of viewing (Cochrane, 2013). The nature of spatiality in cinema and the development of specific practices of spectatorship and viewing, which is the nature of cinematic pleasure, defines the particularity of the sub-field. Practices of spectatorship are an expression and constitution of the collective public identity of the audience (Cochrane, 2013). At the same time, cinematography is a form of art and produces artistic expressive forms that evoke feelings through image, sound, and symbols. Although the *Chernobyl* series addresses historical events and refers to archival materials, the film itself as a work of art is an artistic interpretation. The production company of the series provided an interpretation of Alexievich's book *Voices*

from Chernobyl. The story of *Chernobyl* deals with the presentation of reality (historical facts) and at the same time, it is a drama aimed to evoke strong emotions (fear, beauty, sorrow) and aesthetic sensations. The TV series *Chernobyl* is created in the highly market-dependent HBO television field, which operates separately from the economic field of the nuclear industry. This independence made it possible to make a shocking film about the worst nuclear accident in history that shattered the safety myth of the entire nuclear industry and revealed potential risks and the devastating effects of nuclear energy on human health and the natural environment.

The main criticism in the series is aimed at the Soviet nuclear energy industry as a peculiar technopolitical regime that existed in the Soviet Union. Under this regime, technologies and nuclear facilities, and specific organizational nuclear culture with systemic defects in nuclear energy were combined with specific political governance of the industry (including secrecy and bureaucracy). Even though the series does not express criticism of other national technopolitical nuclear regimes and direct disapproval of the American nuclear industry (in this context it is worthy to mention that the United States is the largest producer of nuclear power in the world), there is no denying that the *Chernobyl* series contributes to a broader anti-nuclear cultural discourse which makes an indirect impact on fields dealing with the nuclear industry by fashioning the attitudes of common citizens to nuclear energy. The series becomes an attempt to contribute to the new politics of representation by challenging gender-related stereotypes and gender inequality in the cultural production sector. By introducing the character of Ulana Khomyuk, a woman nuclear physicist, the authors of *Chernobyl* seek to counter a traditional distribution of power in nuclear science and industry where women are underrepresented in the male-dominated field. Due to the relative independence of the cultural production field and a different level of exposure to the pressures of the market and politics, some peculiarities could be detected in different national and historical contexts. Therefore, an empirical study of nuclear media discourses in Lithuania delving into the interaction of the fields of nuclear industry, politics, and cultural production (including media) could contribute to a better understanding of how power configurations are produced.

3. Methodology

The four Lithuanian online news portals which have the biggest audience of readers were empirically analysed. Three of them are commercial daily news websites (*delfi.lt*; *lrytas.lt* and *15min.lt*) and the fourth one is a news portal by the national broadcaster (*lrt.lt*).

By applying data scraping methods (Karthikeyan, Sekaran, Ranjith, & Balajee, 2019), the authors of the article created a unique tool of article collection by using R language. Articles were collected from the news

portals by using keywords ‘Visaginas city,’ ‘Ignalina NPP,’ ‘Astravyets NPP,’ ‘Chernobyl.’ The articles were collected for the years 2018–2020. A total number of 3,451 articles were explored. The keyword ‘Astravyets NPP’ was found in 1529 cases, ‘Chernobyl’ in 831 cases, ‘Ignalina NPP’ in 658 cases, and ‘Visaginas city’ in 433 cases (Figure 1).

The qualitative content analysis of media articles for revealing nuclear media packages was employed by referring to framing devices (Gamson & Lasch, 1983; Gamson & Modigliani, 1989): metaphors, exemplars (i.e., historical examples from which lessons are drawn), catchphrases, depictions, and visual images, roots, consequences, and moral appeals. The articles were analysed factoring in: the date when the article was uploaded online, the leads (first two paragraphs of the article), the author(s) of the article, selection of quotes, and concluding statements or paragraphs of the articles.

4. Findings: Nuclear Online Mass Media Discourses

In this section we discuss four different nuclear media packages.

4.1. Media Package ‘Safe Nuclear Technologies under Political Governance’

The study established the media package with a frame representing the nuclear sector as an exceptional (not banal) nuclear industry fulfilling commitments to the international standards of safety. The exemplar of this package is the national nuclear industry. This package is promoted by public officials, governmental organizations, politicians, and official representatives of the NPP.

Since 2009, after the second unit of INPP was closed, power has not been further generated by nuclear energy in Lithuania, and this energy industry branch is no longer part of the energy landscape. The necessary funding for decommissioning and nuclear waste management comes from the EU and is affirmed during the highest level of political negotiations, where Lithuanian politicians negotiate with the EU on the amount of support for INPP closure work. ‘Tensions are raging’ in the President’s negotiations with members of the EU parliament pertaining to the allowance allocated to Lithuania.

