



ELSEVIER

Contents lists available at ScienceDirect

Energy Policy

journal homepage: www.elsevier.com/locate/enpol

The framing of unconventional natural gas resources in the foreign energy policy discourse of the Russian Federation

Petr Ocelík^{a,b,*}, Jan Osíčka^{a,b}^a Department of International Relations and European Studies, Faculty of Social Studies of Masaryk University, Joštova 10, 602 00 Brno, Czech Republic^b International Institute of Political Science, Faculty of Social Studies of Masaryk University, Joštova 10, 602 00 Brno, Czech Republic

HIGHLIGHTS

- We examine the image of “unconventional gas” in Russian foreign energy policy discourse.
- Two main frames (reliable supplier and triumphant natural gas) were identified.
- Two main argumentation schemes (economic and environmental) were identified.
- The “unconventional gas” is defined as a mistaken and inferior source of energy.

ARTICLE INFO

Article history:

Received 25 November 2013

Received in revised form

15 February 2014

Accepted 4 April 2014

Available online 30 April 2014

Keywords:

Unconventional natural gas resources

Russian Federation

Foreign energy policy

ABSTRACT

The advent of unconventional resources of natural gas has altered the order on global as well as continental gas markets. With rising liquidity, the position of established dominant suppliers is eroding. We focus on the initial response of Russia, the leading supplier of natural gas to Europe, to the new situation, building the research on unit-level constructivism and discourse analysis. We use frame analysis to reveal what image of unconventional resources was constructed in Russian foreign energy policy discourse (FEPD) in the period between 2009 and 2011, when the “unconventional revolution” did not yet have any sharp contours. We conclude that in Russian FEPD the unconventional resources are considered as a distinctive and inferior source of energy compared to conventional natural gas. Emphasis is put on their economic irrationality and environmental hazards. The bottom line of the discourse is the idea that there is a choice between conventional and unconventional sources, with this choice being framed as one between good and bad, or right and wrong.

© 2014 Elsevier Ltd. All rights reserved.

1. Introduction

The recent disappearance of the U.S. market from the global LNG trade has re-routed LNG flows towards Europe and Asia. Hence, the conventional gas suppliers who had dominated the three continental markets until 2005 are now under significant pressure from both commodity-to-commodity and gas-to-gas competitors. Their initial reactions varied—on the North American market, many majors and independents have acquired small companies pioneering the extraction techniques or have pursued their own projects in order to cut out as large a chunk of the unconventional production as possible. Acquisitions made by

Chesapeake in the last five years may serve as a good example. Meanwhile, Qatar has kept confident about the firmness of the Sales and Purchase Agreements it signed mostly with its Asian buyers (Kanady, 2012), and on the European front, Moscow long hesitated before it publicly admitted the very existence of this challenge (Khvostunova, 2013).

This article aims to evaluate the initial stages of formation of the Russian position towards the new sources. The following text examines the framing of the unconventional gas resources (UNG) in the foreign energy policy discourse of the Russian Federation. The article deals with the following central research question:

How are the UNG framed in the foreign energy policy discourse of the Russian Federation in years 2009–2011?

Utilizing the concept of foreign energy policy, we build on the work of Balmaceda (2013, pp. 61–93), Liuhto (2010), or Shadrina (2010). We define foreign energy policy (FEP) in accordance with Shadrina (2010): p. 14 as “a system of views on the content, principles and main areas for energy cooperation with other

* Corresponding author at: Masaryk University, Department of International Relations and European Studies, Faculty of Social Studies, Joštova 218/10, 602 00 Brno, Brno, Czech Republic. Tel.: +42 0606717711.

E-mail addresses: petr.ocelik@gmail.com (P. Ocelík), osicka@mail.muni.cz (J. Osíčka).

countries.” The foreign energy policy discourse (FEPD) is then understood as a particular social representation of FEP that is shaped by texts and talks (see Fairclough, 2000). The research is exploratory oriented, since we do not account for framing effects, i.e. the consequences that specific frames have for actors’ identities and actions, nor for frame-building processes, i.e. the interplays of actors and actor-structure interactions which give rise to specific frames (see Vliegthart and Van Zoonen, 2011). The analytical focus is thus not on “why a particular outcome was obtained,” but rather how these discursive structures are socially constructed (see Doty, 1993). The objective of the article is to show how the “UNG issue” is framed in a given discourse.

2. Literature review

Current literature dealing with Russian energy policy is divided into two branches according to different ontological assumptions. It can be argued that the vast majority of existing research is theoretically embedded in ontologically materialistic geopolitical (For example: Ebel, 2009; Petersen and Barysch, 2011; Zhiznin, 2010) or market approaches (For example: Binhack and Tichý, 2012; Černoch et al., 2011; Finon and Locatelli, 2008; Noël, 2008).

Literature grounded in ideational ontology is traditionally concerned with concepts such as “identity” (Brooks and Wohlforth, 2006; Williams and Neumann, 2000), the “search for international recognition” (Tsygankov, 2006; Neumann, 1996) mediated by domestic perceptions and debates (Tsygankov and Tarver-Wahlquist, 2009), the Russian “place in the World” (Light, 2003), or the nature of “relations with the West” (Tsygankov, 2006) and how they are perceived by the Russian citizens (O’Loughlin, 2000). Energy analyses building on ideational ontology also exist, although they are considerably less common. Shadrina (2010), for instance, demonstrates how the Russian behavioral pattern towards different regional partners shifted in order to be perceived as a more “reliable, mature, or businesslike partner.” Kortunov (1998) analyzes mutual perceptions of Russia and Central Asian states in order to map Russian endeavors to “unlock Central Asian and Caucasian energy assets.” Monaghan (2007), in turn, focuses on what the “Energy Superpower” status stems from, and questions the popular notion of Russia holding such status. Kratochvíl and Tichý (2013) explore the dominant interpretations of the EU–Russian energy relations by using discourse analysis.

With regards to shale gas, materialistically grounded texts dominate the current literature. They mostly deal with issues such as the impact of shale gas on North American, European, and Asian gas markets and consequently on Russian market share outlook (Actagon Research Institute, 2013; Melling, 2010; Medlock et al., 2011), or they elaborate on the likely development of emerging global LNG market under the new circumstances (Rogers, 2012; KPMG, 2011; Jaffe and O’Sullivan, 2012). Some also combine what are possibly the two biggest threats Gazprom faces now: the European Commission legal probe and shale gas development, to see where the company might find itself in the months and years to come (Sartori, 2013; Riley, 2012; The Economist, 2013).

Ideationally grounded literature on this matter is at the moment practically non-existent. To a limited extent it is covered by Aalto (2010) who argues that the change Russian energy sector is likely going to undergo in the near future is a part of a bigger (energy) paradigm shift stemming from the clash between material forces represented by path dependency and inertia in usage of fossil fuels and ideational forces represented by political and societal efforts to develop a more harmless energy industry. His structuralist article nevertheless only scratches the surface of the phenomenon. The research on Russian perception and/or framing

of shale gas is still out there to be done. Commentary on particular statements of various actors of Russian energy policy and industry can be found in both Russian (ITAR-TASS, 2013) and Western (Kravchenko and Shiryaevskaya, 2013) media, but their overall image remains scattered and incomplete. The work done by Khvostunova (2013) is so far closest to what could have been done on the issue. Unfortunately, the publishers’ format did not allow her to build a more robust analysis on solid theoretical and methodological foundations.

3. Theory

In accordance with Wendt’s (1999) constructivism, we assume that social world is chiefly “made of and driven by ideas.” These ideational structures shape actor’s social identities, thus forming their beliefs and interests and consequently their behavior. The structures are at the same time reproduced as emergent products of routinized actors’ interactions (Searle, 1995). Complementary to Wendt (1999) who is primarily interested in the systemic level of analysis, we focus on the domestic level drawing on “unit-level” constructivism¹ literature (especially Hopf, 2002; Weldes, 1996). Katzenstein et al. (1996) made a strong case for inclusion of the “unit-level” factors when focusing on domestic social and legal norms enabled the explanation of variation of identity, interest and action across states (Reus-Smit, 2005: p. 200). Hopf (2002, p. 22), argues that foreign policy actors’ identities are largely construed domestically and understanding of other states is consequently possible only through the actor’s self-understanding. Similarly Weldes (1996, p. 280), maintains that policy makers can engage in international politics only due to concepts which arise from the meanings produced in their domestic context. An actor’s ability to imagine certain courses of action is thus possible only because certain kinds of social actors and relationships, background meanings, metaphors and analogies, such as the “Russian threat,” “the bridge between the East and West,” or the “Cold War” are already present in a given “cultural stock” and carry a specific (and negotiated) meaning (Doty, 1993: p. 298; Weldes, 1996: p. 284). Hopf (2002, p. 6), uses the concept of social cognitive structure which “establishes the boundaries of discourse within a society” and is created by competing discursive formations. This situatedness within the interrelated discursive formations then shapes actors’ understanding of themselves as well as Others.

This line of reasoning is consistent with well-developed constructivist variants of frame analysis (For example: Entman, 1993, 2003; Goffman, 1974; Johnston, 1995; Steinberg, 1998; for a conceptual overview, see Scheufele and Iyengar, 2011; Van Gorp, 2007). The process of articulation², i.e. the construction of temporarily fixed meanings by establishing chains of connotations among different linguistic elements, as described by Weldes (1996, p. 284), is close to the central idea behind the concept of frame. Snow and Benford (1992: p. 137) define a frame as “an interpretative schemata that signifies and condenses the ‘world out there’ by selectively punctuating and encoding objects, situations, events, experiences, and sequences of action in one’s present or past environment.” Entman (2003, p. 417), offers a widely accepted conceptualization of framing: “Framing entails *selecting and highlighting some facets of events or issues, and making connections*

¹ Reus-Smit (2005): p. 200 defines the unit-level constructivism as the inverse of systemic constructivism. Instead of focusing on external, international domain, unit-level constructivists concentrate on domestic factors, i.e. the very factors which are bracketed by Wendt.

² The following part of this process involves the interpellation of the subjects. Specifically, a particular social identity is taken up from a nexus of social relations. Different identities then correspond with different representations of the world and consequently with different interests (Weldes, 1996: pp. 287–289).

among them so as to promote a particular interpretation, evaluation, and/or solution [italics in original].” The more culturally resonant frames are, i.e. the more they are “noticeable, understandable, memorable, and emotionally charged [italics in original],” the more formative they are (ibid.: p. 417). The persuasiveness of a frame is typically fostered by argumentation schemes which connect the representations provided by frames to agent’s action via agent’s practical reasoning (Fairclough and Fairclough, 2013: p. 86). We understand “argumentation schemes” as “stereotypical patterns of reasoning” which are a part of the frame (Reed and Walton, 2005, p. 19). They have more of a “rhetorical or persuasive function than a logical function” (Walton, 1996: pp. 8–9).

