Risk perception and political alienism: Political discourse on the future of nuclear energy in Hungary

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ABSTRACT: This article analyzes political narratives of the discourse on the future use of nuclear energy in Hungary. In light of the January 2014 parliamentary decision to expand Hungarian nuclear energy production capacity with Russian technology and financing, the article examines parliamentary addresses of the period 2010–2013 to identify and interpret characteristics and changes in nuclear narratives of parliamentary parties and the government. The content analysis includes identification of framing, characteristics of choice of language, realization of risk and of benefit oriented speaking patterns, and the assessment of power relations between the political actors. The article argues that the nuclear communication strategies of political parties show distinct approaches: full front approach to include nuclear aspects of all possible issues, avoidance that attempts not taking sides in this issue, and re-direction that, within the nuclear framing, places a focus on other aspects with the purpose to re-define the dominant framing and to rule the discourse. Risk awareness patterns range from comprehensive to occasional, selective and latent risk perception structures. The Risk Perception Index, comprehending levels of risk and benefit perception, can serve as a model to measure, in numeric terms, the support or critique of the nuclear agenda.

KEYWORDS: nuclear energy, power relations, risk perception, discourse analysis

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INTRODUCTION

Nuclear energy and the public sphere

It is argued that as the majority of Hungarian society has no access or interest in first-hand information on nuclear energy, any relevant discourse is based on constructed realities. Discourses themselves also contribute to the creation of social realities. Members of the public lack direct empirical knowledge; therefore reality is replaced by a constructed space, and defined primarily by claimed or actual experts and decision makers. In the construction of virtual space for nuclear energy, media play an essential role.

As a consequent phenomenon, a significant part of the public has an opinion about the use of nuclear energy, without actually possessing information about its use. Forming an opinion without information reflects an intensification of the role of beliefs and attitudes. Opinion is not any longer based on information, but is a reproduction of the attitudes expressed towards other issues, such as the perceived significance of technological and scientific advancement, attitude towards and confidence in the state, the general level of trust in institutions and people, as well as environmental awareness.

Social discourse about the use and future of nuclear energy is based on constructed realities, where, together with the indifference of the majority of the public, various actors shape their own interpretation of the situation. Their goal is to position themselves as competent experts, who are then in a position to influence decision-making. The correlation between personal value choices and the views on nuclear energy are sought, to decide whether sympathizing with or refusal of the use of nuclear power is a reflection of personal value systems.

Finally, it is important to define who has an actual interest in the nuclear issue. The stakeholder concept defines interested actors not only in the context of curiosity but, in view that the outcome, operations or possible successes and failures of the given organization or program have a strong influence on the given person or group. Stakeholders form a particular segment of the public, who have the curiosity as well as the vested interest in the given subject. Differences in the interpretation of nuclear energy are a reflection of the complex structure of stakeholders. It may be argued that stakeholder groups today are a representation of the citizens (Habermas, 1962) (bourgeois, Bürger) of the liberal democracies. It can be claimed that stakeholder groups have a vested interest in the issue, while having differing levels of power to exercise influence on the given subject. In contrast citizens used to be key influencers and actors in the field of social-political representation of interests.

Paks Nuclear Power Plant and public discourse

In Hungary, the issue of nuclear energy[1] has never been in the focus of public attention or center of debates. The four reactors of the Paks NPP were built between 1969–1987, in the period of single party rule, with the last reactor having been inaugurated a few years before the fall of the communist system in Hungary. In that period, discussions on strategic issues were not overtly encouraged from the dominant political power. No element of the nuclear life cycle, development and operation of nuclear power plants or handling of nuclear waste was ever the crystalliza-

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[1] In Hungary, there are a number of further institutions using nuclear energy, including a smaller reactor for educational purposes at the Budapest University of Technology, a research reactor for scientific purposes at the Hungarian Academy of Science as well as various health care institutions. Unless indicated differently, use of nuclear energy always refers to generation of electric power through nuclear energy at the Paks Nuclear Power Plant.

tion point of public debates or anti-nuclear movements. Even events like the Chernobyl disaster in 1986 did not bring to the surface any differing views. The only notable exception relates to the issue of uranium mining in Hungary: in the Mecsek mountains, a low lying mountain range in the southern part of the country, significant extraction of uranium deposits took place in the period 1957–1997, and reports depicting serious health consequences reached public awareness.

The fall of the communist system in 1989–1990 and the development of a parliamentary democracy prompted a new setup, where conflicts between or matching of differing interests could develop channels to reach the public's attention. The question of nuclear energy could have been one of the issues for widespread public discussion, with atomic power being one of the alternatives for meeting the growing energy needs of the economy and society. Apart from the limitations described at the beginning of the paper, no legal barriers emerged to stop public discussion on the use of nuclear energy. As an issue with widespread possibilities of association, there was a strong chance that it would become an area of intense discourse.

