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What's underneath? Social skills throughout sustainability transitions

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ABSTRACT

This paper focuses on the critical role of institutional entrepreneurs' social skills in enabling transformative change as described by the Multi-Level Perspective. Understanding the role of social skills is crucial for developing a micro-foundational view of sustainability transitions. We develop an analytical framework using a multiple case study on Swiss cantonal planners who acted as institutional entrepreneurs during comparable sustainability transitions by introducing sustainable planning practices within their cantons. We find seven applied skills (i) empathic, (ii) analytical, (iii) translational, (iv) framing, (v) tactical, (vi) organizational, and (vii) timing. Four propositions discuss the role of these social skills across transition phases: from pre-development to take-off, from take-off to acceleration, and from acceleration to stabilization. We present conclusions and implications for future research on the micro-foundations of sustainability transitions.

1. Introduction

Recent literature on sustainability transitions has addressed the relevance of studying its micro-foundations to advocate a multi-dimensional model of agency in the Multi-Level Perspective (MLP) (Geels, 2020). Early debates have focused on describing different stages of change, such as the pre-development, take-off, acceleration, and stabilization phases (Loorbach and Rotmans, 2006; Schot and Kanger, 2018). However, over the years attention has been given to the role of agents and institutional entrepreneurs; these are actors that challenge dominant institutional structures to foster sustainability transitions (Hoogstraaten et al., 2020; van Doren et al., 2020). Such research has looked at the role of (i) collective agents (Wijen and Ansari, 2007; Aldrich, 2011; Jolly and Raven, 2015), (ii) field-level conditions that provide opportunities for agency (Battilana et al., 2009; Seo and Creed, 2002), or (iii) different type of actors who refer to diverse institutional strategies (Alexandrescu et al., 2014; Hoogstraaten et al., 2020). In contrast, a micro-foundational approach aims to disclose the underlying interlinkages between lower-level agency and aggregate social processes (Felin and Foss, 2019); thus, it seeks to understand how macro-level structures are constituted and modified by individual actions and interactions, which themselves are affected by macro-level structures (Haack et al., 2019; Harmon et al., 2019).

Nevertheless, a systematic analysis of the role of institutional entrepreneurs' social skills throughout sustainability transitions using this approach is still lacking (Heiskanen et al., 2019; Köhler et al., 2019; Geels, 2020). Social skills have been defined as “the ability to motivate cooperation of other actors by providing them with common meanings and identities” (Fligstein, 1997; p 397). These skills include

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the ability to interpret and perceive others' actions (Fligstein, 1997, 2001; Fohim, 2019) to engage in agenda-setting and build vision for change (Battilana et al., 2009; Perkmann and Spicer, 2007), or to refer to tactics and sanctions to bring actors behind a common goal (Maguire and Hardy, 2006; Wijen and Ansari, 2007). Hence, social skills are key resources that institutional entrepreneurs rely upon to challenge incumbents and position new institutional arrangements (Fligstein, 2001). However, further insights into the interlinkages of social skills and the overall macro conditions of socio-technical transitions are still missing (Upham et al., 2020). Therefore, it is important to investigate the application of these social skills throughout sustainability transition processes (Heiskanen et al., 2019). We are interested in illustrating key social skills that institutional entrepreneurs apply to proceed during the four phases of sustainability transitions (Rotmans et al., 2001; Kivimaa et al., 2019). We focus on taking a micro-foundational approach, which leads us to our main research question: *Which type of social skills do institutional entrepreneurs apply to accelerate different phases of sustainability transitions, from the pre-development to the stabilization phases?*

We conducted a multiple case study on institutional entrepreneurs who faced comparable sustainability transitions. In line with existing research, we referred to a spatial planning context from the MLP (Ernst et al., 2016; Hrelja et al., 2015; Roggema et al., 2012; Switzer et al., 2013, 2015). Specifically, we studied Swiss cantonal planners' (CP) applied skills during a recent reform that consisted of introducing a new national law on spatial planning at the cantonal level with an aim to establish sustainable planning practices (Spatial Planning Act, 2019). As Switzerland is a federal country, the law had to be transferred into all 26 cantons (ARE, 2008). This resembled highly political processes that required discussions with various stakeholders and the approval of cantonal institutions (KPK, 2017). The CPs, as members of the cantonal administrations, were responsible for steering these complex processes within their cantons. Due to the purpose and the structure of the reform, all faced comparable sustainability transitions that provided opportunities for agency by applying social skills to move the cantonal transformation forward. Analyzing data from interviews and documents, and examining our findings revealed seven social skills for transformative change: (1) Empathic and analytical skills are relevant to accelerate the shift from the pre-development to the take-off phase, (2) translational and analytical skills are relevant to accelerate the shift from the take-off to the acceleration phase, (3) tactical and organizational skills are relevant to accelerate the shift from the acceleration to the stabilization phase, and (4) timing skills support the shifts between all phases.

The remainder of this paper proceeds as follows. In section two, we focus on the literature on sustainability transitions, institutional entrepreneurship, and micro-foundations of institutions. In section three, we discuss the research method, including the context of the applied multiple case study on all 26 Swiss CPs in detail. In section four, we present our findings. In section five, we generalize these findings into four propositions on the role of institutional entrepreneurs' social skills in the overall context of sustainability transitions. In the final section, we highlight the importance of our model for the debate on the micro-foundations of sustainability transitions, while discussing limitations of our approach that can serve as the basis for future research.

2. Theoretical background

2.1. Elements of sustainability transitions

Sustainability transitions are long-term and complex processes that involve large-scale and deep structural transformations towards a more sustainable model of production and consumption (Grin et al., 2010; Markard et al., 2012). The Multi-Level Perspective (MLP) framework has been used to analyze historical and contemporary sociotechnical transitions in different domains such as energy, mobility, housing, spatial planning, or agriculture (Geels, 2002; Markard et al., 2012; Switzer et al., 2013; 2015). The MLP implies three analytical levels (niche, regime, and landscape) and suggests that socio-technical transitions occur when (i) destabilization of the socio-technical regimes creates windows of opportunity for niche innovations that put pressure on these regimes; (ii) changes at the landscape level put pressure on the socio-technical regimes, and (iii) niche innovations are sufficiently developed through tangible expectations, expanding social networking, and facilitating first- and second-order learning processes (Geels, 2011).

Prior research has identified that sustainability transitions undergo different phases. According to Geels (2005), transitions can be divided into four phases, while frequency, amplitude, speed and scope can vary (Geels and Schot, 2007). Like Geels' (2005) approach, we refer to existing research that labels these phases as the pre-development/exploration, take-off, acceleration, and stabilization phase (Rotmans et al., 2001; Van Lente et al., 2003).

Pre-development and exploration phase: During the pre-development and exploration phase, new options emerge for socio-technical change, while the status quo does not necessarily change. This phase exhibits significant experimentation to articulate new societal needs as niche innovations are not perceived as a significant threat to dominant socio-technical regimes. During this phase, intermediaries create new spaces for experimentation, disseminate new knowledge, translate new lessons, and connect heterogeneous actors to develop momentum for socio-technical change (van Lente et al., 2003; Loorbach and Rotmans, 2006; Kivimaa et al., 2019).

Take-off phase: During the take-off phase, individual socio-technical experiments develop further and build temporary protective spaces to shield upcoming niches from mainstream practices of socio-technical regimes. Emerging niches also face competition from dominant socio-technical regimes (van Lente et al., 2003; Kivimaa and Martiskainen, 2018).

Acceleration phase: During the acceleration phase, emerging niches become more mature because of visioning and networking activities between actors. Thus, they begin to compete with established practices from dominant socio-technical regimes. Local experiments become more aggregated and gradually develop into global niches. During this phase, structural change becomes visible because of the diffusion and embedment of new practices and collective learning processes. Intermediaries play an important role in establishing linkages between niches and dominant socio-technical regimes (Kivimaa and Martiskainen, 2018; Kivimaa et al., 2019).

Stabilization phase: During the stabilization phase, emerging niches become the new socio-technical regime, and a new dynamic

equilibrium is reached (van Lente et al., 2003; Kanger and Schot, 2016; Kivimaa and Martiskainen, 2018). In practice, it is often difficult to know in advance when stabilization is achieved. Stabilization also results in returning to the pre-development and exploration phases, which again provides the basis for new niches (Kivimaa et al., 2019).

The sequence of the four phases does not necessarily follow a particular pattern, as uncertainty, nonlinearity, complexity, and feedback loops exist throughout the process (Grin et al., 2010). Fig. 1 illustrates and synthesizes the theories and models discussed above on sustainability transitions and provides the basis for our envisaged theorization.

2.2. Role of institutional entrepreneurs' social skills in enabling socio-technical transitions

A key conceptual puzzle within the literature on sustainability transitions is the role of agency and actors' strategies in socio-technical changes (Geels, 2011). Several studies have discussed the importance of incorporating the role of agency throughout socio-technical transitions (e.g., Genus and Coles, 2008; Fuenschilding and Truffer, 2014; Pesch, 2015; Avelino and Wittmayer, 2016; Fischer and Newig, 2016). Related to the role of agency, past debates have emphasized the need to conceptualize the role of institutions and institutional change in sustainability transitions (Geels, 2004; Kukk et al., 2016; Fuenschilding and Truffer, 2014; Fuenschilding and Truffer, 2016; Fuenschilding and Binz, 2018) by conceptualizing socio-technical regimes as a semi-coherent set of rules that become taken-for-granted (Geels, 2020). On this basis, recent accounts have focused on institutional entrepreneurship for understanding how actors challenge dominant institutional structures to facilitate sustainability transitions (Hoogstraaten et al., 2020; van Doren et al., 2020).

