

Social aspects of the functioning of the Ignalina nuclear power plant

Liutauras Labanauskas

*Institute for Social Research
Saltoniškių str. 58, LT-08105 Vilnius*

The key themes in this article relate to policy observation and analysis of social aspects of the functioning of the Ignalina Nuclear Power Plant (INPP). The multiethnic Visaginas community is socially, economically and culturally excluded from other areas of Lithuania as the majority of economic activities in the region is oriented towards the INPP. The following interrelated questions are considered in the article: the social costs of decommissioning of the plant, the integration policies and their operation in reducing social and economic disparities in the region as well as the access to citizenship and education benefits of the INPP residents. As the challenges confronted today by the second generation non-Lithuanians in the region are still ignored there are some specific questions about the growing social, cultural and economic divide between Lithuanians and non-Lithuanians in the INPP region addressed in the article.

Pagrindinės sąvokos: socialinė integracija, tautinės mažumos, Ignalinos AE, antros kartos rusai.

Keywords: social integration, ethnic minorities, Ignalina Nuclear Power Plant, second generation Russians.

Introduction

This article aims at analyzing the structural and cultural integration challenges to overcome by the Ignalina Nuclear Power Plant (INPP) region residents and focuses on social policy observation and analysis of the issues confronted today by the multiethnic Visaginas town community, 80 percent of the population of which is made up of the Russian speaking ex-immigrants from the Former Soviet Union (the FSU) [2: 36]. As the research in this field has been rather fragmented and somewhat inefficient, it is of utmost importance to tackle this fragmentation, the peculiarities of which require consolidated scientific activity of a number of institutions and integration of multidisciplinary knowledge.

In many high-performing work environments, an organization's control over the individuals is low; however the Ignalina Nuclear Power Plant has a high degree of control over the social and economic benefits for the majority of the residents in the INPP region which makes it an exceptional phenomenon from the point of view of social and political sciences. Visaginas town together with the INPP region marks an important place in the political and

sociological examination of Lithuanian urban structure as it was at the center of ideological action and has remained one of the most prominent examples of 'empty field investment' - a situation when a new town and a large plant is build in a territory with no prior infrastructure. In geopolitical terms the INPP region has remained transnational region even after 1990's when Lithuania regained the independence and it strongly influences the neighbouring Latvia, Byelorussia, Poland and Estonia on reaping the benefits of economic and environmental policies and, in Olsonian terms, 'concentrated' societal interests. At the moment there are no major programmes coordinated by either Lithuanian or international research community on the impact of INPP decommissioning on the Visaginas community¹.

¹ By the decision by Lithuanian Government in 2000 the policy package "Eastern Lithuania Development Programme for 1996-2003" was prepared and implemented by The Department of National Minorities and Lithuanians Living Abroad to the Government of the Republic of Lithuania. The main goal of this programme was to assess the social developments and economic changes in Eastern

Nobody can determine which of the two possible scenarios is likely to predominate in the years ahead: a growing and more diversified INPP region economy with Visaginas population enjoying greater access to the major institutions of society, such as education, labour market, a political system, social services and economic opportunities (i.e. **structural integration**), a community with developed competence in and understanding of the language, culture and the values of contemporary Lithuanian-dominant society, (i.e. **cultural integration**), and a community with inclusion in the primary relationships and social networks of their ethnic communities and having strong social ties with the larger society and the members of the majority group (i.e. **interactive integration**), or a socially, politically and economically excluded minority group, suffering from the sluggish labour market and playing out a future town-zombie scenario constructed by the media and scientists.

In 1990 after Lithuania regained its independence from the Former Soviet Union, Russians in Lithuania became a minority group as a result of economic, political, legislative and social changes, rather than traditional migration. Thus, the idea of permanent settlement of Russians in Lithuania contributes to the discourse of ethnic minorities' integration policy and adds a clear distinction from immigration policy.