As shown above, a frame analysis is useful mainly as a tool for uncovering frames that shape and promote specific understandings of the world. Thus, framing is a policy-making activity itself. This can be even more important in the case of energy related issues which are – in contrast to e.g. human rights agenda – typically seen as exclusively technically and economically defined and thus reducible to “hard data”. This analytical position helps us to reveal tacit assumptions, judgments and beliefs upon which any policy discussion rests. We assume that disagreements about the nature and future role of the UNG between Russia and countries like USA or Poland result from different world-views (and consequently different framings of the issue), not from politically-neutral divergences of “hard data” analyses.

4. Methodology

Since we are interested in discursive construction of the UNG issue, this research is methodologically based on a discourse analysis (see e.g. Jorgensen and Phillips, 2002; Wood and Kroger, 2000; Wodak and Meyer, 2001). In general, discourse analysis rejects the positivist assumption according to which language mirrors and neutrally describes objects in the world (Fierke, 2004: p. 36). On the contrary, the use of language is always social and constitutive. As Hansen (2006, p. 16), argues, things – objects, subjects, states, living beings, and material structures – acquire meaning and a particular identity only through their construction in language. In this context, making a discourse analysis essentially means looking closely at the text and reconstructing how the language is used to establish and maintain meanings. At the operational level, we define a discourse as an inter-related body of texts patterned by certain (primarily semiotic) structural features. These structural features can be revealed through a frame analysis (details in Section 4.1). Thus, discourse can be seen as an ideational space which contains a number of interrelated frames covering different policy issues.³

As mentioned, we are primarily interested in issue of the UNG and we do not make any assumptions about the number of applicable frames. Thus, the goal we pursue is to uncover how the UNG are framed within the Russian FEDP: specifically, (1) what characteristics, naming, collocations, tropes etc. are associated with the UNG; (2) what types of relations exist between these semantic elements; and (3) what argumentation schemes are related to the UNG. These three partial objectives correspond with three stages of a coding process: open, axial, and selective coding (for more details, see Section 4.1) which are used for frame (s) identification. The analysis is carried out solely on the textual

level and we do not account for other aspects of the framing process.⁴ The unit of analysis is a frame, whereas the units of observation are selected textual sources (see below). The research aims to extract, describe, and evaluate frame(s) which define (s) the UNG issue in Russian FEDP. Analytical focus is on frames in official sources of discourse (see Hansen, 2006: pp. 66–67), although we do not limit our search to official state documents only (see Section 4.2). While the research has not been carried out with a particular social goal in mind, neither we incline towards objectivism in a sense that there is reality “out there” waiting to be discovered by an “aside-standing researcher” (Holden and Patrick, 2004: p. 5; Tuathail and Dalby, 1998: p. 22). We gather and interpret data in accordance with the assumptions and procedures outlined in Sections 3 and 4.

4.1. Research method

Frame analysis is used as a discourse analysis method concerned with dissecting the ways in which an issue is defined, evaluated and problematized, as well as with the effects this has on broader discussion of the issue (Hope, 2010). The frames are reconstructed through the following procedure. First, we “open up” the text in order to uncover the concepts and meanings it holds. The open coding decomposes the text to segments (coding units) which are labeled by codes that interpret them. In this way, the data are reduced and sorted out into distinctive sets of codes. These codes are further developed with regard to wider and deeper context (Given, 2008: p. 581). The coding logic is semantic. More precisely, we are interested in the ways in which the meaning of the UNG is being created; that is, what lexemes⁵ the UNG is being associated with and in what manner these lexemes contribute to the meaning in which they are used.⁶ Second, by comparing and merging particular codes, summarizing categories are formed, which concentrate the meaning of the related codes into a single more general concept. Categories are further developed through dimensions, i.e. attributes which are characteristic of them and which can acquire different values. Third, the character of the relations between codes and categories as well as variation of categories across dimensions is defined during the axial coding (Strauss and Corbin, 1998: p. 123–125). Since our research objectives are different (exploration, not theory generation), we do not use the standard “coding paradigm” of grounded theory (as defined in Strauss and Corbin, 1998: chap. 7), but a modified catalog of relations as defined in the ATLAS.ti. software (2010, Version 6.2.). Fifth, according to the character of identified relations, we further develop the meaning of given codes and categories, and specify their role in the formation of a given frame. Compared to axial coding, here we look for broader and deeper patterns, not particular relations. Thus, selective coding allows us to determine not only how the issue of concern is made “visible” and what meanings are in this regard important (which corresponds with functions of problem definition and cause

³ As Van Gorp (2007): p. 70 points out, there is “an explicit distinction between issues and frames” since one issue can be defined by multiple frames, and the same frame can cover different issues. The UNG issue thus can be seen a discursive nodal point whose meaning is re/constructed through interacting frames and, more generally, discourses. The articulation is thus an attempt to fixate the nodal point (issue), i.e. to embed it into a specific nexus of meanings (see Diez, 1997).

⁴ According to Van Gorp (2007): p. 64, framing involves the interplay between the “textual level (frames applied in the media), the cognitive level (schemata among the audience and media makers), the extramedial level (the discourse of frame sponsors; discussed below), and, finally, the stock of frames that is available in a given culture”.

⁵ A lexeme is a basic unit of the lexicon (vocabulary) referring to all forms of a certain word or phrase.

⁶ Coding reliability was strengthened through repeated close reading of the texts as well as periodical consultations among the authors and the coder. The labeling of codes and structuring of their interrelations was during this process accordingly revised. Coding validity was fostered in the same fashion. Additionally, conclusions and interpretations given by the authors were supported by direct quotations from the corpus. Thereby we demonstrate consistency of the interpretations with available data (see Wood and Kroger, 2000: pp. 163–178).

identification), but also the “argumentation schemes” that promote specific evaluation and solutions, (which correspond with functions of moral judgment and treatment recommendation) (Entman, 2003: p. 417). For that purpose, the frames are graphically represented as semantic networks (see Minsky, 1975: p. 212). The semantic network consists of nodes (codes and categories) and relations between selected nodes. The relations in such a network assert the semiotic character of a given relation or part-to-whole properties (Trehub, 1991: p. 99).⁷ Finally, the dominant argumentation schemes are reconstructed from the coded data and semantic networks. For data processing and visualization, we used the analytical software ATLAS/ti. software (2010), Version 6.2.).⁸ The analytic framework is represented by Fig. 1.

4.2. Data

The population under study is defined as the totality of ideational objects represented by lexemes in issue-specific texts and talks. The data have been drawn from the following textual sources: (1) official state documents, (2) official documents, interviews and announcements of the Gazprom Company, and also (3) Russian internet and printed media (for details, see References) between the years 2009 and 2011. By “initial position” we mean the position developed between the time when U.S. unconventional production started to affect other markets (2009) and the renegotiation of long-term contracts between Gazprom and its European counterparts (2012). We consider this renegotiation as an adjustment of Gazprom’s export strategy and therefore also as tacit acceptance of the change the North American unconventional have brought about. In accordance with Doty (1993, p. 303), we assume that “the discourse(s) instantiated in these various documents produce meanings and in doing so actively construct the ‘reality’ upon which foreign policy is based.” This discursive space is not limited to the realm of official government institutions, since the reception and reproduction of the official foreign energy policy statements is determined by their “fit” into a broader social–political context (ibid.: p. 303).

For these reasons we include not only the official state documents, but also textual sources (2) and (3). The influence of Gazprom on decision-making in external energy relations is well-documented from various positions (Cornell and Nilsson, 2008; Kazantsev, 2010; Sartori, 2013; Woehrel, 2009)—even the collocation “Gazprom’s foreign energy policy” has occurred (Russian Analytical Digest, 2008). Gazprom’s and the government’s actions have been closely intertwined since 2000, when the state regained *de facto* control over the company (Baev, 2008). The role of other natural gas companies during the period concerned was very limited. As Balmaceda (2013: p. 72) points out, Gazprom’s monopoly refers not only to its export monopoly inherited from the Soviet Ministry of Gas Industry, but also to the company’s intentional blocking of new producers from entering

the domestic gas market. These factors translate into Gazprom’s influential position in policy-making. The inclusion of media then deepens the assessment of official discourse hegemony through the indication of media responsiveness to critical evaluations, or a reiteration of the official position. Importantly, policy-making is dependent not only on the formal or official authority, but also on knowledge of a particular issue (Hansen, 2006: pp. 7 and 55). The FEPA is thus partly shaped and reshaped by the media coverage of the issue. Since we are interested neither in framing effects nor in frame-building, the other potential sources of data (such as popular culture sources, memoirs, textbooks, etc.) have not been included. Consequently, the sample frame has been compiled on the basis of a search of the selected keywords⁹ (see Entman, 1993: p. 52) in the aforementioned publicly available sources.

Since the sample frame is of relatively small size, due to the recent emergence of the issue as well as by its specificity, all cases were included in the sample (corpus). For that reason, we have not been using theoretical saturation as a strategy of data collection. The data corpus consists of 20 texts in English and Russian languages (for details, see References). The text dating from the earliest period is *Energy strategy for the period up to 2030* (Russian Department of Energy, 2009) and the article *Российский газ скоро никто не будет покупать?* (*Will almost no one be buying Russian gas?*) (Аргументы и факты, 2009), also dating from October of the same year; the majority of the texts then dates to 2011. Table 1 indicates that the UNG represent a new issue in the foreign energy policy discourse of the Russian Federation, whose relevance has been limited so far. The minimal space, which the UNG get in the aforementioned strategic document *Energy strategy for the period up to 2030*, supports this claim; likewise, the UNG issue is only marginally mentioned in the remaining conceptual documents of the Russian Department of Energy.

5. Analysis

In this section, we identify and interpret frames through which the meaning of the “UNG issue” is established. As noted, a frame can be viewed as a specific arrangement of categories, codes and their interrelations that constitute the message conveyed by the frame. The core of the message is represented by categories whose meaning emerges from a set of codes and their interrelations. The frame analysis is divided into three parts according to the main issue areas: (1) the self-presentation of Russia (Russia as a reliable supplier), (2) the view on conventional natural gas (Triumphant Natural Gas), and (3) the view on unconventional natural gas (Mistaken Unconventional Resources). The section concludes with an extraction of the main argumentation schemes, i.e. main patterns of reasoning present in the frames. Whereas the frames provide a complex depiction of the issue concerned, the argumentation schemes connect general ideas (such as environmental responsibility) through conclusion rules (such as pre-cautionary principle) with the conclusions (such as a rejection of unconventional resources).