However, for the first 20 years of parliamentary democracy and pluralistic media, it can be demonstrated that the issue of nuclear energy and the Paks Nuclear Power Plant did not meet with public interest. By and large, sensitivity to nuclear issues did not prove significant. The only exceptions to general disinterest were periods that followed nuclear accidents, catastrophes or breakdowns. The periods following the Paks NPP breakdown in 2003 and especially the Fukushima accident in 2011 are notable exceptions to general disinterest (MKIK, 2011).

Developments in the public sphere between 2010 and 2013

In April 2009 the Hungarian Parliament brought a resolution to start preparatory steps for the expansion of the Paks NPP, with the aim of adding two further reactors to the existing four. A mandate was given to the government to start investigations, to be able to make later a well-founded decision, once expansion is recommended. Following parliamentary elections in April 2010 the new government pursued the mandate granted by the previous parliament.

Four years later, on January 13, 2014, in the presence of Russian President Vladimir Putin and Hungarian Prime Minister Viktor Orbán, the general director of Russian nuclear energy giant Rosatom and the Hungarian Minister for National Development signed an intergovernmental agreement for the construction of the two new units at the Paks NPP. To secure financing of the construction, Russia agreed to offer a loan of up to 10 billion euro. The current analysis studies the period leading to the decision of signing of the Paks expansion deal and seeks signs if, during the period 2010–2013, any reference were made to actual preparation of a nuclear agreement contract between Hungary and Russia.

In order to analyze the prevailing narratives in Hungary in the period 2010–2013, focus is put to the analysis of political discourse. The study of texts of parlia-

mentary debates aim at identifying dominant political narratives related to nuclear energy. Study of parliamentary discourse allows for an in-depth analysis and a thorough apprehension of individual argumentations, as well as an overview how narratives may change over periods of time.

BACKGROUND AND LITERATURE REVIEW

The importance of language

Significance of words in creating sharp differences is argued for (Szabó, 2006). Szabó states that conceptual use of language contributes to the construction of "political aliens." Development and use of differing language structures create and reinforce differences and create categories of differentiation or discrimination. Language structures turn supposed intentions into determined actions. Categorization through language structures results in social categorizations and provide an interpretational framework for actions. It is also important to recognize that in modern societies, narratives describing significant differences in opinions, often use metaphors related to power: war, enemy, alien. Holders of politically contrasting views are described as political aliens, who can be dangerous, irrelevant or unknown. Perception of difference ensues actual differentiation: "the political alien is primarily a communication alien, who is alien because of our own perception and that defines our relation to them" (Szabó, 2006, p. 30).

Facts are especially important upon the study of a subject. Language forms the bridge between facts and the actual text corpus. Language as such therefore is an active agent in constructing social realities. The use of language has an impact on the interpretation of facts, and consequently becomes part of the reevaluated, reinterpreted reality. Facts are therefore not a set of objective conditions, structures, institutions, events or activities but "an objective reality interpreted in the mind, the language and in the text. Empirical is a construction." (Szabó, 1998, p. 282).

Identification of meaning behind words is a core area for research. Critical discourse analysis examines what relationship exists between casual use of language and social determination (van Dijk, 1991; Fairclough, 1995). It is argued that the element of power is essential in the analysis of the actual discourse. Actual discussions always include a power element, therefore they cannot be approached irrespective of the social structures they represent. Verbal and written language needs to be analyzed in its social context. Claims prevail that the influence works in both directions: while language is a representation of the social structures, language itself exerts a strong effect on social structures.

The previous arguments imply that potential issues of a discourse can be looked upon from two different perspectives. First, they can be the subjects of critical publicity, about which individual members of society express their opinion, or they can be cases of manipulative purposes and serve as a tool of socialization of issues. This

possibility reinforces Habermas' claim that the "sine qua non" of the public sphere is the strong division between state and society. However, as Habermas noted some sixty years ago, the emerging "societalization" of the state, parallel to the growing "stateification" of society, gradually destroy the basis of the bourgeois public sphere (Habermas, 1962). The state becomes the master of publicity and turns it away from its original function. This results in the state becoming an active influencer of societal affairs. Social affairs are not any more governed by their own bourgeoisie, but become influenced and then subordinated to interventionism. The re-politicized social sphere brings along the falling apart of the public sphere.