Following this agentic turn, scholars have indicated the need to look at actors' personal characteristics that challenge the dominant institutional arrangements (Fuenschilding, 2019; Geels, 2020). Furthermore, prior studies have discussed typologies of key actors that engage in creating transformative change such as frontrunners, connectors, toppers, and supporters (De Haan and Rotmans, 2018): (i)

Increasing structuration of activities in local practices

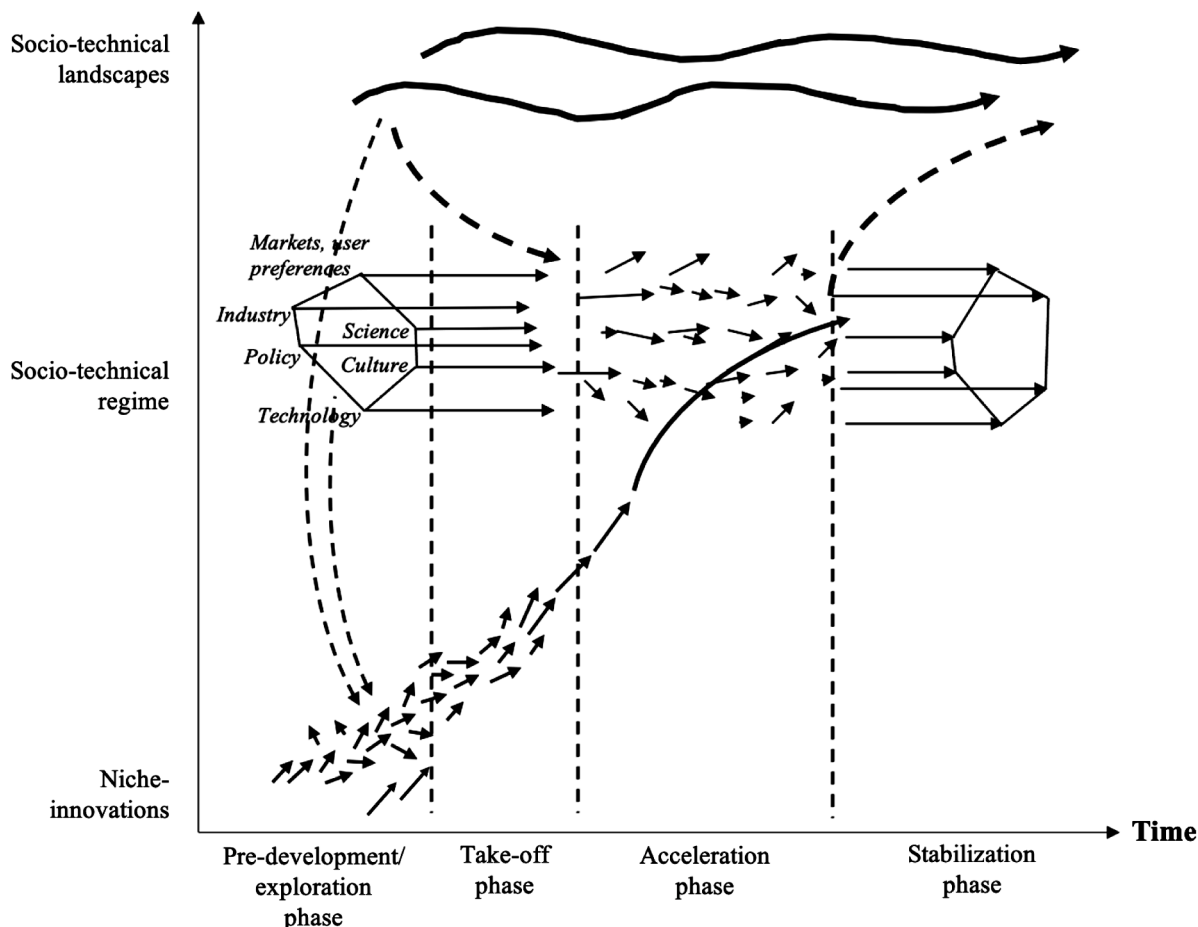


Fig. 1. Multi-level perspective on sustainability transitions based on Geels (2005) and Geels and Schot (2007).

Frontrunners engage in developing novel solutions to create socio-technical change; (ii) connectors engage in the formation of new alliances and embedding new solutions in a specific institutional context; (iii) topplers focus on introducing, changing, and phasing out institutions to create spaces for new solutions; and (iv) supporters provide support for institutional processes of transformative change by providing endorsement (ibid., 2018). Recent accounts have moved further in this direction by highlighting the role of psychological capabilities, personal characteristics, and social skills of actors that persuade other actors to enable transformations (Upham et al., 2020).

Social skills are defined as the ability to motivate cooperation among actors (Fligstein, 1997). As Fligstein (2001) argues, this behavior also includes coercion and sanctions as well as introducing common identities and cultural frames. Hence, social skills impart institutional entrepreneurs the ability to leverage and mobilize critical resources, interpret other actors' behavior, and use appropriate tactics such as bargaining, negotiation, brokering, and establishing visions for change (Fligstein, 2001; Heiskanen et al., 2019). Socially skilled actors thus induce cooperation by leveraging knowledge of field characteristics and position different actors, while framing strategies that can be useful for inducing change (Linneberg et al., 2021). Scholars have identified a variety of social skills, such as political and cultural skills (Perkmann and Spicer, 2007). Some key dimensions of these skills are (i) analytical, (ii) empathic, (iii) framing, (iv) translational, (v) organizational, (vi) tactical, and (vii) timing skills (Fohim, 2019). Analytical skills represent the ability to perceive the chances of change. Empathic skills enable actors to put themselves in different actors' positions. Framing skills allow the establishment of institutional projects in line with the established knowledge. Translational skills permit change agents to adopt the language of others. Organizational skills are the ability to establish instruments of implementation. Tactical skills prepare agents to circumvent political power games. Timing skills are the competencies required to detect the right moments to push forward or to hold a change process (Fohim, 2019).

2.3. Micro-foundations of sustainability transitions

Recent research has called to adopt a micro-foundational approach to sustainability transitions and particularly to the MLP (Geels, 2020). The micro-foundations agenda has been inspired by research on institutional theory, particularly by literature on micro-foundations of institutions (Felin and Foss, 2019; Zucker and Schilke, 2019). This research aims to detect multilevel interlinkages rooted in dominant established institutions (Haack et al., 2019). Thus, institutions are not exclusively the outcome of individuals' behavior (Felin et al., 2015; Harmon et al., 2019). Rather, we recognize that individual micro actions are shaped by overall macro phenomena, while these phenomena are again rooted in people's behavior (Cardinale, 2018; Coleman 1986) (see Fig. 2). Hence, research on the micro-foundations of institutions perceives social behavior through multi levels of analysis (Jepperson and Meyer, 2011).

Previous research on micro-foundations of sustainability transitions has emphasized the role of citizen contributions within such transformations by studying competing micro-processes that can lead to a new perceived 'ideal world' (Almudi et al., 2017). Geels (2020), however, articulates a multi-dimensional model of agency in the context of the MLP. Although the MLP implicitly acknowledges agency as a key driver of sustainability transitions (Geels and Schot, 2007), Geels (2020) underlines that the model has underdeveloped this aspect yet. By a micro-foundational approach, Geels (2020) urges to disclose agency as an embedded actor in the overall trajectories of sustainability transitions. Thus, in contrast to previous research on agency (for instance, Koistinen et al., 2019; Timmermans et al., 2014; Pesch et al., 2017), agency should be studied in relation to simultaneously ongoing transformations as depicted by the MLP. As we elucidated, social skills are key drivers for inducing institutional change (Heiskanen et al., 2019; Fohim, 2019). We thus suggest that these abilities are influential throughout different phases and levels of sustainability transitions. Thus, understanding the role of key social skills as drivers for creating a shift throughout different transformation phases (namely, from the pre-development to the take-off phase, from the take-off to the acceleration phase, and from the acceleration to the stabilization phase; Heiskanen et al., 2019), allows to develop novel conceptual insights regarding the micro-foundations of sustainability transitions (Geels, 2020); thus studying "what's underneath" the MLP. Accordingly, we gain a comprehensive understanding of how certain actors

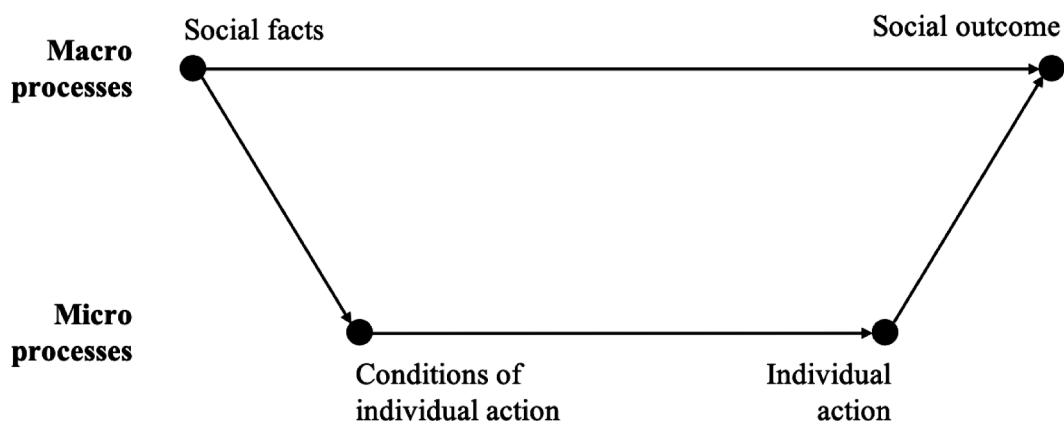


Fig. 2. Causal diagram for relating macro and micro processes based on Coleman (1986).

engage in transforming institutional arrangements toward a more sustainable future (L. Fuenfschilling and Truffer, 2016; De Haans and Rotmans, 2018), and provide a useful approach for examining the micro-foundations of sustainability transitions (Geels, 2020).