5.1. Russia as a reliable supplier

The first frame is built around two categories: *reliable supplier* and *The Century of Natural Gas*. The first category included (*reliable supplier*) sums up the ways in which the position of Russia as a

⁷ Moreover, quantitative indicators are measured in terms of absolute frequency and degree centrality (see Appendix A). “Absolute frequency” indicates the number of occurrences of a given code in the corpus; “degree centrality” indicates the number of connections that a given code has with other codes. Whereas absolute frequency tells us about the *importance* of the code (based on assumption that prevailing codes contribute to the meaning constitution more substantially), the degree centrality can be interpreted in terms of *influence* (based on assumption that interconnected codes *mutually contribute* to the meaning constitution). These quantitative indicators are considered as additional tools of analysis.

⁸ Atlas.ti (<http://www.atlasti.com>) is computer software primarily used for qualitative data analysis. Atlas.ti enables users to organize their text, graphic, audio, and visual data files into a project file called a Hermeneutic Unit (HU). An HU can be used to organize coding, memos, and findings associated with these files. Atlas.ti provides also search features, query and visualization tools (Creswell, 2007: p. 166; for more information see Friese, 2011).

⁹ Shale Gas (Сланцевый газ), Tight Gas (Газ из плотных пород), Sand Gas (Газ уплотненных песчаников), Coalbed Methane (Метан угольных пластов), Unconventional Gas (Нетрадиционный газ), Unconventional Gas Resources (Нетрадиционные источники газа).

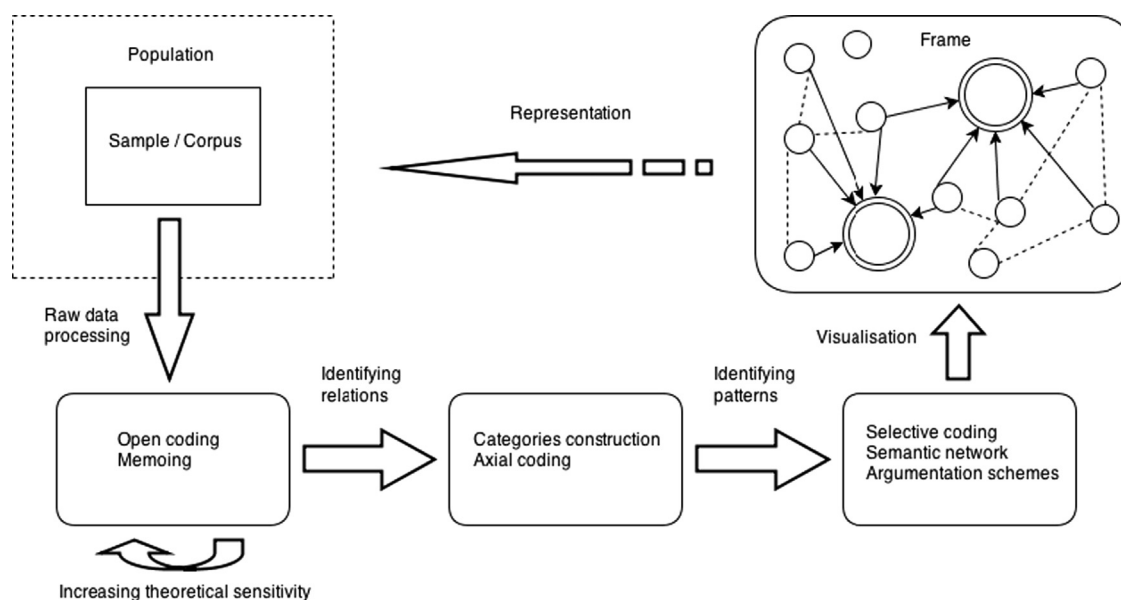


Fig. 1. Analytical framework, Source: The Authors.

Table 1
Number of selected texts sorted by year and sources.
Source: The Authors.

| Year | Number of selected texts sorted by sources | | | |
|-------|--|---------|-------|-------|
| | State institutions | Gazprom | Media | Total |
| 2009 | 1 | 0 | 1 | 2 |
| 2010 | 1 | 3 | 2 | 6 |
| 2011 | 1 | 9 | 2 | 12 |
| Total | 3 | 13 | 5 | 20 |

Table 2
Reliable supplier category summary.
Source: The Authors.

| Category: <i>reliable supplier</i> | Characteristics | Scale ^a |
|------------------------------------|---|-------------------------|
| Codes | Diversification {5 ^b -3 ^c } | (Political) Stability 3 |
| | Foreign investment {2-2} | (Resource) 2 |
| | Prospective NG {15-3} | Potential |
| | Prospective supplier {19-2} | |
| | Stable Russia {18-4} | |

^a The “dimensional extent” is determined by the position on the 7-degree semi-quantitative scale (---, --, -, 0, +, ++, +++) recoded as (-3, -2, -1, 0, 1, 2, 3). For example, value 3 (political) stability means that Russia is being characterized as a *very stable* political regime in the Russian foreign policy discourse. The placement of a given category on the scale is the result of an analytical decision of the researcher.

^b “Code frequency” indicates the frequency of its appearance in hermeneutic unit (absolute frequency) (see Friese, 2011: pp. 25–26).

^c “Degree centrality” of the code indicates the number of its associations with other objects in a hermeneutic unit (in our case, with other codes and categories).

natural gas supplier is presented. As shown in Table 2, the key lies in the triplet of following codes: *Prospective NG*, *Prospective Supplier* and *Stable Russia*. The first code asserts physical abundance of high quality energy resources (*Prospective NG*), a necessary condition for strengthening Russian position on the world energy markets (*Prospective Supplier*); the third code emphasizes stability as a defining feature of Russian statehood (*Stable Russia*). The remaining codes (*Diversification* and *Foreign Investment*) make the representation of Russia as a *reliable supplier* more credible.

Mutually supportive relations between the codes then increase the robustness of the core idea, i.e. Russia as a *reliable supplier*.

The stability image (*Stable Russia*) is constructed through the comparison of the stable political and security situation in Russia with the instability typical of traditional producers in the Middle East and North Africa (MENA) region. This construction is evident in, for example, this segment of Gazprom CEO Alexej Miller’s (2011a) statement:

Political crises in North Africa and the Middle East, the war in Libya and suspended oil and gas deliveries from this country caused changes in the approach to the energy supply risks assessment.

The question is clear: Does Europe need another Libya to reduce its dependence on Russia?

In contrast, Russia and Gazprom, respectively, represent a proven and predictable partner (Gazprom, 2010, 2011d):

I want to say that for more than 40 years of gas supplies to Europe we have never violated our contractual obligations, fully and timely supplied the required gas volumes to our consumers.

The USA has understood that it may get rid of the dependence on the unfavorable regimes. These are, mainly, the Middle Eastern regimes that traditionally supplied LNG to the North American market.

For Europe it is a real blessing that it has such a powerful neighbor with such conventional gas reserves. Exploration of non-conventionals may end with no results, as experience of certain countries shows. So let’s live in peace and friendship and contribute to strengthening Russia’s contacts and ties with the European Union and Ukraine.

Weaknesses of the Russian energy sector such as low energy efficiency or infrastructural insufficiencies, as recognized in the Energy Strategy, are at the international level considered as an opportunity for export growth. Accordingly, an ambitious goal of nearly 50% natural gas export increase is set in the document (see Russian Department of Energy, 2009: Appendix A). Two remaining codes, *Diversification* and *Foreign Investment*, further strengthen the image of Russia as a *reliable supplier* (Miller, 2011b). Gazprom

is depicted as an expanding company with global reach and diversified portfolio of activities as well as transition routes. The foreign investments serve as an evidence of this development and underline the international recognition and competitiveness of the company. In this context, Russian supplies represent the way for overcoming the current state of extreme uncertainty on the energy markets, but they also offer a *long-term solution* by providing sufficient supply of energy resources. Contrary to a series of skeptical estimations regarding Gazprom's productive capabilities (see for example Mäkinen, 2010), the image of *Prospective Supplier* has been set, which has so far not completely developed its *potential*; this was clearly indicated by Miller (2011b) in another statement:

Great efforts have been taken lately on streamlining the geological exploration system in Gazprom. Structural changes are underway—the Company is consolidating its onshore exploration activities performed in Russia and abroad. The cost management system in exploration has been improved, exploration efficiency indicators are introduced with due consideration for the value of growing physical reserves, their commercial value, role and place in ensuring the mid-term and long-term gas balance.

At the same time, attention is drawn to the fact that Europe is losing the privileged position of being the *only* key consumer market, as supported by references to the exporting diversification via LNG terminal and supplies to East Asian markets (Gazprom, 2010; Miller, 2011b; Russian Department of Energy, 2009):

Gazprom has many advantages – long-term rules of play; no risks, neither technological nor economical [sic – economic]. The question is whether this stability and confidence in future will be heavier on the scale than the adventurous attempts to find an alternative to conventional gas.

There is no doubt the beginning of gas deliveries to China along the “western route” will become a new reference point in the history of the Russian Unified Gas Supply System development. At the same time, the proportion of European energy markets in the total volume of Russian energy export will steadily decline due to export diversification to Eastern energy markets (China, Japan, Republic of Korea, other countries of the Asia-Pacific region).

The second category (*The Century of Natural Gas*) defines the position of natural gas in the context of the changing structure of energy markets. As shown in Table 3, the category emerges from the following codes: *Prospective NG* (read further for more details), *Dangerous Nuclear Energy*, and *Uncompetitive Renewable Resources*. The first code, which belongs also to the previous category, asserts physical abundance of high quality energy resources as a condition that allows a transition towards “natural gas based” world energy market. This change is explained through the other two codes as the only logical outcome, since the competing resources – nuclear and renewables (RNW) – are described as inherently problematic; coal, which is not mentioned at all, does not fit into this vision as well. Thus, *The Century of Natural Gas* is seen as a product of two

trends: (1) strengthening of Russia as a supplier and strengthening of natural gas as an energy resource and (2) insufficient competitiveness of alternative resources (primarily RNW). Analogy is drawn with the “golden era” of oil in the second half of the Twentieth Century. The upcoming era of natural gas is then inevitably associated with the dominant position of Russia. The categories of *reliable supplier* and *The Century of Natural Gas* therefore reinforce each other (see Fig. 2).

