Role transformations in collaborative R&D-projects as reciprocation between research, practice and policy

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This paper discusses how roles in R&D-projects can transform and develop through the duration of a project and how different types of knowledge reciprocate with policy learning at different scales. Research, practice and policy represent different but interconnected social spheres, each with different interests, institutional rationalities and values. When different institutional rationalities meet in the setting of a collaborative R&D-project there are many factors that will affect process efficacy and project outcomes. In this paper we focus on how researchers and practitioners can fill different collaborative roles, work in *desired* or *undesired* pairings, through the duration of a R&D-project. The paper argues that through making role clarification and adaptation part of reciprocal processes, the likelihood of creating learning and added value for all parties can increase.

Key words: collaboration, R&D-project roles, research methods, policy learning

1. Introduction

The meeting between theory and practice is a meeting between different types of knowledge. There is societal expectation that the paring of research and practice knowledge in collaborative R&D-projects will generate knowledge for social change, policy making and theoretical development. Such expectations to knowledge co-creation are also shared by action re-

International Journal of Action Research, 10(2), 2014, 184-212 DOI 10.1688/IJAR-2014-02-Vasstrom
ISSN 1861-1303 (print), ISSN 1861-9916 (internet)

searchers. A general challenge for both action research and collaborative R&D-projects is how local knowledge generation can increase its scope by generalization for policy learning at a broader scale (Gustavsen et al., 2008).

User-oriented research and R&D-programs have gained momentum through EU-programmes such as FP7, Horizon 2020 and Interreg. The assumption is that the coupling of research and practice, reflection and action, will generate theoretical and experiential knowledge that can prove useful for policy learning and change at different scales. However, even if the *language* in EU-programmes and action research methodology shares similarities, e.g. participation vs. user-orientation, this does not necessarily mean that large scale R&D-program policies necessarily build on core insights from practice oriented research methodology. It is therefore important to continue to address the issue of *roles* in R&D-projects on behalf of researchers, practitioners and politicians seeking to engage themselves in and learn from collaborative projects.

This paper attempts to address two aspects of this larger theme: (a) to develop a typology of how researcher and practitioner roles can transform, develop and reciprocate during the evolution of a collaborative R&D-project, and (b) to examine how researchers, practitioners and politicians can act methodologically, practically and strategically in reciprocal processes to create knowledge and policy learning at different scales.

The relationship between researchers, practitioners and politicians is discussed based on our participation in a three-year (2009-2012) Interreg project called: *Rural development in Scandinavia* (LISA-KASK).[1] The central features of LISA as an R&D-project were that it had both research and development goals, had participation from both practitioners and researchers, was followed and evaluated by politicians at different scales, and lastly, both practitioners and researchers had (or established) some degree of autonomy related to the design of their roles. This makes the LISA-project an interesting learning case in order to examine research-practice role-transformations and knowledge reciprocation with politicians.

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[1] LISA is an akronym for "Landsbygdutvikling i Skandinavia" and KASK stands for the Kattegat-Skagerrak Øresund region.

In the following, we first present the theoretical framework of our discussion which is summarised in an analytical model of researcher and practitioner roles. Based on this we present our two research questions. Then we present the LISA-case, the research process and a discussion of the case in relation to the analytical model. Building on these ideas and our reflections from the LISA case, we explore in more general terms reciprocation between research, practice and policy. The paper is concluded with a summary of reflections and suggestions for further research.

2. Collaborative roles

2.1 Creating communicative space

Literature on interactive research strategies and action research, see for example (Greenwood, 2002; Greenwood & Levin, 1998, 2007; Johnsen & Normann, 2004; Nielsen & Svensson, 2006; Reason & Bradbury, 2001; Vasström, 2013; Whyte, 1991; Wicks & Reason, 2009) often puts great demands on the researcher and the competencies, resources, skills and attitudes the *action researcher* should possess when she/he interacts with practice. The researcher must e.g. have a firm grip of the challenges facing practitioners, be a "doer" with facilitative skills, have a thorough understanding of group dynamics and processes, be skilled methodologically and as an academic professional, act ethically, and have a participatory perspective on themselves and their work, etc. (Greenwood & Levin, 2007; Reason & Bradbury, 2001). We support holding researchers to the highest standards, but in order to succeed with collaborative R&D-projects the requirements for involved politicians and practitioners are also significant. A starting point for us is that researchers, practitioners and politicians alike bring in different knowledge perspectives and interests.

The diffusion of knowledge from practical R&D-projects to a wider policy sphere implicates a problem of scope (Gustavsen et al., 2008). The travelling of knowledge, ideas, concepts and experiences from a particular situation to generalizable policy making and social change is complex. However, Gustavsen *et al.* (2008), argue that such policy learning is possible. The hurdle is to develop the linkage between practical experiences and the for-

mation and organisation of political and societal discourses. Similar difficulties are encountered by researchers in social qualitative research in general that endeavour to extract generic knowledge form particular case studies. It is thus a matter of scaling up knowledge and learning from a particular R&D-project and to communicate its relevance on a broader societal (and political) arena. Politicians are often not directly involved in R&D-projects, but often seek to set-up R&D-programmes and learn from these as a way to define and refine policy strategies and goals. In this paper we will argue that R&D-projects can develop relevant knowledge for policy learning at both local and inter-regional policy scale. However, such diversified knowledge generation necessitates a clarification and acceptance of different R&D-roles and institutional rationalities.