The independent Lithuania of today offers a favourable legislative liaison among all ethnic minorities. The laws of the Republic of Lithuania guarantee national minorities, living in the country the rights to equal social, cultural, political and economic benefits of Lithuanian citizenship; however, Lithuania provides an interesting case

Lithuania (Visaginas in particular) in order to prepare solutions to the lack of investment and social development issues. The project of "National Minorities Policy Development Strategy for 2015" is now being prepared by The Department of National Minorities which will be the most significant legal document provisioning long-term national minorities integration policy objectives based on economic, social, cultural and political expressions of relations between national minorities and the host society. In the project of the Minorities Policy Development Strategy 2015 it is stated that despite that the adaptation of national minorities in Lithuania remains the dominating strategy of integration, there still exist differences in the access to social and economic benefits between persons belonging to minority group and the host society.

for the integration policy observation as the number of Russians who reside in the country live mainly in urban areas [4: 212] and in largely concentrated communities. Ethnic group integration is also a term which builds its meaning on notions of assimilation, absorption, acculturation, incorporation, inclusion and civic participation versus enfranchisement, and intolerance etc. If we add Weber's concern about legitimacy and controlling territory to this definition we have a fairly complete picture of the political aspect of integration, thus the three dimensions of integration - **structural, cultural and interactive** – are operationalized in this article. The article is organized as follows: after we have introduced the structural, cultural and interactive integration concepts and placed them in the empirical context in the first section, we will proceed to evaluating the social costs of decommissioning of the Ignalina Nuclear Power Plant in the next section and addressing the integration problems of structural, cultural and interactive character of the second generation Russians in Lithuania in the last section of this article.

The Social Costs of Decommissioning of the Ignalina Nuclear Power Plant

Today the plant's operators are ethnic (some of them second generation) Russians who have agreed to stay on and become Lithuanian citizens. Here lies the main problem of Visaginas town: the residents to Ignalina NPP region have come from ethnically, geographically, culturally and linguistically heterogeneous territories which led to substantial integration problems: the indigenous population was not likely to accept strangers [6: 176]. The town was founded in 1975 as a satellite town to the Ignalina Nuclear Power Plant and since 1977, when the first residents settled in the new town and up to 1990's, the population of Visaginas increased rapidly, mainly due to net migration from the rest of the USSR. Such migration patterns resulted mainly in predominantly Russian-speaking ethnic structure of Visaginas [18: 5] By the end of 1980s, the majority of Visaginas population consisted of Russians and Belarussians, whereas ethnic Lithuanians accounted for less than 8 percent. While the situation was gradually changing in 1990s, fundamental changes did not occur and are not likely in the near future: Russian speaking ex-immigrants from other parts of the USSR still constitute over 80 percent of the population of Visaginas (see Table 1).

Table 1. Ethnic structure of Visaginas population 1979–1999%

	Lithuanians	Russians	Poles	Belarussians	Latvians	Ukrainians	Others
1979	5.8	66.2	5.4	11.5	0.7	x	10.4
1989	7.7	64.2	6.4	11.0	3.0	2.5	5.2
1995	14.0	59.4	6.1	10.8	3.0	x	6,7
1999	15.0	55	8.0	11	0.5	6.5	4.0

(x – attributed to the “Others“)

Source: International Organization for Migration, 2002.

The social, economic, cultural and political adaptation of Russian-speaking immigrants from the former republics of the Soviet Union was mainly determined by their work experience in the nuclear energy sector. This form of immigration, when heterogeneous ethnic groups intermix or are intermixed in an empty geographical space still remains underexplored in the understanding of Visaginas urban phenomenon. Another important issue facing Russian ethnic minority in Lithuania was that in the new states they have encountered a double adaptation stress: adaptation to market economy, and adaptation to new ethno-politics and minority status [5: 16]. In the FSU Russians in Lithuania were not considered as a minority but rather as part of the the ‘glue’ that kept the multinational Soviet states together [7: 200]. However, this ‘glue function’ consisted mainly in the strong identification with the Soviet state and its ideology i.e. their presence as an ethnically alien element in the non-Russian republics was justified by adopting an ‘internationalist’ self-understanding, claiming that in ‘mature socialist society’ ethnic differences no longer mattered [ibid]. When the Soviet Union began to crumble, Lithuania offered an example of the power of nationalism as neither the construction of soviet social welfare system, nor universal access to education, or improved standards of living had been able to establish full legitimacy of the Soviet regime, nor had this been able to make the national feeling lethargic. The imperative to switch to a new identity (i.e. Russian-speaking minority in the new-born Lithuania) raised an issue which could be addressed in two ways: out-migration and minority protection. As Kolsto states, out-migration was a question not only of leaving but also of arriving somewhere and those members that were born outside of the Russian Federation had few ties to a local community in that country [ibid]. This is why according to Kolsto, the ‘repatriation’ for some Russian-speaking members of the community was a highly

misleading concept as they might have felt that they would have been leaving the land of their ancestors.

