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Agency of institutional intermediaries in transitions: A study of influences on intermediary practices

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ABSTRACT

Keywords: Institutional intermediaries Policy mission Change agent Strategy Social-technical transitions Social psychology

Traditionally, the literature on socio-technical transitions has predominantly focused on system-level phenomena. However, to fully comprehend the processes of change, it is crucial to understand the roles and practices of individual actors involved in these transitions. This paper examines institutional intermediaries, which are actors with the mission to implement policies. Our objective is to explore how agency influences the practices of individuals serving as institutional intermediaries, financed by a national energy agency, to support citizens and organizations in adopting sustainable technologies and practices. We introduce an analytical framework highlighting that institutional intermediaries are subject to multiple levels of influence. These include top-down influences, coming from national or local decision-makers, bottom-up influences from local clients, as well as middle-out influences derived from their own agency and interpretation of their institutional role. The latter significantly impacts how institutional intermediaries operationalize their policy missions. Consequently, intermediaries are not merely passive implementers of national policies but also agents with their own agendas. This has important implications for the theoretical understanding of intermediary actors' behaviors in transitions and for the design of public or governmental employees' tasks and missions.

1. Introduction

In the field of sustainability transitions, there has been a growing interest in understanding the crucial role of individual actors in enacting change within socio-technical systems (De Haan and Rotmans, 2018; Farla et al., 2012; Köhler et al., 2019; Löhr and Mattes, 2022). The actor perspective has gained prominence by highlighting how agency and individual practices contribute to transition processes. In this paper, we conceptualize agency as being distributed within the structures that actors themselves have created and consider that socio-technological structures do not only generate constraints on agency but, instead, provide a platform for the unfolding of institutional work driven by actors (Garud et al., 2007). Since actors are embedded in the institutional structures of socio-technical systems (Fuenfschilling and Truffer, 2016), attention to actor level phenomenon complements the system perspective usually taken in transitions research, by uncovering underlying aspects of broader system changes and addressing the micro-macro dilemma prevalent in transitions research (e.g., Bergek et al., 2015; Köhler et al., 2019). This perspective posits that individuals are knowledgeable agents capable of reflecting and acting in ways that deviate from accepted rules, social norms and technological conventions (Garud et al., 2007).

Among actors embedded in socio-technical systems, the intermediary-type of actor has received increased attention in transition research (Kivimaa et al., 2020; Kivimaa et al., 2019). Intermediaries can facilitate transitions by intervening at the actor level of transitions, at the system level, or in-between actor and system levels (Gustafsson and Mignon, 2019; Mignon and Kanda, 2018). Some intermediaries that act at the system level actively engage in the institutional context, e.g., they receive a mission (or mandate) from policymakers, are funded by policies, and/or are affiliated with governmental organizations (e.g., Kivimaa, 2014; Nordt et al., 2024; Polzin et al., 2016; Talmar et al., 2022). This type of intermediary has been referred to as institutional intermediaries¹ (Polzin et al., 2016) and examples of such intermediaries include innovation funders, energy agencies, local planners, and networks (e.g., Glaa and Mignon, 2020; Kivimaa, 2014; Klerkx and Leeuwis,

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¹ Other authors have referred to this intermediary type as government-affiliated intermediaries, policy-affiliated intermediaries, and public innovation intermediaries. In this paper, while we chose to settle for the term institutional intermediary, we consider these different concepts as equivalent.

2009; Polzin et al., 2016).

The transitions literature presents institutional intermediaries in different ways. At times, they are depicted as passive public employees carrying out the decisions made by policymakers (e.g., Backhaus, 2010; Parag and Janda, 2014). Conversely, other authors describe them as active agents who play crucial roles in facilitating sustainability processes, sometimes even assuming championing roles (Kivimaa and Martiskainen, 2018; Martiskainen and Kivimaa, 2018). Clearly, there are varying perspectives on the extent of individual agency that these intermediaries have. This variation may be attributed to the different units of analysis that researchers use when studying intermediaries. Some researchers focus on organizations (e.g., Kant and Kanda, 2019; Kivimaa, 2014; Nordt et al., 2024),), while others examine individuals (e.g., Martiskainen and Kivimaa, 2018; Mignon and Winberg, 2023).

As an attempt to contribute to elucidating this tension, the aim of this paper is therefore to understand what influences the practices of individual institutional intermediaries in the process of operationalizing their policy mission. To address this, we propose to integrate perspectives from the literature on (institutional) intermediation with the literature on social psychology and agency in transitions. The latter highlights that while institutions shape norms, values, rules, and networks, individuals act according to their own will, preferences, and resources (e.g., Bögel et al., 2022; Bögel and Upham, 2018; De Haan and Rotmans, 2018; Duygan et al., 2019; Upham et al., 2020). As a result of their own will, a variety of actor practices exist, which, in turn, influence and affect the overall system (Farla et al., 2012).

There are several reasons why understanding the intrinsic motivations and agency of transition actors is of particular interest for sustainability transitions (De Haan and Rotmans, 2018; Farla et al., 2012; Fuenfschilling and Truffer, 2016). First, while the concept of "actor" is often used in the transition literature, there is sometimes an assumption that organizational actors and individual (human) actors behave the same way (Becker et al., 2021; Upham et al., 2020). Yet, from a more pragmatic perspective, we know that organizational actors, e.g., companies or municipalities, as well as actor groups, e.g., intermediaries, are not homogeneous. Instead, they are composed of multiple individual human actors with a variety of cognitive and normative mental frameworks (Bögel et al., 2022; Bögel and Upham, 2018; Upham et al., 2020). In relation to institutional intermediaries, it can be inferred that the degree of agency of individual intermediaries reflects in the interpretation of their assigned mission, and in their (individual) approach to operationalizing this mission. Although it is logical that the degree of agency influences what can be achieved and which policy goals or functions are assigned, it is still unclear what determines agency and how it translates into intermediary practices. This is problematic because policymakers need these insights to align their expectations with institutional intermediaries' goals and mandates (Klerkx and Leeuwis, 2008; Mignon and Kanda, 2018).

