



Landscape Research Trends and Some Insights from Rurban Landscape

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In the course of present intensive transformations of rural, urban and natural environments new types of dynamic and complex landscapes emerge which possess both rural and urban features. These unseen and problematic types of landscape not only require deeper understanding, new terms, and categorizations, but also represent the concentrated manifestation of the contradictory and complicated processes, affecting the today's landscapes and the field of landscape research. Thus the aim of the research was to distinguish the significant landscape development and research trends and to illustrate them with the trends and features characteristic to rurban landscapes. The literature review and subsequent analysis allowed us to distinguish several major challenges of landscape development and landscape research relevant to rurban studies: the increasing pace and scale of landscape change, the increasing complexity of landscapes, proliferation and fragmentation of knowledge regarding landscapes, problems related to handling the subjective dimension in landscape valuation, and the landscape aesthetics challenges. We have analyzed these trends and the peculiarities related with rurban landscape – transitional character, multidirectional change, and time depth, tensions and conflicts, diversity, chaos, and uniformity - in greater detail. The research method is the desk-top study including literature review. This analysis has shown that the rurban landscapes not only showcase in the concentrated manner the concerns and opportunities related with ongoing landscape restructuring, but as the landscapes of new complexity require a distinctive approach.

Keywords: *Landscape research, rural-urban interface, rurban landscapes, landscape changes*

1. Introduction

The declaration of the European Landscape Convention has induced the increasing interest in various types of landscapes: natural, rural, urban and peri-urban areas, landscapes of outstanding value, ordinary, and degraded landscapes, etc. (ELC, 2000). However, it can still be noted that natural landscapes with little human impact or valuable cultural landscapes receive much more attention compared to other types. For example, Conrad et al. (2011) notice that the landscape research and management efforts are unevenly distributed across landscape types. They argue that there is, nevertheless, the scope to better address landscapes, which currently have not been well studied, such as freshwater environments, seascapes and peri-urban areas. The need to study different kinds of landscapes can be motivated by different causes: outstanding landscapes need to be

protected; meanwhile the degraded landscapes or landscapes under the enormous pressures for change can be studied in order to understand the extreme landscape conditions and the ways either to avoid or to mitigate them. Just ten years ago the research on rural-urban interface – rurban studies – was a new area of scientific interest. The pace and extent of contemporary urban expansion urge the research in this area; thus this sphere of research is continuously expanding and focuses not only on the protection of nature, but also on the effects that urban expansion, urban lifestyles and values do on rural areas.

Significant number of research papers and several monographs including general considerations (Antrop and Eetvelde, 2000; Allen, 2003; Jerpasen and Swensen, 2005; Low Choy et al., 2008; Marshall et al., 2009) and case studies (Olmo and Munoz,

2004; Dupont, 2005; Overbeek and Terluin, 2006; Swensen and Jerpasen, 2008) and several major literature reviews, including Rakodi (1998; 1999), Phillips et al. (1999), Adell (1999), Buxton et al. (2006), focus on different aspects of rural-urban interface. Part of the reviews is concentrated on specific issues, such as poverty (Rakodi, 1999), natural resources (Phillips et al., 1999), others are more general and comprehensive (Adell, 1999; Buxton et al., 2006). The review of these sources has demonstrated that the research material regarding rural-urban interface, even if extensive, still lacks contextualization i.e. setting the rural-urban problematic into the wider context of landscape research trends and in this way demonstrating its importance and contemporary relevance.

The importance of this subject is also reflected in the growing research area of rural-urban interface in Lithuania. Researchers analyze the changes of rural landscape (Aleksavičius and Valčiukienė, 2011) and land use (Česnulevičius, 1999) under the influence of large cities, the phenomenon of urban sprawl affecting countryside (Bučas, 2010; Bardauskienė and Pakalnis, 2012), study the general peculiarities of peri-urban or suburban landscapes (Laukaitytė-

Malžinskienė, 2005, 2008; Neniškis, 2009; Cirtautas, 2010, 2012), issues of rural heritage under pressure of urbanization (Jurevičienė 2005; Vitkuvienė 2005) or analyze the examples of particular cities from the point of view of suburban and peri-urban development (Daujotaitė, 1967; Daunora, 1996; Jakaitis, 2001; Dijokienė, 2006). The review of Lithuanian literature directly and indirectly related with rural-urban interface has demonstrated another important issue - i.e. the lack of synthesis of rural and urban studies. When analyzing the urban development and expansion, the rural dimension is insufficiently regarded and vice versa.