3. Research method

To address this research gap, we applied a multiple case study design (Eisenhardt, 2021; Eisenhardt and Graebner, 2007). This method is useful for developing a comprehensive empirical description of phenomena by using different data sources such as interviews, observations, documents, or surveys (Yin, 1994). Multiple case studies are useful for inductively/abductively establishing a novel theory by analyzing and juxtaposing carefully selected cases (Eisenhardt, 1989). Cases should be selected by controlling extraneous variations to focus on variations of interest (Gehman et al., 2018). In other words, multiple cases should be comparable to detect the variables of interest that explain the outcome under investigation. Our aim of studying appropriate cases is thus to achieve theoretical generalization (from case analysis into theory), instead of external generalization (from the sample to the population) (Eisenhardt, 1989; Gioia et al., 2012; Yin, 1994); . Hence, we strive to establish theoretical propositions that can be derived into hypotheses and tested in other cases (Bacharach, 1989). Following this approach, we comply with the criteria of rigor as adopted in case study research; namely, by (i) building accurate, internally coherent, and parsimonious theory, (ii) compelling evidence by analyzing and displaying rich data from multiple sources and informants, (iii) applying theoretical sampling of cases, and (iv) starting with a research question rooted in existing literature (Eisenhardt et al., 2016; Eisenhardt and Ott, 2017). On this basis, we studied the application of social skills by institutional entrepreneurs during comparable sustainability transitions.

3.1. Research context

After a referendum in 2013, Switzerland introduced a new national law in spatial planning (SRF, 2013). This was a response to tackle the upcoming urban sprawl that the country had faced throughout the previous decades (Spatial Planning Act, 2019). As the population increased by 15% between 1990 and 2010 (Federal Statistical Office - FSO, 2020), Switzerland experienced increasing construction activities that led to a 25% increase in settlement areas within 24 years (FSU, 2020). Such developments threaten the habitat of millions of species and lead to a decline in biodiversity (Cardinale et al., 2012). To counteract such negative ecological outcomes, the law aims to change existing planning practices by allowing denser construction and inner development (Spatial Planning Act, 2019). Thus, the new law aimed to establish planning practices that would allow sustainable development and advocated for sustainability transitions through spatial planning.

As Switzerland is a federal country, the law was not implemented automatically and had to be transferred into all 26 cantons. All cantonal laws and cantonal structure plans had to be changed to meet the updated national standards (ARE, 2008). A cantonal structure plan defines the spatial vision of a canton for the next ten years. It divides land into construction or agricultural land, as well as conservation reserves, while determining the exact conditions for each category (KPK, 2016). All 26 cantonal structure plans had to be adjusted to the new national standards. The reforms affected almost everyone who lived and worked in a canton. For instance, the cantonal plans specified the municipalities that could continue to grow in the future and those that could not. Such decisions fueled many political discussions: green parties and nature conservation organizations lobbied for stricter rules, and business-friendly organizations favored more liberal solutions. All these stakeholders could block the reform process, since the final plan needed to be approved by the respective cantonal governments and/or parliaments (KPK, 2017).

Due to the purpose and structure, the 26 spatial reform processes resemble sustainability transitions as described by the MLP. First, as previous research on spatial planning applying the MLP approach has identified (Ernst et al., 2016; Hrelja et al., 2015; Roggema et al., 2012; Switzer et al., 2013, 2015), the goal of the reform processes is to reduce the use of natural resources by the amendment of spatial constellations, physical structures, and social networks; thus, having an overall positive impact on society and the environment through such transitions (Levin-Keitel et al., 2018). Second, the reform processes correspond to the MLP according to their inherent structure. Before the actual reform had started – comparable to the pre-development/exploration phase – this phase was characterized by actors' decade-long manifested planning practices at the regime level that had usually hampered sustainable developments (for instance, zone plans that allowed the construction of single-family houses in the countryside, causing additional commuter flows into the bigger cities). At the same time, upcoming sustainable forms of housing (denser constructions) or new mobility forms (electro bikes, car sharing facilities, expanded public transport etc.) from the niche level were emerging and proving that new and more sustainable spatial arrangements are achievable. Social discourses on climate change and loss of biodiversity at the landscape level triggered the search for new planning practices. Throughout the second phase of the reform – comparable to the take-off phase – ideas on alternative planning practices emerged that addressed the ongoing social discourses and upcoming sustainable technologies. Some ideas were amended zone plans that permitted denser constructions in the city center and protection areas in the countryside. During the third phase – comparable to the acceleration phase – certain alternative planning practices started to consolidate and contrasted with the previously established planning practices (for instance, that only bigger municipalities should receive the right to draw new housing areas, while smaller towns and villages should not expand their construction land anymore). Throughout the last period – comparable to the stabilization phase – the previously combated, sustainable planning practices were finally implemented in almost all cantons and triggered sustainable development by protecting most of the natural land areas within the 26 cantons.

In each canton, a cantonal planner (CP) was responsible for steering this complex transition. A CP belongs to the cantonal administration and is usually the director of the respective planning department (Gülden, 2012). Thus, they are mainly responsible for meeting the various stakeholders (politicians, business owners, citizens, etc.), to establish a cantonal structure plan and new planning practices that are approved by a majority. Thus, CPs must consider all different stakeholders' interests while being faithful to the

national standards. At the time of investigation, among the 26 planners, 4 were women. Planners' backgrounds were very diverse, ranging from geography, law, economy, or sociology. To guarantee anonymity, we did not display any individual information per CP. Subsequently, we labeled them as CPs A to Z for each respective canton. As the 26 CPs were responsible to steer the reform within their cantons, they all confronted comparable sustainability transitions as described above. Due to their positions, CPs could act as institutional entrepreneurs by establishing new institutions (such as the cantonal structure plan and alternative, sustainable planning practices). They were thus the main agents in accelerating these processes. Among others, the task required the application of social skills as we defined them above: They tried to establish cooperation among various involved actors to establish a new spatial vision for more sustainable planning practices. We thus treated each of this cantonal reform as a sustainability transition on its own. On this basis, we studied the applied strategies for motivating cooperation by each CP to detect the applied skills that were essential for accelerating the respective sustainability transitions.

3.2. Data collection

To detect the social skills applied by the CPs during the 26 independent reform processes, we conducted semi-structured interviews (Rubin and Rubin, 2005; Bourne and Jenkins, 2005) with all 26 CPs. Through the interviews, we aimed to detect the CPs' applied strategies for establishing cooperation among involved stakeholders throughout the reform processes. We asked them about their actions to convince the involved stakeholders: How did they plan the process? Which stakeholders did they mobilize throughout the process? Which communication methods did they use to convince the involved stakeholders? We also enquired about the difficult moments that they faced throughout the reform and how they reacted to them. As control questions, we asked them, for instance, what should their potential successors undertake to accelerate such a reform. Once the main questions were posed, we let them speak openly and dug deeper if precisions were missing. The semi-structured interviews took place over 1 to 2 h and were conducted in German or French. To maintain the essence of the conversations during the interviews, we retained the interviews in their original language throughout the analysis. We exclusively translated the main quotes for the present publication. The interviews were conducted in CPs' office spaces. All interviews were recorded and transcribed.

To triangulate the interview data and to receive another perspective on the CPs' applied strategies, we collected additional data such as documents on each cantonal reform process. Specifically, we consulted media coverage such as newspaper articles or TV reports that discussed various steps of each reform process. Furthermore, we referred to official documents, such as the standard reports by the national planning department for each reform (ARE – Bundesamt für Raumentwicklung, 2021). We also examined official documents from the cantonal departments. These were publicly available documents that summarized the adopted procedure and the accompanying results (e.g., Fribourg, 2020; Zürich, 2021). We also consulted internal documents that were distributed among the involved stakeholders to summarize the foreseen procedures and/or achieved interim results. In addition, we conducted interviews with three field experts. To preserve the anonymity of these experts, we do not provide detailed information about their background, responsibilities, or functionalities. It can be said though, they were all in a position that enabled them to closely follow the 26 reform processes. Accordingly, by interviewing them, we gained an additional perspective on the CPs' applied strategies to motivate cooperation among involved stakeholders.

By collecting various sources and interrogating different informants, we thus complied with common methodological standards for conducting multiple case study research (Eisenhardt et al., 2016; Eisenhardt and Ott, 2017). This allowed us to gain different perspectives on CPs' applied strategies to motivate cooperation among involved stakeholders. Overall, we gathered approximately 40 h of interview data and 86 documents for examination (see Table 1). Consequently, in line with common multiple case study methods (ibid.), we did not investigate on the applied social skills directly. We established these skills from the identified CPs' cooperation strategies through an abductive analyzing process, which is explained in further depth hereinafter.

3.3. Data analysis

To analyze the data in line with common case study methods (Eisenhardt et al., 2016; Eisenhardt and Ott, 2017), we applied an abductive two-step approach (Eisenhardt, 1989; Eisenhardt and Graebner, 2007; Miles and Huberman, 1994). We started with within-case analyses; for each case, we analyzed the interview data of the respective CP and the corresponding documents. The focus of the analysis was on identifying CPs' applied skill types throughout the entire revision process that meant to mobilize the involved stakeholders behind a new cantonal structure plan. In line with Gioia et al., 2012 method, we developed first-order codes from CPs' decisive statements that built the foundation for the subsequent cross-case analysis. Next, we compared the initially developed

Table 1
Data table.