The study is based on a cross-case analysis of 22 municipal energy advisors in Sweden. These energy advisors are individuals employed as public servants in municipalities. They are funded mainly through a national policy program monitored by the Swedish Energy Agency and their mission is to promote reduced CO₂ emissions from energy use and increased renewable energy investments. They operationalize national goals and visions and provide locally-adapted information and advice to households, small- and medium-sized enterprises, and associations. As individuals, they have different backgrounds, experiences, preferences, and personalities. In summary, they belong to similar organizations and have the same mission, but their psychological frames and local contexts differ.

This study has several implications for research and policy. First, it introduces an analytical framework for understanding the factors influencing institutional intermediaries, categorized into top-down, middle-out, and bottom-up influences. By applying (and later adjusting) this framework, the study enhances our understanding of intermediaries' agency and its impact on the operationalization of their policy mission, resulting in a categorization of institutional intermediation practices. This provides new insights, which are developed as propositions for future studies on intermediaries in the context of transitions as well as for future studies on intermediaries performing institutional work. Finally, this paper offers important information for policymakers and the design of public servants' tasks and missions.

The paper is structured as follows. Section 2 overviews the literature on institutional intermediaries and social psychology to provide an analytical framework of intermediary agency. Section 3 outlines the methodology and study context, and Section 4 presents the findings. In Section 5, the findings are discussed, and propositions are introduced, and Section 6 states our conclusions and contributions.

2. Conflicting perspectives on institutional intermediaries in sustainability transitions

2.1. Institutional intermediaries' roles in sustainability transitions

During the last decade, different streams of research have highlighted the important roles of intermediary actors, e.g., for facilitating the development and the diffusion of innovations (Howells, 2006) or for facilitating sustainability transitions (Bergek, 2020; Kivimaa et al., 2019). These intermediaries have received particular attention for the functions that they play at the actor level, e.g., by matchmaking actors and their resources (e.g. Aspeteg and Mignon, 2019; Martiskainen and Kivimaa, 2018), or at the system level, e.g., by linking networks with each other (Kanda et al., 2020), or between the system level and the actor level, e.g., by translating policies to the local context where they are implemented (Gustafsson and Mignon, 2019; Hodson and Marvin, 2009a, 2009b). While much attention has been given to intermediaries operating at the actor or system level, those functioning between systems and actors have received less attention. This is unfortunate, as intermediaries who translate policies, visions, and local contexts can drive socio-technical system change by creating feedback loops between centrally designed policies and their implementation at the local level (Gustafsson and Mignon, 2019; Hodson et al., 2013).

In previous research, depending on the theoretical approach, different labels have been given to intermediaries (Table 1). In the innovation literature, innovation intermediaries have received attention for their roles at connecting markets or supply and demand in the innovation value chain. In the transition literature, transition intermediaries that play a role in facilitating transformation processes among multiple actors and systems have been particularly studied. Institutional intermediaries are present in both innovation and transitions contexts, and, to some extent, they may overlap with innovation and transitions intermediaries. Nevertheless, they have the particularity that they have been created or given a mission to act as policy instruments² (Polzin et al., 2016, p34). Examples of institutional intermediaries include innovation funders, energy agencies, local planners, and networks (e.g., Glaa and Mignon, 2020; Kivimaa, 2014; Klerkx and Leeuwis, 2009; Polzin et al., 2016). In most cases, they are government-affiliated, i.e., they are or belong to public organizations, they receive public funding and are given a specific mission of promoting or reducing barriers for sustainable technologies or practices.

2.2. Alternative views on institutional intermediaries' agency

In previous research, agency has taken as a starting point that individuals are knowledgeable agents capable of reflecting and acting in ways that deviate from accepted rules, social norms and technological

² In contrast with e.g., intermediaries with a business purpose, which are assumed to have agency and to pursue commercial or financial goals e.g., Mignon, I., (2017a), Aspeteg, J. & Bergek, A. (2019), Mignon, I. & Kanda, W. (2018).

Overview of intermediary characteristics in different theoretical approaches.

Intermediary types	Examples of such organizations	Examples of individuals taking such intermediation role	Intermediate between x and y	Examples of studies in the literature
Innovation intermediaries	Consultancy firms, innovation contest organizers, chambers of commerce, trade associations, knowledge intensive business service providers (KIBS), innovation and research agencies, technology networks	Consultants, employees, innovation experts, IP specialists	Between systems, or between actors, e.g., between markets, idea creators and technology developers, technology developers & technology suppliers, technology suppliers and users, universities and industry	Bessant and Rush (1995), Simmie and Strambach (2006), Franzò et al. (2023)
Transition intermediaries	Climate change or environmental agencies, municipalities, wind community energy initiatives, solar PV trade associations	Technology installers, architects, efficiency advisors, climate advisors, sustainability consultants	Between actors, e.g., between regime and niche actors, between systems	Kivimaa et al. (2020), Kivimaa et al. (2019), Mignon and Kanda (2018)
Institutional intermediaries	Government-affiliated actors such as innovation funds, energy agencies, local governments, regional agencies, ministries, research institutes/networks.	Civil servants, public employees, urban planners	Between policymakers & the local context, between national financers and projects.	Kivimaa (2014), Gustafsson and Mignon (2020), Hodson et al. (2013), Polzin et al. (2016), Selviaridis et al. (2023)

conventions (Garud et al., 2007). While actors are embedded in the institutional structures of socio-technical systems (Fuenfschilling and Truffer, 2016), these structures are created by actors themselves (Garud et al., 2007). Hence, socio-technological structures do not only generate constraints on agency but also provide a platform for the unfolding of institutional work driven by actors (Fuenfschilling and Truffer, 2016; Garud et al., 2007).