This media package frames Lithuanian nuclear industry as safe, clean and professionally managed. The central idea (frames) recognized in the media, reveals the features of the Lithuanian nuclear energy facility. Previously part of the Soviet nuclear energy program, it now belongs to a technopolitical regime which has undergone fundamental changes in the last three decades since Lithuania regained its independence in 1990 and joined the EU in 2004. INPP with an unsafe RMBK reactor is being dismantled following the international EU regulations and directives on nuclear safety, and nuclear safety culture has changed.

A general attitude is being formed that advocates that all problems related to dismantling and nuclear waste management are safely solved technologically and carried out professionally. Environmental concerns and possible human health risks posed by nuclear waste are not mentioned: The media coverage focuses rather on the general description of dismantling, repository construction, and financing issues, without going into too much technical detail and without discussing the potential risks of nuclear waste for the current and future generations;

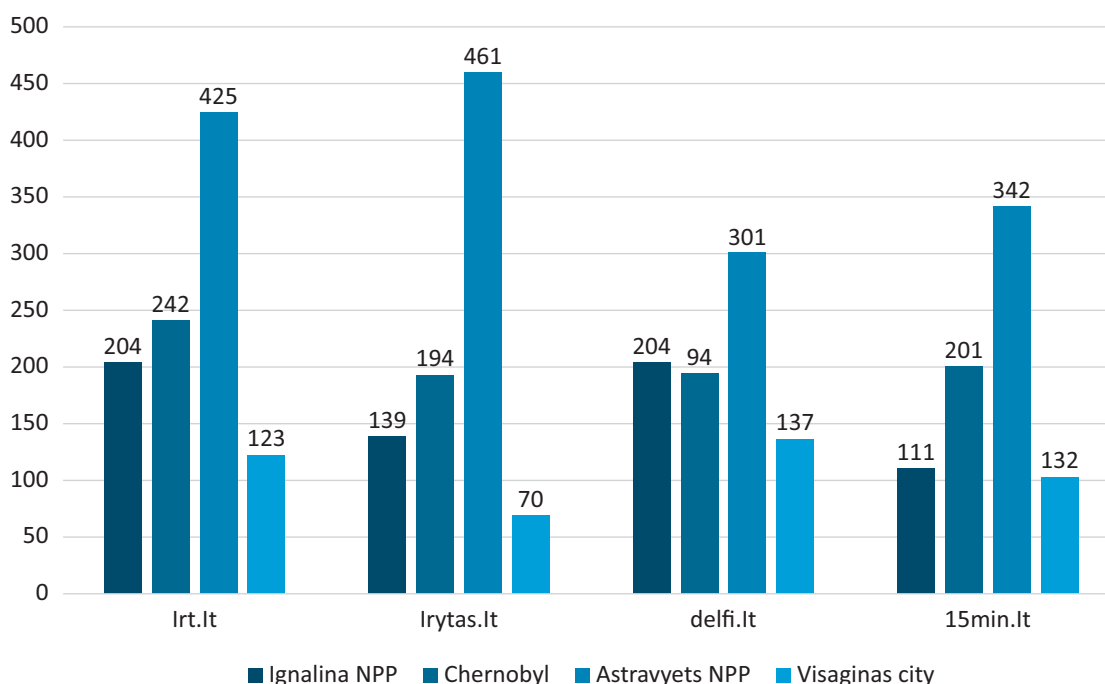


Figure 1. Number of articles examined during the period 2018–2020, all keywords.

there is no discussion or reminder that radioactive waste will be present in the country for thousands of years. This is explained by the fact that the closure of INPP already presupposes the elimination of risks caused by nuclear energy. At the same time, the marginality of this discourse can be related to the fact that INPP decommissioning and nuclear waste management is performed by using the most advanced, safety-enhancing modern technologies, following international recommendations and standards for nuclear safety, employing professional INPP staff and nuclear experts.

INPP communication seeks to minimize the correlation with the Chernobyl nuclear accident. It reflects the general tendency of the entire nuclear industry public communication to avoid associations with unsafety. There are no other participants (environmental organizations, NGOs) in the nuclear media discourse who would express environmental concerns.

It should be noted that most of the articles written by journalists on this topic are based on press releases from the authorities and political parties or press conferences. Information on the progress, reliability and professionalism of the performed work is provided by the official reports of the INPP Communication Department and the Ministry of Energy supervising the work of this state enterprise. The strong reliance on press releases provided by official sources reveals that agency is possessed mostly by public authorities and the state-owned nuclear company. Texts in this media package are short, formal, and expressionless; they lack metaphors, catchphrases, and visual symbols. Only occasionally are other participants, who do not directly formally represent the nuclear energy and political field, invited by journalists to contribute to the discourse. In such situations, interviews with nuclear experts reveal more technical details of dismantling and repository preparation, as scientists assess and analyse risks.

In some cases, journalists, when presenting the ongoing dismantling of INPP and the stages of construction of storage facilities for nuclear fuel waste, challenge official narratives and point out again the inherent unsafety of the constructions of INPP reactors which are similar to those of the Chernobyl reactor. Articles prepared by the INPP Communication Department about the great interest in the NPP and the influx of visitors after the release of the HBO series appeared in the media, but this communication did not touch upon the INPP relationship with the Chernobyl NPP (CNPP) and the similarities to the dismantled INPP RMBK type reactor.