Perceived risks, benefits and the public sphere

Risk perception forms a dominant element of discourse. As the issue of safety gains prominence in modern societies, perceived risks are lighthouses that set directions for communication, interaction and behavior. Risk becomes the dominant descriptor of modern societies, therefore risk taking ability and risk perception are key factors in social survival and development (Beck, 1992, 2006). It is claimed that survival chances of societies could grow through a focus on distribution of risk, instead of distribution of wealth. Arguably, interpretation of risks should not be limited to their technological and natural science contexts, but their social, cultural and political relevance should also be admitted. In order to handle "civilization costs," science needs to go hand in hand with political, economic and ethical considerations. The concept of a risk society builds on the notion of imagined communities (Anderson, 1983), as Beck identifies the factor of risk as the key binding material of modern communities (Beck, 1992). This argumentation may challenge the notion of the "political alien" (Szabó, 2006) where the discursive differentiation is the prime factor of distinction between "us" and "them." Beck (1992) emphasizes the universal relevance of belonging to a society based on risk. Risk in his argumentation affects every single member of society while the concept of "political alienism" (Szabó, 2006) would imply that some people are affected by risk, while others are not.

It is argued that concepts of universal sharing of risks and political alienism imply contradictions. The first suggests that recognition of risk creates strengthened community feelings, while the latter underlines that detailed interpretation of risk, including its causes and results, reinforces inclination to differentiate and even antagonize differences. The latter approach lacks the acceptance of shared responsibility and shared consequences, even if creation of risks as well as managing its consequences affects every member of society.

The interrelation between the issue of risk and alienism is demonstrated if groups of people start to become perceived as alien groups, the subsequent discourse on dangers and risks intensify. Alternatives are not any more discussed as possible actions with equal chances for decisions, but are differentiated as a clear

choice between "our" alternative that brings benefits and is in the interest of people with whom empathy is expressed, and "their" alternative that brings dangers, risks and the outcome of which cannot be foreseen. It may well be that "their" alternative serves interests that are unclear or even diabolic. Consequent fear strengthens further the perception of fear from actors whose intentions are unknown and should be rightly feared of. Differentiation between the known and the alien further intensifies developments of selection mechanisms and construction of parallel realities.

The phenomenon of alienation extends beyond the socio-political dimension, and also includes the social-technological dimension. Contrast between safe and secure on the one hand, and unforeseen and full of risks on the other hand becomes an overriding concept for a wide range of technological areas, such as innovations, investments and development models. The social sphere of life is also dominated by preference to what is considered safe and secure: preference for choices in arts, sports, education, health care — or even political parties — is often based on the concept of safety and security.

Finally, it needs to be acknowledged that perception of risk differs considerably. Experts and lay people have contradicting perceptions of risk (Vári, 2009). Experts base their risk assessment on correlations of statistical data, where numeric values provide probabilities of the occurrence of certain outcomes. Nonprofessionals base their judgment on contextual characteristics, such as the level of fear and level of notoriety. Risk perception is relative and acceptance of risk depends primarily on the trust expressed in the institution managing the given risk (Slovic, 2000).

Risk is an element measured of the probability and the impact of the occurrence of a given event. The higher the likelihood of the occurrence of an event to happen, and the higher the impact of the manifestation of the given event, the higher the consequent risk is. Risk relationship can be expressed as a mathematical equation as: Risk = Impact x Probability.

Fears related to technological progress do not only relate to perceived risks. Awareness exists in the public that technological innovations always bear social consequences as well. Innovations therefore have both a social and a technological dimension. The contrast between these dimensions increases tension and contribute to reluctance to accept or adapt to technological innovations (Felt & Wynne, 2007).

METHODOLOGY

Plenary sessions of the Hungarian Parliament of the period October 2010–December 2013 were analyzed, using the tools of content analysis. Transcripts of parliamentary plenary sessions[2] were coded and analyzed to study nuclear energy re-

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[2] Transcripts are available and researchable from the website of the Hungarian Parliament. Retrieved February 10, 2014 from http://parlament.hu/internet/plsql/internet_naplo.

lated political discourse. All texts have been considered that included the term "nuclear energy" or "nuclear.[3]" First, all transcripts were categorized according to their elements of identification. Identification allowed quantitative assessment of the political discourse through affirming critical numbers and distributions among speeches.

Identification coding was done according to the following criteria:

— name of Member of Parliament (MP),
— MP's party affiliation,
— date of speech,
— law under discussion.

Identification was followed by a contextual analysis to specify the presence and meaning of nuclear energy related terms. Contextual analysis allowed for the qualitative assessment of the individual and the aggregate text corpuses.

Contextual coding was built on the following criteria:

— reference made in speech to the speeches of MPs from other parties,
— key words,
— key message,
— risks mentioned in relation to the expansion of the Paks NPP,
— benefits mentioned in relation to the expansion of the Paks NPP,
— specific reference implying power relations.