In the Soviet Union, these opposing interests of ethnic minorities were not acknowledged and migration from one ethnic territory to another was widely supported by the authorities. With the collapse of the Union the immigrants encountered a complex problem of where to live - in the new-born state or Russia – and which citizenship to acquire; the problems concern not only national identity and ethnic culture, but also living space and civil rights [8: 174]. In 1991 benefiting from rather liberal provisions of the Lithuanian Citizenship law most of Russian-speaking immigrants were granted Lithuanian Citizenship. The year did not bring a crucial change the political status on non-Lithuanians as all residents that lived in the state until that date received Lithuanian citizenship automatically; however Russian-speakers had to face specific problems as they were more vulnerable than the ethnic Lithuanians: high level of unemployment and lack of support from authorities, and the lack of knowledge of state language were also key obstacles for persons belonging to national minorities to gain professional training and find suitable jobs. In 1999 almost 92 % of Visaginas residents were Lithuanian citizens (8.3 % remaining foreigners) [18: 7]. However, those who nominally held Lithuanian citizenship, de facto felt strangers outside the Visaginas community. The regulations of the International Atomic Energy Agency, provide for the use of five official languages (Russian included) for documentation in Nuclear power Plants; thus for security requirements Lithuanian language regulations were adapted correspondingly, thus enhancing possibilities to use Russian language by the staff of the INPP. Therefore, for the majority of Visaginas labour force, Lithuanian language was not obligatory, and subsequently was never studied seriously [ibid]. This makes the Visaginas community relatively isolated. Poor language skills lead to insufficient knowledge of other as-

pects of life in Lithuania: less employment opportunities outside Visaginas and training/ re-training or upskilling possibilities. It is clear that, without financial and social support, the current social and economic level of Visaginas is at stake. The region and Visaginas town do not possess enough attraction elements for other activities to come. In the INPP case, there will be an ongoing need for employees to train, re-train or upskill.

From the historical perspective Lithuania was both politically and economically weak entity when it became an independent country in 1990. Consequently, Visaginas town and the INPP region became a controversial issue of political and territorial integrity as in terms of fulfilling its economic and social functions the region remained highly polarized between the economic structure, ethnicity, geopolitical environment and social welfare elements. The decision to construct the world's most powerful nuclear plant was made by the former Soviet Union (FSU) government bodies and consequently the region itself and Visaginas town neither possessed a historical and ethnographical background nor were they a consequence of national Lithuanian regional policy. The government of a new-born Lithuanian state was eager to find a solution to the INPP region integrity problem and had to balance between the opposing forces of resurging nationalism and ethnocentrism. To overcome the biased outcomes of social change inherent in the social environment of the region two alternative models of societal group intermediation have emerged. First, the Lithuanian state assumed Visaginas town as the "capital" of ethnic minorities where the divisions between ethnic groups no longer mattered, and second, most importantly, promoted an equal balance of opportunities for the integration and social harmony in culturally fragmented society of non-Lithuanian residents. In other words as society changed, new (Lithuanian) identity had to be formed in the region and this new (interactive) identity had simultaneously to adjust its ties to the original ethnic community [6: 182-183].

Visaginas labour market is not only characterized by the dependence on one organization but also by a small number of private business, a high number of non-governmental or political organizations, relatively young population and insufficient knowledge of the Lithuanian language (by the labour force, in particular) [18: 7]. By any objective measure, the last two decades have been the most difficult ones for the INPP

region residents and the future of INPP is still clouded by uncertainty: Unit 2 is expected to close in 2009 if sufficient financial resources supported by agreements with the EU institutions and international organizations are in place [2: 36]. However, there is no clarity about the construction of a new plant in the region or attracting labour-intensive investment. Visaginas is currently isolated from other areas of Lithuania and the majority of economic activities is oriented towards the INPP (goods or services) and to services to workers from the INPP. If no active programmes are implemented, aimed at redeploying the social and economic activities, it is sure that Visaginas does not possess significant advantages for avoiding a massive economic recession [ibid]. The impacts may come not only from the potential economic recession but also from other particularities, such as relative cultural isolation, closed society and economic reforms [ibid]. At the date of November 2003, there was 3,614 staff at the INPP [ibid]. Some publications indicate personnel numbers around 5,000. This great difference with the number announced here comes from the separation by INPP of its non-core activities. The overall assessment of the future unemployment in the INPP region was carried out by The Lithuanian Institute of Labor and Social Research where a total number of 7,500 (i.e. $\frac{1}{4}$ of all residents) job cuts is estimated in Visaginas with the population of approximately 30,000 people [7]. The direct effects of unemployment at the INPP create indirect effects on the socio-economic evolution of Visaginas and through the multiplication effect (i.e. the decrease of orders to subcontractors and suppliers; the decrease of the average income due to unemployment; migration to other areas or abroad; the lack of substitution jobs; substitution jobs with lower salaries etc.) a further round of job cuts is likely to take place [2: 164-165].