Still, this interpretative package emphasizes that all aspects related to the potential damage caused by nuclear waste to humans and the environment as well as potential imperfections in modern science and technology, deficiencies in nuclear knowledge and science, and in the expertise of nuclear industry experts, are unquestionable and undoubted. The package incorporates a theme around belief in technological progress and advances in nuclear science and technology.

4.2. Media Package ‘Unsafe Nuclear Technopolitical Regimes’

This package is exemplified by the topic of discussion around the issue of the ANPP under construction in Belarus. Political framing of the nuclear project at ANPP is found in Lithuanian media with reference to unsafety. The political actions of the Lithuanian government are presented and the official position is expressed both to the government of Belarus and to the international organizations that oversee the safety of nuclear industry. The media constantly publishes notifications about the preparations for launching the NPP in Belarus—informs about the launching stages and regularly discusses potential threats.

Media airs the position of the political entity Anti-Astravyets Movement, initiated by members of different parties, whose strategy was to present a petition to the European Parliament about the suspension of the ANPP and the ban on the import of electricity generated by this power plant into the EU associated countries, as well as an acceleration of the synchronization of the Baltic electricity grids with the EU network. Since 2016, Lithuania has been attempting to reach a consensus with neighbouring countries (Latvia, Poland) on a common political strategy concerning ANPP due to the potentially hazardous nature of this project. Top-level politicians and representatives of ministries are proactively involved in shaping the nuclear discourse. The Lithuanian President is mentioned as participating in various discussions around agreements with the EU countries, meetings with the National Defence Council, conversations with the Presidents of the Baltic States and with Nobel Laureate S. Alexievich.

Political field agents (politicians, leaders of parties, prominent political figures) highlight unsafety issues in various genres of media content—press releases, expressions of opinion, discussion with politicians or ministries. When using the highest political discourse and organizing international pressure and resistance to the construction and operation of the nuclear facility in Belarus, Lithuanian politicians in the political field as well as in the media, name, and comment on the technical unsafe parameters of the NPP, including the risky location—impermissible proximity to large residential areas (less than 50km to Lithuania’s capital Vilnius). The main visual representations involve images depicting a modern NPP building with two cooling towers. There are several variations of the same image with cooling towers in the background: in some photographs, the foreground depicts agricultural fields with hay bales, elsewhere with combine harvesters, or with an old wooden well, or a peasant driving a cart horse. These images imply the impermissible proximity of the nuclear facility to villages with rural activities. Some of these images express a hidden mocking message about the incompatibility of ambition to reconcile modern nuclear energy facility and backward rural life and ‘technologies’ (a cart horse, a wooden well).

One more important aspect highlighted by many politicians is that the nuclear project in Belarus is constructed by the Russian company Rosatom and financed by Russia ('Putin' and 'Kremlin'). Consequently, besides economic incentives, the project is perceived as having a political underpinning with the strong impact of 'Russia's Hand.' In the discussion about the unsafety of the ANPP, an economic topic also surfaces: Lithuania takes the position that the NPP is an unsafe project, therefore it refuses to buy energy from ANPP and urges other EU countries (especially neighbouring Latvia) to do the same. Thus, technological safety and security arguments reveal that it is not a banal economy based on economic benefits. The press has consistently emphasized that the potential economic benefits of electricity from a NPP for thousands of people cannot outweigh the risks and harm to human health and the environment. This idea is expressed by the use of catchphrases such as "our neighbours get cheap electricity; we get iodine pills" (Martikonis, 2020).

When speaking about ANPP, media coverage on nuclear power unsafety is related to environmental and health risks framing, which is created and formed by those involved in the discourse. Lithuanian politicians, when criticizing the ANPP, emphasize the unsafety of this nuclear facility and the non-compliance of technical parameters with international safety standards. It is noted that the constant technical incidents at the ANPP under construction just 50km from Vilnius raise serious doubts about the work quality in the project under development. The enterprise is described as potentially posing a hazardous threat to human health. The ANPP is deemed a mistake, insecure, and a serious threat to Lithuania. Such depictions as 'ticking bomb,' 'awakening monster,' 'atomic jumbo on clay feet' are applied. Journalists give advice on where to buy potassium iodide tablets and how these tablets will be delivered to border residents (the medicines should be taken in the event of a radiation leak or other serious incident at the ANPP). The Chernobyl experience and the irreversible health effects of radiation are recalled in terms of the potential danger posed by the ANPP. Vivid statements and catch-phrases by prominent politicians and public figures about a possible accident at the ANPP are quoted: "Astravyets will shake, and neither my children nor my home will remain" (Oželytė, 2020). It should be noted that this discourse was developed during the screening of the series *Chernobyl* (May and June 2019), and thereafter, (in 2020), 'stirred' the general discourse about nuclear disasters and their consequences in Lithuania. It explains why iconographic images of the Chernobyl disaster are displayed in the news portals. One of the memorable images of the nuclear disaster used in the media coverage on the ANPP is taken from *Chernobyl*—a clean-up worker wearing protective overalls and a mask—is depicted in the articles on the ANPP. In the context of ANPP reports, the importance of measuring radiation levels, conducting research, and analysing the effects of radiation on the human body is highlighted in the media.