In the existing literature on institutional intermediaries, there are different views and assumptions about intermediaries' level of agency and self-determination. Some authors see them as policy implementers, with no or limited room for strategic choices and self-driven action (e.g. Backhaus, 2010; Parag and Janda, 2014). For instance, studies have pointed out that some intermediaries are expected to be neutral in their ways of providing funding or advice (Klerkx and Leeuwis, 2008; Mignon and Kanda, 2018; Mignon and Winberg, 2023; Parag and Janda, 2014). While this neutral policy implementer role can be seen as appropriate from a policy perspective (given that these intermediaries are financed and/or employed as public servants to deliver a predetermined mission (Stapelbroek, 2015)), and presented as necessary for the legitimacy of the intermediary (Klerkx and Leeuwis, 2008), such neutrality, when associated with a lack of freedom of action, can also considered as problematic. For instance, Klerkx and Leeuwis (2009) have argued that intermediaries, even if they fulfill a policy function, should be able to deviate from policy instructions and have some freedom to choose the targets of their support as well as how they organize this support.

Interestingly, other empirical studies have demonstrated other behaviors, suggesting that due to intrinsic motivations and determinations, institutional intermediaries are instead driven to act with some entrepreneurial mindset. For instance, Kivimaa (2014) discussed the cases of Motiva and Sintra, i.e., two institutional intermediaries perform different activities, due to the fact that they have different degrees of engagement in driving systemic change in society. Likewise, in a study about the roles of intermediaries in accelerating the commercialization of clean technologies, Polzin et al. (2016) provided illustrations of institutional intermediaries' agency by showing how institutional innovation intermediaries can accelerate the commercialization of clean technologies by influencing the design of government-funded R&D programs. Kivimaa and Martiskainen (2018) also highlighted that intermediaries, particularly in the context of low-energy homes in the UK, both shape policymaking and are steered by it. Selviaridis et al. (2023) studied intermediaries that facilitate the public procurement of innovation and found that, within the intermediary organizations, there are individual agents who identify and learn about institutional failures and adapt their institutional work accordingly. Finally, Nordt et al. (2024) illustrated how transition intermediaries at the local government level leveraged institutional contradictions to promote low-carbon mobility.

Overall, even among studies depicting intermediaries as agencydriven actors, it remains unclear to what extent the agency emerges from the individual intermediaries themselves and their context. For instance, in Kivimaa (2014)'s study, the different levels of agency of the studied intermediaries may be explained by a variety of factors, i.e., mandates, governance, and driving forces. Likewise, in Polzin et al. (2016), the institutional intermediaries work on different funding programs, within different policy contexts (e.g., energy, transport) and depend on different ministries. In Selviaridis et al. (2023)'s case, it was found that individuals' agency was made possible by internal aspects, e.g., the stability of the intermediary organization. To elucidate these questions, we turn to an extensive body of literature that delves deeply into individual agency and its determinants within the field of social psychology.

2.3. A social psychological perspective on institutional intermediaries' agency

In order to understand long-term societal changes, technology diffusion or regime transformations, it is not only important to understand the mechanisms and obstacles taking place at the system level of change, but also what happens at the actor level (Fuenfschilling and Truffer, 2016; Mignon, 2016; Mignon and Bergek, 2016). Particularly, to understand the roles that actors can play in transitions, it is crucial to understand why they act the way they do, i.e., their behaviors, motivations, and limitations (Bögel et al., 2022; Bögel and Upham, 2018; De Haan and Rotmans, 2018; Farla et al., 2012). However, until now, it seems that the transitions research has been lacking the proper tools to study individual actors and what drives/hampers their practices. This has led some authors to advocate for the use of social psychology frameworks for the study of individual agency (Bögel and Upham, 2018; Upham et al., 2020). Individual agency here refers to "the subjective experience and resulting actions of single persons" (Bögel et al., 2022, p172).

To be fair, transitions studies are not entirely alien to the study of agency. Actor resources, expectations, attitudes, responses, and challenges have for instance been discussed in contexts of policy development and implementation, or development and promotion of clean technologies and practices (for a deeper look at these examples, see the special issue edited by Farla et al., 2012). Nevertheless, the type of agency discussed in the context of transitions has until now mainly focused on organizations – i.e., not on individuals – or on the aggregate level of phenomena such as technological diffusion (e.g., why do groups of adopters behave as they do? (e.g. Bergek and Mignon, 2017; Kamali Saraji et al., 2023)), community or social movement development (e.g.,

how can communities/social movements lead and govern change in a way that benefits them as society as a whole? (e.g. Ajith et al., 2022; Nordt et al., 2024; Trahan and Hess, 2022; Vernay and Sebi, 2020)).

In the social psychology literature, individuals' behaviors are explained by two main elements: elements that are intrinsic to the individual (e.g., knowledge, past experience, beliefs, habits, cognition, norms and values), (Ajzen, 1985, 1991; Conner and Armitage, 1998) and elements associated with actors' social environment (e.g., social norms and expectations, social networks, religion, social class) (Moscovici, 2000; Wagner et al., 1999). When making decisions, individuals are therefore influenced on the one hand, by the individual's intentions, understanding and expectations of the behavior resulting from the decision, and on the other hand, by the individual's understanding of what the social environment demands (or expects) from them.