This lack of synthesis and contextualization justifies *the aim of the research*, which was to distinguish the significant contemporary landscape developments, to research trends and to illustrate them with the tendencies and features characteristic to rural landscapes, thus setting them into context. The research method is the desk-top study including literature review and the result is the discussion showing the rural-urban problematic in the light of general landscape research. The general results of the research can be applied to various local contexts including Lithuania (Figure 1).



Fig. 1. The local face of global trend - rural-urban interface in Lithuania (zone of influence of Kaunas city). Photographs by I. Gražulevičiūtė-Vileniškė

The literature review helped us to distinguish several challenges of landscape research relevant to rural studies: *the increasing pace and scale of landscape change, the increasing complexity of landscapes, proliferation and fragmentation of knowledge, handling subjective dimension in landscape valuation, landscape aesthetics challenges*. The hypothesis of the research has been drawn that the rural landscapes around the world constitute a concentrated manifestation, a microcosm of the contradictory and complicated processes affecting the today's landscapes and can serve as the indispensable objects for integrated landscape research: these

landscapes can function as laboratories for landscape research.

2. Results and Discussion

The analysis has demonstrated that rural landscapes present challenges in the major significant spheres of landscape perception and analysis – from ecology to landscape related narratives. The problematic research into landscapes and the rural landscapes outlined in Table 1 is elaborated in greater detail in the sections below. The abstract concepts

presented in the Table are formulated as a means to demonstrate the relevance of the problem and are further explained in the subsequent subsections.

Table 1. Rural-urban interface problematic research in the context of general challenges of landscape

Landscape research trends	Peculiarities of rurban landscape research and planning
Increasing pace and scale of landscape change	Transitional character and multidirectional change Time depth The urbanity as the driver of change
Increasing complexity of landscapes	New types of landscapes Landscapes of new complexity Global and local interface Diversity, chaos, and uniformity
Fragmentation of knowledge regarding landscapes	Miscommunication between research disciplines studying rurban problematics Conflicting policies regarding rurban areas
Rise of subjective dimension in landscape valuation	Conflicting interests in rurban space Lack of stable identity and common narratives in rurban space The need to establish the links between the subjective and objective
Challenges of landscape aesthetics	New rurban aesthetics Aesthetic fragmentation in rurban areas “Aesthetics of change” The need to reconcile the ecology, equity, aesthetics and rural and urban dimensions in rurban areas

2.1. Increasing pace and scale of landscape change

Landscape researchers devote considerable attention to landscape dynamics. According to Antrop (2000), the nature of the composing elements changes, as do their connecting relationships. As Ewald (2001) notes, the energy and material flows over time are the major driving forces of landscape dynamics. It is clear that landscape dynamics includes both spatial and temporal dimensions of landscape changes. Since the advent of human settlements in the Neolithic era the natural and human created or modified components interact in landscapes with differing dominance. Since that time the human role in landscape dynamics was gradually increasing. The process to create the cultural landscapes we value today was the slow development with few periods of change and long periods of consolidation (Antrop, 2000). Thus, the landscape change is not new, but what is new and poses concern is the scale, the pace and the results of contemporary landscape change: the stages of the major reform are followed by very short periods of compensation or even by another abrupt change. With technological advancement and predominant economical thinking these processes have taken on a global character. One of the definitions of rurban or peri-urban areas is that these are the areas outside the existing urban agglomeration, where large changes are taking place over space and time (Dupont, 2005). Several aspects regarding the pace and scale of change in the rurban areas are distinguished below.

Transitional character and multidirectional change. The rurban landscapes as we know them today had emerged in a very short period of time. Today these areas are not stable and still clearly exhibit the rapid continuous restructuring of space driven by the socioeconomic processes and the institutional policies: the rural landscape with some urban features can be rapidly replaced by urbanized landscape with fragments of rural environment,