FINDINGS

Distribution of addresses

In the parliamentary term studied the following parties were represented in the Hungarian Parliament: Fidesz (government, conservative), KDNP (government, Christian Democratic), MSZP (opposition, socialist), Jobbik (opposition, national radical), LMP (opposition, green) and PM (opposition, green).[4] Representatives of each political party contributed to the parliamentary discourse on nuclear energy.[5]

Analysis of interventions show that of the 162 addresses dealing with the issue of nuclear energy, representatives of LMP commented most frequently (46 occasions), followed by government representatives (28), Jobbik (26), Fidesz (24) and MSZP (23). Comments were most frequently made by Bernadett Szél (LMP, 18),

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[3] In Hungarian these are covered by 2 distinct terms: *atomenergia* and *nukleáris*. Technical contributions, such as the speaker of the house reading out the name of the legislation before voting, were omitted.

[4] The PM was formed in February 2013 following its breakaway from the LMP. Its deputies became independent members of the Hungarian Parliament, as members could not form faction.

[5] In the case of parties in the government, there is a separate indication to addresses made by party representatives or delivered on behalf of the government.

Benedek Jávor (LMP), István Józsa (MSZP) and Lajos Kepli (Jobbik) (12 each), while further frequent advocates including János Fónagy (government, Fidesz) and László Szilágyi (LMP) (11 each). It is worthwhile noting that both Prime Minister Viktor Orbán and State Secretary of Environmental Protection Zoltán Illés touched upon the issue of nuclear energy only once each (Table 1).

Table 1. Number of parliamentary addresses on nuclear energy

Political party	Number of addresses
LMP	46
Fidesz (government)	28
Jobbik	26
Fidesz	24
MSZP	23
KDNP	9
KDNP (government)	4
PM (independent)	2
TOTAL	162

Source: author.

Background of MPs and content of contributions

Analysis of the background of frequent proponents of the nuclear issue (Table 2) allow for certain observations. The political discourse on nuclear energy is influenced primarily by engineers (41 speeches of the 119). The contribution of economists and sociologists is also significant (35), while the professions of biologists, teachers and theologians are represented by 1 person each with 36 addresses in total.[6] In terms of socio-demographic composition, LMP politicians are younger than the average, are of social science, humanities, economics and natural science backgrounds, and the green party ranks the only active female politician of the nuclear discourse. While these numbers have indicative significance and do not grant authenticity to quantitative conclusions, it is important to note that the politicians of LMP show a cohesive pattern of criticism in relation to nuclear energy (see discussion later on risk and benefit assessment patterns).

However, it would fit with patterns identified in the US (Greenberg & Truelove, 2011), that women, younger people and those with a social science, humanities, economics and natural science background are more likely to express critical views against nuclear energy than the older generation, men and with an engineering

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[6] Certain overlaps derive of Bernadett Szél and János Bencsik indicating 2 qualifications on their data sheet.

background. Furthermore, the critical approach of people with a non-engineering background is usually broader, and looks at the issue of nuclear energy not only from an operational perspective, but through considering the issue as part of a complex socio-environmental framework (Table 2).

Table 2. Most frequent speakers on nuclear issues

Name and surname	Year of birth	Profession	Political party	Number of addresses	Critical / supportive to Paks expansion
Bernadett Szél	1977	economist, sociologist	LMP	18	C
István Józsa	1953	engineer	MSZP	12	S
Benedek Jávor	1972	biologist	LMP	12	C
János Kepli	1978	engineer	Jobbik	12	S
János Fónagy	1942	lawyer	government (Fidesz)	11	S
László Szilágyi	1965	teacher	LMP	11	C
András Aradszki	1956	lawyer	KDNP	7	S
Pál Kovács	1963	engineer	government (Fidesz)	7	S
János Bencsik	1965	theologian, sociologist	Fidesz	7	S
István Göndör	1950	economist	MSZP	6	S
Ferenc Tóth	1950	engineer	Fidesz	5	S
Zoltán Balczó	1958	engineer	Jobbik	5	S
János Bencsik*	1965	theologian, sociologist	government	+4	C/S
Benedek Jávor*	1972	biologist	PM	+2	C

* The 31 December 2011, State Secretary of Energy János Bencsik left his government position, while in February 2013 Benedek Jávor quit the LMP and became co-founder of the PM. Number of addresses in these line indicate their addresses in their new positions.

Source: www. parlament.hu, retrieved February 10, 2014.

Referencing in speaking

Occurrences were then analyzed where advocates would make direct reference to a remark made by another member of parliament. These references give an indication on narratives changing into discourse, on creation of discussion chains, and reveal an intention to turn representation of narratives into dialogues or even streams of communication. The LMP made 15 such references, followed by Jobbik (10) and MSZP (7), while the government (3) and Fidesz (2) lagged behind. Fi-

gures imply that referencing and reacting to allocutions is exercised by the opposition parties, while the government and its parties rather refrain from referencing. This phenomenon may be the reflection of standard parliamentary structures, where governments and government parties see their role as presenters of bills, while opposition parties need to reference and position themselves against the government and often against each other. It can be argued that the presence or lack of referencing provides an indication on the power structures between parliamentary forces and reveals imbalances in terms of a need of to set independent narratives.