Private business in the region is very small. Annual sales of over 900 enterprises do not exceed 1 million litas as of January 2002 and most of the businesses are town-oriented and do not expand their activities outside [18: 14]. The closure of INPP, with its highly skilled workers, specialists and managers, could decrease the general level of education in case there is an emigration toward other areas of the country or abroad. Together with the decrease of income in the INPP region, this effect would lead to a social recession i.e. the so-called "town-zombie" scenario [2: 39].

The Integration Problems of Structural, Cultural and Interactive Character of the Second Generation Russians in Lithuania

Many studies have pointed out that it is among the youth that the crucial shift in language use, political attitudes, cultural preferences, and loyalties take place (see Portes and MacLeod, 1999; Portes and Zhou, 1993); however, the issues of structural, cultural and interactive integration confronted today by the second generation Russians are still ignored and neither theoretical research nor empirical studies cannot highlight different contextual situations facing today by the second generation non-Lithuanians (aged 18-35) in seeking adaptation to the Lithuanian society. Despite the fact that modern nations are all cultural hybrids [1: 616], and most of the present-day Russians (being the largest ethnic minority in Lithuania) are migrants from the Soviet era or their descendants, (only a small fraction of them can trace their ancestry in the area back to previous centuries), the prospects of adaptation of the second generation Russians in Lithuania cannot be gleaned from the experience of their parents.

Here we argue that the cultural divide between Lithuanians and non-Lithuanians in INPP region remains a latent problem on the social policy agenda as it is not possible to describe the diverse outcomes of the challenges on the contemporary second generation non-Lithuanians and their integration in contemporary and europeanised Lithuanian society. A comparison of data supplied by the surveys made in 1989 and in 1993–1996 revealed that quite a number of non-Lithuanians residing in the new-born Lithuania did not wish to have their nationality inscribed in their passports, while almost all

Lithuanians wish to have it inscribed in theirs (see Kalnius, 1998). In spite on the preconditions for structural integration (i.e. equal rights) the data on social ties (i.e. interactive integration) also reveals the ethnic isolation in the sphere of employment: almost half of the ethnic Russians in Lithuania work in mono-ethnic environment, they are the most passive with regard to participation in public life and one fifth of them indicates that it is important to be Lithuanian in order to get a good job [4: 224].

In this article we argue that there are visible divides between Lithuanians and non-Lithuanians and some members of these groups do not have equal access to social and political structures. Here we mean that the young residents of INPP region (who are mostly Russian speaking people) are faced with difficulties to enroll into the higher education system, the universities in particular, and we present some critical insights into this problem. Although, at the present moment we do not hold the data on every university or college in Lithuania, but the data available to us demonstrates a tendency of young Visaginas residents to rather enter the colleges than universities of Lithuania (see Table 2). For example, in 2006 only 14 Visaginas residents became 1st year Vilnius University students amongst 24.000 other students at the same university and only 4 student places were available for the first year students from Visaginas at Mykolas Romeris University the same year which employs approximately 16 thousand students. The number of Visaginas residents studying at colleges demonstrates a much higher proportion (e.g. 42 students from Visaginas entered Vilnius College which provides approximately 10 thousand student places and 32 students entered Utena College among 2437 students in total).

Table 2. Number of students from Visaginas in Lithuanian higher education institutions

	First year (full-time and part-time) students from Visaginas in 2006	Total number of students in 2006
Vilnius University	14 **	24 793 **
Mykolas Romeris University	4	~ 16 000
Vilnius Pedagogical University	64 *	12 525 *
Vilnius College in Higher education	42	10 169
Utena College	32	2 437

*all year, all study modes and cycles students, 2005 data

** the number of students at the International Business School is not included

Sources: Vilnius University, 2006; Vilnius Pedagogical University (annual report, 2005); Mykolas Romeris University Statistics 2006; Vilnius College in Higher Education (annual report, 2006), data provided by Utena College Public Relations Department.

