# TRANSLATION OF EXPERIENCE AND KNOWLEDGE IN PRIVATE FOREST OWNERS' NETWORKS

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**Abstract**
Fragmentation of private property (142 thousand private forest owners) cause the challenge for governing forests, because forests are part of wider forest ecosystems, but at the same time narrowly assigned by private borders. Land restitution put the new pressures on path dependent management and new possibilities and responsibilities (that were emergent features of private forest governance). This article is part of doctoral thesis about the common governance of private forests with particular aim to focus on describing knowledge and experience exchange in private forest owners' networks in this paper. The research question for this article is to help to find out *how the translation of experience and knowledge manifest itself in private forest owners' networks?* The best theoretical model to fit this situation is the concept of translation from actor-network theory and emergent norm theory. Case study approach was selected to follow actors in forest owners' networks. The cases are forest owners' cooperatives, forest owners NGO's, as well as other forms, in particular, forest extension services and cases where an emergent process can be seen. The empirical material shows that *translation of experience and knowledge manifest itself* in few important ways, namely, at first, in a negotiation of needs and agreement on private forest owners' needs; secondly, in stewardship role of multi-functional actors; thirdly, in emerging and evolving legislative norms. A multi-functional actor is a term offered in order to reveal a wide range of mediation forms in multicultural multi nature of forests as governed property and forests as integral part of ecosystems.
**Key words:** private forest owners, mediators and intermediaries, multi-functional actors, knowledge, forest ecosystems.

## Introduction

There are changes in the composition and profile of private forest owners in Latvia, according to experts interviews, project materials in the framework of COST (European cooperation in science & technology) and Latvian State Forestry Institute Silava (Latvijas Valsts mežzinātnes institūts 'Silava', 2015, Vilkriste & Zalīte, 2015, also the Latvian State Forestry Institute Silava and the Association 'Forest Owners Cooperative Support Center' (Rozentāls *et al.*, 2017) The composition can be described as follows. There are 137 888 individuals, who own 1075 thousand hectares of forest (average 7, 8 hectares). The majority of private individuals own area of 5 ha and 18% – in the range from 5 to 20 hectares, which is 23% of the total private forest area. 4 057 forest owners were registered legal entities with 319, 8 thousand ha of forest ownership (on average 79 ha per legal entity).

Fragmentation of private property in Latvia was caused by land restitution by assigning inherited land (Živojinović *et al.*, 2015). The fragmented forest ownership structure is a characteristic issue in various European countries. The general setting of the small-scale forestry conference organized by the International Union of Forest Research Organizations (IUFRO) in 2012 was as follows: 'In many parts of the world, extensive forested landscapes have been divided into numerous small ownerships. Forest ecosystem pattern and function occur at broader scales, but this small-scale ownership phenomenon introduces unique constraints and considerations for conservation and management. Most, if not all, of the challenges have a human component and people, especially those who own or manage the resource, will need to be part of the solution' (Meyer, 2012).

Forests as part of ecosystems mean several aspects. Firstly, they are integrated into ecological circuits. Secondly, the ecological chains are complex and diverse; they are themselves subject to different interpretations and approaches (we call it different forest ecology approaches). Thirdly, ecological chains are related to human-organized chains (protection, conservation, acquisition, development, use, recreation, space for leisure and many others). Fourth, forests as part of ecosystems mean that they include not only forest resource systems and units (according to the concepts from common resource studies), but also the social understanding of natural resources. Finally, the characterization of the role of forests as an ecosystem component is not social understanding of forests as a natural resource, but social implications of the forest as an ecosystem component.

Land restitution put the new pressures on path dependent management and new possibilities and responsibilities (that were emergent features of private forest governance). Experience of the forest management and governance is determined by institutional framework and dynamics in a politically legal context, for example, via land reform. On the one hand, identifiable varieties of land reform experiences, both within individual countries (Gustafson, 2008) and in different post-soviet countries (see, for example, Wegren, (ed.), 1998;

Wegren, 1998b, Dudwick, Fock, & Sedik, 2007). On the other hand, they share common challenges, such as the transition from centralized government to free market economy (Swinnen & Rozelle, 2006; Bandelj, 2008), the consequences of land reform processes (ownership issues, developmental dilemmas) in developing countries where in this context, also Latvia (Lipton, 2009; Manji, 2006; James, 2007; Ho (Ed.), 2005). Policy and legal changes do not mean adequate economic and social changes in land management. So we can speak of continuing actions and prevailing norms regarding that using concept such as path dependency, on the one hand, but as well as of the rules and actions that are emerged, on the other hand.