As mentioned above, competing resources, whether nuclear power or RNW, are then considered as either dangerous (events in Fukushima) or uncompetitive (RNW as well as UNG); incentives to their development are therefore political, not economic, in their nature (Kirilov, 2011; Gazprom, 2011d):

For instance, the March earthquake in Japan and the subsequent tragedy with Fukushima 1 Nuclear Power Plant strongly affected the market not only due to the breakdown of some energy capacities, but rather due to the large-scale environmental collapse provoked by these events. As a result, many energy consumers changed their opinion of the nuclear power industry. And this involves other global systems as well. The public opinion is nowadays focused on environmental and energy safety issues that can be met using, first of all, conventional energy sources with natural gas as the top-priority.

...[I]f some time ago the European Union could afford itself to provide large subsidies for alternative energy, today we see that the situation has changed and the amount of subsidies is reducing rapidly. That's why power energy prospects didn't seem to look good with the existing subsidies, but, anyway, at present, in the post-crisis period, they seem to be even more problematic than before. That's why we consider the 20th century to be the age of oil and the 21st century—the age of gas. Gas is surely the key fossil fuel, which will dominate the European Union energy balance in the medium and long term. I'm sure about it.

The unfavorable economic situation thus only underscores the non-viability of the EU's plans to switch to the decarbonized energy sector and the inevitable strengthening of the role of natural gas in the energy mix of the EU at the expense of not only traditional fossil fuels, but of RNW as well.

5.2. Triumphant natural gas

The *Triumphant NG* category emerges from a series of codes that highlight “virtues” of natural gas (such as availability, safety and competitiveness) and its irreplaceable position within the energy sector. As shown in Fig. 3, the definition of natural gas is apodictic, whereas the construction of the category *Mistaken UNG* (details in the following subsection) is more complex and combines the meanings which are produced through opposition to “traditional” or “conventional” natural gas.

The argumentation that supports greater usage of “conventional” natural gas is fairly consistent across texts, and while portraying the natural gas, we usually meet the *Prospective NG* code. The following brief segment of the interview with Stanislav Tsygankov, general director of the Severnefte Gazprom Company, demonstrates the full span of the meanings usually associated with *natural gas* (Kirilov, 2011):

This situation proves our words that we have been proclaiming for many years now: natural gas remains the most efficient, environmentally friendly, clear both for producers and for consumers and, most importantly, the safest energy carrier. Its safety may be evaluated not only in terms of an individual

Table 3
The Century of Natural Gas category summary.
Source: The Authors.

| Category: <i>The Century of Natural Gas</i> | | Characteristics | Scale |
|---|---|-----------------|-------|
| Codes | Prospective NG {15-3} | Availability | 3 |
| | Dangerous nuclear energy {1-1} | Safety | 3 |
| | Uncompetitive alternative resources {5-1} | Competitiveness | 3 |

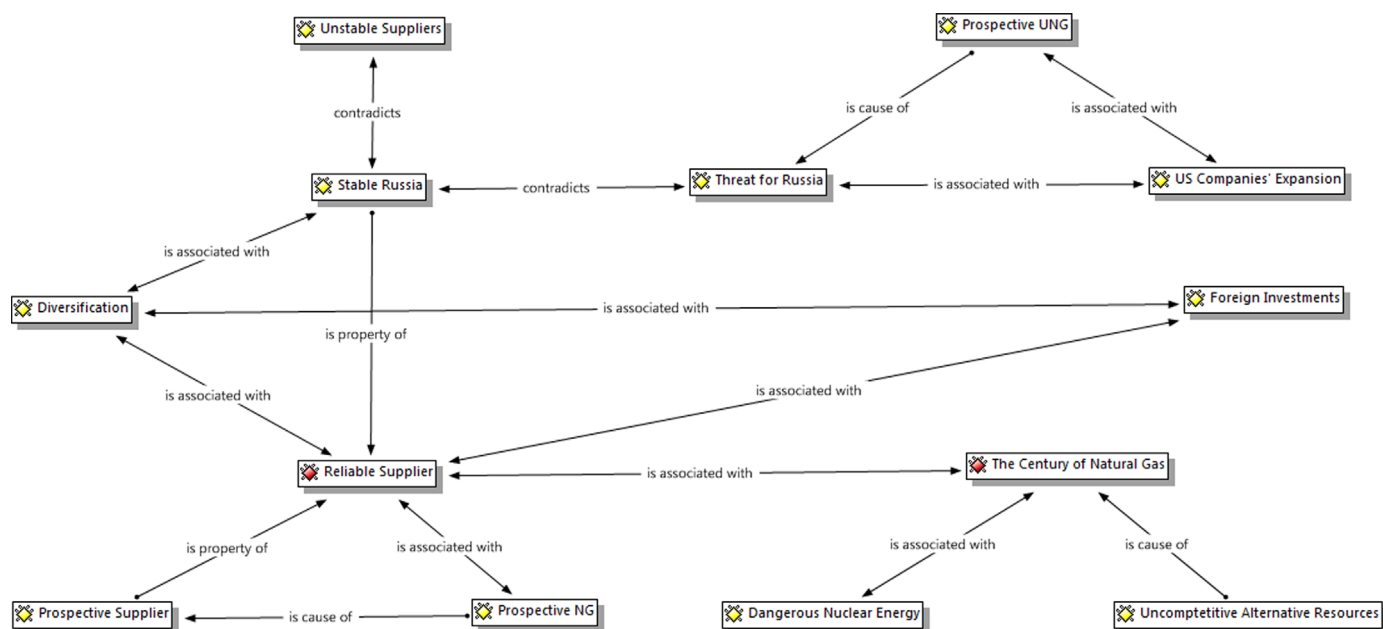


Fig. 2. Semantic network: reliable supplier and The Century of Natural Gas, Source: The Authors.

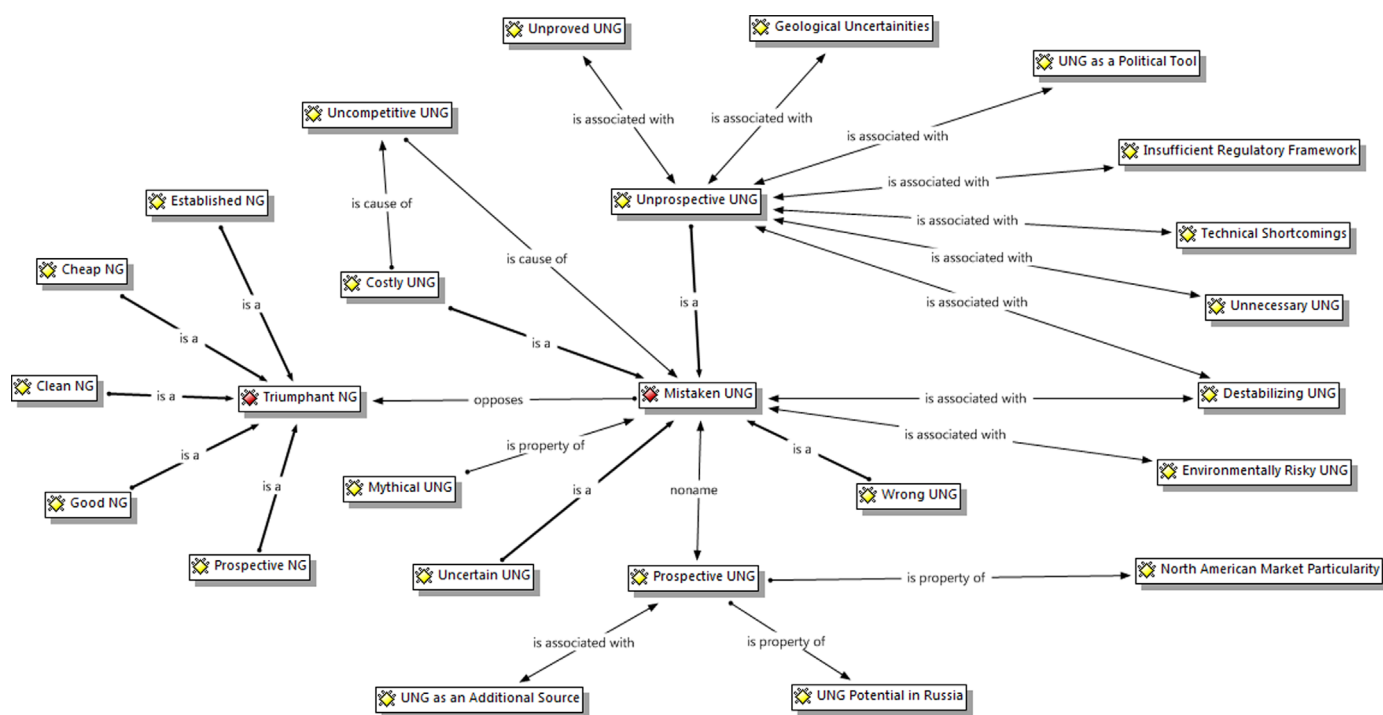


Fig. 3. Semantic network: Triumphant NG vs. Mistaken UNG, Source: The Authors.

business entity or a household, but rather on the global scale – by counties and state alliances such as the European Union. In this context, natural gas has been and will in the foreseeable future remain [the] number one energy resource associated with stability, demand and development prospects for the global gas industry as a whole and our company in particular.

Natural gas is associated with attributes such as efficient, ecological, transparent and safe. Natural gas produced from unconventional deposits is then considered as distinctive, a *different source of energy* in relation to the “conventional” or “traditional” natural gas. The antagonistic position of both categories is evident, since codes

which determine them are formulated as dichotomies: *Clean NG* vs. *Environmentally Risky UNG*, *Established NG* vs. *Mythical UNG*, *Prospective NG* vs. *Unprospective UNG*, and so on. This opposition is consistent; “conventional” natural gas and UNG do not have a single code in common (see Fig. 3). Stressing the distinctiveness and competitiveness of the UNG enables the problematization of its position within *The Century of Natural Gas* image, which is inextricably connected to “traditional” natural gas. While characteristics such as efficiency, eco-friendliness, availability, and so forth are represented as simple and evident facts, the code *good gas* highlights the segments of the text which carry an explicit normative message (Miller, 2011a):

Shale gas production development in America enthusiastically regarded by many experts has an adverse effect on Europe so far. “What brings the competitiveness—a newly discovered cheap energy resource or still subsidized renewable power generation?” The answer is evident and it will not cheer European taxpayers.

Of course, by no means we are calling for a turn back in the course of history. But we want to highlight that the critical mass of factors has already been reached allowing to reconsider the European sense of good and bad, the structure of the optimal fuel and energy balance and the prioritization of the energy policy in a changing environment.

A choice between conventional and unconventional natural gas resources is understood here as a choice between the right and wrong (good and bad). Consumer countries are faced with a key (and moreover moral) dilemma, which will decide whether they will head towards stability and prosperity, or towards uncertainty and decline.