Obviously, the opportunity to enter the institutionalized education at university level is determined by lots of other subjective factors such as learning motivation, cognitive skills etc., but the low numbers of Visaginas residents entering universities may be determined by the integration problem of structural, cultural and interactive character i.e. the fact that a large proportion of Lithuanian citizens in Visaginas use Russian rather than Lithuanian as their first language (only 3% of the employees of Ignalina NPP can speak the state language sufficiently well and the ignorance of the state language makes the integration into other districts of Lithuania quite complicated and difficult, especially in seeking to fill higher posts [2: 40] may lead to the social exclusion of ethnic minorities: the speaking of only Lithuanian in all formal institutions and public places may indicate preferences given only to ethnic Lithuanians.

As the access to citizenship benefits remains largely a national question, bound up with varied social and cultural constructions [...] nation states have sought to distinguish those who “belong” from those who can legitimately be excluded as “outsiders” [14: 188] and here we argue that this is evident speaking about Visaginas community as Lithuanian citizenship entitlements remain closely tied to nationality, despite the desire of ethnic minorities to consider themselves as Lithuanians. Besides the integration problem of structural, cultural and interactive character mentioned earlier, this situation creates additional social problems i. e. exclusion from social networks and civil non-integrity remains a setback to Russian-speaking Lithuanian citizens joining the economic, political and cultural activities or taking more leading posts in the labour market and public institutions of Lithuania.

Further Discussion

During the first decades when the NPP was inherited from the FSU a number of comprehensive studies on environmental issues and safety analyses have been performed; however there were no major programmes coordinated by either Lithuanian or international research community on the Russian-speaking community integration problems of structural, cultural and interactive character. This analysis represented a preliminary step towards understanding and assessing structural, cultural and interactive integrity dimensions of the INPP region residents.

As the Ignalina Nuclear Power Plant has a high degree of control over the social and economic benefits for the majority of the residents in the INPP region, the Russians residing there remains more volatile than the ethnic Lithuanians, despite the adoption of more accommodative citizenship and language laws in the 1990s. The cultural divide between Lithuanians and non-Lithuanians in INPP region remains a latent problem on the social policy agenda as it is not possible to describe the diverse outcomes of the challenges on the contemporary non-Lithuanians (the second generation in particular) and their integration in Lithuanian society. The debate about the social costs of decommissioning of the plant, the structural, cultural and interactive integration policies and their operation in reducing social and economic disparities in the region as well as the access to citizenship and education benefits of the INPP residents refers to the structural dimension of the adaptation process (educational system, labour market etc.) as well as to subjective cultural and interactive dimensions of the integration and identifications of the Russian-speaking population with Lithuanian social, economic and political values.

References

1. Hall, S. *Modernity: An Introduction to Modern Societies*. Oxford: Blackwell Publishers, 1996.
2. *INPP Unit 1 Decommissioning Project for Defuelling Phase Environmental Impact Assessment Report*. Released: M. Tyrrell, Ignalina Nuclear Power Plant Decommissioning Project Management Unit, 2004.
3. Kalnius, P. *Etniniai procesai pietryčių Lietuvoje XX a. antrojoje pusėje (Ethnic Processes in the Southeastern Lithuania in the Second Half of the 20th Century)*. Vilnius: Žara, 1998 (Lietuvos etnologija; 5).
4. Kasatkina, N., Leončikas, T. *Lietuvos etninių grupių adaptacija: kontekstas ir eiga*. Vilnius: Eugrimas, 2003.
5. Kasatkina, N. Lietuvos etninių grupių adaptacijos ypatumai. *Filosofija. Sociologija*, 2002. Nr. 4, 15–22.
6. Kazlauskienė, V. Kalbos ir bendravimo problemos Visagine *Ignalinos AE: žmogaus veiklos ir gyvenimo sąlygos*. Ats. red. A Čiužas) Vilnius: Eugrimas, Lietuvos filosofijos ir sociologijos institutas. 1998, 174–193.
7. Kolsto, P. The New Russian Diaspora: Minority Protection in the Soviet Successor States. Sage Publications: *Journal of Peace Research*, Vol. 30. No. 2, 1993, 197–217.