Policy learning is a process that couples knowledge, reflection and learning between different actors at different scales (Karlsen & Larrea, 2014; Sabatier, 1987). It can be understood as a multidimensional process where policy goals and strategies are repeatedly adjusted based on new insights. It thus entangles theoretical and experiential knowledge in a process of creating or reshaping policy horizons (Bennett & Howlett, 1992). Policy learning is difficult to define because it involves different learning processes, actors and knowledge inputs. In this paper we distinguish between *instrumental* policy learning, where R&D-results are used directly either to defend existing policies or to implement new policies for "solving" a concrete problem, *incremental* policy learning, where R&D-results are used to evaluate and adjust/adapt existing policies accordingly, and *reciprocative* policy learning, where complex societal issues are considered in relation to the complexity and scale of the knowledge generation process itself.

Instrumental and incremental policy learning are not, as such, dependent upon knowledge being developed through collaborative processes. However, if we assume that collaborative R&D-projects can address certain 'wicked problems' (Rittel & Webber, 1972) that cannot be solved by *only* practitioners, by *only* researchers, or *only* by any other homogenous group (Hajer & Wagenaar, 2003; Koppenjan & Klijn, 2004). Rural development projects such as the LISA-KASK are in this paper understood as communicative arenas that seek to address "wicked" development situations. Such are char-

acterized by not having reducible or objective solutions, by requiring different types of knowledge and involvement of different actors at various institutional levels to bring about change and improvement. Reciprocative policy learning can then be viewed as a means to address 'wicked problems' through its foundation in collaborative knowledge creation processes. From this follows that a carefully planned R&D-project can function as a policy learning arena where politicians can develop new insights for political decision-making based on both experiential, contextual and theoretical knowledge. Development of such learning arenas requires clarification of institutional rationalities, goals, knowledge and roles of R&D-participants.

The collective planning of an collaborative R&D-project requires consideration of how different research strategies balances project goals, participants' interests, politicians development agendas and academic research agendas, as well as about situated knowledge generation processes (Nielsen & Svensson, 2006). In this regard, both researchers, practitioners and politicians should be conscious about how to create *communicative spaces* and build relationships between different types of knowledge bases that can contribute to successful and productive projects (Arieli et al., 2009; Wicks & Reason, 2009). A starting point for such communicative spaces should include joint and systematic examination of project structure, phases, roles, and role transformation processes *before* project start-up and parallel with project evolution.

In the following, we examine a typology that can function as a common reflection model for the meta-discussions around such a communicative space. In the model, we lay emphasis on different roles that practitioners and researches can take in a project and how these can change both through reciprocative and unintended processes. Further, we reflect on knowledge generation processes in relation to policy making at different scales. The rationale is that awareness of different types of roles and role transformations in R&D-projects can increase the likelihood of actors being able to act reciprocatively and deliberatively in order to reach project goals in a productive manner.

2.2 Analytical model

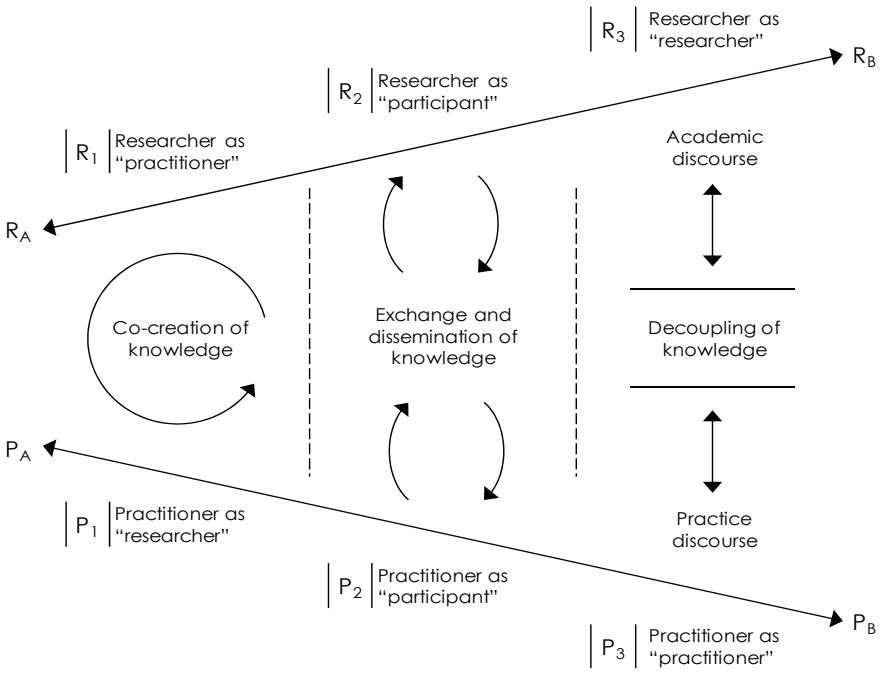
R&D-projects will most often move through a series of identifiable development stages such as; planning, initiation, implementation, completion and evaluation, etc. In addition, an R&D-project will typically move into different knowledge spheres where different types of actors have core competencies and different types of local or general knowledge is fostered. Complexity will often be added through shifts in both internal and external project expectations. Further, it is also common, in multi-year projects, to experience personnel changes of key actors both internal and external to the project. In itself, this will likely mean that the characteristics of the meeting between research and practice will change through the duration of most projects. However, these often-unintended role shifts have the potential to be made explicit and integrated in the overall programme strategy and project design. This is not only a matter of directing the knowledge creation processes towards desirable outcomes, but also of facilitating a more flexible, adaptive and less friction filled project.

The model depicted below simplifies this and shows how practitioners and researchers roles respectively can be either static or dynamic and move on the P_A-P_B and R_A-R_B line, giving us a typology of in total six role configurations.