While Bögel and Upham (2018) have advocated using social psychology in transition contexts, they have also acknowledged its limitations. Unlike other theoretical streams such as sociology, which consider the influence of external factors, i.e., elements associated with actors' physical and institutional environment (e.g., national or local rules and regulations, existing infrastructure and resources), social psychology mainly focuses on intrinsic individual behavior (Bögel and Upham, 2018). Combining system and individual perspectives is yet critical, in order to understand how system and actor dynamics influence each other during transitions, and more specifically, understand how actors' embeddedness in sociotechnical systems shape transitions. Zooming back to the main topic of this paper, i.e., understanding what influences the agency of institutional intermediaries in the context of sociotechnological transitions, we propose a new analytical framework integrating the literature on intermediaries and social psychological.

2.4. Tentative analytical framework to study institutional intermediaries' agency

Based on the previous literature on intermediaries (Sections 2.1 and 2.2), particularly intermediaries that translate between policies and the local context where they are implemented, we can assume that institutional intermediaries are influenced by top-down and bottom-up factors, due to the very fact that they have the mission to intermediate between the system level and the local level where users, citizens and local specificities interact (e.g. Gustafsson and Mignon, 2019; Hodson and Marvin, 2010; Hodson et al., 2013). Nevertheless, in this paper, building on the social psychology perspective (Section 2.3.), we propose that institutional intermediaries are also affected by intrinsic factors when they choose to interpret and decode between different actors and contexts. To contribute with what we claim is a missing part in the understanding of institutional intermediaries, we complement the top-down and bottom-up perspectives with a middle-out perspective advocated by the social psychology theory, representing the intrinsic elements that are specific to each individual intermediary. This analytical framework is illustrated by Fig. 1.

It should be noted that while it is acknowledged that actors (including their behaviors and cognitive frameworks) are embedded in socio-technical structures and that actors and these structures mutually influence each other, it remains unclear how these influences take place or what influences result in. Through the study conducted in this paper, we therefore aim at bringing new dimensions to the tentative framework, by uncovering what influences the practices of individual institutional intermediaries and how this affects the operationalization of their policy mission.

3. Method

To understand what influences institutional intermediaries' agency and practices in transitions, a qualitative research approach was chosen. We focused on the context of municipal energy advising in Sweden and performed semi-structured interviews with 22 municipal energy advisors and then analyzed the data through a cross-case analysis with each advisor constituting a case (Eisenhardt, 1989).

3.1. Study context

Sweden provides an interesting institutional context as it has a long tradition of decentralized governance, and hence combines high national sustainability ambitions with strong local governments (Gustafsson and Mignon, 2019). Apart from playing a major role in implementing national energy strategies (Fenton et al., 2015), Swedish municipalities are legally obliged to develop and implement local energy plans (Palm, 2006). In this paper, we study Swedish municipal energy advisors, i.e., civil servants employed within municipal organizations that are financed and governed by the Swedish Energy Agency, as cases of institutional intermediaries.

There are several reasons why the municipal energy advisors can be considered to be institutional intermediaries. First, they are funded by the Swedish government, coordinated by the Swedish Energy Agency, and employed and acting on a municipal level. Second, they have a mission from the government to promote reduced climate impact from energy use and contribute to national energy and climate goals by providing neutral and independent advice that is locally and regionally adapted to households, SMEs, and associations (Swedish Government, 2016). Finally, they often collaborate on a regional basis, in networks managed by regional energy offices. Hence, they act in-between the national and local levels, broker between different actors, and operationalize national visions and policy goals of accelerating the energy transition.

In Sweden, municipal energy advising is organized in a project form (2–3 years) where the amount of funding depends on the population size of the municipality(-ies) in the project. Each advising project must cover at least a half-time position as advisor to receive funding, resulting in municipalities organizing their energy advising service in different ways; a group of (small) municipalities can go together to have one (or more) advisor(s), municipalities can decide to have a shared employment of the advisor (part-time advisor combined with another municipal position), or one municipality can have one or several advisor(s) (Eriksson and Kjeang, 2021). Consequently, the number of advising positions differs between the advising projects. As of 2022, there were 188 energy advisors distributed over 121 advising projects in Sweden.³

3.2. Data collection

The data was collected through 22 semi-structured interviews with municipal energy advisors in Sweden conducted between April and September 2022. The selection of respondents was made purposefully by choosing one respondent for each of the 21 regions in Sweden (two for the capital region due to the large number of inhabitants) to account for potential differences due to the demographic characteristics (e.g., gender, age, educational background) and to the geographical context of the respondents (e.g., type of municipality, scope of their work, organizational belonging). This selection approach was chosen to capture not only representativity, but also contrasting or replicating patterns resulting from potential differences between the cases (Eisenhardt, 1989; Eisenhardt, 1991). It is important to note that the collected data represents the intermediaries' own perspective of their agency and practices in operationalizing their mission, rather than what others observe them to do.

The interviews focused on the operationalization of tasks, planning and prioritizing, municipal organization, and networks, as well as drivers, barriers, and enablers in their work (see below in Table 2). The respondents were given the liberty to describe their mission, roles, and activities as they deemed appropriate, and to reflect on the motivation

³ There are 290 municipalities in Sweden in total.



Fig. 1. Tentative analytical framework to study institutional intermediaries' agency.

 Table 2

 Overview of the interview themes and topics of questions included in the interview guide.