Relevance of parliamentary speeches

Relevance of parliamentary speeches was designated according to how direct their focus on the Paks expansion had been. All allocutions were categorized to see their direct relevance. Category 3 addresses includes contributions with a full focus on the future of nuclear energy in Hungary and the planned expansion of the Paks NPP, category 2 refers to speeches with focus on other aspects of nuclear energy, while category 1 is attributed to those speeches that have remarks on nuclear energy, however their focus is actually on another area (Table 3).

Table 3. Parliamentary addresses and their relevance to nuclear development plans

	1	2	3	Total
LMP	15	16	16	47
Government (Fidesz)	8	13	7	28
Jobbik	8	12	6	26
Fidesz	7	12	5	24
MSZP	11	8	4	23
KDNP	1	5	2	8
Government (KDNP)	1	1	2	4
PM	—	1	1	2
Total	51	68	43	162

Source: author.

LMP shows an even distribution of speeches combining a direct and an indirect approach to the subject. Analysis of MSZP addresses shows that socialist MPs touched nuclear related issues with indirect aspects, and their allocutions showed limited relevance to the actual expansion of the Paks NPP. Fidesz, KDNP and Jobbik as well as the government preferred to discuss areas with nuclear relevance, but that were not directly related to the future development plans of Paks NPP. LMP exploited every possible opportunity to tie to the nuclear issues and deal with every

aspect. Their strategy can be characterized as that of a f u l l f r o n t a p p r o a c h. MSZP preferred not to be involved with direct development issues, therefore their strategy can be described as that of a v o i d a n c e. Fidesz, KDNP and Jobbik as well as the government opted for restraint from positioning development plans as the actual focus of nuclear issues. Their strategy can be described as a drive for r e - d i r e c t i o n.

Discussions on nuclear-related bills

Deliberation on nuclear energy took place in relation to discussion of relevant bills, or through the raising of direct questions. Most frequently the contributions were made when a law, directly effecting and regulating nuclear issues, was discussed. The modification of the nuclear law in 3 stages, the modification of the energy law in 2 stages, the debate and elaboration of the national energy strategy and the reports of the safety aspects of the use of nuclear energy dominated the scene. A significantly lower number of comments were recorded when the social — environmental setting of nuclear energy was regulated. These references included the proposal on the public access to information in relation to the planned Paks expansion, modification of the law on mining, the national framework strategy on sustainable growth and the modification of law on spatial planning (Table 4).

Table 4. Proposed acts related to nuclear energy

Name of law	Name of law in Hungarian	Registry number	Dates of discussion	Number of addresses
Modification of law on nuclear energy	Az atomenergiáról szóló 1996. évi CXVI. törvény módosítása	T/3288	6/8-27/2011	21
Energy strategy	A nemzeti energiastratégiáról	H/3839	9/13 - 10/3/2011	17
Report of safety of nuclear operations	Az atomenergia 2009. 2010. és 2011. évi hazai alkalmazásának biztonságáról szóló jelentés elfogadásáról	H/9949	2/12/2013	16
Law on nuclear energy	Az atomenergiáról szóló 1996. évi CXVI. törvény módosításáról	T/9235	11/27/12	10
Law on nuclear related issues	Az atomenergiával, valamint az energetikával kapcsolatos egyes törvények módosításáról	T/11101	11/27/12	9
Modification of certain energy related laws	Egyes energetikai tárgyú törvények módosításáról	T/13055	11/19/13	5

Public access to information on Paks expansion	A paksi atomerőmű bővítésére vonatkozó döntésben való társadalmi részvételről és az előkészítéssel kapcsolatos adatok teljes nyilvánosságáról	H/4114	11/14/11	4
Mining law	A bányászatról szóló 1993. évi XLVIII. törvény módosításáról	T/6589	4/11/112	4
Modification of certain energy - related laws	Egyes energetikai tárgyú törvények módosításáról	T/9245	11/27 - 12/09/12	3
strategy on sustainability	A Nemzeti Fenntartható Fejlődés Keretstratégiáról	H/9064	2/26/13	3
Modification of law on spatial planning	Egyes törvények területrendezéssel összefüggő módosításáról	T/12910	11/27/12	3
Energy law modification	Az energetikai tárgyú törvények módosításáról	T/1941	12/21/2010	2

Source: author.

Immediate questions

Immediate questions to the government are reflections of issues raised by members of parliament in the form of addressing members of the government. During this period 4 questions were raised in relation to nuclear energy, all by politicians of the LMP. These questions concerned planned action of the government following the Fukushima disaster, results of the stress tests of the Paks NPP and the repeated enquiry into how much the recovery of the Paks breakdown in 2003 cost to Hungarian taxpayers.