4.3. Media Package 'Disastrous Nuclearity' with an Example of Chernobyl

The HBO series *Chernobyl* screened in 2019 evoked wide media discourse in Lithuania about the disastrous nature of nuclearity, the high risk posed by the nuclear energy industry and the hazardous effects of radioactive contamination on human health and the environment. The Chernobyl accident becomes a signifier of a specific Soviet techno-political regime. The predominant subject matter of interviews, stories, opinions, and testimonies in Lithuanian news portals is a criticism of the Soviet regime and the Soviet government for lying and concealing information about the accident. Lithuanian citizens themselves as well as news portals readers have authentic experiences of the Chernobyl accident, and how they survived being in the territory exposed to radioactive contamination both during and after the accident.

Thus, the series' strong criticism of the Soviet regime for the management of nuclear energy, which led to the catastrophe, and the manner in which the consequences of the catastrophe were handled, is gaining a unique dynamic in Lithuania. Journalists find spectacular metaphors and depictions to describe Chernobyl as a 'death machine' and 'cosmic disaster' that coincided with a 'social cataclysm' (Lukaševičius, 2019). This media coverage of the *Chernobyl* series and of the nuclear accident in Chernobyl itself has become a kind of memory work exercise, when Lithuanians, invited and encouraged by journalists, share memories and recall the Soviet past, sharply criticizing the Soviet regime and Soviet nuclear energy industry. In addition to authentic experiences of Lithuanian residents who participated in the emergency response and suffered critical damage to their health, media coverage presents a great deal of material with stories and testimonies by clean-up workers, their families, and other citizens from Ukraine, Russia, Belarus. These authentic testimonies of the participants of the Chernobyl accident are procured by Lithuanian journalists from the portals of other countries (e.g., foreign journalists working in Ukraine, articles from Russia, Ukrainian online portals) and reprinted in Lithuania. In addition, journalists refer to various scientific, popular sources about Chernobyl (facts about the number of victims, details of clean-up operation, etc.). One of the impressive metaphors employed by media coverage is a story about the statue of Prometheus erected in 'atomgrad' Pripjat—a town near CNPP. Before the Chernobyl disaster, this monument was meant to symbolize nuclear energy (Prometheus fire) bringing prosperity to humankind. However, ironically, following the disaster, this statue metamorphosed into a symbol of divine punishment for the use of nuclear energy (in the ancient myth Prometheus was punished by Zeus for the stolen fire). Among visual representations of this package are iconic images of fire-damaged Chernobyl INPP, the abandoned ghost town of Pripjat with empty streets and dwellings, and artifacts left by residents (toys, household

items, dosimeters), and clean-up workers in gas masks and protective clothing. Unlike the interpretations of the Chernobyl events presented in the HBO series, the Lithuanian press does not develop a heroic narrative, memories of the events do not depict the heroism of the clean-up workers. In the Lithuanian media, the reconstructions of the past are dominated by the motives of either the existential survival of the nuclear catastrophe or suffering experienced under the regime, as well as the condemnation of and accusations against the Soviet government. This Chernobyl theme includes the presentation of documented history. For example, S. Ploky's book *Chernobyl: History of the Nuclear Catastrophe* reveals the flaws of the Soviet nuclear industry, linking the disaster to the authoritarian nature of the regime, control of scientists, the pursuit of economic goals at the expense of safety and human lives and the concealment of information (Brown, 2019). At the same time as the HBO series *Chernobyl* was under discussion, the book *Chernobyl Prayer* by S. Alexievich was published in Lithuania and introduced in the media. Another book widely discussed in the media in connection with the series is *Chernobyl: 01:23:40* by A. Leatherbarrow, which emphasizes the consequences of the catastrophe, and the fates of the people who participated in clean-up operation.

4.4. The Cultural Production Field in Creating the Interpretative Package 'Nuclear Culture'

This media package is 'sponsored' by actors from the cultural production field, when journalists draw on nuclear imagery as a part of nuclear culture and interact with creative workers, artists, and citizens by introducing them in media artistic projects about nuclearity. The *Chernobyl* series is an outstanding art project around nuclearity which was filmed in Lithuania and at the INPP. The media present the process of filming including the INPP staff, and the local creative team, photos of actors, the filming of scenes, and their location.

The series was filmed in a Soviet-built district in Vilnius, depicting the CNPP atomic town Pripyat, while scenes depicting the CNPP were filmed on the site of the INPP.