which, in turn, can become increasingly urbanized. We can even pose a question: is rurban landscape a place or a process of transition from rural to more urbanized settings? Are these landscapes in constant flux? Rurban landscapes can significantly change even in the course of the analysis. Low Choy et al. (2008) note that the peri-urban zone is either diminished if it is finite, or its inner and outer boundaries move further outward from the dominant urban centre. They refer to these areas as the “zone of impermanence”. This causes monitoring and forecasting difficulties. The changes in the land use (and landscape) occur very fast, so census statistics does not “catch up” (Antrop, 2000). Transitional character is often visible in the spatial dimension as well: the proportion and distribution of urban and rural features, their affect on the identity of the place changes moving from the outskirts of the city to the rural areas. However, the human and natural processes that take place in these transitional landscapes are multidirectional: decay of heritage buildings, renaturalization of abandoned agricultural lots, intensification of industrial and household agriculture in the proximity of urban areas due to the larger densities of residents, construction of new buildings and infrastructure due to urbanization pressures etc. For example, the urban pressure is often considered to cause the decline of agricultural practices, however, the experience from the developing countries demonstrates that agricultural activities can be more intensive moving closer to the city’s edge (Marshall et al., 2009).

Time depth. Despite the rapid change, one of the basic features distinguishing rurban landscapes from urban areas or suburbs is the presence of rural dimension: the residues of rural environment, the rural heritage. Thus, these landscapes transformed by urbanization or social pressures often can be characterized as remnant or having a historical dimension, significant landscape memory or the time depth (Dobson, 2008). Legibility of the historical

dimension can be different in different rural landscapes. In some areas, as Antrop (2000) notes, these remnants of the traditional landscape structures become just isolated patches in a large-scale uniform space and are more and more difficult to recognize. He argues that the understanding the historical development - the time dimension - of rural landscape allows the assessment of these traditional landscape elements and structures that can become the anchor places in the management and reorganization of the changing surrounding landscape.

The urbanity as the driver of change. Antrop (2000) underlines that historically the rural hinterland

was vital for the subsistence of the city; meanwhile, now cities are vital for the subsistence of the rural hinterland or rural areas. In other words, the urban explosion and the social urbanization perform a role of a driver in the development of rural areas. The fact that the urbanity is perceived as the main driver of development of rural-urban interface is well reflected in the bulk of terms implying the urban priority that had recently emerged to describe new processes and landscapes (Figure 1). Meanwhile the rural component, one of the factors shaping the rural identity, is often omitted.

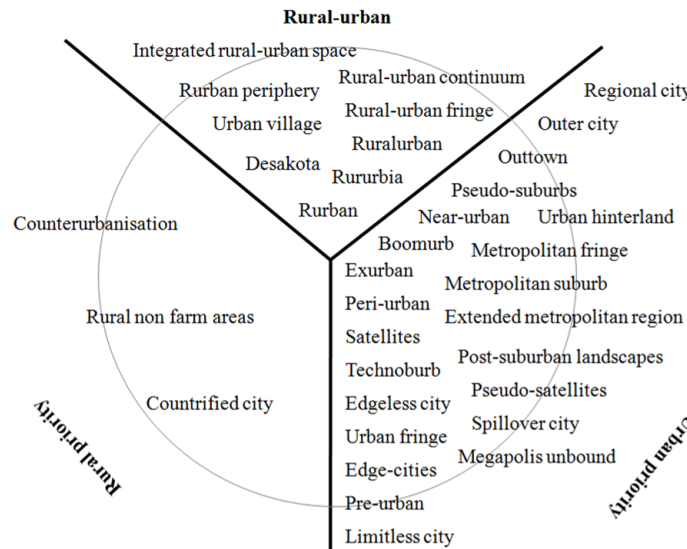


Fig. 2. Terms used to describe new processes in landscapes (Adell 1999; Taylor & Lang 2004; Low Choy et al. 2008) and their distribution according to the connotations of meaning

2.2. Increasing complexity of landscapes

Complexity is the major result of rapid landscape change. Certain complexity, diversity and multifunctionality were characteristic valuable features of many cultural landscapes. This desirable stimulating landscape diversity is the goal of sustainable development of cultural landscapes. However, the contemporary pace and scale of landscape change often result in psychologically and socially unacceptable forms of diversity – visual, structural, and functional chaos, visual and social landscape fragmentation, management problems, conflicts and tensions. The changes and decline in ecosystems and ecosystem fragmentation pose major concerns as well. It is paradoxical that the chaotic landscape diversity goes hand in hand with global landscape uniformity: suburban, industrial, agricultural-industrial, logistics areas replace traditional landscapes and become increasingly similar around the world. Rural areas best exemplify the landscape complexity; several aspects of this problem are discussed below.