Themes	Topics of questions
Background	Educational background, length of employment as climate advisor, previous working experiences, reasons for choosing to work as climate advisor.
Activities	Typical working day at work, different activities performed within the job, logics to choose the activities/channels/target groups/themes for the activities, planning rationale for the work, prioritization between activities and tasks, reactive versus proactive activities, tasks that the advisors would wish to include in the work, collaborations within the organization/ other municipalities/other advisors
Clients	Target groups, types of services demanded, types of services depending on target groups, clients' stage of reflection/ adoption when seeking advice, follow-up activities.
Belonging organization	Situation of the climate advisor role within the organization, impact of the organizational situation on the work as climate advisor, collaboration among climate advisors within the region, management of the collaboration within the region, differences in ways of working among climate advisors, use of the collaborations.

behind their methods of organizing and prioritizing. They were not directed to label their responses in any predefined manner and were instead encouraged to speak from their own perspective and understanding of the work.

One interview (with Advisor 1) was conducted face-to-face, while the others were digital. The interviews lasted between 45 min and 2 h 45 min and were recorded and transcribed. Table 3 provides an overview of the respondents.

3.3. Data analysis

A cross-case analysis was conducted in three steps using the software data analysis tool NVivo. In each step of the process, the two authors independently coded the material, compared and discussed the coding, and agreed on a common coding frame.

 \Rightarrow Step 1: Packaging the data into first level codes

The first step involved an initial content analysis of the influences on the respondents (such as their motivations and reasoning for their actions) as well as the respondents' practices (such as their activities and priorities in implementing their mission). This step was broad and comprehensive to ensure no determinant influence or practice were overlooked. At first, quotes of influences and practices were highlighted in NVivo, under the broad first level codes "Influences" or "Practices". In Section 4.1 and 4.2, Tables 4 and 5 include examples of selected quotes in the far-right columns.

⇒ Step 2: Unpack the first level codes into aggregated categories

The second step involved going back to all selected quotes and using the software to redistribute them into aggregated categories. The two authors independently coded several interviews, and the emerging patterns were compared to agree on a common coding frame. This process resulted in the coding trees below (Figs. 2 and 3).

\Rightarrow Step 3: Compare and contrast cases

In the third step, the cases were analyzed in terms of influences and practices to identify contrasts and replications between them. This step enhanced the rigor of the methodology by evaluating the uniqueness of different practices and examining the relationship between influences and practices (e.g., by posing questions such as "What triggers this practice?" and "Does this influence affect one or more practices?").

4. Findings

This section introduces the different advising practices that were identified in the cross-case analysis. The analytical framework presented in Section 2 is then used to analyze the influences explaining the choice of practice.

4.1. Influences on institutional intermediaries

Applying our analytical framework to the institutional intermediaries in our study, we indeed identified different influences that impact how individual intermediaries operationalize their policy mission. This section presents what top-down, middle-out, and bottom-

Demographics and local specificities of the respondents.

Energy	About the energy advisors				Local specificities of the advising work			
advisor	Gender	Educational background	Experience as advisor (years)	Other employments within the municipality	Number of municipalities within the advisor's scope	Type of municipality	Number of advisor positions in the advising project	Organizational belonging in the municipality
1	Male	Energy analytics	5	_	1	Urban	1,5	Environmental strategy unit
2	Male	Engineering (heat and power)	12	Sounding board internally (10 %)	3	Rural	0,9	Building permit unit
3	Male	Biology + environment and health protection	7	_	1	Rural	0,7	Sustainability unit
4	Female	Environmental science	12	-	1	Rural	1	Building permit unit (located at the regional energy office)
5	Male	Energy technology	7	-	1	Rural	1	Social development unit
6	Male	Engineering (power)	6	Environmental strategist (50 %)	5	Rural, urban	2,3 (on 3 people)	Social development unit
7	Female	Energy efficiency in buildings	0,5	-	2	Rural	1	Municipal management unit
8	Female	Agronomy	7	Environmental strategist (50 %)	4	Rural	1,5	Environment and building unit
9	Male	Electrician, environmental technology	8	Environmental inspector (50 %)	2	Rural	0,5	Environment and building unit
10	Female	Environmental science	5	-	5	Metropolitan	4	Environment and building unit
11	Female	Environmental science	11	Sustainability coordinator (50 %)	1	Urban	0,5	Environment and building unit
12	Female	Environmental science	2	Other advising- related projects (50 %)	5	Urban, rural	0,5	Regional energy office
13	Male	Energy technology	8	-	1	Urban	4	Building permit unit
14	Male	Energy engineering	0,5	Consumer guidance (50 %)	1	Urban	1,5	Culture and leisure unit
15	Male	Energy technology	15	-	1	Urban	1	Municipal management unit
16	Female	Engineering (energy and environment)	12	-	6	Urban, Rural	1,5	Environment and building unit
17	Male	Engineering (energy)	4,5	Municipal projects (close to energy advising) (50 %)	1	Urban	1,4 (on 3 people)	Environmental strategy unit
18	Male	Agronomy	5	Retired (50 %)	1	Urban	3 (on 4 people)	Business administration unit
19	Male	Engineering (energy and industrial economy)	5	_	1	Metropolitan	2 (on 3 people)	Environmental strategy unit
20	Male	Engineering (mechanical and energy systems) + teacher (STEM)	11	-	5	Urban	1	Environment and building unit
21	Female	Engineering (industrial economy)	8	Sustainability strategist (50 %)	1	Urban	0,5	Municipal management unit
22	Male	Engineering (energy systems)	0,5	Other energy projects (50 %)	2	Urban, rural	0,5	Regional energy office

up influences influenced the studied advisors to act the way they did. It is important to note that, while the different levels of influence are presented one by one, these influences cannot entirely be separated from each other, since individual advisors are embedded in a social context (which, e.g., influences their norms, values and intrinsic motivations). We will discuss these overlaps in detail in the discussion section (Section 5).