5.3. Mistaken unconventional resources

As mentioned above, the category *Mistaken UNG* is constructed through opposition to the superior natural gas. Thus, it rests on a number of codes (see Table 4) that attribute inferior qualities to UNG and seriously problematize its position within the energy sector. This inferiority results from multiple factors such as environmental risks, geological uncertainties or economic unviability which imply that a correction of all the deficiencies is *de facto* impossible. The codes *Costly UNG* and *Mythical UNG* (see Table 4) are the most frequent ones; they both have in common the reference to the irrationality of UNG usage. The development of UNG is here represented as a purely political decision directed against *common sense* stemming from the allocating efficiency of the market which cannot be *outwitted* (Kirilov, 2011):

There is common sense as it relies on the economics that are impossible to outwit. And there is the policy that is often detached from real market demands, but willing to meet the interests of this or that country.

The mythical quality is attributed to UNG by, for example, making the analogy to unsuccessful bio-fuels, or to the metaphor of the *speculative bubble* explaining the temporary success of the UNG. Just as the real estate bubble was enabled by the rise of new financial instruments which hid the real value of the assets, the UNG bubble is enabled through provisional (hedging) investments, which cover the actual (meaning high) costs of extraction. It is, therefore, only the matter of time when that situation will be corrected; meaning, *waking up* to reality (Gazprom, 2011d; Natural Gas Europe, 2011):

As for shale gas—it is an international PR campaign, well planned by mass media. There are plenty of those campaigns—global warming, biofuel, I can give other examples.

It's very hard for shale gas producers to stop dreaming. We can say that shale gas production reminds one of riding a bicycle: if you stop pedaling, you fall. Hedging is the second explanation—your revenues allow you to meet your costs and you are allowed to survive for a certain amount of time until your situation improves.

The momentary success of UNG was explained primarily through the specific nature of the North American market. Reproduction of the “quiet revolution” in Europe is considered to be unfeasible. Even here, UNG will not go beyond the level of a supplementary resource. Generally, UNG is marked as a prospective resource only in association

Table 4

Triumphant NG and mistaken UNG categories summary.
Source: The Authors.

| Category: <i>triumphant NG</i> | | Characteristic | Scale |
|--|----------------------------------|-----------------|-------|
| Codes | Clean NG {9-1} | Availability | 3 |
| | Good NG {3-1} | Safety | 3 |
| | Established NG {2-1} | Competitiveness | 3 |
| | Cheap NG {3-1} | | |
| | Prospective NG {15-3} | | |
| Category: <i>mistaken UNG</i> ^f | | Characteristics | Scale |
| Codes | Destabilizing UNG {5-2} | Availability | -1 |
| | Costly UNG {32-2} | Safety | -1 |
| | Mythical UNG {27-1} | Competitiveness | -3 |
| | Environmentally risky UNG {20-1} | | |
| | Uncertain UNG {3-1} | | |
| | Uncompetitive UNG {9-2} | | |
| | Unprospective UNG {6-8} | | |
| | Wrong UNG {2-1} | | |

^f Code prospective UNG (see Appendix A) is almost at all cases brought up into relation with the specific position of the North American market and with Russian UNG potential.

with the North American market, Russian UNG supplies, and local usage of UNG. The usage of UNG is also brought into relation with the following conditions, defining the codes *Geological Uncertainties*, *Technological Shortcomings*, *Environmentally Risky* and *Insufficient Regulatory Framework*. All these characteristics further strengthen the element of uncertainty and a lack of potential of the UNG (Gazprom, 2010, 2011c):

It is obvious that serious conclusions on the prospects for shale gas production development are premature. The phenomenon is young and has no “deferred result” when you can estimate long-term consequences. Will this factor become so influential to make a considerable impact on the global markets and the global energy policy, or will it remain just a regional phenomenon? This will be clear at least in five years.

The production of shale gas is associated with significant environmental risks, in particular, the hazard of land surface and underground water contamination with chemicals applied in the production process. This fact already caused the prohibition of shale gas development and production in France...

Shale gas production projects feature a number of technological and commercial peculiarities. These are a large scope of production drilling, a sharp drop in production volumes in the first years, a constant need to move to new development areas, consume significant volumes of water, and substantial environmental risks.

There are also several cases in which the development of UNG is associated with the threat to the Russian position on the market; both direct and indirect influence is mentioned. A direct threat (first paragraph) is associated with concerns that the Russian share would get smaller on the consumer market, while indirect (following two paragraphs) ones are related to the ongoing pressure of long-term contracts and their relation to oil and growing competition in general (Natural Gas Europe, 2011; Gazprom, 2010):

Komlev said he had read in a Polish newspaper that Poland could become a second Norway. “I started to imagine what would happen with our long term contract with Poland, expiring in 2022, which is for delivery of 11 billion cubic meters per year. I can imagine Poland would break relations with Russia, and start production of shale gas.”

Shale plays in Europe have not been investigated so far. There are two most common, though opposite, opinions. According to

the pessimistic opinion, shale gas reserves account for a half of the onshore gas reserves being developed in Europe. While the optimistic opinion states that these reserves are commensurate with the conventional gas reserves in the operating fields and reach a half of all the discovered but not developed conventional gas reserves. The deposits could be large enough for Europe to repeat the US experience....

In this situation Russia should in any case think of how to maximize the profit from gas exports to Europe. One of the options is to change the gas pricing mechanisms by detaching the formula from oil derivatives. Meanwhile, it is most likely that the amount of gas supplies to the European market will be maintained. Another option is to keep the price formula intact with a high probability of reduction in supply amounts. In order to select the best option, it is necessary to carry out serious analysis based on the market development scenarios and the actions of other market players.

Nevertheless, the likelihood of any threat to Russia is associated with the list of arguments (mainly economic) that raise doubts about the UNG potential, and, by the same token, the threat itself.

5.4. Argumentation schemes

In this section, we examine the prevailing schemes of argumentation. The economic argumentation was identified as the dominant scheme, while the secondary line of argumentation is defined environmentally.

5.4.1. The economic irrationality scheme

Syntax of the economic argumentation includes the definitions of (1) conditions on the energy markets and macroeconomic conditions in general, (2) characterization of UNG, (3) intervening conditions of UNG development and (4) outcomes of possible development of UNG.

Causal conditions (1) are associated with the beginning of *The Century of Natural Gas* and with the potential of Russian production, against which there is the uncertainty associated with unconventional resources. The development of UNG is associated with a specific situation on the North American market. The UNG market is considered to be immature, and the success of UNG in the USA thus must be perceived with great skepticism (Gazprom, 2010; see also Pravosudov, 2010 [Pravosudov]).

It is important to understand that even the USA being a pioneer in this area, has been dealing with non-conventional gas production, in general, and shale gas, in particular, for a number of recent years only. This business is the youngest one in the world practice, it lacks production experience. In fact, the talks of the “shale gas revolution” are based on 3 to 4 years of operations in a single field—Barnett Shale, being the first one to be developed. Operations in other fields were launched later and still fall behind the leader in terms of production volumes.

The major characteristic of UNG (2) is its uncompetitiveness, which is caused by higher costs along the entire logistic chain (Gazprom, 2011c):

Shale gas production projects feature a number of technological and commercial peculiarities. These are a large scope of production drilling, a sharp drop in production volumes in the first years, a constant need to move to new development areas, consume significant volumes of water, and substantial environmental risks. Moreover, the prime cost of shale gas production in USA is rather high, and it is several times higher

than the prime cost of conventional gas production in other world regions, including new fields in Russia. These factors predetermine the role of shale gas as a local resource offsetting the lack or absence of conventional gas in regional markets.

Within the intervening conditions (3) we find, on the one hand, political motivation for the development of these resources, and on the other, circumstances which further decrease UNG usage potential, such as the absence of a regulatory framework, technological shortcomings, and so on (Natural Gas Europe, 2011; Gazprom, 2011c).

...Poland has to think twice before moving into this direction, especially if the decision is about politics and not the costs of shale gas production.

It was highlighted that apart from environmental, juridical limitations exist dealing with the peculiarities of land and subsurface ownership rights, consumption and utilization of water as well as high population density. Besides, Europe presently lacks for the equipment required for shale gas fields development.

The outcomes (4) of potential development of UNG are then associated with destabilization of the energy markets and of losing competitiveness in general. In this context, if economically sound conventional production is not promoted, the costs of this “irresponsible experiment” will be borne by taxpayers. EU member states stand before a decision that will have a considerable impact on which course they will further take. The choice between unconventional and “traditional” (Russian) natural gas is, therefore, the choice between uncertainty and prosperity. This message has been intensified by the means of *suggestive dichotomy*; i.e. a seemingly necessary “choice” between two alternatives. Russian natural gas is thus depicted as a necessary condition for the economic development of the EU.

5.4.2. The environmental hazard scheme

When compared with the dominant economic scheme, the environmental argumentation is a less complex; it is based on simple identification of UNG with a “standard listing” of environmental risks. The technique of *incomplete argumentation* was identified, when only the arguments of the extraction critiques were considered. This contrasts with the context of environmental impacts of natural gas extraction in Russia domestically¹⁰ and, generally, the sensitivity of the Russian society towards environmental issues (Jorgensen, 2008). The following statements are extracted from Gazprom (2011d), and (2010).

...[E]veryone knows about the problems related to technological and environmental aspects of shale gas. It is an unacceptable way of development for Europe.

Europe faces a number of challenges in shale gas production. Exploration work in shale gas fields requires drilling of numerous wells, which may be quite difficult in densely populated Europe. Environmental issues may emerge as well. Even a low risk of ground water pollution may lead to a ban on shale gas production. However, one should not forget that a lot of promising shale gas resources are located in the countries most dependent on Russian gas supplies – in Poland, Hungary and Ukraine. Their desire to become independent from gas imports may surpass all the negative factors.)

¹⁰ According to estimations, between 15 and 50 bcm of natural gas is burned in Russia per year (Ladehaug and Loe, 2012). In terms of energy, the Russian economy is among to the most intensive worldwide and is distinguished by a high rate of CO₂ per capita as well as CO₂/GDP (IEA, 2011a).