New types of landscapes. The rural-urban interface areas are often considered just as transitional area from urbanized to rural and natural setting (Marshall et al., 2009) and are attributed to the

competence of urban or rural studies, depending on the proportion and intensity of corresponding features. Other view towards rural areas sees them as generated largely by the activities within the urban zone (Philips et al., 1999; Adell, 1999). However, the reality of rural areas is not that simple, and they often resist the usual subdivision between the urban and rural competence spheres. Researchers list different functions and uses, which coexist in the areas or rural-urban interface: pockets of suburban housing, large residential and rural residential lots, a range of farming activities including intensive agriculture and shed based agriculture, resource extraction activities, utility installations and major urban infrastructure and services facilities, such as airfields, landfills, schools, churches, retail and commercial premises, and tourist and recreational uses (Low Choy et al., 2008). New hybrid rural-urban uses also emerge. These complex areas are sometimes referred to as the “fuzzy zones” (Marshall et al., 2009). These “fuzzy zones” further attract various rural, urban, and hybrid activities resulting in the unusual mixtures of functions and forms and in unusual experience, which is neither rural nor urban. Thus, out of the interface or collision of the supposedly antagonistic rural and urban features, new qualities can emerge. Rural areas can take many

shapes depending on the natural character of the area and the combinations and conflicts of different rural and urban-driven human activities. Some types of rurban landscapes remain beyond the definition up to date presenting the field of research for landscape studies.

Landscapes of new complexity. The complexity of rurban landscapes involves not only the heterogeneity of land uses. Spatial complexity, complex ecological problematics, and social complexity can be distinguished. These emerging landscapes can be referred to as the landscapes of new complexity. Marshall et al. (2009) distinguish such aspects of socioeconomic complexity: the “mosaic” of land-use patterns, the accessibility of this area to the city, the diversification of household incomes, the proximity of markets, the availability of farm labor and the possibilities of off-farm employment. According to them, the rural-urban interface areas can be characterized both by rural values and ‘tradition’ and by high, and often increasing, population density compared to countryside, small landholdings, rich countryside homes, poor slums, diverse sources of income, a lack of regulation, contested land tenure rights, changing agricultural practices, uncoordinated conversion of farmland to housing, commercialization, economic dynamism including industrial developments, a severe lack of service provision, and urban “vices”. Some of these aspects in turn cause complex ecologic problems including pollution, intensive resource exploitation, and ecosystem fragmentation. Such complexity and dynamism often result in management and classification challenges. Antrop (2000) notes that significant differences exist between the official land use statistics and reality in the rurban areas: many land uses cannot be categorized easily in the statistical classification schemes and many uses are not legally reported.

Global and local interface. In order to understand the complexities of rurban areas, not only the local and regional links should be addressed. The influence of global economic flows, markets, political processes and cultural trends on the urban form encourages looking at the relationships between the global, national and regional drivers of rural-urban interface. Marshall et al. (2009) identify the globalization as the most pervasive of these broader structural processes shaping the rurban; with reference to them several aspects of this influence can be distinguished: 1) influence on urban and peri-urban centrality (development of new economic centers and high technology islands in the areas of rural-urban interface, peripherization of the parts of the urban core), 2) influence on urban and peri-urban economy (increased demand for services, new criteria for selecting and evaluating economic activities), and 3) influence on rural-urban dichotomy and identities (mobility, “contraction of space”, globalization-related economic growth and related socioeconomic polarization, suburban uniform lifestyle in rurban areas).

Diversity, chaos, and uniformity. Diversity, instability and rapid change characterize contemporary rurban areas. However, the results of these changes can be different: peri-urban chaos, positive, stimulating diversity, spatial, social, and ecological fragmentation, total change of identity and, very often, the chaotic uncontrolled diversity of rural, urban, industrial, infrastructural elements may result in uniformity. Low Choy et al. (2008) point out the blurring of uses and characteristics of much of the peri-urban area, the undifferentiated sameness and regional facelessness. Moreover, uniformity is characteristic both to suburban sprawl and industrial agriculture. Thus, without ingenious and sensible planning, agricultural uniformity can be replaced with suburban uniformity.

2.3. Proliferation and fragmentation of knowledge

It is peculiar that the physical fragmentation of landscapes that raises concerns to contemporary researchers and planners corresponds with the fragmentation in the field of landscape knowledge and the methods applied. Landscape as an entity or concept has unifying features. According to Antrop (2000), as an abstract notion, landscape has no borders and refers to concepts such as scenery, system and structure. Such landscape characteristic calls for unified, holistic approaches. However, the strict modernist subdivision of the areas of competence and the proliferation of various scientific disciplines and study areas create just the opposite. Several aspects of this problem relevant to any landscape, but especially to rurban areas, can be distinguished.