The press discusses how these filming locations in Vilnius and Kaunas have become places visited by tourists. The INPP is fairly widely presented in the media as a site of nuclear tourism—an influx of tourists from Lithuania and abroad has been reported after the screening of the HBO mini-series *Chernobyl*. The press states that "two worlds met at the Ignalina Nuclear Power Plant—cinema and a site of strategic importance because of the dangers of radiation" (Špokas, 2019). A further nuclear and cinematographic tourism destination discussed in the media is the premises of the INPP training console, where scenes of the accident occurring in the infamous control room of CNPP were filmed in the HBO series *Chernobyl*. At the same time, one of the arti-

cles describes a new nuclear tourism entertainment in the Chernobyl zone. The media coverage has become a peculiar promotion of nuclear tourism in the territories related to the nuclear accident—the Chernobyl Exclusion Zone and places in Lithuania that are associated with Chernobyl.

Another group of projects include exhibitions, performances, music festivals, and books published in Lithuania, which introduce the changing identity of the atomic city Visaginas. Most artistic projects concern not only nuclear energy but also emphasize INPP as a part of the Soviet nuclear industry; sometimes appealing to life in Soviet times with perceptible elements of nostalgia, which is significantly different from the dominant memory politics, i.e., exceptionally negative or tending to sink into oblivion. An example may be the art project *Atomic Identity* (author N. Rekašiūtė), where a photo exhibition and performance in a Soviet-type flat conveys everyday Soviet life. The tourist route around Visaginas city which includes Soviet architecture, presents the exceptional architectural and urban features characteristic of the Soviet nuclear mono-industrial city. Extensive media coverage of this topic emphasizes the difficult social situation following the closure of INPP when the city loses its main economic source and is experiencing an economic and social downturn. This discourse can be interpreted, on the one hand, as a concern, a conscious and unconscious attempt to draw the attention of the society to the difficult situation of the city; on the other hand, such negative representations further marginalize the city community as a result of the stereotyping process, when the city is portrayed as a place of economic, social, and moral decline.

5. Discussion and conclusions

Media discourse in Lithuania has become a process of collective sensemaking when, with reference to Gamson and Modigliani (1989), diverse groups of strategic actors present their position on nuclear issues by promoting different interpretative packages. The four frames identified in the study of online news media reveal the role of sponsors of nuclear discourse who come from particular social and professional fields (nuclear industry, politics, nuclear science, economy, cultural production, etc.). The interconnection of these different areas and fields reflects multiple facets of the phenomenon of nuclearity described by Hecht (2009, 2012; see Figure 2).

Bourdieu's concept of the field enables the evaluation of the role of sponsors of nuclear discourse in the media from the perspective of the logic of the field they represent. Moreover, field theory enables recognition of the way in which diverse sponsors of the nuclear discourse frame nuclearity. Three interpretative packages on (un)safety in nuclear industry and disastrous nuclearity (in the cases of NPPs in Lithuania (INPP), Belarus (ANPPs), former USSR (CNPP) recognized in the research, manifest the ideas of Bourdieu on politics as a field of