The most predominant *top-down influence* relates to the way the government and the Swedish Energy Agency (in charge of funding, coordinating, and evaluating the policy) have formulated the mission of

energy advisors, as well as the guidelines and frameworks used to evaluate the impact of each advisor. Most respondents cited their mission, i.e., what they should or should not do (e.g., recommending a supplier), and the used reporting system as two important guiding principles in planning and prioritizing their work. The national thematic projects⁴ are also influential in guiding what topics and activities the respondents prioritize. Some advisors stress the importance of complying with municipal, regional, national, and EU goals and strategies. Top-down influences define the advisors' tasks, specify what they should avoid, identify which organizations or citizen groups to serve,

⁴ Time-limited projects focused on specific themes, e.g., sustainable transportation and resource-effective buildings, in which all energy advisors participate.

Table 4	(continued)

T. O	- 1	111	Influences	Examples	Illustrative quotes
Influences	Examples	Illustrative quotes			to feel that you actually make a difference
Top-down	Mission and scope from the Swedish Energy Agency	"We have certain prerequisites to relate to: what is in the regulation about energy advising. It is quite clear what we must work with and what we're not allowed to			and help them move forward." - Advisor 16 "There is an inner satisfaction in being able to impact and provide people with
		work with." - Advisor 10 "We have to be neutral and independent so you can't recommend any particular brands or suppliers, but sometimes, this makes the clients frustrated as they would		Knowledge	knowledge to move forward with measures to reduce their costs and still be part of contributing to the energy transitions. It's a cool feeling." - Advisor 21 "I think it's an advantage that we energy
		like to have something to start with." - Advisor 18			advisors have different backgrounds - some are engineers, technicians,
	Budget	"I don't have coverage for all I do in the main funding, so we have applied to the Swedish Energy Agency for an extended project about electric cars in rural areas." - Advisor 20			environmental scientists. I have a colleague who is a biologist. When you come from different places, you find ways to explain things so that more people understand." - Advisor 10
		"We've been lucky to find an external lecturer for two days that wasn't that expensive. That has allowed us to do more other things instead " - Advisor 5			"When the number of incoming questions is low, we have time to dive deeper into specific issues, which we learn a lot from." - Advisor 6
	National and EU rules and regulations	"Before, there was financial support dedicated to all people changing from oil- fired boiler to heat pump. It was easy and made people feel like it was worth the		Previous experience	"I worked as a substitute teacher when studying which was great. When I started as an advisor and planned lectures and explained to someone what a heat pump is I folt that I had great use of having
		effort. Now, when people ask if there is any such support and I say no, they close the matter quickly." - Advisor 8 "It is challenging with the incredibly large news flow with a lot of rules and taxes, from the FU level and so on." - Advisor 15			is, I feat that I had great use of having worked with pedagogics before." - Advisor 10 "As I've worked as an energy advisor for so long, I know what works and what doesn't." - Advisor 4
	Municipal, regional, and national goals and strategies	"We have both the region that wants us to do things, because we have been paid by them to do certain projects, and the five municipalities that we represent. We have a lot of stakeholders, so to say." - Advisor 10		Networks	"I have gotten to know many craftsmen over the years, and I know exactly whom to call if I have questions about heat pumps or ventilation, so I have built a big network around this." - Advisor 21 "Among households, it's clear that my
		"We have a mandatory monthly meeting with the energy advisors in the region coordinated by the regional development leaders. There, focus is on what the energy office wants us to do and what we are currently working on." - Advisor 17			predecessor has created a very good network. People here know well that there is an energy advisor in the municipality, so the ones I've met so far have said, 'Oh, you have taken over after X, I know him!'' - Advisor 7
Middle- out	Own interpretation of the mission	"As an energy advisor, you have to be social and work well with different types of people, know how to do some energy calculations, seem smart in interactions with people and know directly what it is they are talking about. And you need to gather information to analyze later. On top of this, we add the extra requirement on ourselves to have a strong client-focus."	Bottom- up	Client demand	"There has been an enormous increase in demand for advice about the higher electricity prices and the biggest increase is the medial interest. The visibility in media makes people start thinking about the electricity price and what they can do about their energy consumption." - Advisor 19 "During the pandemic, my advising went
		- Advisor 1 "We are not communicators and sometimes it feels like we would need one to do the marketing part of our job." -		Client needs	well but the demand was remarkably lower." - Advisor 21 "The most common question is regarding solar panels. Number two is problems with hosting or changing botting custom
	Interests and motivations	Advisor o "I work as an energy advisor because it covers areas that interest me a lot, and it feels like I can make a difference with my work." - Advisor 16 "In this job. you work with something you			Number three is electric car chargers." - Advisor 20 "Companies in general often ask if there are any grants or subsidies to apply for to make energy measures or install solar
		know is needed. Hopefully, you make a difference in the energy and climate crisis we are facing, as everyone can do something, but they might not know what. As I've studied this, I know, and I must spread the word." - Advisor 14 "Me and my colleagues are quite perdy. I		Local specificities	panels." - Advisor 12 "Given that we cover municipalities that are far apart, we only have the possibility of hosting a limited number of events as it requires a car and staying overnight." - Advisor 8 "Our city has segregated areas and there.
		think this job is really fun. Even though I'm more interested in energy technologies than the energy transition, I think it's fun			are absolutely areas from which no one ever calls us." - Advisor 10
	Preferences	"The absolute best is to meet so many incredible people in this job, it's amazing			

Interactions between practices of institutional intermediaries and the levels of influence.