The model (Figure 1) is meant to be neutral, i.e. not give precedence to R_3 instead of R_1, or P_1 in front of P_3, etc. The model is based on the assumption that the various roles satisfy functions, development needs, and institutional rationalities in different spheres. This implies that roles not only *could* be expected to change, but that they *should* shift between P_A–P_B and R_A–R_B, through the evolution of a collaborative R&D-project. For instance, the notion that the roles in a collaborative R&D-project permanently should be in a R_1+P_1 situation is neither realistic (it is very cost-and time-consuming for both parties), or desirable (it does not satisfy all institutional rationales and requirements such as e.g. academic discourse and publication, and the administrative and development needs of practitioners). If the situation R_1+P_1 was the only legitimate role configuration in collaborative R&D-projects – one could argue that the rationale for collaboration itself overtime would disap-

pear when the two institutional spheres become less diverse and more similar in their knowledge and experience base. The rationale for politicians for funding collaboration between researchers and practitioners must be that they each represent different types of knowledge and skills, and that it is the blend of this diversity that can result in new insight and knowledge. The essence of collaborative R&D-projects – and their relevance for reflective policy learning – is therefore that they contribute with both local contextual knowledge from particular situations *and* reflection and theorization of knowledge applicable at a wider policy learning scale (Nilsen & Svensson, 2006).

Figure 1: R&D-project role configurations, adapted from (Johnsen, 2013)



What is of importance, in such knowledge creation processes, is that practitioners and researches *share phase configurations*, which we here label as being in *desired pairings* (R_1–P_1, R_2–P_2 and R_3–P_3). Such desired pairings require that there exists a mutual understanding of the "other's" role and an

awareness and recognition of how being in this role contributes to reaching project goals. *Undesired pairings* are when research and practice roles not are in accord (R_1–P_2, R_3–P_2, etc.) and practitioners and researchers mentally and/or physically are at different places and have different expectations to the "other" than what is manifested in practice. Undesired parings are often the result of ambiguous role expectations and lack of clarity and understanding in programme and project design. Undesired pairings are often sources of conflict and dysfunctional processes that may prevent R&D-projects from reaching the research, development and policy goals that are set (Johnsen & Normann, 2004). Even if the consequences may vary, unintended undesired parings are probably a relatively common issue in many R&D-projects. In most circumstances, we believe that there will be significant benefit in reducing the number of undesired pairings and maximise the number of desired pairings through the evolution of any R&D-project. What will vary between different types of collaborative R&D-projects e.g. technological, social, organizational, etc. is specificities about what desired pairing that fits best with a given project phase and of which duration. Based on this, the Table 1 schematically outlines our typology.

Common for the desired pairings is that there exist a communicative space where roles and roles expectations have been communicated, understood and accepted as beneficiary for all parties. All of the three desired pairings can in different ways contribute to mutual critical perspectives to each other's knowledge and role. It is in the process of coupling-decoupling-coupling that roles become reciprocative and researchers and practitioners alike acquire new knowledge and experience – and generates added value in collaborative R&D-projects. Decoupled "outside" knowledge and experience can also help to open up new and critical understandings, avoid cognitive lock-ins and prevent dominant prejudices to spread (Snoeren et al., 2012), thus avoiding that established understandings developed within the project frame becomes limiting "truths" (Nielsen & Svensson, 2006). The realization of this type of productive project synergy requires that both parties evenly feel they can contribute on an equal basis, and that mutual criticism is recognized and formulated in a way that is perceived as constructive for the project purpose and outcomes (Wicks & Reason, 2009).

Table 1: Typology of R&D-roles

R&D-roles		***Description***
Desired pairings	*Co-creation* (R_1+P_1)	A normative ideal within participatory action research (Greenwood & Levin, 1998, 2007). The research-practice relationship is about using different forms of knowledge, shared experiences, reflection to learn from each other and co-create, implement in practice, and evaluate the usefulness, and use this as input in a new knowledge generation cycle.
	Exchange and dissemination (R_2+P_2)	This is an often seen configuration in user-oriented research projects. Were knowledge developed in different domains are exchanged and disseminated.
	Decoupling (R_3+P_3)	This configuration represents the "stereotypic" academic-practice relationship. Were knowledge is developed, disseminated and used within the same domain. It does however function in collaborative R&D-projects e.g. in preparatory phases and when actors address specific institutional demands.
Undesired pairings	*Dance without a partner* (R_1/P_1+P_2/R_2, etc.)	In this configuration, one of the parties seeks to engage in close collaboration and mutual knowledge generation processes, but the other party is not present, able, want or aware of this expectation.
	Monologue without audience (R_2/P_2+P_1/R_1, etc.)	In this configuration, one of the parties seeks dialogue but achieves only monologue. The other party is not physically present, cognitively or socially compatible, or unable to communicate in a language that the other party understands and/or can relate to.
	Home alone (R_3/P_3+P_1/R_2, etc.)	Here one of the parties focuses on processes in their own domain, without this being recognised as productive for the project by the other party.

2.3 Research questions

As mentioned in the introduction the political rationale for involving both practitioners and researchers in R&D-projects are often based on the assumption that the theoretical and practical knowledge can complement each other in various phases of a project. In relation to this it is interesting to examine whether there are *desired pairings* that are more useful than others in various stages of an R&D-project, and to what extent these can be deliberately facilitated by politician's expectations, programme design and funding schemes, and by researches and practitioners themselves when designing and implementing the project. Further, it is interesting to explore how the knowledge

developed through different pairings can contribute to policy learning at different scales. Based on this we pose the following two research questions:

1. What factors influence researcher – practitioner dynamics in various stages of R&D-projects?
2. How do collaborative R&D-projects reciprocate with policy learning at different scales?

Our analysis and discussion of these questions are based on our interpretation and learning from the LISA-project in relation to the analytical model and typology above.