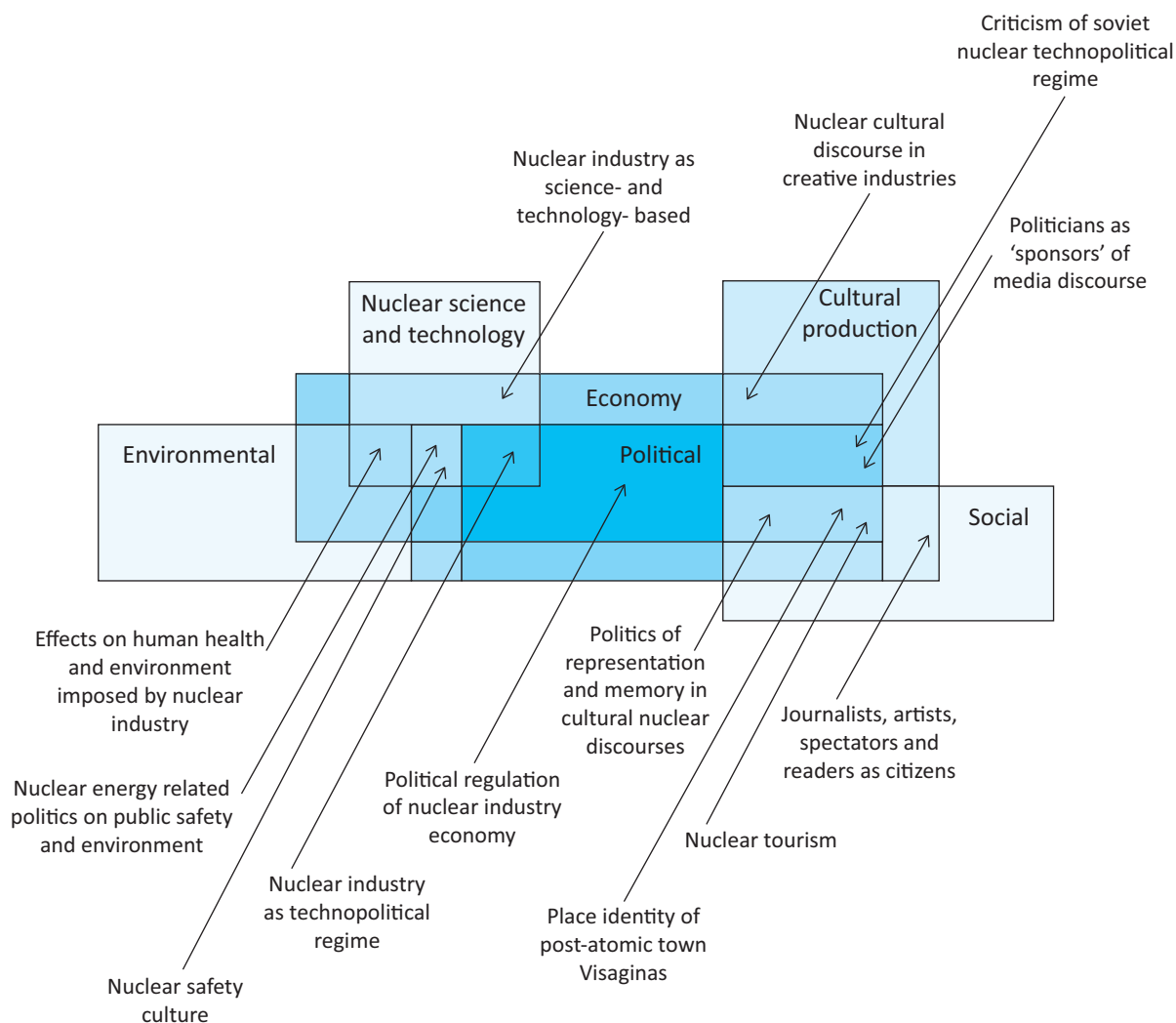


Figure 2. Main interacting fields involved into construction of nuclear media discourses: Findings of analysis of Lithuanian online media portals in 2018–2020.

power and Hecht’s conceptualization of nuclear exceptionalism, where nuclear industry is defined as exceptional (not banal) economy under the power of hierarchical structures. The media field, which is under the influence of the political field, as well as strategic communication and public relations departments of nuclear companies (Zukas, 2018), assist in the construction of the nuclear discourse corresponding to the general intentions of the nuclear industry and the political field that protects it. These three frames demonstrate features of different technopolitical regimes, when nuclear industry, technologies, safety standards, emergency and crisis management during a nuclear disaster are handled within a particular political and ideological regime, with specific governance and nuclear citizenship and include a particular approach toward the environment and citizen health. Frames including media coverage of NPPs in Lithuania (INPP) and Belarus (ANPPs) are promoted by public officials and politicians, who become main sponsors of the nuclear discourse expressing strong agency in providing journalists and media companies with informa-

tion and opinion on safety standards and international political events, providing ideological and political evaluation of the situation. These sponsors provide press releases, organize press conferences, give interviews and write opinion articles. Together with journalists, they co-create texts by using various framing devices (exemplars, metaphors, catch phrases).

The official institutions in charge of nuclear energy in Lithuania, and INPP itself, inform the public in media and organize tourist excursions to the site of the nuclear facility. This study highlighted the general features of INPP’s communication on decommissioning and nuclear waste management: The general public is informed about the safety of the work performed, the professionalism of the NPP employees, and technological reliability. Actually, such information reflects the real features of nuclear safety culture, following the international safety standards and ensuring transparency. However, it should be noted that the media does not comment in detail on the technical solutions for dismantling and nuclear waste management.

The ‘unsafety’ frame, relying on the ANPP case, is closely related to another frame of ‘Disastrous Nuclearity,’ exemplified in the case of media coverage on the Chernobyl disaster and the HBO series *Chernobyl*. While speaking about the unsafety of ANPPs in Belarus, politicians excite the nuclear imagination of readers and citizens by referring to the Chernobyl nuclear imagery created in the cinematography, media or literature, and employ particular framing devices with the help of journalists. Politicians seek to mobilise citizenry for actions through nuclear discourse—to ensure citizen support for the political actions at the national and international level. Nuclear media discourse continues to reflect some features of nuclear exceptionalism: This technology-based industry with specific economic and safety standards is represented in media as an exclusive area of competence for nuclear experts, high ranking politicians, and public officials.

Two other interpretative packages—on Chernobyl (‘Disastrous Nuclearity’ and ‘Nuclear Culture’)—delineate the role of other key actors and sponsors: journalists, creative industries workers, citizens, artists, and tourism providers. These interpretative packages illustrate another essential element of nuclearity: broader cultural discourse. These frames have unveiled the strong role and considerable weight of cinematography, arts, and literature fields in constructing media nuclear discourses.