Table 5
Identified frames and argumentation schemes.
Source: The Authors.

| | | Functions | | | |
|--|--|---|---|--|---|
| | | (Problem) definition | Cause identification | Evaluation | Solution |
| Frame I | Demand for energy in the EU is increasing | The EU does not have sufficient domestic energy sources | Russia is a reliable, stable partner whose position is becoming stronger | Russia is a reliable, stable partner whose position is becoming stronger | Energy policy must follow economic, not political, reasoning |
| | Energy markets undergo structural changes | Alternative resources cannot accommodate these needs in an economically viable and/or safe manner | The utilization of Russian conventional sources is instrumental for the EU's economic growth | The utilization of Russian conventional sources is instrumental for the EU's economic growth | As a consequence, the EU should foster its trade exchange with Russia—the economically rational and morally responsible policy choice |
| | Political instability impedes functioning of markets | Political considerations turn the EU to the suboptimal choices | The shift to alternative resources including UNG is economically irrational, thus ideologically driven | The shift to alternative resources including UNG is economically irrational, thus ideologically driven | |
| Frame II | Environmental considerations are important | | The momentary success of UNG on North American market is unreplicable | The momentary success of UNG on North American market is unreplicable | |
| | Natural gas (NG) and unconventional are two qualitatively different energy sources | The technology of NG extraction is proven, safe and effective | NG is abundant, efficient and clean source—no other source has all these qualities | NG is abundant, efficient and clean source—no other source has all these qualities | NG is an energy source for the prosperous future |
| | | Geological, technological, and environmental shortcomings of UNG extraction are common | UNG is an inferior source defined by a number of deficiencies | UNG is an inferior source defined by a number of deficiencies | The choice between NG and UNG is ultimately a choice between good and bad |
| | | The momentary success of UNG on the North American market is given by its specifics, subsidies, and speculative investments | | | |
| Argumentation schemes | | | | | |
| Economic irrationality | | | Environmental hazard | | |
| Structure of energy markets shifts towards increased usage of NG AND Russian NG has an irreplaceable position AND UNG is an inferior source defined by number of deficiencies AND UNG development is ideologically-driven OR technologically-economic conditions of UNG development are unfavorable →UNG development leads to market distortion subsidized by the taxpayers | | | Environmental considerations must be taken seriously AND UNG are defined by a number of environmental risks AND Environmentally-friendly alternative (NG) is available →UNG extraction leads to unnecessary and unreasonable environmental destruction | | |

Similarly to the economic argumentation, here we also find the assumption that, despite clear and “rational” arguments against launching the extraction, some countries will, on the basis of “irrational” motivation (i.e. reduction of dependence on Russian supplies), persist in struggling to develop of UNG. It is noteworthy that these references to the irrational efforts to reduce the dependence on Russian supplies are – together with outcomes of UNG development in the USA (deflection of LNG supplies) – the only points at which the development of UNG was framed geopolitically (in contrast, it is geopolitical framing of UNG development through the concept of supply security that is dominant in Poland).

6. Conclusions

The research objective was to show how UNG has been framed within the Russian foreign energy policy discourse in the initial period of its development. As demonstrated, the UNG issue has been framed through two frames (for summary, see Table 5). The first frame is built upon the image of Russia – a reliable supplier characterized by political stability, and the importance and potential of its conventional reserves, as well as the know-how and capital power of the Russian gas sector – in a changing energy market environment which structurally has shifted towards more extensive use of natural gas. Rival suppliers are then characterized as either unstable and

problematic regimes (MENA countries), or like producers whose exporting potential is limited; in case of UNG producers, typically due to economic and technological reasons. The momentary success of U.S. production is explained at best as a one-off and short-lived anomaly and at worst as a speculative bubble with clandestine political backing. The second frame is defined by the binary opposition of natural gas and unconventional sources, whereby “conventional” natural gas is associated with attributes such as efficient, ecological, proven and safe. The meanings are constructed primarily through the “juxtaposition between a privileged sign on the one hand and devalued one on the other;” i.e. through the negative process of differentiation (Hansen, 2006: p. 17). UNG is thus presented as a qualitatively different and inferior source of energy, which is seen as a malign deviation on an otherwise well-functioning natural gas market.

The sources differentiate in their approach towards the UNG. While Gazprom holds the most skeptical position (e.g. Gazprom, 2011d; Miller, 2011a), which does not allow for more significant (and more lasting) impacts, the media (see Аргументы и факты, 2009; Комсомольская правда, 2011; Николаев, 2010; Новая газета, 2011) mention potential geopolitical consequences of the UNG development (especially in the context of a strengthening of the negotiating position of consumer countries), which can be seen as an embryonic marginal frame. State documents (Russian Department of Energy, 2009, 2010, 2011) express an opinion on UNG that is somewhere in

between these two poles and bring up the potential of domestic unconventional resources.

As shown, the initial reaction of the Russian Federation is framed in a clearly negative, distrustful manner. The frames present two alternative futures. First, there is an optimistic scenario where Russia, a rational and pragmatic great power, acts as a reliable partner and dominant supplier on the natural gas market(s). Second, a pessimistic scenario depicts the deepening economic crisis of the European market caused by politically driven, and thus economically irrational, decisions such as transition towards alternative sources of energy, including unconventional gas resources. In contrast to Russia itself, the image of the implicit Other (be it particular European countries, the European Commission, the U.S., or energy companies) is constructed through attributes of ideology, irrationality, irresponsibility, etc.

The evaluative function of frames (Entman, 2003: p. 417) is then expressed by two dominant argumentation schemes, economic and environmental. The economic argumentation is the dominant one and is based on a self-understanding of Russia as mentioned above. In this context, it is either a “Russian century of gas,” in which natural gas overtakes the position of oil as the “blood of the economy,” or distorted, gradually deteriorating energy markets with serious consequences for the economy as a whole. The “choice” between good natural gas and bad unconvensionals, understood as the choice between right and wrong, is presented as inevitable. “The century of gas” (CoG) can be seen as an analogy of “the golden age of oil” corresponding with economic growth of the 1950s and 1960s. A comparison of the Russian and the IEA (2011b) variants of the CoG argument could bring valuable insights into the differences between producer’s and consumer’s perceptions of energy markets’ future development. The environmental argumentation is more focused on the Western or European environmental awareness; more precisely, the Russian perception of the Western identity. The eventual development of unconventional gas resources is then portrayed as a betrayal of these very principles.

In general, pragmatically- and technocratically-oriented arguments prevail. The wrong move towards UNG is not connected with any substantial security consequences and is seen as a threat for the taxpayers’ money, not for the states’ sovereignty. This is in accordance with Shadrina’s (2010, pp. 158–163), findings about the shifts in Russian behavioral patterns on particular energy markets; in the case of the EU from a reassuring supplier defined by its proven history of commodity trade to a reliable partner defined by an emphasis on its modernization program, its investment climate improvement, and its increased institutionalization (Russia’s accession to WTO, the Russia–EU strategic partnership, the Russia–EU energy dialogue). The geopolitical codes are thus pushed out to a peripheral position.

In the near future, the sharp linguistic distinction between conventional and unconventional natural gas will likely prevail. Considering the possible policy implications of such a distinction, it is remarkable that the Russian adaptation and mitigation policy measures can be distinguished according to the same division line. With regards to adaptation policies, Russia will continue to struggle for its endangered positions in continental Europe. We have already observed how long-term bilateral contracts—the cornerstone of the Russian “traditional natural gas” export policy, have been renegotiated to reflect the shift towards buyer’s market after 2010. Regarding the unconvensionals, Russia could be expected to mitigate further losses by supporting the environmental opposition against shale gas that emerges all over Europe. Moreover, in countries where the natural gas sector is controlled by the government we can expect that Russians would pressure to include non-shale policies into the wide portfolio of intergovernmental deals that often result from gas deliveries contract renewal negotiations.

As for further research, the mapping of the initial position on the issue is a necessary precondition for further explanatory

efforts, be it the framing effects (see Vliegenthart and van Zoonen, 2011) or particular policy outputs. Comparative studies, i.e. mapping of UNG framing e.g. in Poland, U.S. or other involved countries, is another promising area of research. The same analytical framework can be applied on subsequent developments in the Russian position. A number of questions raises here: are the identified frames still in a dominant position, can new frames be identified, how has the construction of UNG changed in the context continuing shale gas boom etc.? Similarly, the scope of the research can be broadened to interrelated issues such as antitrust investigations of Gazprom (Riley, 2012), Russian market liberalization and the rise of the independents (Henderson, 2005), Russian relations towards key business partners (Shadrina, 2010) and so on.

Acknowledgments

The text was prepared within the specific research project of the Department of International Relations and European Studies “Contemporary Issues of European and International Politics” (MUNI/A/0754/2012) and with the support of the International Institute of Political Science, Faculty of Social Science, Masaryk University as well as Ministry of Foreign Affairs of the Czech Republic (grant project 09/02/11). The authors would like to thank the anonymous reviewers for their valuable comments and suggestions to improve the quality of the paper as well as to Tatiana Kardošová for assistance with data collection and coding. Fig. 1 has been drawn using free online diagramming application Draw.io (2013).

Appendix A. Supporting information

Supplementary data associated with this article can be found in the online version at <http://dx.doi.org/10.1016/j.enpol.2014.04.006>.

References

Primary sources, Official state documents

- Russian Department of Energy, 2009. Energy strategy of Russia for the period up to 2030. Last retrieved 24th July 2013 from: (http://www.energystrategy.ru/projects/docs/ES-2030_%28Eng%29.pdf).
- Russian Department of Energy, 2010. В Госдуме РФ состоялся «круглый стол» по перспективам освоения ресурсов сланцевого газа. министерство энергетики российской федерации. Last retrieved 24th July 2013 from: (http://minenergo.gov.ru/press/min_news/3226.html?sphrase_id=172470).
- Russian Department of Energy, 2011. Перспективы развития нетрадиционных углеводородов в России. министерство энергетики российской федерации. Last retrieved 24th July 2013 from: (http://minenergo.gov.ru/press/min_news/9082.html?sphrase_id=172470).

Documents and statements of the Gazprom Company representatives

- Gazprom, 2010. How can the Development of Shale Gas Production Influence the Global Energy Market? Last retrieved 24th July 2013 from: (<http://gazprom.com/press/comments/522327/>).
- Gazprom, 2011c. Gazprom to Keep Focus on Worldwide Shale Gas Development. Last retrieved 24th July 2013 from: (<http://www.gazprom.com/press/news/2011/november/article124440/>).
- Gazprom, 2011d. Press Conference Following the Topical European Energy Issues Roundtable Discussion. Last retrieved 24th July 2013 from: (<http://www.gazprom.com/f/posts/80/905737/krugly-stol-stenogramma-eng-2011-02-21.pdf>).
- Kirilov, D., 2011. Stanislav Tsygankov: Maintaining the Drive. Gazprom Magazine Issue 6. Last retrieved 24th July 2013 from: (<http://www.gazprom.com/press/reports/tsygankov-draiv/>).
- Natural Gas Europe, 2011. Gazprom: Think Twice About Shale Gas. Natural Gas Europe. Gazprom. Last retrieved 24th July 2013 from: (<http://www.naturalgas-europe.com/gazprom-costs-of-shale-gas>).