Miscommunication between research disciplines. Ecology, archeology, architectural history, social sciences, psychology, agriculture and many other disciplines share their interests in landscapes. Different disciplines variously interpret landscapes as an ecological entity, artifact of material culture, visual resource, a metaphor, an artistic depiction, ideology, agent of power relations, etc (Stephenson, 2008). These interests and views generate large quantities of research material (for example, the sociological research on peri-urban poor, the research on ecosystem fragmentation in rurban areas, the research on rural heritage under urban pressure, etc.), however, the problems of lack of common language between these areas and the overlapping knowledge, when two disciplines research the same area and do not exchange knowledge adequately, are evident. The excellent example of knowledge fragmentation and overlapping competences are the rural studies and the urban studies, which both address the rural-urban interface looking from different perspectives. Stephenson (2008) notes that landscape evaluations are commonly set up to provide a series of parallel assessments by different disciplinary experts and what is perceived to be of value will depend on the particular interest of the discipline.

Conflicting policies. Landscape research in many instances is applied research and many findings become translated into policies, which affect our immediate living environment. Different research results provided by different disciplines may result in different, uncoordinated and even conflicting management strategies. This is particularly relevant to rural areas, where agricultural, industrial, forestry, recreational, transportation, heritage preservation and many other interests represented and coordinated by different institutions and organizations overlap. According to Ewald (2001), the farmers tend to view landscapes as the places of production and daily work and they hardly consider, for example, the recreational concept of landscape, the interests of the city in rural landscape, or a landscape as a whole. Thus, conflicts arise as soon as planners treat the agricultural land as a part of the general landscape. Meanwhile, the foresters do not perceive their forests in a landscape context and still see the forests primarily as an area of timber production. Besides the overlapping interests, the “horizontal” “institutional fragmentation” (Marshall et al., 2009) and knowledge fragmentation appear. For example, the part of the rural areas often is comprised by the administrative boundaries of the city; and the part of them constitutes the wider metropolitan region. Development of these areas, thus, is administered by different entities and may result in different characteristics and visual features.

2.4. Rise of subjective dimension in landscape valuation

The subjective dimension of landscape receiving an increasing attention as it is clearly reflected in the definition of landscape as “an area, as perceived by people” in the European Landscape Convention (ELC, 2000). The researchers agree on both the relevance of subjective dimension in landscape analysis and management and the complexities it brings to the field. Researchers uphold the idea that landscape qualities are inseparable from the observer (Antrop, 2000; Stephenson, 2007); thus, theoretically, as many landscapes can simultaneously exist at the same time at the same spot as many observers we have, the differences and qualities of these landscapes would depend on the backgrounds and priorities of the observers. Consequently, landscape research directs more and more attention to symbols, narratives, mental images embedded in landscapes, different landscape identities, spiritual, social values (for example, Stephenson (2007; 2008)). Hermeneutics is being increasingly applied to landscapes and interpretation is encouraged. In this context rural landscapes present particular difficulties and challenges, which are discussed below.

Conflicting interests. The so-called rural community now comprises a far greater diversity of residents and stakeholders than hitherto (Low Choy et al. 2008). Low Choy et al. (2008) even had

distinguished the four groups of stakeholders in peri-urban context: the seekers, the survivors, the speculators, and the strugglers. In the rural areas the variety of forms how landscapes are used and inhabited are closely intertwined. In this way the development of rural landscapes produces an array of conflicting interests: production vs. recreation, hobby vs. profit, rural uses vs. urban uses, rural lifestyles vs. urban lifestyles, rural aesthetics vs. urban aesthetics, local visual character vs. uniform global character of urban and suburban areas and many others. For example, the new residents of changing urban areas are oriented towards the city, linked to the city, their interests are concentrated in the city; meanwhile the old residents are tied to the place and their activities are much more locally concentrated. Moreover, the same landscape functions, for example agricultural, can be perceived and treated differently by different people and social groups, as Ewald (2001) notes.