The presentation and discussion of the series and literary works on Chernobyl not only reconstructed the course of Chernobyl as the biggest nuclear accident and divulged the consequences, but also strengthened the understanding of the Soviet legacy of Lithuanian nuclear energy, stressing that filming the series in INPP territory is related to the similarities of Chernobyl and Ignalina Soviet design RMBK reactors. At the same time, the participation of the INPP in both filming the series and nuclear tourism have become an example of nuclear industry collaborating with creative industry and reflected the nature of a new understanding of nuclearity, involving cultural discourse and nuclear imagery. Through raising public awareness, public communication, and tourism, the nuclear industry has been moving from the paradigm of secrecy, mystery, ‘witchcraft’ and nuclear exceptionalism (Anshelm, 2010; Hecht, 2009, 2012; Kinsella, 2005) to banalisation of the nuclear energy by making it more familiar, ‘domestic’ and commonplace (Sastre-Juan & Valentines-Alvarez, 2019). The social field related to the nuclear industry—the community of the atomic town Visaginas and the search for a new identity—is a part of the frame on the cultural and social facets of nuclearity. However, in the general framing of nuclearity, this narrative occupies a much smaller part of the media discourse. It illustrates the lesser power of this social field and its members. It is worth noting that in the general context of nuclear discourse, social issues carry less weight than political and economic industrial issues, which are dictated by the

fields of power—politics and nuclear industry. These two frames include the extensive presentation and, discussion of nuclearity in the HBO series as well as literary and artistic works about Chernobyl. Journalists, artists, cultural actors, and tourism developers involve citizens in memory work on the Chernobyl accident and contribute in a specific way to the development of nuclear citizenship and nuclear belonging in the media. Memories of Chernobyl highlighted the cultural and political identity of Lithuanian citizens—a negative attitude towards the Soviet regime and its controlled nuclear industry, where the Chernobyl accident was considered a significant dramatic event in this industry branch, in which citizens participated involuntarily and the negative consequences of which are still being experienced. These ideas, attitudes and experiences of negative nuclear citizenship resonate with the political field-constructed discourse on ANPP, where politicians create representations of another country’s nuclear unsafety and construct negative attitudes and perceptions of citizens about possible risks of nuclear contamination in Lithuania due to a possible nuclear accident at ANPP.

Artistic projects (theatre and art performances, photograph exhibitions, etc.) presented in the media around the nuclear city of Visaginas play an important role in involving the local community, giving it a voice, and assisting in the negotiation of a new post-nuclear and post-industrial identity. Nuclear discourse participants (politicians, nuclear industry, media, art representatives, and citizens) construct nuclear media discourse with differing amounts of media participation—some participants are more visible (politicians, nuclear industry) and certain frames are more pronounced, while other participants express less agency (i.e., the atomic city community) and topics are less elaborate. A special role of the cultural production field (cinematography, literature, and arts) emerged, in which a broader cultural nuclear discourse, which includes an anti-nuclear stance, is being developed in fields relatively independent from politics and the nuclear industry, which involve citizens, and creates a space for the expression of their agency, civic participation, and existential experiences.

Acknowledgments

This article has been developed within the research project “Didactic Technologies for the Development of Nuclear Educational Tourism in the Ignalina Nuclear Power Plant Region (EDUATOM)” funded by the European Regional Development Fund (No. 01.2.2-LMT-K-718–01-0084/232) under a grant agreement with the Research Council of Lithuania. Furthermore, the authors wish to thank the reviewers for their valuable comments and advice which helped to make the article more specific.

Conflict of Interests

The authors declare no conflict of interests.