Presence of risks and benefits

In the context of analysis of risks and benefits, the dominance of certain issues is notable (Table 5). The issues of cost and the non-transparency of budgetary aspects, followed closely by the concerns of operational safety, dominate the discourse on risk. The third significant area of concern is related to issues of lack of public control, unclear role of authorities and questions related to information and management. Lack of sustainability and its negative effect on the development of renewable energies are also mentioned. Focus on risk perception and presentation is dominated by representatives of the LMP, in fact its politicians were the only ones to present risk aspects only. Two speeches each from Fidesz and Jobbik MPs referred to risks as well as benefits, while MSZP and KDNP representatives did not touch on risks at all.

The analysis shows that the risk perception of the LMP is especially high on the issue of costs, safety and lack of information and public control. Past records, time and budget overruns as well as doubts about sustainability also prevail. To a much lesser extent, Fidesz is aware of the risks related to costs, lack of publicly available information and sustainability, while Jobbik mentions possible risks in relation to handling of used fuel rods and safety. The LMP portrays a c o m p r e h e n s i v e   r i s k   a w a r e n e s s   m o d e l, where financial, managerial, environmental and political issues all abound. Fidesz has a representation of s e l e c t i v e   r i s k   a w a r e n e s s where certain risk elements appear randomly. Jobbik has o c c a s i o n a l   r i s k   a w a r e n e s s, primarily related to its claimed expertise in technological aspects. Government representatives did not touch upon any of the risk elements in the given period, signaling a l a t e n t   r i s k   a w a r e n e s s (Table 5).

Table 5. Number of mentions of nuclear-related specific risks

	Costs	Safety	Lack of public control, information	Not sustainable	Past record	Leaves no space for renewables	Time and budget overruns	Long term handling of fuel rods	Total
LMP	5	4	3	1	2	1	1	—	17
Fidesz	1	—	1	1	—	—	—	—	3
Jobbik	—	1	—	—	—	—	—	1	2
Total	6	5	4	2	2	1	1	1	22

Source: author.

In terms of benefits, the positive effects on the environment through decarbonization provide the dominant framing, followed by cost efficiency and perceived low cost as well as security of energy supply. Safety of operations and reduction of dependency on energy imports are also mentioned. Narratives on benefits are led by Jobbik (7 mentions), followed by the government (5), Fidesz and MSZP (4 each). KDNP contributes with 1 argument for the benefits, while LMP deputies do not account for any benefit in their speeches.

The benefit mapping of parliamentary parties provides an even spread of advantages of nuclear energy across the range. With the exception of the LMP, all parties mention some or several benefit elements. With the highest number of mentions, government representatives emphasize benefits the most, reflection of an a b s o l u t e benefit perception. Jobbik perceives environmental effects, cost factors and the energy supply security as main benefits in the framework of an a c c e n t u a t e d benefit model. Fidesz and MSZP show an even distribution of various benefit factors, representing a b a l a n c e d benefits model (Table 6).

Table 6. Number of mentions of nuclear-related specific benefits

	Environment, clean energy	Cost, cost efficiency	Supply security, reliability	Safety, professional control	Energy inde-pendence	Total
government (Fidesz)	4	3	3	3	—	13
Jobbik	4	3	2	—	—	9
Fidesz	3	1	2	—	1	7
MSZP	1	2	—	1	1	5
KDNP	—	—	—	1	—	1
Total	12	9	7	5	2	35

Source: author.

In overall terms, emphasis of risks or benefits provides an insight into the perception of nuclear energy of the given political party. Priority to risks reflect concern for the expanded use of nuclear energy, while focus on benefits underlines anticipated advantages. The balance of risks and benefits provide an indication if the actor has supportive or opposing views regarding the expansion plans of the Paks NPP.

Of the two factors of the risk equation, analysis of texts testifies that politicians primarily focus on impact and neglect assessment of probabilities. Supposedly, description of impacts serves communication and political purposes better than probabilities. Furthermore, emphasis on impact is in line with the overall approach that builds on the significance of the social-environmental factors. On the other hand, discussion on probabilities rather refers to occurrence of events directly related to operations. This observation on risk perception in political discourse supports the statement that within the risk formula in general terms, the impact of the danger, consisting of size and controllability is considered of bigger importance than the probability of its occurrence (Bauer, 1995).

Balance of risks and benefits: the Risk Perception Index

The presence of risk and benefit factors in the narrative of each party is reflective of its overall attitude to nuclear energy. Overall balance of risk and benefit elements is an indication of this attitude. An indicative figure can be drawn based on the difference in number of mentions of benefits and risks.