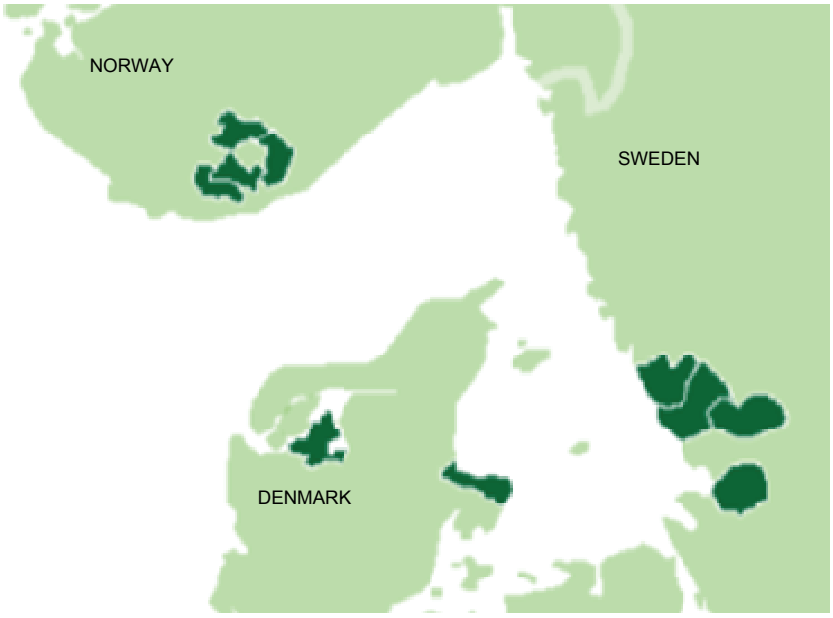
3. The LISA-case

3.1 Rural development in Scandinavia

Rural development in Scandinavia (LISA) was an inter-regional development project in the Interreg IVA KASK programme. It aimed to strengthen regional economic growth based on regional advantages, while linking the regions closer together by facilitating networking, interaction and learning between the regions residents, businesses and governments. The program was organized as collaboration between various groups of stakeholders from local and regional authorities (the LISA-project team), businesses, NGOs, and research institutions. The local and regional politicians were not involved in the development of the project as such, but occasionally participated in local and inter-regional meetings to keep at pace with the project development. The role of the research institutions was to contribute to the project through participation and knowledge sharing with partners (Interreg IV A, 2007).

The project had two integrated main goals: 1) to stimulate specific rural development activities in the different municipalities, and 2) to develop approaches and methods for municipal work with rural development on a more general level. The project involved partners from ten municipalities, three regions and three research institutions. The LISA-project was developed in response to common "wicked" municipal challenges for rural development in general, and specifically focusing on economic growth. The map below shows the geographic location of the participating municipalities.

Figure 2: The location of the partner municipalities[2]



LISA was organized into five work packages (WPs) that addressed various aspects of local government challenges and opportunities in rural development; WP1: Mobilization and development plans, WP2: Economic development, WP3: Attractive rural areas, WP4: Tourism industry. The fifth work package, Triple-helix, aimed to improve the interregional dimension of learning and dialogue between the municipal practitioners (the LISA-project teams), politicians, and research partners. In addition, the project had three distinct geographical scales: the inter-regional (between countries/regions), the regional (within the country/region) and the local (within the municipality).

3.2 Research Progress and Methods

LISA-researchers from Norway were independent partners in the project (with additional independent funding) and could therefore in principle design

[2] Norway: (Songdalen, Vennesla, Birkenes and Evje-Hornnes), Sweden: (Laholm, Hylte, Falkenberg and Varberg), Denmark (Nord-Djurs and Skive).

their role relatively freely within the framework of the project. We interpreted this as making our research relevant for the ongoing activities and use the development process and objectives planned for the LISA project as our empirical material. Further, the research activities were aimed at developing more generic knowledge about rural development aspects relevant for a broader academic (and political) sphere. Research activities from the Norwegian side, were thematically oriented towards the following two themes that matched both project objectives and researcher competencies and interests: (a) place attractiveness and (b) the organization of local development processes. The competencies of the researchers were characterized by their project experience from work in an applied regional research institution and their social science education background. Further, all of the researchers had extensive project experience also from previous Interreg programs with similar agendas. The competencies of the practitioner (LISA-project team) were characterized by little previous R&D-project experience, but with much work experience in a political administrative institution (the municipality) and their work experience as local planners and administrators.

The LISA-project application was developed by municipalities in cooperation with regional partners and commissioned by municipal politicians, without direct involvement of the researchers. The project description was adapted to a standard Interreg KASK form which emphasised quantification of various goals rather than providing space for development and descriptions of the purpose of the project and project roles. The complexity of the project objectives and the various role definitions were therefore, at times confusing and diverging, during the first partner meetings in 2009 and 2010.

The role of the researchers was particularly controversial in the beginning of the project at the inter-regional level. The municipal and regional partners supposed that researchers could do commissioned research to help solve specific problems in the project. The researchers pointed out that such a role was not defined in the project application. Further, that their role would serve the project better by utilising their project experience and their ability to provide theoretical and methodological knowledge into the project organisation that could bring in new perspectives to the project, as well as develop knowledge with a more generic edge. The researchers suggested that they

could do this by contribute knowledge through presenting and discussing relevant issues in partnership meetings and conferences. It was also proposed to assist in creating reflection and evaluation processes in connection with the inter-regional partnership meetings to strengthen the interregional learning dimension, which was one of the purposes of the Triple-helix work package. The discussions of roles at the beginning of the project were unfortunate and should have been clarified prior to project start-up. However, they also succeeded to generate a reflective space for clarifications and new understandings between the partners that the project could accommodate different research and practitioner roles in the process.