Lack of stable identity and common narratives. Researchers underline the informational function of landscape (Jacobs, 2011; Nohl, 2001). The informational capacity makes landscape a vehicle to transfer various forms of heritage to the future generations. Nohl (2001) argues that positive stimulating and enriching functions of landscape are inseparable from its informational capacity and legibility: the more beholder is successful at “reading the landscape”, the greater is his emotional and expressive benefit. He presents the remarks on the contemporary state of the European landscapes, which are particularly clearly visible in the rural areas: landscape is unable to tell anything to the beholder, neither perceptually nor symbolically; landscape has lost its narrative aspects as well as its poetic aspects (expressiveness); landscapes are not able to deliver stimulating orientation patterns. The decline of informational capacity of rural landscapes is closely related with the above-discussed rapid structural, functional and social change, chaotic diversity (mix of visually, functionally, and cognitively contrasting landscape features), and uniformity of the rural space. Jacobs (2011) notes that due to the impacts of urbanization, our perceptions, uses and management of the landscape are in serious flux. This flux affects the landscape identities and narratives. The rapidly and continuously changing rural landscapes not only lack historically formed identities and images in the consciousness of society; it is even difficult to formulate the stable images of rural areas both for the residents with rural and urban background. In such landscapes neither urban nor rural narratives are valid no more. Changes in narratives and legibility can be different: due to arrival of new residents and users with urban background the meanings and narratives connected with rural area can change more rapidly than the landscape itself; different meanings are constructed by different groups of people - rural residents, newcomers from the urban areas, international migrants settling in the peri-urban zone - sharing the rural landscape;

in some cases under pressure of urbanization landscape changes so rapidly that the old narratives become disconnected from it and lose their primary meaning. Due to changes of landscape and landscape meanings common points of reference can be entirely lost.

2.5 Challenges of landscape aesthetics

Subjective dimension in landscape research and the search of common points of reference discussed above are closely related with the aesthetic perception and aesthetics of landscape. Researchers note that the role of aesthetics in the field of contemporary landscape research has notably diminished (Jacobs 2011). The field of and the means available for landscape research had considerably expanded; however, the same cannot be stated about the landscape aesthetics research. Several reasons that explain this can be seen. For example, Conrad et al. (2011) see the transition from aristocratic, elitist to democratic treatment of landscape. This means the transition from aesthetic concerns, which became viewed as elitist, towards the functional, economic, equity and ecological concerns, from qualitative towards quantitative, from artistic towards technical. Landscape today is seldom viewed as an object of enjoyment, delight, or of art criticism. According to Jacobs (2011), the idea of landscape implied by the majority of contemporary research has narrowed to a predominately mechanistic view. Another aspect that can be linked with democratization of approaches towards landscape is the above-mentioned emphasis on subjectivity in landscape research. According to Nohl (2001), "people will more and more supply each of the different landscape types with their own aesthetic understanding and appreciation as the individualization and atomization of society grows." Shifts in attitudes and approaches towards individual, subjective, equity, utility, and functionality had strongly affected not only landscape aesthetics research but also the aesthetic quality of landscape itself. According to Nohl (2001), contemporary land management requires large economically effective uniform plots, thus, landscape changes are often very insensitive and cover huge areas; as a result the number of aesthetically effective elements in the cultural landscape is dramatically reduced; moreover, radical ecological thinking often brings about uncontrolled vegetation growth.

New rural aesthetics and aesthetic fragmentation. It can be stated that rural areas present unfamiliar and disorientating mixture of familiar landscape features. Considering the holistic approach to landscapes (Antrop and Van Etvelde 2000), where the whole is more than a sum of composite parts, in the areas of rural-urban interface new landscape aesthetics may emerge out of the mixture of familiar features. This raises the challenges of new definitions and of understanding of new aesthetics trends. Even if the negative views towards these evolving both chaotic and uniform landscape