The difference provides an indication of how actors see the relationship between risks and benefits, and gives an insight into individual risk assessments. The Risk Perception Index can also be perceived as an overall reflection of the attitude towards nuclear energy development plans. Bearing in mind that supporters tend to

emphasize benefits over risks, while opponents usually put focus on risks ahead of benefits, the balance of benefits and risks gives manifestation to levels of support or dissent to the expansion project. Based on the Risk Perception Index, the most ardent supporter of the Paks expansion project is the government, followed by Jobbik, MSZP and Fidesz, while the only and notable critic of the nuclear project is LMP (Table 7).

Table 7. Balance of risks and benefits based on nuclear-related parliamentary addresses

	Government	Jobbik	MSZP	Fidesz	KDNP	LMP
Risks	0	2	0	3	0	17
Benefits	13	9	5	7	1	0
Balance (risks-benefits)	-13	-7	-5	-4	-1	17

Source: author.

Reference to power relations

Once the differences between parties in relation to their nuclear energy attitudes are noted, it is worthwhile to identify language structures of political actors. The overall terms and political argumentation serve two purposes: it is an attempt to convince other parties and/or the government of an actual position, and it is a demonstration to the public sphere that the actual political party represents the interests of its electorate. Language structures may provide in-depth explanations for political standpoints regarding the issue of nuclear energy as well as views on each other's electorate. Analysis of language gives an indication as to how the power relations are perceived between actors.

Categories and reference to power relations prove that political language is indeed an important tool in creating reality. Framing of the issue of nuclear energy is accomplished through the use of specific language. Transcripts do not provide detailed information on emotions, but indications are that emotional content adds significant elements to the language construction (Table 8).

Table 8. Quotes with reference to power relations (Authors' translation into English)

Name, surname, political party	Date	Quote	Category, reference to power relations
János Bencsik, Fidesz (gov)	6/8/11	We are speaking about the replacing of existing capacities, and not about expanding additional capacities.	Political turning point, first reframing of the issue, change in narrative
István Göndör, MSZP	6/8/11	Let us create a positive public atmosphere and acceptance of the expansion.	Misuse of terminology on purpose

Benedek Jávor, LMP	11/14/11	It is democracy that needs debate, including potentially a referendum, and not the issue of nuclear energy or renewables.	Reframing the issue at stake
András Schiffer, LMP	6/18/12	We should be grateful that they are not forcing in the nuclear law into here.	Nuclear issue as a symbol
László Szilágyi, LMP	6/28/12	Instead of dealing with this, the government is dreaming about new nuclear reactors.	Discrediting the other party, minimize and ridicule their activity
Pál Völner, Fidesz (gov)	11/19/12	One of the key guarantees of nuclear energy safety and social acceptance is the transparency of related activities.	Hypocritical, trivial statement
Bernadett Szél, LMP	11/19/12	Fidesz does not understand, perhaps it lacks this in its inner culture, that the inclusion of stakeholders is not something unnecessary, but rather the opposite.	Discrediting the other party, generalization
János Fónagy, Fidesz (gov)	11/26/12	The new reactor(s) are fundamentally necessary for maintaining the energy security of the country.	Political turning point, change in narrative
Ferenc Tóth, Fidesz	11/27/12	Social control does guarantee safety.	Hypocritical, trivial statement
Lajos Kepli, Jobbik	11/27/12	It would be worthwhile to check, before taking to underground storage, what radioactivity these wastes have at all, after being stored for years on the surface.	Minimization of problem, attack instead of defense
János Bencsik, Fidesz	2/12/13	Nuclear safety needs to enjoy utmost priority against any other partial interests.	Political turning point, change of emphasis
Lajos Kepli, Jobbik	2/12/13	The iodium contamination did not cause any health hazard, and only served for the anti-nuclear circles and lobby to create panic for practically nothing.	Minimization of problem, attack instead of defense
Bernadett Szél, LMP	2/12/13	Nuclear energy keeps generating problems that today's economy and society can simply not handle.	Nuclear issue as a symbol
Bernadett Szél, LMP	2/12/13	Nuclear energy is present in every home.	Nuclear issue as a symbol

Pál Völner, Fidesz (gov)	6/3/13	If the distinguished MP had not only focused on keeping contact with the Austrian green party reps during the visit at Paks, obviously he could have received much more detailed pieces of information.	Discrediting the other person, speaking from up to down
János Fónagy, Fidesz (gov)	10/28/13	Dear Ms. MP, please relax (laughter and clapping from government benches). You will receive an answer to every rational question of yours.	Discrediting the other person, speaking from up to down, sexism
Viktor Orbán, Fidesz (gov)	12/2/13	I am happy to tell you this, but if you had prepared before your speech, you could have read it for yourself.	Discrediting the other person, speaking from up to down

Source: author.