Type of Data	Number of Gathered Type of Data
<i>Interviews (1 – 2 h) with cantonal planners (one interview per cantonal planner) on their applied cooperation strategies</i>	26
<i>Interviews (1 – 1.5 h) with field experts to gain external perspectives on all 26 cantonal planners' applied cooperation strategies</i>	3
<i>Official documents by national and/or cantonal planning departments to receive additional information on each cantonal reform process</i>	52
<i>Internal documents to receive insider information on each cantonal reform process</i>	31
<i>Newspaper articles and/or TV reports about each cantonal reform process</i>	50

Table 2
Data exemplars for first-order constructs.

First-order construct	Exemplars from the Data
<i>Approach stakeholders</i>	<p>“Everyone has opinions on these political issues. These are very political issues. It is therefore important to integrate the representatives of these different sensitivities.” [CP B]</p> <p>“I always say to my employees: ‘You have to go out, you have to see that too. You have to feel that. As a planner, you have to speak to a local council, for instance.’ [CP N]</p> <p>“Since we are not specialists in individual topics, we have to seek knowledge where it is located.” [CP A]</p>
<i>Understand stakeholders</i>	<p>“It is also important to listen. You need to understand the position of the opponents. Because if you understand why someone is against it [a sustainability transition], you can find more easily the arguments to convince someone.” [CP H]</p> <p>“You have to try to put yourself into the position of the other people. And try to think ahead about their concerns as well as possible.” [CP I]</p> <p>“You have to be empathetic. You have to listen [...]. In my opinion, empathy is a skill that should not be missing to advance change processes”. [CP B]</p>
<i>Discern complexity</i>	<p>“If we wouldn’t include all the diverse stakeholders, we would be faster. It would be faster to do the project because there could be three of us sitting around a table. You could quickly write what you need to put in the plan. We could go fast. However, you have to validate your plan. And then it collapses because nobody would understand why you are doing it this way. And you would lose the time you won in the beginning.” [CP F]</p> <p>“The complexity results due to the very distinctive interests that are very contradictory.” [CP A]</p> <p>“Initially you have to ask yourself: What are the relevant interests? You have to identify all interests and then evaluate them. Afterward, you have to weigh them up against each other.” [CP G]</p>
<i>Identify windows of opportunities</i>	<p>“It’s about having a political instinct. What are social concerns? You have to feel the political issues you have to continuously deal with. Hence, you can prepare the ground for change.” [CP O]</p> <p>“You have to accept that we are only the technicians and it’s the politicians who decide. Consequently, it also means accepting that you have to adapt your project to have a chance to get through. There is no use in simply having right by oneself.” [CP A]</p> <p>“And somehow I just have to say that it was simply a window of opportunity that was open to make the project. [...]. There were a lot of discussions in the media about the topic.” [CP N]</p>
<i>Adopt language to stakeholders</i>	<p>“We have to adapt our discourse to the respective persons. When I am with a colleague in the administration, I can be very technical, very scientific, very legal. But when I am discussing with a mayor who may be a farmer, a carpenter, or a screen printer, I need a proper discussion, but I have to adjust the words and explanations.” [CP F]</p> <p>“It is a different stakeholder. We had a standard presentation over time. We always had the same slides, especially since the content remained the same. However, we made the effort to consider the audience and how to reach these addressees? We then allowed ourselves to organize the presentation accordingly.” [CP Y]</p> <p>“You always adapt the message to the listener, while remaining true to the topic. This is a basic principle.” [CP Q]</p>
<i>Mediate among stakeholders</i>	<p>“When I explain my job to friends, I say to them: I need to explain the technological aspects to the politicians. And I have to explain the political issues to the technicians.” [CP B]</p> <p>“The debates (among the various actors) allow each milieu to hear the different viewpoints. [...] In this way, all stakeholders understand why the other has a different opinion. And our task is it to find a middle ground.” [CP F]</p> <p>“I would say that you have to act as a mediator or as an integrative role. [...] It is also a bit of a translation work. We are always standing between specialists that have their subject-specific interests and we have to mediate among them.” [CP K]</p>
<i>Design rules by addressing established knowledge</i>	<p>“You have to work with examples. High density (the concept, we wanted to introduce) does not mean Shanghai. I always say that the densest that we have in Switzerland are the wonderful old towns that today everyone actually wants to live in.” [CP J]</p> <p>“When we presented possible examples of high-density building, some argued: ‘You show settlements that are very banal, very everyday instead of top architecture.’ That’s exactly what we did not want to do. We did not want to say that high density always means outstanding architecture. [...] For many people it is their living environment. And it is important that people recognize it when studying the examples: ‘Oh, this is my settlement. I live there. This is thus an example of high-density buildings.’” [CP E].</p> <p>“We made a presentation with different forms and types of settlements of high density. And people said: ‘Aha, these are classic terraced single-family housing estates with central parking facilities. You can build densely high without losing the character of a rural settlement structure.’” [CP N]</p>
First-order construct <i>Design rules by respecting established complexity</i>	<p>Exemplars from the Data</p> <p>“You have to bundle and group the essential points so that a majority opinion or a consensus emerges in the course of the discussion.” [CP R]</p> <p>“It is important that the central actors who work with it [the new guidelines for spatial planning] were themselves at the workshops and developed them themselves together. Hence, the process so to speak was as a teaching and learning event.” [CP M]</p> <p>“(We said to ourselves:) ‘We try to make the most of the leeway we have. But there is a limit and we don’t want to go beyond that, because in the end we want an approved plan.’” [CP I]</p>
<i>Ask for more than you expect</i>	<p>“You try to set out your positions to see where everybody stands. On this basis, you can then try to meet half-way throughout the discussions.” [CP K]</p> <p>“When we have negotiations on the budget, we calculate: Let’s ask for 11 million now, although 9 million are enough. We are aware that the parliament provides us 9 million, but not 11 million.” [CP Y]</p>

(continued on next page)

Table 2 (continued)

First-order construct	Exemplars from the Data
	“How can I maximize the scope as good as possible? This is a quite legitimate question and to apply it is probably what it needs.” [CP N]
<i>Distract attention of stakeholders</i>	<p>“I then tried to raise sometimes questions that may not always have been central to the change process. However, then the stakeholders decided something. And they had the feeling to have participated.” [CP P]</p> <p>“We do not hide anything in our documents. But sometimes we try to distract attention about certain issues. [...] Many people look at the cards or at the pictures. But they don’t necessarily read the texts. And sometimes it is therefore better to not put everything into the illustrations.” [CP A]</p> <p>“Throughout the time you realize that you need to focus the topics to be discussed. It might be necessary to omit certain topics, because otherwise you will not be able to move ahead” [CP K].</p>
<i>Implement measures to ensure use of new rules</i>	<p>“The principles of the new cantonal structure plan are quite broad. You cannot control them directly. However, the resulting planning instructions are formulated in a way that the achievement of their goals can be controlled regularly.” [CP O]</p> <p>“We said to the communities: ‘Make contracts with the landowners. You classify them as a construction zone, but if you do not develop your land within 10 years, you as a municipality can decide what to do with it.’” [CP A]</p> <p>“After the meetings with the municipalities, we establish a binding contract of what has been mutually agreed. On this basis, they can implement the new rules of the cantonal structure plans.” [CP E]</p>
<i>Establish teaching materials on new rules</i>	<p>“We also made guides that explain how to use the new cantonal structure plan. A kind of a guideline for how to implement it?” [CP F]</p> <p>“We have created regulations to help the municipalities to move from the old to the new system (in terms of building regulations).” [CP Q]</p> <p>“Videos have been made. Guidelines have been made for the municipalities and their representatives. What do the new rules mean? We have done a lot of training, information, and regulations.” [CP T]</p>
<i>Identify the right moment to advance change</i>	<p>“We are now more careful when presenting such pictures [showing potential future urban projects] during an early phase and we wait until ideas become more concrete.” [CP O]</p> <p>“During every process I think about milestones that we have to communicate during the project.” [CP M]</p> <p>“When you want to collect feedback, it should happen at a time when the topic is still ‘soft’. Hence, when the iron is still hot.” [CP G]</p>
<i>Identify moments when to decelerate transition</i>	<p>“There are sometimes moments when you should not communicate something. For example, during the election period. Otherwise, you can imagine that (any communicated topic) will be misused for an election campaign.” [CP F]</p> <p>“The election period is such an issue. Half a year, or three quarters or maybe even a year before the elections, you have to be careful of the topics that you communicate.” [CP G]</p> <p>“When the government council is campaigning, about six months before the elections. Then you put certain projects aside. You let them sleep a little bit to not upset the municipalities.” [CP B]</p>

first-order codes among the 26 cases while trying to summarize these findings into second-order codes. In line with [Mantere and Ketokivi’s \(2013\)](#) approach, we referred to existing literature, particularly to literature on institutional entrepreneurship, to establish more generalizable second-order codes. We especially referred to Fohim’s (2019) different social skill dimensions. Using such an abductive process, we established final codes that were the basis for the ultimate theoretical model.

By analyzing the data as described, we identified 14 common activities applied by the CPs throughout the sustainability transitions under investigation. [Table 2](#) summarizes these 14 activities, which we label as first-order codes. We present the main quotes of the different CPs who represent the underlying meanings of each first-order code.

[Fig. 3](#) illustrates how we developed the second-order codes, which summarize the seven established key social skills, from the first-order codes. These are *empathic, analytical, translational, framing, tactical, organizational, and timing skills*. Next, we discuss these findings in further detail and develop a model to interpret these social skills in the context of sustainability transitions.

4. Findings

The data analysis reveals seven social skills that could be observed during the 26 reform processes: (i) empathic, (ii) analytical, (iii) translational, (iv) framing, (v) tactical, (vi) organizational, and (vii) timing ([Fohim, 2019](#)). Although these skills were present across the entire transition, it became clear that certain types of skills were particularly relevant during specific situations of the process. CPs used empathic skills to establish a network of various stakeholders. Further, they had analytical skills to identify opportunities to act. They used translational skills to mediate among different stakeholders. When presenting a new project, they referred to framing skills while designing the project in line with the audience’s knowledge. CPs also utilized tactical skills to counteract political power games. Organizational skills were crucial for establishing instruments that ensured the application of newly established planning practices. Timing skills were applied to find the right moments in moving forward during the reform.