- Miller, A., 2011a. Ecological challenges and the energy sector. In: Speech Presented at the European Business Congress Annual General Meeting and Conference "Ecological Challenges and the Energy Sector", Prague, Czech Republic. Last retrieved 24th July 2013 from: (<http://www.gazprom.com/press/miller-journal/067734/>).
- Miller, A., 2011b. Gazprom: New Horizons. Speech Presented at the Annual General Shareholders Meeting, Moscow, Russian Federation. Last retrieved 24th July 2013 from: (<http://www.gazprom.com/press/miller-journal/370038/>).

Russian printed and internet media

- Аргументы и факты, 2009. Российский газ скоро никто не будет покупать? Last retrieved 24th July 2013 from: (<http://www.aif.ru/money/dontknow/2851>).
- Комсомольская правда, 2011. Американцы будут искать на территории Литвы сланцевый газ. Last retrieved 24th July 2013 from: (<http://www.kp.ru/online/news/891155/>).
- Николаев, С., 2010. Дядю Сэма распирает от газа. pravda.ru. Last retrieved 24th July 2013 from: (<http://www.pravda.ru/economics/materials/gas/12-11-2010/1057192-news-0/>).
- Новая газета, 2011. Сланцевый газ и медный таз. Last retrieved 24th July 2013 from: (<http://digest.subscribe.ru/economics/news/n684390475.html>).
- Правосудов, С., 2010. Сланцевый пузырь. Слухи о грядущей неустойчивости российского газа оказались сильно преувеличены. Российская Бизнес-газета 12. Last retrieved 24th July 2013 from: (<http://www.rg.ru/2010/04/13/gaz.html>).

Secondary sources

- Aalto, P., 2010. The Emerging New Energy Agenda and Russia: Implications for Russia's Role as a Major Supplier to the European Union. Last retrieved 24th July 2013 from: (<http://src-h.slav.hokudai.ac.jp/publicn/acta/30/01Aalto.pdf>).
- Actagon Research Institute, 2013. The Upcoming Gas Revolution: Russia's Response and its Implications for Europe. Last retrieved 24th July 2013 from: (<http://johnhelmer.net/wp-content/uploads/2013/02/The-Upcoming-Gas-Revolution.pdf>).
- Baev, P.K., 2008. Russian super-giant in its lair: Gazprom's role in domestic affairs. In: Cornell, S.E., Nilsson, N. (Eds.), Europe's Energy Security. Gazprom's Dominance and Caspian Supply Alternatives. Europe Central Asia-Caucasus Institute Silk Road Studies Program, Washington, D.C.
- Balmaceda, M., 2013. Politics of Energy Dependency: Ukraine, Belarus, and Lithuania between Domestic Oligarchs and Russian Pressure. University of Toronto Press, Scholarly Publishing Division, Toronto.
- Binhack, P., Tichý, L., 2012. Asymmetric interdependence in the Czech–Russian energy relations. *Energy Policy* 45, 54–63.
- Brooks, S.G., Wohlforth, W.C., 2006. Power, globalization, and the end of the Cold War: reevaluating a landmark case for ideas. *Int. Secur.* 25, 5–53 (Last retrieved 24th July 2013 from: (<http://www.mitpressjournals.org/doi/abs/10.1162/016228800560516>)).
- Černoch, F. et al., 2011. The Future of Natural Gas Security in the V4 Countries A Scenario Analysis and the EU Dimension, MPU, Brno.
- Cornell, S.E., Nilsson, N., 2008. Europe's Energy Security. Gazprom's Dominance and Caspian Supply Alternatives. Europe Central Asia-Caucasus Institute Silk Road Studies Program, Washington, D.C.
- Creswell, J.W., 2007. Qualitative Inquiry and Research Design: Choosing Among Five Approaches. Sage Publications, London.
- Diez, T., 1997. Governance—A Matter of Discourse. Discursive Nodal Points in the British Debate over Europe. Paper for presentation at the Biennial Convention on the European Community Studies. Association (ECSA), Seattle. Last retrieved 24th July 2013 from: (http://aei.pitt.edu/2567/1/002505_1.pdf).
- Doty, R.L., 1993. Foreign policy as social construction: a post-positivist analysis of U.S. counterinsurgency policy in the Philippines. *Int. Stud. Q.* 37, 297–320.
- Ebel, R.E., 2009. The geopolitics of Russian energy. Looking back, looking forward. Center Strategic Int. Stud. (Last retrieved 24th July 2013 from: (http://csis.org/files/publication/090708_Ebel_RussianEnergy_Web.pdf)).
- Entman, R.M., 1993. Framing: towards clarification of a fractured paradigm. *J. Commun.* 43, 51–58.
- Entman, R.M., 2003. Cascading activation: contesting the white house's frame after 9/11. *Polit. Commun.*, 415–432 (Last retrieved 24th July 2013 from: (http://www.tandfonline.com/doi/abs/10.1080/10584600390244176#.UhzjFz_-TEw)).
- Fairclough, I., Fairclough, N., 2013. Political Discourse Analysis: A Method for Advanced Students. Routledge, London.
- Fairclough, N., 2000. Discourse, social theory, and social research: the discourse of welfare reform. *J. Sociolinguistics* 4, 163–195.
- Fierke, K.M., 2004. World or worlds? The analysis of content and discourse. *Qual. Methods* 2 (1), 34–40 (Last retrieved 11th February 2014 from: (<http://www1.maxwell.syr.edu/uploadedFiles/moynihan/cqrm/Newsletter2.1.pdf>)).
- Finon, D., Locatelli, C., 2008. Russian and European gas interdependence: could contractual trade channel geopolitics? *Energy Policy* 36, 423–442.
- Friese, S., 2011. Atlas.ti 6. User Guide and Reference v.6. ATLAS.ti Scientific Software Development GmbH, Berlin.
- Given, L., 2008. The SAGE Encyclopedia of Qualitative Research Methods. Sage Publications, London.

- Goffman, E., 1974. Frame Analysis: An essay on the organization of experience. Harper and Row, London.
- Hansen, L., 2006. Security as Practice: Discourse Analysis and the Bosnian War. Routledge, London and New York.
- Henderson, J., 2005. Non-Gazprom Gas Producers in Russia. The Oxford Institute for Energy Studies. Last retrieved 24th July 2013 from: (<http://www.oxfordenergy.org/shop/non-gazprom-gas-producers-in-russia/>).
- Holden, M.T., Patrick, L., 2004. Choosing the appropriate methodology: understanding research philosophy (RIKON Group). *Marketing Rev.* 4, 397–409.
- Hope, M., 2010. Frame analysis as a discourse-method: framing 'climate change politics'. In: Paper Delivered to the Post-Graduate Conference on Discourse Analysis March 2010, University of Bristol. Last retrieved 11th February 2014 from: (http://www.academia.edu/306273/Frame_Analysis_as_a_Discourse_Method_Framing_Climate_Change_Politics).
- Hopf, T., 2002. Social Construction of International Politics: Identities and Foreign Policies, Moscow, 1955 and 1999. Cornell University Press, Ithaca.
- IEA, 2011. CO₂ Emissions from Fuel Combustion. Highlights. OECD/IEA, Paris (<http://www.iea.org/co2highlights/co2highlights.pdf>) (Last retrieved 24th July 2013 from:).
- IEA, 2011. World Energy Outlook. Are We Entering a Golden Age of Gas. OECD/IEA, Paris (http://www.worldenergyoutlook.org/media/weowebsite/2011/WEO2011_GoldenAgeofGasReport.pdf) (Last Retrieved 24th July 2013 from:).
- ITAR-TASS, 2013. Владимир Путин: Добыча сланцевого газа пока кардинально не поменяла ситуацию на мировых рынках. Last retrieved 24th July 2013 from: (<http://www.itar-tass.com/c378/780666.html>).
- Jaffe, A.M., O'Sullivan, M.L., 2012. The Geopolitics of Natural Gas: Report of Scenarios Workshop of Harvard University's Belfer Center and Rice University's Baker Institute Energy Forum. Last retrieved 24th July 2013 from: (<http://belfercenter.ksg.harvard.edu/files/The%20Geopolitics%20of%20Natural%20Gas.pdf>).
- Johnston, H., 1995. A methodology for frame analysis: from discourse to cognitive schemata. *Soc. Movement Cult.* 4, 217–246.
- Jorgensen, A.G., 2008. Environmental Awareness in Russia: an analysis of the preconditions of implementing an awareness raising campaign on climate change. *Inst. Polit. Sci. Univ. Copenhagen* (Last retrieved 24th July 2013 from: (http://polsci.ku.dk/studievejledningen/opgavebank/bilag/environmental_awareness_in_russia.pdf)).
- Jorgensen, M., Phillips, L.J., 2002. Discourse Analysis as Theory and Method. Sage Publications, London.
- Kanady, S., 2012. Qatar Capable of Facing Shale Gas Challenges: Sada. The Peninsula. Last retrieved 24th July 2013 from: (<http://thepeninsulaqatar.com/business-news/213886-qatar-capable-of-facing-shale-gas-challenges-sada.html>).
- Katzenstein, P.J., et al., 1996. The Culture of National Security: Norms and Identity in World Politics. Columbia University Press, New York.
- Kazantsev, A., 2010. The crisis of Gazprom as the crisis of Russia's "Energy Super-State" policy towards Europe and the Former Soviet Union. *Caucasian Rev. Int. Aff.* 4, 271–284.
- Khvostunova, O., 2013. How Gazprom Snoozed through the "Shale Gas Revolution". Institute of Modern Russia. Last retrieved 24th July 2013 from: (<http://imrussia.org/en/economy/382-how-gazprom-snoozed-through-the-shale-gas-revolution>).
- Kortunov, A., 1998. Russia and Centralasia: Evolution of Mutual Perceptions, Policies, Interdependence. The James A Baker III Institute for Public Policy of Rice University (<http://www.bakerinstitute.org/publications/russia-and-central-asia-evolution-of-mutual-perceptions-policies-interdependence>) (Last retrieved 24th July 2013 from:).
- KPMG, 2011. Shale Gas—A Global Perspective. Last retrieved 24th July 2013 from: (<http://www.kpmg.com/Global/en/IssuesAndInsights/ArticlesPublications/Documents/shale-gas-global-perspective.pdf>).
- Kratochvíl, P., Tichý, L., 2013. EU and Russian discourse on energy relations. *Energy Policy* 56, 391–406.
- Kravchenko, S., Shiryayevskaya, A., 2013. Putin Dismisses Concern Gazprom 'Slept Through' Shale Gas Boom. Last retrieved 24th July 2013 from: (<http://www.bloomberg.com/news/2013-04-25/putin-dismisses-concern-gazprom-slept-through-shale-gas-boom.html>).
- Ladehaug, O., Loe, J. S. P., 2012. Reducing Gas Flaring in Russia: Gloomy Outlook in Times of Economic Insecurity. Pöyry Management Consulting (Norway) AS. Last retrieved 24th July 2013 from: (<http://www.fni.no/russcasp/WP-2012-002-JPL-Reducing-Gas-Flaring-in-Russia.pdf>).
- Light, M., 2003. In search of an identity: Russian foreign policy and the end of ideology. *J. Communist Stud. Transition Polit.* 19, 42–59 (Last retrieved 24th July 2013 from: (<http://www.tandfonline.com/doi/pdf/10.1080/13523270300660017>)).
- Liuhto, K., 2010. Energy in Russia's Foreign Policy. Electronic Publications of Pan-European Institute (http://www.utu.fi/fi/yksikot/tse/yksikot/PEI/raportit-ja-tie-topaketit/Documents/Liuhto_final_netti.pdf) (Last retrieved 24th January 2014 from:).
- Mäkinen, H., 2010. The Future of Natural Gas as the European Union's Energy Source –Risks and Possibilities. Pan-European Institute (<http://www.tse.fi/fi/yksikot/erillislaikokset/pei/Documents/Julkaisut/M%3C%3A4kinen.pdf>) (Last retrieved 24th July 2013 from:).
- Minsky, M., 1975. A framework for representing knowledge. In: Winston, P.H. (Ed.), *The Psychology of Computer Vision*. McGraw-Hill, New York.
- Medlock III, K.B., et al., 2011. Shale Gas and U.S. National Security. The James A. Baker III Institute for Public Policy of Rice University (<http://www.bakerinstitute.org/publications/EF-pub-DOEShaleGas-07192011.pdf>) (Last retrieved 24th July 2013 from:).