prevail among contemporary experts (Marshall et al. 2009), the questions may be asked whether the rural landscape can be a place for consolation, an object of delight, interest, can it embody classical aesthetic notions of beautiful, sublime, picturesque? As Antrop (2000) notes, the sense for beauty is universal but the expression of beauty may differ between regions, cultures and historic periods. According to Nohl (2001), new aesthetic orientations occur when significant changes in landscape take place. Jorgensen (2011) notes that even if some researchers consider the preferences of the scenic beauty of society to be relatively permanent, the shifts in aesthetic preferences and tastes are possible, including not only the long-term historical and cultural shifts in aesthetic appreciation for particular types of landscape, but also relatively rapid changes in aesthetic preferences associated with environmental awareness and education. Bearing in mind contemporary landscape changes and the contemporarily predominant concept of sustainability Nohl (2000) had distinguished four aesthetic perceptual categories under sustainable landscape conditions: "the beautiful", "the new sublime", "the interesting", and "the plain"; "the interesting" would be predominant and would connect a fragmented diverse mosaic of different landscapes. This could be the future of the rural landscapes, as he notes that "the interesting" may happen in the areas with large construction places, as the urban fringe, in the suburban hotchpotch, on derelict areas or on nobody's land; however, several threats should be mentioned. For example, Marshall et al. (2009) note the flows-based understanding of the peri-urban, which emphasizes the flows of produce, finance, labor and services and the influence of the processes of rapid economic, sociological, institutional, and environmental change. Such approach not only shows the distance between rural research and landscape aesthetics research but also reflects the rapid changes of physical structure and visual features of rural areas. Rapid and constant changes make it difficult to grasp the stable aesthetic categories of rural areas. It is even possible to speak about the aesthetics of change. Another issue relevant to rural areas is the extreme aesthetic fragmentation both in physical, structural and subjective perceptual levels. With reference to Nohl (2001) it could be stated that today's landscapes in the areas of rural-urban interface can be characterized by a multiplicity of functions, which are scarcely compatible with each other, and therefore, build separate landscape aesthetic worlds of their own. This increasingly fragmented mosaic of disconnected aesthetic worlds creates a disorientating pattern in space in human living and working environment about which the proponents of postmodernity like to speak. The spatial chaos and aesthetic fragmentation in rural areas are complemented by the increasing perception diversity in individualized and atomized society. This well reflects the previously mentioned diversity of interests and tastes and polarization of inhabitants and users of peri-urban areas and other stakeholders.

Thus, the complicated structure of the peri-urban is viewed through many prisms including the urban middle class tastes, tastes and preference of rural communities, preferences of developers and designers, etc. Further preference fragmentation may arise in the multicultural societies, where different people from different backgrounds and with different landscape preferences have to share the same environment. These issues clearly illustrate the complexity of creating aesthetic rural landscapes, as an aesthetically mature and viable cultural living landscape most often develops in an evolutionary way and exhibits strong links between the land and the population that inhabits it.

Aesthetics and ecology in rural landscapes.

The aesthetics and ecological concerns are of considerable importance and closely interrelated in the areas of rural urban interface. It could be maintained that what makes landscapes beautiful is often strongly linked to other intrinsic landscape values, such as biodiversity (Jorgensen, 2011). However, the landscape aesthetics and ecological health are not always linked directly in the rural areas. For example, abandonment of rural properties and renaturalization or agricultural land in the areas of rural-urban interface may positively affect biodiversity and cause the aesthetic decline; the fragmentation of landscape has both negative aesthetic and ecological consequences; intensive urbanization sometimes can contribute towards landscape aesthetics but diminish biodiversity, etc. Jorgensen (2011) maintains that changes in perception of landscape ecological values can shift perceptions of how we perceive and appreciate the beauty of landscapes and implies that the climate change signals an end to the perceived biological status quo and the advent of “aesthetics of necessity”. Thus, this landscape “aesthetics of necessity” would become a driver of landscape change on the basis of a diverse range of values, including social as well as environmental equity. However, the perspective of merging the aesthetics with ethics is multifaceted and ambiguous, as the lessons of modernist architecture imply. The aesthetics cannot be measured solely with equity or biodiversity and this is particularly important in rural areas, where rural history, nature and ecology, agriculture, and intensive urbanization interact. Ecological, equity, and aesthetic concerns need to be reconciled with historic dimension, which is one of distinguishing features of rural areas.