During the project evolvement at the regional and local-level there was a greater degree of agreement between the various Norwegian partners. The researchers attended the regional meetings as a reflection and discussion partner. The researchers tried on two of these regional meetings to encourage the LISA-project team to reflect, define and structure their project purpose better in relation to the overall LISA-milestones. The LISA-team did not invest time in this exercise, supposedly because they were too occupied with the practical activities in the project. At the local municipal level the Norwegian researchers attended as observers and discussion partners in the majority of public meetings to gain a better understanding of how the LISA-project team worked with local firms and citizen groups and the challenges and opportunities they faced. It was based on this participation that the researchers concretised their research agenda and continually developed their research perspective in relation to LISA, which was also presented at the regional and inter-regional partner meetings.

The researchers participation on the local arena combined with the presentation of the emerging research agenda in the inter-regional partner meetings also created a space for role clarifications. The emerging clarification was correlated with an equal improvement of the practitioners' conception of their own role as rural development agents. At the local and regional level, the development activities were increasingly concretized through continuous village meetings and the establishment of local working groups addressing specific local development agendas. At the interregional level partnership meetings and exchange of experience contributed to create more unified

perspective on how municipalities could act as rural development actors. The project goals had in this sense been better defined and the role understandings had been significantly improved.

In this period, Norwegian researchers, with the participation of the Swedish research partner, arranged a regional dialogue seminar with local partners and regional actors and politicians in LISA. The purpose of the seminar was to discuss the various actors' roles and performance expectations during the remainder of the project. This dialogue seminar helped create a basis for reflection and dialogue about the various existing and potential roles in a rural development project. The researchers' role was to facilitate the seminar and actively contribute through dialogue and reflection. In addition, the researchers synthesized the discussions of the participants through the publication and presentation of a project report (Normann et al., 2010).

Both at local level and inter-regional level the researcher role had now become more accepted and established. The researchers contributed with presentations of preliminary research findings and theory as input to the concrete rural development discussion at local meetings. In addition the researchers were not only invited as discussion participants on partnership meetings, but also asked to deliver key research findings and perspectives on partnership conferences. These conferences typically had 80-120 participants (LISA-project team stakeholders, local and regional politicians, and administrative staff) from the partner countries. These presentations gave recognition for a more theoretical research role as a supplement to the more practice-oriented research role. Based on these conference and partnership meeting presentations, the researchers were encouraged to create a dialogue seminar for all LISA-partners. This was the start of the development of a more unified understanding of research and practice complementarities in the R&D-project. Further, it represented an acceptance that this was a relationship that contained tensions which could be viewed from different perspectives.

The overall Lisa-project resulted in visible practical results at local level (development plans, new networks, business establishments, etc.). At the inter-regional level (across the LISA-project teams) the results can be understood as experiential and methodological reflections and knowledge development related to own practice as rural development agents.

The research results were based on systematic data through interviews, document analysis and surveys that were analysed in relation to theories of organization and planning of rural development projects. These results were presented at a full-day seminar arranged by the researchers and attended by 22 participants from the LISA-project. This seminar created discussions between theory and practice with the research presentations on the one hand and the experiential knowledge of the practitioners on the other. The seminar was concluded with a more general discussion about the role of research and the development of the LISA-project. Based on this workshop, researchers published a report summarizing perspectives and discussions from the seminar participants (Jonasson et al., 2012). This (research) report was used by the inter-regional project team to communicate part of the findings of the LISA-project to the regional project partners and the Interreg secretariat.

Further, at the local and regional level, the Norwegian researchers were invited to present research results from LISA for the Norwegian politicians and project stakeholders. The researchers sought here to place LISA-results into a larger context of rural development in Scandinavia, and reflect on the project outcome and learning. The project was finalized with an inter-regional conference for all partners, financial contributors, local stakeholders and other interested parties. At this conference, the researchers were asked to contribute with a stand that presented different theoretical perspectives and research findings from LISA, but also as participants in panel discussions on local government's role in rural development, and research roles in R&D-projects.

The final part of the project, in this sense, facilitated a better understanding of the researchers' role in the project among the practitioners. Firstly, in terms of creating a reflective space for the project team and in this way helping to create learning about their own practice. Secondly, the research presentations and reports were seen as useful for communicating project results to a wider public and to create greater legitimacy for the project at a regional political level. The researchers' role in the aftermath of the LISA-project has mainly been related academic publication (Cruickshank & Lysgård, 2013; Jonasson et al., 2012; Lysgård & Cruickshank, 2013; Normann & Vasström, 2014).

3.3 Role transformations in LISA

From the case presentation and our interpretation of events, we will argue that R&D-roles in the LISA-project both had elements of desired and undesired pairings. During the initial part of the project, it was the researchers that were experienced with project work and similar type projects that were eager to initiate an arena for project reflection and shared knowledge creation. At several occasions the Norwegian researchers tried to establish a role as a reflective co-development partner during local and interregional partner meetings and in the facilitation of the first dialogue workshop (Normann et al., 2010). The practitioners not much experienced with neither project work nor engagement with research milieus responded with attempts at initiating a more commissioned research relationship. At this stage they perceived the research role as a disseminator of purchased knowledge that could inform the project practice, yet somehow detached from considerations of the project development trajectory. The first phase of the LISA-project could therefore be characterised by large with what we in our typology labelled the undesired pairing *dance without a partner* (R_1+P_3). This undesired role combination can be understood as a consequence of the initial absent mutual understanding of how researchers and practitioners could participate in an R&D-project. In this sense, both parties gradually wanted to collaborate, but with different understandings of what such collaboration could entail.