This article is part of a doctoral thesis about the common governance of private forests with particular aim to focus on describing knowledge and experience exchange in private forest owners' networks in this paper. The best theoretical model to fit this situation is the concept of translation from actor-network theory and emergent norm theory where it can be applied.

*Theoretical approach of knowledge translation in owners' networks*

Actor-network theory (hereinafter referred to as ANT) is a theoretical approach of co-constructivism, where the most notable authors are Bruno Latour, Michel Callon, John Law, John Hassard and others (see, for example, Law & Hassard (Eds), 1999; Latour, 2005).

It is useful to refer to Bruno Latour where he describes the evolution of the meaning of 'network' over time. Latour emphasizes that initially 'networks' were considered as translations (Latour, 1999), what means a translation process of knowledge, experience, texts and meanings, that cannot be measured clearly and directly, measuring, for example, links in the network who is 'networking' with whom. So the networks are not about who the links are, but what are the links? In this sense, translations determine the meaning, not two points (subjects or objects) that are interconnected. Latour indicates the difference between the actors who transport meaning or force without transformation (intermediaries), and actors, who transform, translate, distort, and modify the meaning they are supposed to carry (mediators) (Latour, 2005). Latour continues that there is no preferable type of social aggregates, there exist endless number of mediators, and when those are transformed into faithful intermediaries it is not the rule, but a rare exception, that has to be accounted for by some extra work – usually by the mobilization of even more mediators (Ibid). Translation in ANT is mainly about converting one thing into another, initially considering these 'things' as equivalent.

In the case of forestry, researchers and readers involved in the field of studies of science, technology and society by extending the concept of translation, which clearly demonstrates the interdependence between micro-technologies in forestry and interactions in society. The concept of translation in broader sense thus reveals the cases of forestry theory and practice that manifests itself in human networks, namely, private forest owners' networks. Knowledge of forestry is not dominant and it needs to be translated into various organisational in interaction forms towards sustainable forest management.

Subjects that interact in networks play an important role. It is a matter of taking two levels into account, namely, purification and translation (according to ANT, see Latour, 1993). I propose to rephrase the ANT dichotomies, analysing cases of private forest owners' networks. Dichotomies – culture / humans versus nature / non-humans mark purification level task. Dichotomies at the level of purification determine dichotomy against hybrids (or networks), thus indicating task of translation (Latour, 1993).

Various human, human-made and natural factors can be located at the level of purification. These factors are forest owners, their actions, attitudes, property rights, acquisition practices (how they manage their forests – forest management plans, property boundaries, logging plans and attitudes, reforestation practices and networks etc.). Knowledge of forests as resource systems for humans and non-humans (live nature, inanimate nature) flows and becomes visible, shaped and transformed into an interaction process among agencies. This process can be described as joint or common forest management.

**Materials and Methods**

Suitable methodology in order to mobilize ever emerged mediators is case study approach. In order to answer to question how the translation of experience and knowledge manifest itself in private forest owners' networks, a case study has been used. Case study consists of a range of forest owners' organisations both formal and informal, where emergent social and natural flows take place. The cases are forest owners cooperatives (recurrent in-depth and semi-structured interviews with cooperative managers in 3 forest owners cooperatives), forest owners NGO's (5 in-depth interviews with managers of NGO's), as well as other forms, in particular, forest extension services (3 interviews with management and employees in state forest consultation extension centres) and cases where an emergent process can be seen (particular number of secondary data, primary data from interviews in each of case). Cases where an emergent process can be seen are support for the planting of new stands; an example of afforestation of agricultural land;

river bank protection zones versus water quality in rivers; unexpected events; cooperation among private forest owners and nature protection institutions and regulations. Emergent cases mean the combination of the theory of emergent norms and case studies, where formulation and implementation of new rules are central and that is wider scope than just their emergence. Case study included several data gathering and data analysis methods, respectively, desk study, structured in-depth interviews with actors in forest owners' cooperatives and forest owners NGO's management, and interviews with multi-functional actors. ANT methodological suggestion 'follow the actor' was applied to select appropriate informants in the course of data gathering as well as the principle of analysing articulated knowledge and experience in the empirical material.