8. Lakis, J. Ethnic Minorities in the Post-communist Transformations of Lithuania, Sage Publications: *International Sociology*, Vol. 10. No. 2, 1995, 173–184.
9. Lietuvos valstybinė mokslo programa „Atominė energetika ir aplinka“ (mokslinių ataskaitų rinkinys 1993–1997). Vilnius, 1997.
10. Mykolas Romeris University: Student Statistics 2006 <http://www.mruni.lt/lt/norintiems_studijuoti/pagrindines_studijos/archyvas/> [žiūrėta 2007 m. balandžio 19 d.].
11. Portes, A., MacLeod, D. Educating the Second Generation: Determinants of Academic Achievement among Children of Immigrants in the United States. *Journal of ethnic and migration studies*, Vol. 25, July, 1999, 373–396.
12. Portes, A. and Zhou M. *The New Second Generation: Segmented Assimilation and its Variants*. Sage Publications. *The ANNALS of the American Academy of Political and Social Science*, 530 November, 1993, 74–96.
13. Phare ieško IAE problemų sprendimo raktą <http://www.iae.lt/infocenter_lt.asp?lang=3&sub=15&infolistparam=23&numbers=>> [žiūrėta 2006 m. vasario 25 d.].
14. Taljunaitė, M. *Pilietybė ir socialinė Europos integracija*. Vilnius: Mykolas Romeris Universitetas, 2005.
15. Vilnius College in Higher Education. Annual report 2006.
16. Vilnius Pedagogical University. Annual report 2005 <[http://www.vpu.lt/index.php? 1498277916](http://www.vpu.lt/index.php?1498277916)> [žiūrėta 2007 m. balandžio 19 d.].
17. *Vilniaus universiteto veikla 2006 metais*. Vilnius: Vilnius University, 2007.
18. *Visaginas After Ignalina NPP: Needs for Labour Market Measures*. Vilnius: International Organization for Migration, 2002.

Liutauras Labanauskas

Socialiniai Ignalinos atominės elektrinės funkcionavimo aspektai

Santrauka

Šiame straipsnyje analizuojamos Ignalinos atominės elektrinės uždarymo socialinės pasekmės. Ignalinos atominės elektrinės regionas apibūdinamas kaip izoliuotas nuo kitų Lietuvos vietovių. Jame daugiatautės rusakalbių gyventojų bendruomenės ekonominė veikla, užimtumas bei socialinė gerovė tiesiogiai priklauso nuo Ignalinos atominės elektrinės funkcionavimo. Straipsnyje aptariami šie tarpusavyje susiję socialiniai Ignalinos AE funkcionavimo aspektai: elektrinės uždarymo socialinės pasekmės, gyventojų socialinė integracija bei su ja susiję socialinės politikos veiksniai. Straipsnyje konstatuojama, kad Ignalinos AE poveikis socialinei aplinkai, tai daugiatautės Visagino miesto bendruomenės socialinė, ekonominė, kultūrinė ir politinė atskirtis, kuri socialinės politikos darbotvarkėje išlieka išoriškai nematoma ir paslėpta problema. Straipsnyje glaustai nušviečiama Lietuvoje dar neanalizuota problema: emigrantų iš buvusių Sovietų Sąjungos respublikų palikuonių (vadinamųjų antrosios kartos rusų) struktūrinė integracija, aktualizuojant jų patiriamus sunkumus, įgyvendinant savo pilietines teises, susijusias su išitraukimu į švietimo sistemą bei darbo rinką. Straipsnyje daroma išvada, kad, nepaisant plačių pilietybės, kalbos vartojimo, švietimo, kultūros teisių ir laisvių, rusakalbiai gyventojai Ignalinos AE regione išlieka socialiai pažeidžiama grupe.

Liutauras Labanauskas – Socialinių tyrimų instituto Švietimo ir verslo sociologijos skyriaus specialistas, doktorantas
 Adresas: Medeinos 17–27, LT-06139, Vilnius.
 Telefonas (8~5) 275 86 67.
 Mob. tel. 8 615 66576.
 Elektroninis paštas liutauras.labanauskas@gmail.com
 Straipsnis pateiktas 2007 rugpjūčio mėn.; recenzuotas; parengtas spausdinti 2007 m. gruodžio mėn.

DOI: 10.5755/j01.ppa.0.22.27055