Practice	Main influence level	Main influence	Illustrative quote
Goal-oriented	Top-down	Rules and regulations	"When I do the planning and decide what activities to work on during the year, I look to see that they fall in line with what the energy and climate strategy says we, advisors, should do. That's how I plan my work. We are very careful about planning after the task directive as well as the municipal goals. Can there be activities that bring us closer to reaching the goals? Then there are operational goals that are also set and that I must fulfil " Advisor 21
Holistic	Middle-out	Interests and motivations	"We do what [the clients] request the most, and then what gives the maximum payoff in time in terms of energy savings and carbon dioxide savings." Advisor 19
Experimenting	Middle-out	Preferences	"I would say this is a job for creative people. That's when it gets most fun to work as an energy advisor, if you like to make things up and try them out". Advisor 10
Learning	Middle-out	Resources	"Since my colleague has worked here for a long time, many clients call her first because they have her number. I think she gets more calls than I do, because now that she's on vacation, people have started calling me instead". Advisor 14
Expertise- oriented	Middle-out	Preferences	"[What we focus on] probably looks very different depending on what background the advisor has. Some are very skilled in marketing and I'm not, I'm more of a technician and [] sometimes end up in deep technical discussions with the clients". Advisor 20
Client-oriented	Bottom-up	Client demands	"There has actually been record- high demand this year, and it's not so strange perhaps with energy prices. [] So, I haven't had time to think about much else really, but that has been the priority". Advisor 3

determine funding duration, prioritize activities, set focus topics, and outline reporting methods.

The *middle-out influences* were clearly determinant for the practices of the energy advisors. In particular, most advisors noted that their understanding of the mission greatly influenced their activities. This pertains to the professional identity of advisors and their understanding of the necessary skills, knowledge, and actions required to achieve sustainability goals, and to respond to the expectations from policymakers and clients. For instance, the advisors have different opinions on what qualities or backgrounds are needed for their function, e.g., good people's skills, creativity, or technical knowledge. Additionally, their interests – in a specific advising topic or a specific target group – and their motivations – e.g., what they find rewarding with their work, what they value – had an impact on their behaviors. Respondents feel rewarded when working on topics they are passionate about, receiving positive client feedback, or contributing to a better planet. Consequently, they strive to maximize those rewards and prioritize activities that align with their interests. Finally, their preferences (e.g., large events or one-to-one advising), their resources (i.e., available time, experience, knowledge) and networks all influence the activities advisors choose. An experienced advisor with field expertise typically has extensive networks and high legitimacy, attracting more client requests.

Finally, bottom-up influences, in particular clients' demands and needs, were mentioned as influential by all respondents. They highlighted how the topics clients contact them about and the volume of client demands influence their work prioritization and organization. They also adapt their behavior based on clients' needs, e.g., what type of information they give, when they work and what tasks they do not prioritize. The specific local conditions that form the context for advisors also significantly influence the behaviors of the advisors interviewed: the breadth of their advisory mission (i.e., whether they provide energy advice to one or multiple municipalities), whether they work independently (e.g., as a sole energy advisor or within a team), what other roles they combine with their advising position (e.g., environmental strategist), and their placement within the municipal organization. These bottom-up influences significantly impact how advisors allocate their resources and time, as well as the issues and target groups they receive most queries about.

These influences, as well as illustrative quotes, are presented in Table 4.

4.2. Practices of institutional intermediaries

Findings show energy advisors operationalize their mission – i.e., they plan, perform, and prioritize different activities – through six types of practices: goal-oriented, holistic, experimenting, learning, expertise-oriented, and client-oriented practices. It should be noted that none of the advisors in our study limit themselves to one practice but choose different ones based on what they judge appropriate based on the situation. As a matter of fact, when analyzing the results, it became apparent that different top-down, middle-out, and bottom-up influences were determinant for which practices the advisors showcased (Table 5). While goal-oriented practices are mainly driven by top-down influences and client-oriented practices by bottom-up influences, holistic, experimenting, learning, and expertise-oriented practices are often guided by middle-out influences.

Goal-oriented practices connect to meeting expectations and fulfilling goals from policymakers and other stakeholders, which clearly stem from top-down influences. These include planning advisory work based on tasks and activities given by the Swedish Energy Agency or the municipalities. The advisors' prioritization of activities is influenced not only by national policies and goals, but also by municipal (and regional) strategies and goals. Hence, they often try to find synergy effects between strategies and goals at different levels of the institutional system. Further, they monitor their activities and the targets according to topdown guidelines (although some of them complement that with subgoals which they set for themselves).

Holistic practices involve considering advising topics from a comprehensive, long-term perspective and presenting a broad view to clients. They prioritize activities that significantly enhance energy savings and CO_2 reductions in proportion to the time invested by the advisor. Thus, group activities and events are often preferred to deliver advice and information. While this is in line with (top-down) national energy transition visions, it mainly stems from middle-out influences, such as particular interests and motivations. In general, most of the respondents were intrinsically motivated by the possibility to contribute to a better world, but the advisors showcasing holistic practices explicitly integrated this motivation in all their activities.

Experimenting practices include brainstorming and trial-and-error methods to develop new ideas and continuously expand the impact of advising. These practices involve using different types of outreach activities, such as events, marketing, and communication, to improve



Fig. 2. Influences: coding tree including descriptive codes, categories and themes.

services for both existing and new target groups. Experimenting practices are more likely showcased when advisors work in teams, which is a consequence of a top-down organization of the advising services in the municipality. Still, experimenting practices are strongly affected by middle-out influences, with explicit interests and preferences in being proactive and experimenting. Advisors using these practices often emphasize creativity and view their role as versatile, focusing on broadening their impact through advising rather than solely relying on technical knowledge.

Learning practices are pursued to increase the advisors' knowledge and legitimacy, by e.g., participating in events and networking with other advisors. These practices are more prominent among newly employed advisors, who do not have the same knowledge or networks as experienced advisors. These practices are thus a consequence of middleout influences relating to available resources in terms of experience, knowledge, and network. Advisors engage in outreach to strengthen their legitimacy, expand networks, and become comfortable in their role.