Forest owners' organizations can be considered as a manifestation of common forest management in which private forest owners cooperate for practical purposes in forest management. Forest owners cooperate; unite in different organizational forms to manage their forests. Translation of knowledge, understanding and applying in forest management occur via multiple mediators and multiple intermediaries. The experience of non-governmental organizations dates back to the 20th century, but the operation of forest owners' cooperatives from 2012. There are several evolving aspects in the process of formation and development of organizations in accordance with the theory of emergence. The first is the logic of the organization itself, the need and the situation in which they were founded and what factors manifest itself during their formation. The other is translation and transfer of knowledge. Private forest owners' organizations act as mediators, interpreting both the constitutional level conditions and the conditions of the operational level in different directions (constitutional, collective and operational levels are concepts offered by authors in common resources study, for example, Elinor Ostrom and others, see Ostrom, 1990; Kiser & Ostrom, 1982). More specifically, representatives of organizations tell about the legislative conditions, the obligatory work in the forest and in reality, forest owners are faced with how to implement the legislative conditions, giving as much feedback as possible – or and how and to the extent possible. Thirdly, the sharing of knowledge is also a practical cooperation, for example, the sharing of technical support. The second and third points relate to the use of knowledge and experience in attracting EU funds for forest management activities. The fourth is a variety of co-operation areas related to both human actors (sharing experiences, advice, etc.) and non-human actors (sharing with forestry equipment, cooperation with plant growers, etc.) and permanent networks in which forests owners cooperate with forest professionals. The aforementioned directions of cooperation are diverse, they arise and break, form, transform and re-create. The theoretical basis of the department is the theory of emergence and ANT. The theory of emergence is used as a theoretical basis for describing the dynamics of processes, where various actors (forest owners, foresters, forest service providers, knowledge, forestry techniques, etc.) follow the actors, which actions leave a trace of where the dynamics of organizational formation leads.

**Results and Discussion**

Translation of experience and knowledge manifest itself in three important ways. Multi-functional or multi-role actors play important role in all three ways. Multi-functional actors are the term I offer in order to reveal a wide range of mediation forms in multicultural multi nature of forests as governed property and forests as integral part of ecosystems. Multi-functional actors are those forestry professionals who play few or many roles starting from heirs of forests in many generations, thus forest owners in cooperation with family members and relatives, continuing with graduates in forestry, members of formal and informal organisations, and ending with public officials, lecturers and public spokespersons in forest management. A statement that multi-functional actors serve multiple roles allows researchers to reveal the will-to-connect.

Firstly, translation of experience and knowledge manifest itself in a negotiation of needs and in an agreement on needs in private forest owners' networks. Empirical material indicates real, practical action by actors in forestry in various examples. Practical actions are of continuing importance in the course of time. Reflecting about various possible solutions in practical situations (for example, what to do with the dry / wither tree?), forest owners weight sustainable solutions (dry trees as a habitat of insects or an economically ineffective way to get a firewood) not to be fixated on isolate, rigid solutions. Translation of knowledge and experience between forest owners and multi-functional actors allows spreading sustainable solutions through the exchange of experience, reasoning, practising and reflecting on it. Forest owners' needs could be traceable in other more general cases, where the process of their expression and interpretation (translation) can be understood as an agreement on needs. Conceptually and methodologically needs in forestry are issues of governance (management, administration) that are relevant at a specific point in time. Empirically identified relevant issues during fieldwork are support for the planting of new stands; an example of afforestation of agricultural land; river bank protection zones versus water quality in rivers; unexpected

events; cooperation among private forest owners and nature protection institutions and regulations.

Analysing the support for the planting and cultivating new tree stands in forests few important conclusions can be drawn. That means not just the management of the opportunities offered by the EU, the forestry policy, but also all the practical lessons that arise from organizing, monitoring, practicing planting and cultivation of new tree stands. The theoretical significance of the ecological factors of a new tree stands is not identifiable, even if it is conceived in policy documents. Social factors who, what and how will perform necessary requirements and how economic factors play the role. These factors are human resource inputs and outputs for sustainable forest management. Solutions that focus on ecological sustainability have been underrated and need to be addressed.