The evolvement of the project allowed that researchers presented theoretical frameworks and research literature on planning and rural development at partner meetings and conferences. Such presentations often contain concepts and language unfamiliar for some of the practitioners and require a great deal of practical project experience or theoretical knowledge to take full advantage of. Some of the practitioners must have experienced these presentations as researchers not being sufficiently in tune with practitioners needs. This relation could be viewed as an example of what we in our typology labelled the undesired pairing *monologue without audience* (R_2+P_3). However, the research presentations on several project arenas also opened new understandings between practitioners and researchers of how different types of knowledge could contribute to a development project.

As the project evolved, better understandings of the other party's perspective emerged. This applied both between various practitioner groups and between practitioners and researchers. The intermediate phase of the project can thus be said to be indicative of a process where practice and research perspectives gradually won greater mutual understanding and we were able to meet in the "middle" and exchange information and reflections in a productive fashion, what we in our typology labelled the desired pairing *exchange and dissemination* (R_2+P_2). The development of this desired role constellation was undoubtedly influenced by recurrent time and the iterative meetings that had facilitated a development of more trustful relations between the actors in the project. However, it was also influenced by the improved understanding of the project complexity and challenges among the practitioners. The research role and contribution was in this sense considered increasingly important among the project partners. This development was furthered in the latter part of the project where the roles experienced a new shift. Now practitioners experienced with the project attempted to engage more directly in co-creation processes with the researchers. However, at this time the researchers had become more focused in their research domain and concerned with data collection, analysis and publication work. Thus, neither being capable nor having the resources to engage in the close involvement now sought by practitioners. This is what we in our typology labelled the undesired pairing *dance without a partner* (P_1+R_3). In this sense, we can understand that the increased project experience among the practitioners and the improved understanding of the complexities and challenges of the project created an appreciation and willingness to work closer with the researchers. At this stage the researchers were committed to disseminate to the research community through academic publications and thus not able to invest the same type of resources into the practical project development activities.

At the end of the project an interregional conference was held and researchers participated as 'researchers' performing a function of validating and legitimizing project outcomes in a "scientific manner" while practitioners focused on communicating the concrete results that was achieved in the project to politicians and project stakeholders. Later, after the LISA-project was concluded, practitioners followed up on local development activities

while researchers developed their academic publications. This resembles a situation representative of what we in our typology labelled the desired pairing *decoupling* (P_3+R_3). The Table 2 below summarizes our interpretation of the development of the project and roles during the LISA-project.

Table 2: LISA-project roles and development

Project role description	Project development	Role development
Undesired pairing: Dance without a partner (R_1+P_3)	Developing understandings of project objectives and participant competencies	Research-practitioner roles un-synced and debated
Undesired pairing: Monologue without audience (R_2+P_3)	Practitioners start to move from planning to practice	Research-practitioner roles un-synced
Desired pairing: Exchange and dissemination (R_2+P_2)	Researchers experiences develops Participants know and understand their own and others' project roles	A developing understanding of roles Research-practitioner roles synced and accepted
Undesired pairing: Dance without a partner (P_1+R_3)	Practice based knowledge and experience increases Practitioners become more interested in other parts of the project, results and perspectives Researchers focus is on data collection and academic writing	Research-practitioner roles un-synced
Desired pairing: Decoupling (P_3+R_3)	Practical and theoretical results emerges	Research-practitioner roles synced and accepted

4. Reciprocation

4.1 Reciprocative Practice

The LISA-case illuminates clearly that a successful meeting between theory and practice within the framework of an R&D-project requires a high degree of communication skills, competence, reflection and adaptations between researchers and practitioners – *reciprocity*. Collaboration is a reciprocative practice. It is not sufficient that the researchers are experienced action researchers if practitioners do not want or cannot assume a dialogic role. Correspondingly, it is not sufficient that practitioners have good ability and under-

standing for dialogue with researchers if researchers do not have sufficient knowledge or understanding of the development challenges practitioners face. In the LISA-project, we saw that it was difficult to balance and understand each other's roles at the beginning of the project. It was during the intermediate part of the project, when both research and development agendas were open for new interpretations and not restrained by an immediate project ending, that the R&D-roles were best synced and able to explore different knowledge contributions to the project.

If LISA had been better planned and had a more grounded research strategy that had defined different knowledge roles more clearly, it could have secured a better project, working well from the beginning. Such initial agreed understandings would open for reciprocal, critical, and constructive perspectives. A successful meeting between theory and practice require that both researchers and practitioners together develop a "research strategy" that allow for various legitimate and complementary roles continuously throughout the project. Such a strategy could have contributed to the LISA-project and enabled project participants to make full use of their "knowledge capital" and implicitly a higher level of achievement. Based on our experience from LISA we would argue that an R&D-project not only should create communicative spaces to clarify and discuss project challenges and roles but that it must do so. Some of the thoughts that build on these ideas and our reflections from the LISA case are explored in the following.

4.2 Reciprocative research strategy

In our first research question we asked what factors influence researcher - practitioner dynamics in various stages of R&D-projects. The topic of collaborative research is large and contains many dimensions that we do not touch upon here (Miles & Huberman, 1994; Reason & Bradbury, 2001). Collaborative research strategies address how both practical and theoretical knowledge can complement each other to induce local practical changes and generate new theoretical insights (Nielsen & Svensson, 2006), and how different types of participation can create different types of communicative space in a project (Wicks & Reason, 2009). Based on our experiences we focus on factors that

can help maximize desired parings and minimize undesired pairings in collaborative R&D-projects. These factors are here summarized through the discussion of the following four dimensions: 1) social relations, 2) knowledge and experience, 3) institutional rationale and resources, and 4) type of problem.