In the political context, language serves the purpose of winning over the others. Choice of words and manufacturing of sentences show self-confidence, awareness of self-importance and significance dedicated to the issue. In certain cases missionary commitment, careful distancing or even skepticism is felt. Whichever way it is, choice of language is not accidental, it is a representation of the individual and group (party) attitude to the issue of nuclear energy.

CONCLUSIONS

Analysis of political discourse on the nuclear agenda indicates diversity of strategies, narratives and use of language. Individual narratives are influenced by personal background, party affiliation and perceived interests of the electorate. Communication is situational with content and style of narratives varying over time in relation to changes in individual, party and government strategy, focus, situation and audience. Most of the addresses are expressions of narratives and do not refer to allocutions from others. However, when reference is made, it is usually confrontational. Contrasting, confronting or even alienating is not only reflected in differing contents, but in construction of language and tone attempting to minimize, ridicule, discredit or speak down to other actors. Nuclear communication strategies of political parties show distinct approaches: a full front approach to include nuclear aspects of all possible issues, avoidance that attempts not taking sides in this issue, and re-direction that, within the nuclear framing, places focus on other aspects with the purpose of defining the dominant framing and to rule the discourse. Each actor, including the political parties and the government have their distinct

risk and benefit awareness footprint. The Risk Perception Index, a draft model to measure support or criticism of a given issue, provides a clear indication of the dimension of these differences and is characteristic to the overall attitude to nuclear energy of the individual political actor.

Sharp differences in risk and benefit perception indicate the lack of a commonly shared risk vision. Individual risk perceptions are constructed reflections and represent sets of individual backgrounds, beliefs, values and interests. Choice of language, including framing, reference to other actors and relevance are essential in the social construction of the nuclear agenda. Individual interpretations are the main driving force behind the prevalence of alienism in relation to the nuclear agenda, resulting in a sharp distinction and potential confrontation between "us" and "them," supporters and critiques of the program. The lack of a shared vision of the Paks development program eliminates the chance of the realization of the vision of a risk society, where development builds on the guarantees of sharing risks. Rather, the findings reveal that in the discourse, the construction of political aliens, the use of language as a tool of representation of power structures instead of expression of facts, and the significantly differing levels of risk and benefit awareness are reflections of the lack of a balanced and widely shared social construction of the nuclear agenda.

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REFERENCES

Anderson, B. (1983). *Imagined Communities: Reflections on the Origin and Spread of Nationalism*. London: Verso.
Bauer, M. (ed.) (1995). *Resistance to New Technology: Nuclear Power, Information Technology and Biotechnology*. Cambridge, UK: Cambridge University Press.
Beck, U. (1992). *Risk Society: Towards a New Modernity*. London: Sage.
Beck, U. (2006). Living in the world risk society. *Economy and Society*, 35 (3), pp. 329–345.
Fairclough, N. (1995). *Critical Discourse Analysis*. London: Longman.
Felt, U., Wynne, B. (2007). *Taking European knowledge society seriously*. Brussels: European Commission. Retrieved January 24, 2014 from http://www.synbioproject.org/process/assets/files/6452/_draft/european-knowledge-society_en.pdf.
Greenberg, M., Truelove, H.B. (2011). Energy choices and risk beliefs: Is it just global warming and fear of a nuclear power plant accident? *Risk Analysis*, 31 (5), pp. 819–831.
Habermas, J. (1962). *Strukturwandel der Öffentlichkeit* [The Structural Transformation of the Public Sphere]. Darmstadt and Neuwied: Luchterhand Verlag.
MKIK Gazdaság- és Vállalkozáskutató Intézet (2011). *A fukusimai atomerőmű-szerencsétlenség sajtóelemzése* [Media analysis of the Fukushima nuclear power plant disaster]. Budapest: MKIK.

Retrieved May 30, 2013 from http://www.gvi.hu/data/papers/fukusima_2011_tanulmany_ 111128_.pdf.

Slovic, P. (2000). *The Perception of Risk*. London: Earthscan.

Szabó, M. (1998). A politikai szemantika lehetőségei. A társadalomtudományok nyelvi-konstrukciós fordulata és a politológia [Possibilities of political semantics. Linguistic construction changes of social sciences and politology]. In: Szabó, M. (ed.). *Diszkurzív térben. Tanulmányok a politika nyelvéről és a politikai tudásról* [In Discursive Space. Studies about Political Language and Political Knowledge]. Budapest: Scientia Humana.

Szabó, M. (2006). *Politikai idegen* [Political Alien]. Budapest: L'Harmattan.

Vári, A. (2009). *Tiszta atomenergia? Radioaktív hulladékkezelés Magyarországon és külföldön* [Clean Nuclear Energy? Handling of Radioactive Waste in Hungary and Abroad]. Budapest: L'Harmattan.

van Dijk, T.A. (1991). *Racism and the Press*. New York and London: Routledge.