3. Conclusions

1. The emergence of the rural landscapes as *landscapes of new complexity* raises new complicated planning and management tasks. With reference to Phillips et al. (1999) and Adell (1999) it can be stated that an amorphous and mobile environment must be managed in order provide the framework for the interaction of various social, economic and cultural processes, to establish the sustainable links between the rural and the urban and simultaneously to maintain the historical dimension creating a viable living and working environment with distinctive identity.
2. The research shows *the importance of integration of time and space in rural landscape research*. The pace of change tends to turn the rural from landscape to process. In such circumstances analysis of the present state and identification of the trends of changes and their possible outcomes are increasingly interconnected and overlapping. The prediction of trends, setting desirable objectives, development of landscape quality models for the rural space must be carried out under uncertainty generated by multitude of interacting factors.
3. *The importance of legibility in rural landscape development* cannot be underestimated. These landscapes would remain distinctively rural only if the legibility of their rural dimension would be maintained. However, it becomes increasingly difficult to maintain the time depth in the ever changing landscapes. Legibility of the historical dimension can be different in different rural landscapes, thus they can be analyzed and classified accordingly. Legibility should be the object of the planning process.
4. *The relationships between aesthetics, ecology, and equity in rural landscapes* should be of considerable importance. Legibility is inseparable from the aesthetic perception of landscape and the need for beauty and delight is universal. This need should be reconciled with ecological and social aspects in the rural space simultaneously preserving characteristic rural and natural features important for local identity.
5. Considering the present individualization of society and the multiplicity of stakeholders and social groups with their social needs and aesthetic preferences in rural areas, it is possible to agree with Conrad et al. (2011) that there is a need of innovation in terms of developing new participatory techniques for landscape protection, planning and management. On the other hand, the expert approach would be irreplaceable finding common points of reference in the complex and ever changing rural areas. *The need to integrate participatory and expert approaches* is relevant in rural research.
6. The problems listed above imply the need to integrate different outlooks (for example, rural and urban studies), *the need for more inclusive, holistic* (Antrop and Van Eetvelde, 2000), *integrative, systematic, comprehensive approaches to rural landscapes*. Not only rural-urban dichotomy, but also the continuums (time-space continuum, rural-urban continuum) should be emphasized. However, all-encompassing holistic approaches may appear too much generalized and the contradictions of holism and quantitative research, holism and

detail, holism and individualism and subjectivism should be resolved.

7. The research has revealed the general issues related with rurban landscapes in the light of contemporary landscape research. This could serve as a starting point for the *comprehensive analysis of local (national, regional) peculiarities of rurban landscapes* including the rural-urban interface in Lithuania. The analysis of global and local aspects of Lithuanian rurban landscapes is the goal of our future research.

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Kraštovaizdžio tyrimų tendencijos ir keletas įžvalgų apie miesto ir kaimo sandūros teritorijose besiformuojančius kraštovaizdžius

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Dėl vykstančių intensyvių kaimo, miesto ir gamtos aplinkos pokyčių plėtojasi dinamiški ir kompleksiniai kraštovaizdžiai, turintys tiek miesto, tiek kaimo požymių. Šiuos neištyrinėtus ir problemiškus kraštovaizdžio tipus reikia ne tik giliau suvokti, vartoti naujus terminus ir klasifikacijas, tačiau kartu reprezentuoti prieštaringus ir sudėtingus procesus, turinčius poveikį šiandieniniam kraštovaizdžiui ir jo tyrimams bendrai. Taigi šio tyrimo tikslas – išskirti reikšmingas kraštovaizdžio plėtojimosi ir mokslinių tyrimų tendencijas ir pristatyti būdingus miesto ir kaimo sandūros teritorijose besiformuojančių kraštovaizdžių ypatumus. Apžvelgus literatūrą ir atlikus analizę išskiriama keletas pagrindinių kraštovaizdžio plėtojimosi ir mokslinių tyrimų iššūkių, tiesiogiai susijusių su miesto ir kaimo sąsajų kraštovaizdžių studijomis: didėjanti kraštovaizdžių kaitos sparta ir mastas, didėjantis kraštovaizdžių kompleksiskumas, kraštovaizdžių tyrimų aprėptis ir fragmentiškumas, problemos, susijusios su kraštovaizdžio vertinimo subjektyvumu, ir kraštovaizdžio estetiškumo iššūkiai. Straipsnyje detaliau išanalizuotos šios su miesto ir kaimo sandūros teritorijose besiformuojančiais kraštovaizdžiais susijusios tendencijos ir ypatumai: tranzitiškumas, kompleksiskumas, įvairiakryptė kaita ir laikinumas, konfliktai, chaosas ir vienodumas. Tyrimo metodai: literatūros apžvalga, analizė ir apibendrinimas. Šis tyrimas parodė, kad miesto ir kaimo sandūros zonose besiformuojantys kraštovaizdžiai yra susiję ne tik su kraštovaizdžio sandaros pasikeitimais bendrai, bet ir turėtų būti suvokiami kaip nauji kompleksiniai kraštovaizdžiai, reikalaujantys savito požiūrio.