References

- Anshelm, J. (2010). Among demons and wizards: The nuclear energy discourse in Sweden and the re-enchantment of the world. *Bulletin of Science, Technology & Society*, 30(1), 43–53.
- Balkan-Sahin, S. (2019). Nuclear energy as a hegemonic discourse in Turkey. *Journal of Balkan and Near Eastern Studies*, 21(4), 443–461.
- Bourdieu, P. (1993). *The field of cultural production: Essays on art and literature*. New York, NY: Columbia University Press.
- Bourdieu, P. (1996). *The rules of art: Genesis and structure of the literary field*. Palo Alto, CA: Stanford University Press.
- Bourdieu, P. (1998). *On television and journalism* (P. P. Ferguson, Trans.). London: Pluto.
- Brown, K. L. (2013). *Plutopia: Nuclear families, atomic cities, and the great Soviet and American plutonium disasters*. New York, NY: Oxford University Press.
- Brown, K. (2019). Serhii Plokhly: Chernobyl—The history of a nuclear catastrophe. *American Historical Review*, 124(3), 1027–1029.
- Cochrane, B. (2013). *Taking Bourdieu to the movies: Understanding cinema as a spatial and embodied practice* (Unpublished Doctoral dissertation). The Open University, Milton Keynes, UK.
- Entman, R. M., & Rojecki, A. (1993). Freezing out the public: Elite and media framing of the U.S. anti-nuclear movement. *Political Communication*, 10(2), 155–173.
- Gamson, W. A., & Lasch, K. E. (1983). The political culture of social welfare policy. In S. E. Spiro & E. Yuchtman-Yaar (Eds.), *Evaluating the Welfare State: Social and political perspectives* (pp. 397–415). New York, NY: Academi.
- Gamson, W. A., & Modigliani, A. (1989). Media discourse and public opinion on nuclear power: A constructionist approach. *American Journal of Sociology*, 95(1), 1–37.
- Hecht, G. (2009). *The radiance of France: Nuclear power and national identity after World War II*. London: The MIT Press.
- Hecht, G. (2012). *Being nuclear: Africans and the global uranium trade*. Cambridge, MA: The MIT Press.
- Hesmondhalgh, D. (2006). Bourdieu, the media and cultural production. *Media, Culture & Society*, 28(2), 211–231.
- Karthekeyan, T., Sekaran, K., Ranjith, D., & Balajee, J. M. (2019). Personalized content extraction and text classification using effective web scraping techniques. *International Journal of Web Portals (IJWP)*, 11(2), 41–52.
- Kinsella, W. J. (2005). One hundred years of nuclear discourse: Four master themes and their implications for environmental communication. In S. L. Senecah (Ed.), *The environmental communication yearbook* (Vol. 2, pp. 49–72). Mahwah: Lawrence Erlbaum Associates.
- Lukaševičius, T. (2019, June 07). Profesorių Vaitkų iki šiol persekioja Černobylio avarija: 4 kartus miręs žmogus ir sovietmečio absurdoi [Professor Vaitkus is still haunted by the Chernobyl accident: A person who died 4 times and Soviet-era absurdities]. *LRT*. Retrieved from <https://www.lrt.lt/naujienos/mokslas-ir-it/11/1066676/profesoriu-vaitku-iki-siol-persekioja-cernobylio-avarija-4-kartus-mires-zmogus-ir-sovietmecio-absurdai>
- Martikonis, V. (2020, August 27). Prarasta Igalina, pramiegotas Astravas: kaimynams pigi elektra, mums jodo tabletės [Lost Igalina, overslept Astravyets: Cheap electricity for neighbours, iodine pills for us]. *LRT*. Retrieved from <https://www.lrt.lt/naujienos/pozicija/679/1219473/vidmantas-martikonis-prarasta-ignalina-pramiegotas-astravas-kaimynams-pigi-elektra-mums-jodo-tabletes>
- Mercado-Sáez, M. T., Marco-Crespo, E., & Álvarez-Villa, À. (2019). Exploring news frames, sources and editorial lines on newspaper coverage of nuclear energy in Spain. *Environmental Communication*, 13(4), 546–559.
- Oželytė, N. (2020, January 15). N. Oželytė: Astravas driokstels ir „neliks nei mano vaikų, nei mano namų“ [N. Oželytė: Astravas will rumble and “neither my children nor my home will remain”]. *Irytas.lt*. Retrieved from <https://tv.irytas.lt/zinios/lietuvos-diena/2020/01/15/news/n-ozelyte-astravas-driokstels-ir-neliks-nei-mano-vaiku-nei-mano-namu--13268864>
- Sastre-Juan, J., & Valentines-Alvarez, J. (2019). Fun and fear: The banalization of nuclear technologies through display. *Centaurus*, 61(1/2), 2–13.
- Storm, A., Krohn Andersson, F., & Rindzevičiūtė, E. (2019). Urban nuclear reactors and the security theatre: The making of atomic heritage in Chicago, Moscow, and Stockholm. In H. Oevermann & E. Gantner (Eds.), *Securing urban heritage: Agents, access, and securitization* (pp. 111–129). Abingdon: Routledge.
- Špokas, J. (2019, September 19). Jonas Špokas: norėčiau atsistoti ant tos scenos ir Holivudo gigantams tarti „Welcome to Lithuania“ [Jonas Špokas: I would like to stand on that stage and say “Welcome to Lithuania” to the Hollywood giants]. *LRT*. Retrieved from <https://www.lrt.lt/naujienos/gyvenimas/13/1099075/Jonas-spokas-noreciau-atsistoti-ant-tos-scenos-ir-holivudo-gigantams-tarti-welcome-to-lithuania>
- Zukas, K. J. (2018). No conflict, no coverage: Media misses repeal of nuclear energy moratorium. *Cogent Social Sciences*, 4(1), 1–17.

About the Authors



Natalija Mažeikienė is a Professor at Vytautas Magnus University, Lithuania. Her research interests include critical theory and critical approach in media studies and education, critical discourse analysis, and research on cultural and social identities.



Judita Kasperūnienė is an Associate Professor at Vytautas Magnus University, Lithuania. She is currently focusing on issues of online media discourses, identity construction in mediated environments and intersections of education, communication, and new technologies.



Ilona Tandzegolskienė is an Associate Professor at Vytautas Magnus University, Lithuania. Her research interests cover museum communication, educational tourism, critical discourse analysis in media and qualitative research methods in social sciences.