Secondly, translation of experience and knowledge manifest itself in translation between forest owners and forest cooperatives representatives or multi-functional actors latter acting as stewards or taking the role of stewards. Stewardship implies manifestations of sustainable, multifunctional monitoring, following a sustainable development course, envisaging, but co-creating sustainable forest management. At the operational level in forest owners' cooperative case, this means translating knowledge in terms of offering the opportunities, but not in terms of imposing them, and practicing the activities defined in the commonly designed strategy of cooperatives. Forest owners' organizations also play the role of stewards, offering and describing opportunities, while leaving decision-making for the private forest owners themselves. Multi-functional actors engaged in education has a various motivation, but in the context of knowledge translation engaged in these activities in order to prevent ignorance, unconsciousness and other obstacles in complex yet liberal forest governance and management policy in Latvia. Forest policy and legal regulation in forest policy have been discussed between the public sector, forest extension service organisations, foresters and forest owners' in the top-down form, but in bottom-up form as well.

That leads to the third form where a translation of experience and knowledge manifest itself. It is performed in emerging and evolving legislative norms. Particular governance is necessary to deal with emerged issues. Issues emerge at different levels, but empirical material suggests that they are getting support in bottom-up feedback. Governance top-down activity initiates, on the one hand, the establishment of certain legal regulation that corresponds with the real situation at the operational level, but, on the other hand, government actors act as mediators, expressing opportunities that forest owners can use. Quote from an in-depth semi-structured interview with forest extension service providers reveals:

'The projects were successful when the owners were not allowed to take care operations in new tree stands in for the project for themselves but were forced to take some service provider. But knowing how much we are unemployed in the country and who will do better as the owner in his own forest, he will caress each tree there. We got it through all the signatures, it was hard to go, but we got it. As a result, European money was also more rapidly absorbed.'

At the constitutional level, some private forest owners' cooperative managers were involved in representing interests of forest owners and foresters in the 'Co-operative Societies Law' (LR Saeima, 1998) in order to balance the interests of foresters with the interests of the agricultural sector. In addition, it is about representation of interests, not lobbying, since the potential for cooperation is not quite competition in the market with companies in the forest sector (if we speak in economic categories), but the provision of similar opportunities or suitable 'rules of the game' for forest owners of different sized properties. In the agricultural sector, legally the first co-operatives were founded in 1998 (LR Saeima, 1998). In-depth interviews with private forest owners' cooperative managers show the defence of interests prior to a legal allowance to found cooperatives in various ways. One of the managers in cooperative confirms the informal ties with the Minister of Agriculture, which are not used in their own interests. Other managers have taken part in the project for the foundation of private forest owners' cooperatives and are currently operating on the executive branch of one cooperative. In this example, readers can see the process of negotiating the solutions to hear the voice and chances for small forest owners' to cooperate in the forestry sector.

Further research could be done to reveal the multiplicity of mediators and intermediaries in private forest owners' network, where voices of many are still unheard in the competing vision of forests as primarily natural resources in perspective from logging companies. Forest cooperatives and NGO's performs as stewards between various forest service providers in the market of saturated service providers, where the activities of forests as natural resources due to their life cycles drastically limit the range of services that can be offered by various competing service providers.

**Conclusions**

Few relevant contextual conclusions can be drawn from this research regarding theoretical approach and methodological approach:

1. First, one of the biggest advantages of actor-network theory in studying common forest

governance is the ability to study, follow up, describe not only the narrow organization formation and institutionalisation, but the wider, dynamic group formation process.
2. Second, the fact that groups are formed (emerging, continuing, evolving, etc.) in one form or another (forest owners cooperatives, forest owners NGO's, as well as other forms, in particularly, forest extension services and cases where emergent process can be seen) does not mean that actors will agree and rely on mutually negotiated and agreed what is optimal sustainable forest management, but it allows identifying and determining space (networks) where interactions take place.

The research question for this article is to help to find out how the translation of experience and knowledge manifest itself in private forest owners' networks? Empirical material from case study shows that translation of experience and knowledge manifest itself in few important ways. These are:

1. Negotiation of needs and agreement on private forest owners' needs;
2. Stewardship role of multi-functional actors;
3. Emerging and evolving legislative norms, what is negotiated and can be traced at various levels of governance of common resources (in terms of forest ecosystem) – constitutional, collective and operational.

**Acknowledgements**

This work has been supported by the European Social Fund within the project "Support for Doctoral Studies at University of Latvia."

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