4.1. Empathic skills

CPs applied empathic skills during the revision of the cantonal structure plans. These skills were particularly important at the

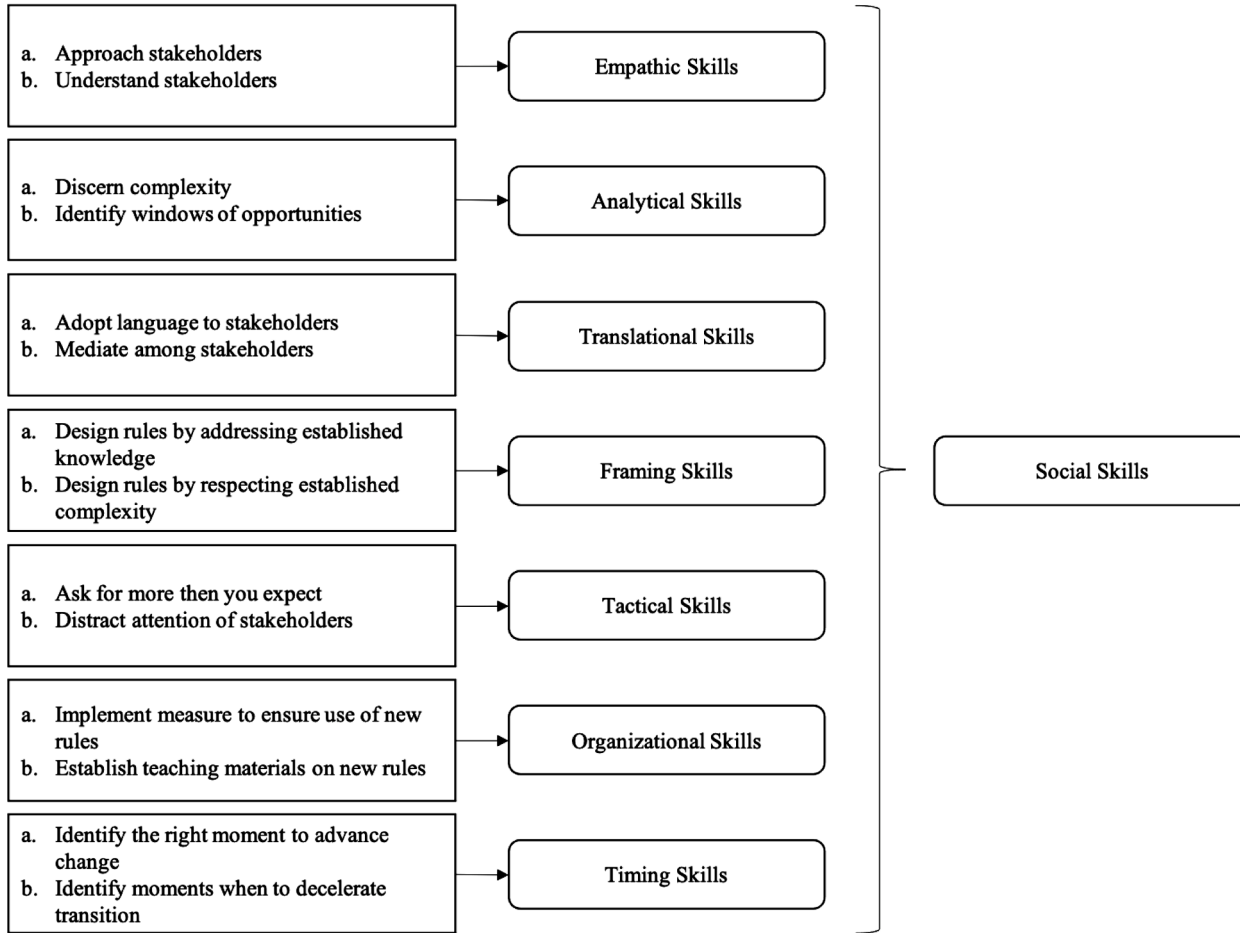


Fig. 3. Key dimensions of social skills.

beginning of the reform. Before establishing new rules, most CPs wanted to incorporate the opinions of potentially affected stakeholders. CP F, for instance, organized workshops with diverse actors.

“The idea was to establish planning practices that are widespread, that were well discussed and enriched by different opinions. That was the motivation [to organize these workshops and sessions with different actors]” (CP F).

Consequently, many CPs *approached stakeholders* from different contexts, such as politicians, companies, or specialists, at the beginning of the process. CPs undertook this step not as a pro forma exercise to make stakeholders feel involved. Many CPs recognized this step as an opportunity to truly *understand the perspectives of all stakeholders*.

“It is a question of empathy. And sometimes I ask [the stakeholders]: What do you want? What do you want? [...] The people usually like this approach” (CP A).

In line with these skills, CPs could establish networks that constituted valuable resources when designing new rules at a later stage of the revision. Due to the planners' empathic skills, they could incorporate diverse stakeholders' expectations of new planning rules. Thus, they could also increase the possibility of establishing broadly supported sustainability practices. Hence, as institutional entrepreneurs utilize empathic skills, planners can build trust with potential allies that can be used when establishing an institutional project (David et al., 2013; Fohim, 2019).

4.2. Analytical skills

CPs referred to analytical skills during the reform process, and crucially, at the beginning of the revision. CPs expressed analytical skills by initially *discerning the complexity* resulting from the involved contradictory interests. CP B argued:

“[Such a revision] is part of the political debate. Hence, one must consider these political sensitivities, which can be very contradictory” (CP B).

Identifying this underlying complexity was essential as it made the CPs aware of potential hurdles that could be addressed during the reform. Furthermore, CPs underlined the importance of *identifying the windows of opportunities*.

“It's about having a political instinct. What are some social concerns? You need to know which political issues you have to deal with continuously so that you prepare the fundament for change” (CP O).

Such an instinct provided CPs with an initial good sense of knowing the type of new rules that would be and would not be politically feasible. CPs did not waste resources on reforms with little chance of being passed. Thus, analytical skills were essential at the beginning of the revision. These skills enabled CPs to appropriately design the reform in a way that increased the chances of successfully implementing new sustainable planning practices that complied with the national standard. Thus, as institutional entrepreneurs use ambiguous situations to initiate change (Fohim, 2019; Lawrence and Phillips, 2004; Mutch, 2007), CPs waited for such opportunities to advance the revision.

4.3. Translational skills

Translational skills were particularly relevant when establishing the initial proto rules. On the one hand, CPs *adopted their language while interacting with the involved stakeholders*. CP I said:

“I always try to act according to the saying: ‘When I go fishing, I don't have to eat the worm, but the fish has to.’ Accordingly, I have to adopt [it] to the audience. I have to use the language that is spoken there [among a specific group of people]” (CP I).

For instance, CPs tried to avoid technical terms when their counterpart was unfamiliar with such vocabulary:

“I always tell my employees that we use terms that our stakeholders don't use within their daily lives. For this reason, I forbid my employees to operate with abbreviations” (CP E).

Hence, to be better understood, CPs explained the new rules and the purpose behind them by trying to speak like their stakeholders. On the other hand, CPs *mediated among stakeholders* as they tried to translate the different viewpoints among the involved actors. As CP B summarized:

“I need to explain the technical aspects to the politicians. And I have to explain the political issues to the technicians. Hence, I always try to explain to the respective persons the logic of the other side” (CP B).

Thus, CPs mediated among stakeholders to successfully establish common ground among all involved actors. Therefore, translational skills were crucial as they increased the chance that the newly communicated planning rules were commonly understood and supported by various stakeholders. In line with insights on institutional entrepreneurship, planners were able to speak and communicate with and among people of different backgrounds (Déjean et al., 2004; Fohim, 2019; Leca and Naccache, 2006).

4.4. Framing skills

Framing skills also proved essential to create the initial proto rules. For instance, when presenting new planning practices that would result in denser constructions, they *designed these rules by addressing the established knowledge*. Hence, CPs consciously referred to model examples of dense buildings that already existed within the respective canton. As CP V explained:

“You have to show examples [of well-developed dense constructions] that are typical of our canton. I cannot take an example from another canton. Such examples couldn't be related to our context” (CP V).

Furthermore, CPs attempted to *design new rules by respecting the established complexity*. CP R said:

“You have to bundle and group the essential points to establish a solution that is approved by a majority [of the stakeholders] or ideally consensually” (CP R).

Hence, framing skills were particularly crucial when new rules were introduced and communicated during the reform process. Due to framing skills, CPs designed new sustainable practices by connecting them to the existing knowledge of the affected stakeholders. Accordingly, this approach increased the chances of acceptance of new practices by stakeholders, and thus, the execution. Thus, as institutional entrepreneurs use older ornaments when designing a new institutional project (Fohim, 2019; Hargadon and Douglas, 2001), the planners referred to stakeholders' existing knowledge when introducing new planning practices.

4.5. Tactical skills

Tactical skills were particularly relevant in the final phase of the reform to enforce the application of new sustainable planning practices. One tactic applied by some CPs was to *ask more than expected*. During negotiations with relevant stakeholders about standards for density construction, for instance, some CPs intentionally indicated higher values of what they were targeting. CP K elaborated,

“You try to set out your positions to see where everybody stands. On this basis, you can then meet half-way throughout the discussions” (CP K).