- Melling, A.J., 2010. Natural Gas Pricing and its Future. Europe as the battleground. Carnegie Endowment for International Peace. Last retrieved 24th July 2013 from: http://carnegieendowment.org/files/gas_pricing_europe.pdf.
- Monaghan, A., 2007. Russia's energy diplomacy: a political idea lacking a strategy? Southeast European and Black Sea Studies 7, 275–288. Last retrieved 24th July 2013 from: http://www.tandfonline.com/doi/abs/10.1080/14683850701402201#Ue8S_o3QngF.
- Neumann, I.B., 1996. *Russia and the Idea of Europe. A Study in Identity and International Relations*. Routledge, London and New York.
- Noël, P., 2008. Beyond dependence: how to deal with Russian gas. Eur. Council Foreign Relat. (Last retrieved 24th July 2013 from) http://ecfr.eu/page/-/ECFR-09-BEYOND_DEPENDENCE-HOW_TO_DEAL_WITH_RUSSIAN_GAS.pdf.
- O'Loughlin, J., 2000. Geopolitical Fantasies and Ordinary Russians: Perception and Reality in the Post-Yeltsin Era. University of Colorado <http://www.colorado.edu/UCB/Research/IBS/PEC/johno/pub/pittsburgh.pdf> (Boulder. Last retrieved 24th July 2013 from).
- Petersen, A., Barysch, K., 2011. Russia, China and the Geopolitics of Energy in Central Asia. Centre for European Reform. Last retrieved 24th July 2013 from: http://www.cer.org.uk/sites/default/files/publications/attachments/pdf/2011/rp_010-4118.pdf.
- Reed, Ch., Walton, D., 2005. Towards a formal and implemented model of argumentation schemes in Agent Communication. *Auton. Agents Multi-Agent Syst.* 11, 173–188.
- Reus-Smit, Ch., 2005. Constructivism. In: Burchill, S., Linklater, A., Devetak, R., Donnelly, J., Paterson, M., Reus-Smit, Ch., True, J. (Eds.), *Theories of International Relations*, third ed. Palgrave Macmillan, New York, pp. 188–212.
- Riley, A., 2012. Commission v. Gazprom: The Antitrust Clash of the Decade? CEPS Policy Brief No. 285. Last retrieved 24th July 2013 from: <http://www.ceps.eu/ceps/dld/7433/pdf>.
- Rogers, H., 2012. The Impact of a Globalizing Market on Future European Gas Supply and Pricing: The Importance of Asian Demand and North American Supply. The Oxford Institute for Energy Studies http://www.oxfordenergy.org/wpcms/wp-content/uploads/2012/01/NG_59.pdf (Last retrieved 24th July 2013 from).
- Russian Analytical Digest, 2008. Gazprom's Foreign Energy Policy. ISN, ETH, Zürich. Last retrieved 24th July 2013 from: <http://www.isn.ethz.ch/Digital-Library/Publications/Detail/?ots591=0c54e3b3-1e9c-be1e-2c24-a6a8c7060233&lng=en&id=55592>.
- Sartori, N., 2013. The European Commission vs. Gazprom: an issue of fair competition or a Foreign Policy Quarrel? Istituto Affari Internazionali (Last retrieved 24th July 2013 from) <http://www.iai.it/pdf/DocIAI/iaiw1303.pdf>.
- Scheufele, D.A., Iyengar, S., 2011. The State of Framing Research: a call for new directions. In: Kenski, K., Jamieson, K.H. (Eds.), *The Oxford Handbook of Political Communication Theories*. Oxford University Press, New York.
- Searle, J., 1995. *The Construction of Social Reality*. The Free Press, New York.
- Shadrina, E., 2010. Russia's Foreign Energy Policy: Norms, Ideas and Driving Dynamics. Pan-European Institute http://www.utu.fi/fi/yksikot/tse/yksikot/PEI/raportit-ja-tietopaketti/Documents/Shadrina_final_netti.pdf (Last retrieved 24th July 2013 from).
- Snow, D.A., Benford, R.D., 1992. Master frames and cycles of protest. In: Morris, A.D., Mueller, C.M. (Eds.), *Frontiers in Social Movement Theory*. Yale University Press, New Haven.
- Steinberg, M.W., 1998. Tilting the frame: considerations on collective action framing from a discursive turn. *Theory Soc.* 27, 845–872.
- Strauss, A., Corbin, J., 1998. *Basics of Qualitative Research Techniques and Procedures for Developing Grounded Theory*, second ed. Sage Publications, London.
- The Economist, 2013. Russia's Wounded Giant. Last retrieved 24th July 2013 from: <http://www.economist.com/news/business/21573975-worlds-biggest-gas-producer-ailing-it-should-be-broken-up-russias-wounded-giant>.
- Trehub, A., 1991. *The Cognitive Brain*. MIT Press, Cambridge.
- Tsygankov, A. P., 2006. Russia's Foreign Policy: Change and Continuity in National Identity, Rowman & Littlefield, Lanham.
- Tsygankov, A.P., Tarver-Wahlquist, M., 2009. Duelling honors: power, identity and the Russia–Georgia divide. *Foreign Policy Anal.* 5, 307–326 (Last retrieved 24th July 2013 from) <http://onlineibrary.wiley.com/doi/10.1111/j.1743-8594.2009.00095.x/abstract>.
- Tuathail, Ó.G., Dalby, S., 1998. *Re-Thinking Geopolitics: Towards a Critical Geopolitics*. Routledge, London.
- Van Gorp, B., 2007. The constructionist approach to framing: bringing culture back. *J. Commun.* 57, 60–78.
- Vliegenthart, R., Van Zoonen, L., 2011. Power to the frame: Bringing sociology back to frame analysis. *Eur. J. Commun.* 16, 101–117 (Last retrieved 24th July 2013 from) <http://ejc.sagepub.com/content/26/2/101.abstract>.
- Walton, D., 1996. *Argumentation Schemes for Presumptive Reasoning*. Routledge, London.
- Weldes, Y., 1996. Constructing National Interests. *Eur. J. Int. Relat.* 2, 275–318 (Last retrieved 24th July 2013 from) <http://ic.ucsc.edu/~rlipsch/Pol272/Weldes.pdf>.
- Wendt, A., 1999. *Social Theory of International Relations*. Cambridge University Press, Cambridge.
- Williams, M.C., Neumann, I.B., 2000. From alliance to security community: NATO, Russia, and the power of identity. *Millennium—J. Int. Stud.* 29, 357–387 (Last retrieved 24th July 2013 from) <http://mil.sagepub.com/content/29/2/357.extract>.
- Wodak, R., Meyer, M., 2001. *Methods of Critical Discourse Analysis*. Sage Publications, London.
- Woehrel, S., 2009. Russian Energy Policy towards Neighboring Countries. CRS Report for Congress. Last retrieved 24th July 2013 from: <http://www.fas.org/sgp/crs/row/RL34261.pdf>.
- Wood, L., Kroger, R., 2000. *Doing Discourse Analysis: Methods for Studying Action in Talk and Text*. Sage Publications, London.
- Zhiznin, S., 2010. Russian energy diplomacy and international energy security (Geopolitics and Economics). *Baltic Reg. J.* 1, 7–17 (Last retrieved 24th July 2013 from) http://journals.kantiana.ru/upload/iblock/e68/Zhiznin%20Stanislav%20_7-17.pdf.

Software

- ATLAS.ti. Version 6.2, 2010. ATLAS.ti Scientific Software Development, Berlin.
- Draw.io. 2013. Free online diagram drawing application. JGraph.Ltd.

Further reading

- Fomichev, M., 2010. Shale gas no threat to Gazprom in Europe—CEO. RIANOVOSTI. Last retrieved 24th July 2013 from: <http://en.rian.ru/russia/20100409/158500290.html>.
- Gazprom, 2011a. Final Press Conference involving the Gazprom Board of Directors Chairman and the Gazprom Management Committee Chairman. Last retrieved 24th July 2013 from: <http://www.gazprom.com/f/posts/94/248065/gazprom-final-press-conf-2011-06-30-en.pdf>.
- Gazprom, 2011b. From Illusion to Lasting Values. Last retrieved 24th July 2013 from: <http://www.gazprom.com/press/reports/eternal-values/>.
- Miller, A., 2010. Natural Gas: Energy of the XXI Century. Speech Presented at the 13th Annual General Assembly of the European Business Congress, Cannes, France. Last retrieved 24th July 2013 from: <http://www.gazprom.com/press/miller-journal/004489/>.
- Pravosudov, S., 2011. Vsevolod Cherepanov: North, South and East. *Gazprom. Gazprom Magazine Issue 1-2*. Last retrieved 24th July 2013 from: <http://www.gazprom.com/press/reports/north-south-east/>.