The term *social relations* relates here to the multifaceted complexities of participation in a collaborative R&D-project. A research strategy must take into account that there are many different understandings of what *participation* entails in a project and that it takes time and communication to continuously establish and re-establish social relationships between project participants (Arieli et al., 2009). Therefore, R&D-projects that have much *social capital* (Levitte, 2004; Nooteboom, 2007; Pérez-Luño et al., 2011; Woolcock, 1998), will build on relations where researchers and practitioners have established relationships characterized by trust and mutual understanding, obviously be beneficial in terms of facilitating projects that early will be able to realize desired pairings. Conversely, situations characterized by little social capital require that the topic of R&D-roles are discussed and clarified more thoroughly. What is of importance is the urgency of doing so, especially in settings characterized with little social capital. Failure to do so will risk that parallel project understandings and role perceptions emerge, develop and institutionalize (Johnsen & Normann, 2004; Wicks & Reason, 2009). This can of course also develop into major obstacles for the project partner's ability to reach project goals when understandings deviate significantly. Central to a collaborative research strategy where there is little social capital, should therefore be to make role expectations and role understandings explicit. From the LISA-project we can learn that a project that was initially characterized by weak ties/relations between the partners, especially at the inter-regional level, required several meetings over time to mold the understandings of project goals and R&D-roles. The gradual formation of social relations in the project gave room for clarifications and recognition of different R&D-roles and thus facilitated the desired pairings.

Knowledge and experience refers here to how different types of theoretical and practical knowledge can fill complementary roles in the process of successfully achieving project objectives in different desired pairings. Aca-

demics are often well trained and competent to interact with other researchers with similar training and background, but not necessarily prepared for interactions in specific practice domains. There is always a significant risk that theoretical knowledge will not communicate in a meaningful way with people that do not share the same theoretical frames of reference (Smith et al., 2010). Conversely, experienced practitioners are not necessarily able to communicate their insights in such a way that others will be able to take advantage of their experience and knowledge. Therefore, in R&D-projects where one or both parties have little practical experience with collaborative R&D-projects there is a significant risk that the researcher will research what they "always" research and practitioners will do as "they always do", in other words remain in their own domains. In order to avoid that one or both parties remain in their own "cognitive corner" relevant countermeasures could be applied. This could range from consulting other researchers/practitioners with collaborative R&D-project experience for advice, to involving them as learning partners in the project. However, based in our experience from LISA we argue that the most important is that the project partners prior to project start-up collectively and honestly reflect upon their capabilities and potential contributions. The LISA-project showed that both practical and theoretical understandings increased during the development of the project. The improvement of the project knowledge base further increased the willingness to collaborate across R&D-roles. Most important, and most difficult, however, is that everyone in the project recognizes that no one alone possesses all the different types of knowledge and skills needed to realize the proposed project as a *collaborative* R&D-project.

Institutional rationale and resources refers to the external conditions a collaborative R&D-project must deal with. Collaborative R&D-projects are often both more cost and time consuming than R&D-projects involving only researchers or only practitioners. In the LISA-project the resources allocated to the researchers only barely covered their presence at the partner meetings locally and inter-regionally. The theoretical research was carried out based on separate research funds. The benefit of collaboration must therefore also be made explicit and continually be communicated to project stakeholders and politicians. This is often a challenge in early phases of collaborative R&D-

projects where time and resources are needed to address the internal development needs of the project.

In situations where project resources are sufficient necessary time can be allocated to project process, developing social capital and to explore the scope for co-creating new knowledge in the project. Yet, in situations where resources are more scarce even the most well planned and designed collaborative R&D-project risks being instrumentalised down to its skeleton (Nielsen & Svensson, 2006). In such situations collaboration can become a rhetorical veil hiding that participants focus primarily on satisfying a bare minimum of core project and institutional domain needs. The LISA-project displays an example of such closure. During the last project phases the practitioners became increasingly eager to work more closely with the researchers to develop new understandings and discuss rural development complexity based on their practical experiences and the theoretical findings. However, the researchers at that time did not have sufficient resources to continue such time demanding exercises. Central to a collaborative R&D-project strategy where resources are scarce is therefore to get acceptance and understanding for realistic development and research objectives at an early stage to reach desired pairings sooner.

Goal and problem formulation is a core and very important issue in collaborative R&D-projects. In the LISA-case we saw that the researchers worked with two classes of research questions – *processual* (working methods; e.g. organization of local development processes) and *substantial* (the development issue at hand; e.g. the concept of attractive places). In most cases, practitioners will relate easiest with research that address process questions. This, because these directly address the concrete challenges practitioners work with in terms of how to organize processes around business and community development. Therefore, in collaborative R&D-projects, it is easier to achieve *desired pairings* if the research questions are phrased as processual rather than substantial problems. This because research questions that addresses the substantial aspects of development often emphasize a descriptive and analytical dimension of how the development issues as such are understood. The processual research questions often have a forward-looking (process and change) and analytical character. In a typical R&D-

project, there will often be room for several issues and topics. An easily obtainable measure is therefore to identify and allow for both processual and substantial project themes and goals.

4.3 Reciprocative policy learning

Our second research question was aimed at exploring how R&D-projects reciprocate with policy learning at different scales. From the LISA-project we can learn that it is mainly in situations of desired pairings that such reciprocation is made possible at different policy scales. In situations of undesired pairings the project was not attuned to create a communicative space where a combination of theoretical and practical knowledge could be discussed with politicians. Our further analysis here therefore takes as a point of departure the project phases where desired parings of R&D-roles were explicit, and explores how practical and theoretical knowledge contributed to policy learning at different scales. Table 3 attempts to summarize these findings.