Another applied tactic was to *distract the stakeholders' attention*. For instance, when CPs wanted to effectively implement certain planning practices, they sometimes referred to other topics to avoid lengthy discussions. For instance, CP C stated

“When there is a certain topic that should pass the parliament, you discuss with the politicians not only this single topic. Otherwise, the politicians would dismantle each letter of the law several times. But when you present the law as a package together with two other topics, then they need to use their time discussing the other laws too. Hence, in the end, the whole package passes more easily” (CP C).

CPs employed tactical skills to sometimes enforce certain planning practices more easily by intentionally raising the bar or by avoiding lengthy discussions. Thus, as institutional entrepreneurs engage in power games to gain an advantage over potential opponents of the proposed institutional change and over actors interested in maintaining the status quo, the planners used tactical skills to circumvent power battles to weaken opponents' positions (Fohim, 2019; Van Dijk et al., 2011; Zilber, 2007).

4.6. Organizational skills

Organizational skills were also essential at the end of the examined revision. To guarantee the adoption of new planning practices, most CPs *implemented specific measures to ensure the use of new rules*. For instance, CP H implemented a monitoring system that continuously observed new construction activities within the canton. Municipalities needed to report how such activities complied with the new planning rules.

Furthermore, some CPs tried to *establish teaching materials on new rules* (e. g., CPs F, Y, and P). By creating guidelines or by organizing courses that should explain the application of new rules, CPs aimed to ensure that all relevant stakeholders understood the new practices completely. This could help them in enhancing the chances of implementation of new rules. Accordingly, as institutional entrepreneurs implement specific instruments that ensure the implementation of an institutional project (Child et al., 2007; Greenwood and Suddaby, 2006; Fohim, 2019), the planners introduced similar methods to monitor if the newly established planning practices were effectively executed.

4.7. Timing skills

Finally, CPs employed timing skills throughout the revision process. As the CP J expressed

“It is important that you know when you have to accelerate [a change process] and when you have to throttle during the process” (CP J).

On the one hand, CPs consciously tried to *identify the right moment to advance change*. As CP P clarified:

“The great art and difficulty [of such a reform] are to know the appropriate moment when a topic is sufficiently soft so that you can discuss it with relevant stakeholders” (CP P).

On the other hand, some CPs did the contrary and intentionally *identified moments when decelerating the transition process* (e. g., CPs B, C, and G). Many CPs described specific situations that demanded slower reform activities. Such situations were, among others, upcoming elections, as politicians might have criticized certain planning decisions exclusively for election-specific reasons and criticisms that could have unnecessarily hampered the ongoing transition process. For this reason, CP Q argued:

“Of course, elections are always delicate. Certain things cannot be said before the elections, but afterward it can be done” (CP Q).

Accordingly, many CPs highlighted the importance of timing skills to ensure a smooth reform process. Likewise, institutional entrepreneurs consider the sense of time as a relevant aspect to enhance institutional change processes (Buhr, 2012; Fohim, 2019; Hermes and Mainela, 2014).

5. Discussion

The findings reveal that the 26 CPs applied seven social skills (empathic, analytical, translational, framing, tactical, organizational, and timing skills) support the respective sustainability transitions across the different phases. Here, by discussing these findings within the context of the existing literature, we argue that different types of social skills are required to accelerate the four iterative phases of sustainability transitions (Rotmans et al., 2001; Grin et al., 2010). Accordingly, we do not deny that these types of social skills can be observed across the entire sustainability transitions. Though, we focus on introducing specific propositions about the role of social skills in different phases of sustainability transitions. Propositions are useful to establish new theory by highlighting previously unknown cause-effect relationships (Cornelissen, 2017). Propositions are thus broader in scope than hypotheses, which is why they provide suggestions for future empirical research (ibid.). We thus argue that certain types of social skills are relevant but not necessarily the only relevant skills when institutional entrepreneurs aim to actively support a shift from the pre-development to the take-off phase, from the take-off to the acceleration phase, and from the acceleration to the stabilization phase.

5.1. Social skills to support the shift from the pre-development/exploration to the take-off phase

CPs referred to emphatic and analytical skills mainly at the beginning of the reform process. Using these skills, they tried to understand the potentially affected stakeholders' viewpoints and the situation in its entirety. Applying these skills at this point of the reform was crucial as the gathered insights supported the CPs for designing sustainable planning practices at later stages of the process. By having the ability to disclose the initial status quo, CPs could establish new planning practices that considered the potential effects on stakeholders and the local context. If they had not applied these skills at the beginning, the newly established rules might have faced more resistance from potentially affected stakeholders. For example, CP R stated:

“If you develop something [such as new planning rules] quietly in your office without talking to any people, then it probably won't go well” (CP R).

Further, CP J explained:

“I know exactly which one of our actions are politically sensitive. If a situation is very sensitive, I always inform my superior [so that I can take appropriate actions]” (CP J).

By using empathic and analytical skills at the beginning of the reform, CPs could gain insights into the status quo that supported them in establishing sustainable planning practices that were more likely accepted by affected stakeholders. Connecting these findings with the literature on sustainability transitions, we understand that in their roles as institutional entrepreneurs, CPs aimed to disclose the status quo of the pre-development/exploration phase. On the one hand, they used empathic skills to establish insights into different

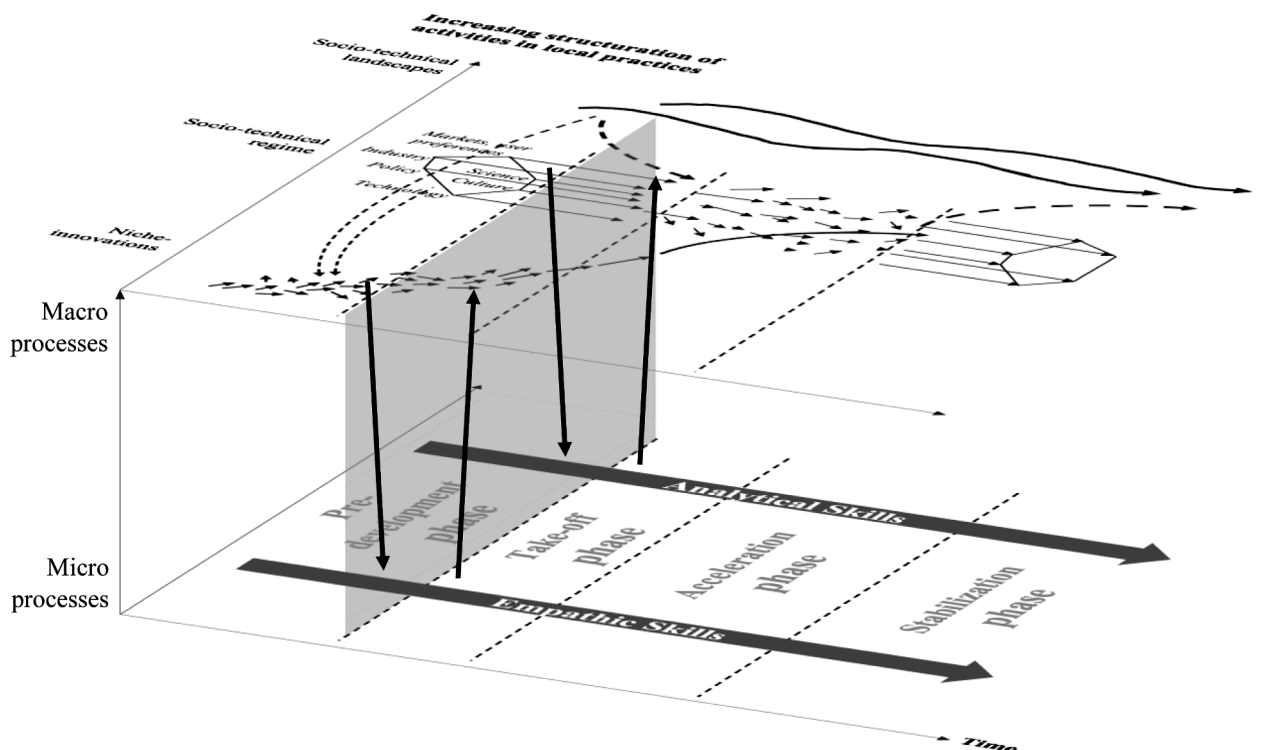


Fig. 4. Relevant social skills to support the shift from the pre-development/exploration to the take-off phase.

actors’ viewpoints, particularly for actors who lobbied for emerging sustainable forms of housing/mobility at the niche level and those representing the current planning practices at the regime level. On the other hand, they referred to analytical skills by screening changing trends such as the social discourses on climate change and biodiversity loss that can be placed at the landscape level. Based on these two skills, they could take an overall view of the status quo and better foresee which new planning practices were more likely to be accepted by different stakeholders. Hence, when diving into the micro processes of the MLP, we recognize that CPs’ empathic and analytical skills supported them in advancing their respective sustainability transition by moving from the pre-development/ exploration to the subsequent take-off phase. In line with these considerations, we establish our first proposition that is illustrated in Fig. 4.

Proposition 1. *Institutional entrepreneurs can apply empathic and analytical skills to accelerate the shift from the pre-development phase to the take-off phase.*

5.2. Social skills to support the shift from the take-off to the acceleration phase

CPs applied translational and framing skills mainly in the middle of the reform process. When applying these skills, they aimed to communicate in a way that fostered the introduction of new sustainable planning practices. For instance, by applying translational skills, and thus customizing information to the common language of involved stakeholders, CPs assumed that such behavior increased the acceptance of newly proposed planning rules: stakeholders can better understand the reasons for developing new rules, and thus, will more likely approve them. Accordingly, they translated information into the language of their counterparts. CP S said:

“A decisive step [to advance the reform process] was that at some point we communicated in a more audience-oriented way” (CP S).

At the same time, they utilized framing skills to ensure that the proposed sustainable planning practices were related to the stakeholders’ knowledge. In this way, the established rules were not too revolutionary and seemed partly familiar to the audience. For instance, rules that allowed denser constructions promised to be more easily approved by the stakeholders when they saw examples of equally dense buildings within their region. CP H elaborated:

“We organized an exhibition so that [the issue on density] could be properly discussed. [...] It displays 32 projects that were successfully implemented in rural areas” (CP H).

Thus, by using translational and framing skills, CPs increased the chances that their suggested sustainable planning practices were more likely supported by the involved stakeholders. Using translational and framing skills, CPs, in their roles as institutional entrepreneurs, resided at a stage which the literature on sustainability transition defines as the take-off phase. During this phase, CPs introduced ideas on new sustainable planning practices emerging from the niche level to actors that supported previous planning rules

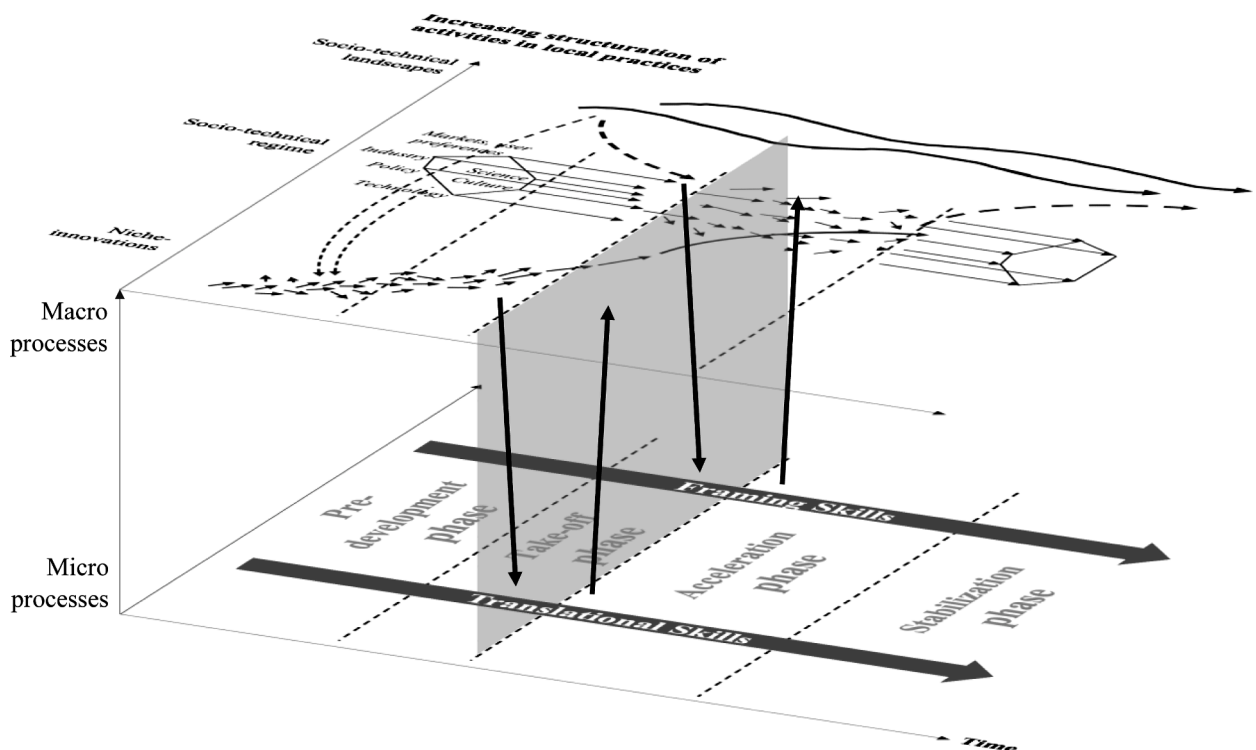


Fig. 5. Relevant social skills to support the shift from the take-off to the acceleration phase.

that can be placed at the regime level. The suggested practices remained in the experimental status and had yet to gain support. To receive the backing of these new practices by crucial stakeholders and to establish visible structural changes, CPs adopted two strategies. First, they customized their language to different audiences to promote their proposed sustainable planning practices. Particularly, they adopted their language to and mediated among actors that can be located at the niche level (those supporting new sustainable planning practices) and at the regime level (those supporting the previous planning practices). Second, they designed these practices by relating them to the current knowledge of their audiences; thus, to the still ongoing accepted standards that perform as exogenous trends and can be placed at the landscape level. In this way, CPs could accelerate the sustainability transition because stakeholders would be less likely to refuse the suggested changes. Hence, by applying translational and framing skills, CPs accelerated the process of entering the acceleration phase, in which new rules would become more mature. From these elaborations, we develop our second proposition that is illustrated in Fig. 5.

Proposition 2. *Institutional entrepreneurs can apply translational and framing skills to accelerate the shift from the take-off phase to the acceleration phase.*

5.3. Social skills to support the shift from the acceleration to the stabilization phase

During the final reform stage, CPs applied tactical and organizational skills. They usually used these skills towards the end. This is because the introduced sustainable planning practices were already settled but had to be implemented to hold in the long term. To a certain degree, tactical skills, which were used as a strategy to circumvent power games, allowed the omission of challenging debates on controversial planning practices. Thus, the application of tactical skills aimed to accelerate the process and establish accomplished facts. Planners only used this strategy to put through some, but not all, the suggested sustainable planning practices. CP K explained the following:

“This is maybe something that you realize over time that you have to focus more strongly. You may have to leave certain topics aside [during debates] because otherwise, you will not get any further” (CP K).

CPs also used organizational skills at the end of the reform to establish measures to ensure the implementation of commonly agreed sustainable practices. As a result of the social skills, the CPs assured through control systems or training materials that newly established rules are truly respected by affected stakeholders, thereby increasing the likelihood of overall change becomes more likely. For this reason, CP B, for instance, created action plans that were connected to the cantonal legislative program, whereby the implementation of new planning practices could be steadily monitored.

Linking these findings with insights from sustainability transition literature, we recognize that the CPs in their role as institutional entrepreneurs applied tactical and organizational skills to proceed to the stabilization phase. On the one hand, when using

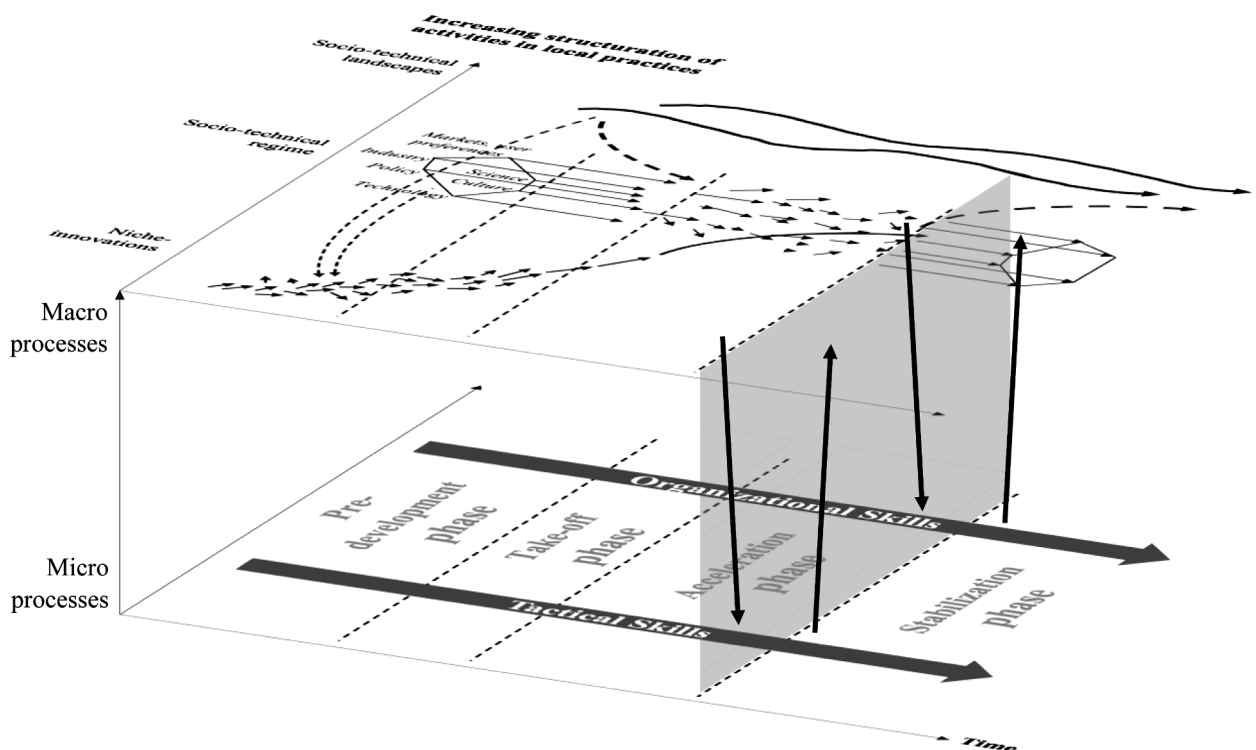


Fig. 6. Relevant social skills to support the shift from the acceleration to the stabilization phase.

organizational skills, sustainable planning practices at stake have been discussed and approved by relevant stakeholders at earlier phases of the sustainability transition. By implementing control systems or training tools, they tried to transform newly established planning practices into a new self-reinforcing standard comparable to the exogenous trends at the landscape level. On the other hand, when referring to tactical skills, the practices at stake skipped discussions at earlier phases of the transition. This step was particularly relevant during the acceleration phase when previous planning practices at the regime level competed with emerging sustainable planning practices from the niche level. Accordingly, CPs could partly omit challenging debates on controversial planning practices. In both situations, the CPs aimed to ensure that newly established sustainable planning practices become the new standard and mark an end during the transition process. Hence, by circumventing power games and setting measures that ensure the implementation of newly agreed rules, the CPs stabilized their suggested planning practices. Thus, the use of tactical and organizational skills supported CPs to reach the stabilization phase of the respective sustainability transition. Accordingly, we establish the third proposition that is illustrated in Fig. 6.