Table 3: Policy learning with desired pairings at different geographical scales

Geographical scale	**Desired pairings**	
	Practical knowledge	*Theoretical knowledge*
Local (municipal)	Place and people Development agendas	Trends in rural development Roles for development agents
Regional	Collaboration networks Process facilitation	Organization and planning of development projects
Interregional	Working methods Comparable challenges and possibilities	Development methodology Conceptualization of findings Different rural development discourses

In the beginning the LISA-project was characterized by undesired pairings. The communication with politicians at local and regional scales was mainly shaped by practitioners' insights from their practical work in the project. Politicians were in this sense presented with descriptive stories from practitioners about the development and outcome of the project. The researchers

were present, but their perspectives were not invited to contribute to the political dialogue.

Later the communication with politicians increasingly used theoretical and methodological reflections and knowledge to understand and explain the course of the project and its potential for further development. Researchers were invited to present theoretical and methodological findings on regional and inter-regional communication arenas in dialogue with politicians. These communicative arenas served to create room for discussing the project between different partner countries, researchers and practitioners. On these occasions practical experiential knowledge from the project process were presented in reciprocation with theoretical perspectives about rural development, planning and governance that linked the particular project with a more general conceptual framework. This reciprocation became more explicit during the last year of the project where researchers were encouraged to arrange a research seminar for the project practitioners and to participate with theoretical findings at the final conference for politicians in all three partnering countries.

The potential for policy learning during the project was mainly fulfilled during the last year when the project had achieved both practical outcome and theoretical knowledge generation. At a local and regional scale the project team attempted to generate dialogue between municipal and regional politicians and researchers to communicate project outcomes from the particular place development projects. These communicative spaces endeavored to link practical experiential knowledge about particular rural development processes with theoretical findings and conceptualizations about the substance, process and organization of such projects in order to create learning about how to approach similar complex development projects in other settings. In this sense, the research role contribution was also a matter of validating and legitimizing the development project process and substantial outcome as such to the political actors.

At the inter-regional level policy learning was pursued through larger project seminars and conferences that mobilized the participation of politicians and external politicians from all three partnering country regions. These gatherings created an opportunity to present and compare practical outcome

and learning from particular cases from different regions, and further reflect these in researchers' presentations of theoretically informed reflections about the projects. The combination of practical and theoretical knowledge was thus used to conceptualize and learn about methodological and substantial development challenges in rural areas in Scandinavia and how future projects could implement these experiences in their project design.

From this it follows that society can address certain 'wicked' challenges, like rural development, by the means of collaborative R&D-projects. To achieve this, certain project design measures should be put in place. First, policy learning must be integrated with project learning, ideally as a reciprocal process. Second, project learning should be made reciprocal in order to maximize the frequency of desired pairings. Third, role transformations should be made explicit and planned for in a communicative space that run in sync with project evolution. Fourth, project learning must be transformed into policy learning by project participants through addressing 'wicked'challenges at different scales.

5. Conclusions

We have sought to describe the LISA-case fairly; the project was by no reasonable account a failure and the project goals were by large met. The project sought to work with what we have labelled 'wicked' challenges. Problems without simple quick fix solutions, such as how to create attractive rural areas, how to stimulate industrial activities in rural areas and how to collaborate strategically on local planning, problems that only could be solved through collaborative efforts. The LISA-case is therefore a good example of the real world complexities and murkiness that many collaborative R&D-projects to a larger or lesser extent will face. Efforts to facilitate productive collaborative R&D-projects require that the policy learners (politicians), researchers and practitioners develop programme and R&D-project strategies in which different types of knowledge roles and knowledge cooperation are made explicit in reciprocative processes. When R&D-project roles legitimately are allowed to be dynamic and evolve through the duration of a project, one avoids creating unnecessary complexity and tensions and in-

creases the likelihood of success. The development of different types of desired parings of R&D-roles generates a potential for communicating theoretical and practical knowledge to politicians at local, regional and interregional scales. Communicative spaces, where policy learners, researchers and practitioners recognize different R&D-roles and knowledge contributions in different phases of a project, can create the foundations for higher quality and more productive collaborative R&D-projects.

Further research, should in more detail investigate how to achieve desired pairings in different configurations of collaborative R&D-projects. For instance how should desired pairings sync with project phases in different types of R&D-projects (organisational, business, cultural, technological, science, social, etc.), what constitutes the practice–research dimension in different types of R&D-projects, are there notable differences between different academic disciplines and practice professions as to how to best achieve desired parings.

Much of the research on collaborative research methods has focused on the role of the researcher, leaving policy making as a "black-box" and practitioners as a static group dependent upon researchers to uniformly adapt. We believe that developing a framework that simplifies ontological and epistemological questions into more easily comprehensible set of practical issues can enhance our understanding and recognition of different R&D-role pairings and their distinct contributions. The realism in creating reciprocative and communicative spaces thus becomes more feasible and the chances of collaborative success become more realistic.

Acknowledgements

The authors would like to thank Øyvind Pålshaugen, Hans Chr Garmann Johnsen and Ivar Amundsen for their constructive comments on earlier drafts. Thanks also to Hans Kjetil Lysgård, Jørn Andre Cruickshank, Susanne Paulsson, Mikael Jonasson, Per Fischer, and all the other LISA-collaborators. Finally, we thank the editors of this special issue and the two reviewers of this paper for their constructive feedback on the development of this paper. All the usual caveats apply. This paper builds on a Norwegian language book

chapter from the same authors; the scope of this paper is expanded to include the policy learning dimension.

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