Proposition 3. *Institutional entrepreneurs can apply tactical and organizational skills to accelerate the shift from the acceleration to the stabilization phase.*

5.4. Social skills to support the shift across all different transition phases

The findings also revealed that CPs used timing skills during the reform process. Timing skills were crucial for detecting the right moments to proceed with the reform or to pause the process. Cantonal planners did use these skills throughout the entire reform and particularly at some specific moments. In particular, when crucial milestones had to be overcome, CPs had to await the right moments. For instance, CP M explained the following:

“During every process, I reflect on the crucial milestones that we need to communicate. I always think about this issue in every reform process” (CP M).

CPs referred to timing skills throughout the entire sustainability transition. Linking these findings with literature on sustainability transitions, we argue that these skills are relevant as sustainability transitions can run at different paces. As Geels and Schot (2007) elaborate, sustainability transitions can be divided into different types of environmental change (regular, hyperturbulence, specific shocks, disruptive, and avalanche) that differ among each other in regard of their level of speed. Depending on the respective pace, sustainability transitions can undergo different transition pathways ranging from transformation, de-alignment/re-alignment, technological substitution to reconfiguration pathways (ibid.). These pathways vary among each other in regard of involved actors and types of interactions that can be placed at different levels of the MLP. Hence, by having timing skills, CPs could better identify the pace of their respective sustainability transition and correspondingly introduce the appropriate milestones at the right moments to advance the reform. Based on these considerations, we established our final and fourth proposition that is illustrated in Fig. 7.

Proposition 4. *Institutional entrepreneurs can apply timing skills to support a shift across all sustainability transition phases.*

6. Conclusion

Using a multiple case study of 26 Swiss CPs' applied actions during comparable reform processes aimed at establishing sustainable planning practices, we highlight that institutional entrepreneurs can utilize seven social skills to support sustainability transitions: (i) empathic skills (the ability to understand different stakeholders' viewpoints), (ii) analytical skills (the ability to detect a transformation's underlying complexity), (iii) translational skills (the ability to speak to different stakeholders), (iv) framing skills (the ability to design rules by relating them to stakeholders' current knowledge), (v) tactical skills (the ability to circumvent power games), (vi) organizational skills (the ability to establish measures that ensure the implementation of new rules), and (vii) timing skills (the ability to identify right moments to accelerate transition processes). On this basis, we elaborate on four propositions about the role of these skills and argue that: (1) institutional entrepreneurs can use empathic and analytical skills to accelerate the shift from the pre-development/exploration to the take-off phase; (2) they can use translational and framing skills to accelerate the shift from the take-off to the acceleration phase; (3) they can apply tactical and organizational skills to accelerate the shift from the acceleration to the stabilization phase; and (4) they can use timing skills to support the shift throughout all phases of sustainability transitions.

We suggest that the four propositions inform research on micro-foundations of sustainability transitions by going deeper and studying “what's underneath” the MLP model. Although the MLP implicitly acknowledges agency as a key driver of sustainability transitions (Geels and Schot, 2007), the MLP has underdeveloped this aspect yet (Geels, 2020). Accordingly, empirical research on sustainability transitions has usually focused on the overall processes that inherit sustainability transitions by highlighting different phases (Rotmans et al., 2001) or multiple levels (Geels, 2011) that exist during such transformations. Nevertheless, this approach has often raised criticism, as it has been said that actors' roles are neglected in such exemplifications (Genus and Coles, 2008; Pesch, 2015; Smith et al., 2010). However, research on actors within sustainability transitions mostly focuses on changing agents' applied strategies (Pesch et al., 2017), character traits (Timmermans et al., 2014), moral norms (Antadze and McGowan, 2017), or life courses (Koistinen et al., 2019). However, this actor-oriented research often has detached insights from the overall underlying processes throughout sustainability transitions. In line with a micro-foundational approach, we aim for a multi-dimensional model of agency as proposed by Geels (2020); thus, a definition of agency that is not detached but relates to the simultaneously ongoing transition processes as described by the MLP.

Inspired by literature on micro-foundations of institutions (Felin et al., 2015; Harmon et al., 2019), we focused on capturing real

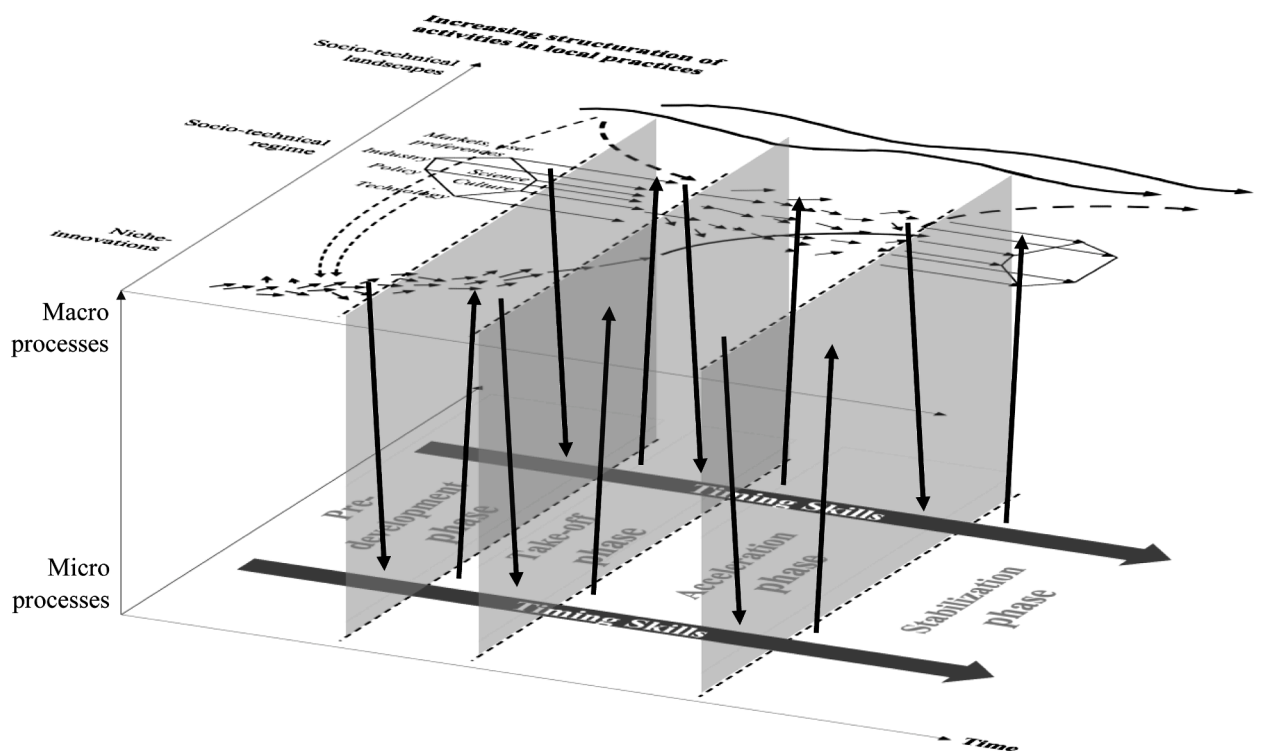


Fig. 7. Relevant social skills to support the shift across all different transition phases.

human social behavior by looking into the role of agents' applied social skills. We understand that individual actions, particularly by actors in the position of institutional entrepreneurs, can accelerate and facilitate sustainability transitions. Due to their application of skills, they can actively influence such transformations (Heiskanen et al., 2019). However, in contrast to other research on agency within sustainability transitions, we highlight that institutional entrepreneurs' applied skills do not make an impact independently of the overall sustainability transition processes. The types of skills applied throughout sustainability transitions depend on the specific phases in which the transformation stands. Hence, our theoretical insights aim to connect and highlight the interlinkages between the macro and micro processes of such complex sustainability transitions. This is our contribution to the literature on the micro-foundations of sustainability transitions.

Following a multiple case study method (Eisenhardt, 1989; Gioia et al., 2012; Yin, 1994), we finally established theoretical propositions on the influence of social skills throughout specific sustainability transitions phases. We argue that the application of specific combinations of social skills are necessary conditions if agents aim to accelerate a corresponding shift from one phase to the next one. Accordingly, we recognize opportunities to deduce from our findings policy interventions as recently proposed by other scholars (for instance, Kanger et al., 2020). Thus, if governments aim to accelerate sustainability transitions in a particular field, we urge them to apply the herein established social skills. These skills can be applied by one single actor as in our discussed cases (by the CPs during the reform processes), but they can also be employed by a combination of actors over a longer period. Beside the relevance of certain constellations of social skills during specific phases, we do not claim that these skills appear exclusively at the discussed sustainability shifts. We acknowledge that agents can use these skills throughout the entire transition process. However, and to summarize the above said, we perceive these social skills as relevant if agents aim to actively shape and accelerate these transitions. Furthermore, we do not assert to have identified all relevant micro processes that influence the shift from one transition phase to the next one. Having focused on the relevance of social skills, we most likely neglected other potentially relevant variables. Hence, we call future research to apply a similar micro-foundational approach on sustainability transitions to detect other crucial micro aspects that lie underneath the MLP. Additionally, we motivate other scholars to derive from our propositions hypotheses that can be tested quantitatively in other case settings. This would allow a refinement of our theory by corresponding to respective environments. These approaches can further enrich research on the micro-foundations of sustainability transitions.

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Declaration of Competing Interest

None.

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