Expertise-oriented practices comprise understanding and explaining detailed technical knowledge and know-how related to the advising topics. Individual advising activities and home visits are preferred as they allow the advisors to solve hands-on problems and dive into the details together with the clients. Some advisors also provide expertise to other advisors all around the country and teach in the national education program for new advisors. These practices are clearly guided by middle-out influences in terms of preferences, interests, and resources and are more common among advisors with a technical background and extensive advising experience. Advisors showcasing these practices interpret their role as technical experts in advising situations.

Client-oriented practices focus on service and delivering added value to clients. Advisors provide activities that tailor information and advice to the (bottom-up) clients' needs. One-to-one meetings and home visits are preferred as they allow for a high level of client interaction and the possibility to adapt advice to the clients' level of understanding. Respondents using these practices also indicate that they feel motivated

(middle-out) by the direct feedback they receive in such situations.

To summarize, the findings show that the practices exhibited by the advisors are indeed affected by top-down and bottom-up influences, as they constitute a formal framework for advising by reflecting the advisors' institutional context. Nevertheless, the results highlight that middle-out influences are determinant for the way advisors interpret and prioritize these influences, hence shaping their role and operationalizing their policy mission into practice. Interestingly, how practices are chosen and formed is based on the local context (e.g., the organization to which the intermediaries belong, how much time/resources they have) and the characteristics (e.g., interests, motivations, previous experiences and expertise) of intermediaries. This suggests that the middle-out influences. This is illustrated in Fig. 4.

4.3. The role of practices in the operationalization

The results show that most advisors showcase a combination of several practices depending on the situation that they face, indicating that they are affected by multiple influences in their operationalization. Client-oriented practices are the most common practices among the respondents. Expertise-oriented practices are more common for advisors with a technical or engineering background. Moreover, experimenting practices are more likely in municipalities with a team of advisors working together and many experimenting advisors have an environmental background. Learning practices often align with being new to the job. Interestingly, the interviews show that different advising practices lead to different prioritization among tasks, planning strategies, and ways of delivering activities.

Starting with *prioritization among tasks*, while all advisors prioritize incoming questions from clients before outreaching activities, clientoriented advisors assert that all clients should get quick replies, no matter what. As Advisor 13 explained "*Worst case, you just have to work more. Some days you need to work 11 hours, and some days you can do less*". In contrast, expertise-oriented advisors do not want to compromise with



Fig. 3. Practices: coding tree including descriptive codes, categories and themes



Fig. 4. Influences on the different practices and the central role of middleout influences.

the quality of advice and thus accept having longer waiting lists. Advisor 2 expressed it as such: "I [...] prioritize to never be too hasty, even if that would mean that the waiting list would be longer. All clients should get good advice." Further, holistic advisors prioritize activities and target groups where they believe they can create the most impact in form of energy

savings, as exemplified by Advisor 19: "I don't advertise helping clients reviewing tenders on e.g., solar PV anymore because it takes so much time. It feels more important to help those that, by simple measures, such as changing window trims, can save a lot of energy and money. I rather prioritize that."

When it comes to *planning strategies*, the advisors show different approaches to planning depending on the preferred practices. Goaloriented advisors plan their work to meet external requirements, and they strive to find synergies among activities and goals. For instance, Advisor 2 informed: "*I try to direct the things I do anyways to collect points for the thematic projects*". In contrast, holistic advisors use their plans more as guidelines and are ready to deviate from them if they believe they are better needed elsewhere. For instance, Advisor 19 reflected: "*We have an operational plan for the whole cluster [of municipalities]. Since they differ in size, we try to divide our time and effort accordingly. But we're not steered by that, instead, [...] we rather maximize the energy and CO_2 savings in the whole cluster".*

Depending on their practices, advisors choose different ways of *delivering advising activities* to their clients. Client-oriented advisors prefer using existing activities organized by others, such as fairs and events, rather than organizing outreaching activities themselves. This allows them to meet many potential new clients while having time left for individual advising activities. Advisor 1 explained: "We try to jump on

to activities that others organize, like the sustainability festival. That way, there are more things happening to attract people and we don't have to spend a lot of resources on it'. Experimenting advisors spend a lot of their planning time to brainstorm and design activities aiming at new target groups and to deliver advice in new ways. Advisor 17 exemplified: "The podcast was initiated because we noticed a saturation on webinars; we felt that we had to come up with something new. You sit there and brainstorm and suddenly you get an idea and think 'let's do this, this seems like a fun idea, it can be useful for us to reach out'." In contrast, expertise-oriented advisors are less prone to try out new outreaching activities and instead rely on word-of-mouth to reach new clients. Advisor 1 reflected: "Our whole marketing strategy is to say to the clients that 'everyone contacts their local energy advisor, why don't you?" Actually, we avoid a lot of marketing just because we focus extremely much on making every client as satisfied as possible. Then we hope that they'll spread the word to their friends."

While individual advisors are driven by different influences and showcasing different practices, many advisors highlight how the heterogeneity of advisors' backgrounds and skills is an asset that can strengthen the national advising service. By sharing experiences on a regional and national basis and collaborating in regional networks of advisors, they can learn from each other and be inspired to improve the quality of their own advising. Advisor 18 explained: "[*The advisors in our regional collaboration*] have very different skills, it's a broad spread of knowledge. If someone has specific knowledge, they help and share it to us others. It's not something you keep to yourself, but instead, if you do something that worked out well, you spread it to your colleagues".

To summarize, the middle-out influences do indeed play a significant role in shaping the practices of the energy advisors. Given the large amount of freedom the advisors have in operationalizing their missions, these middle-out influences showcase the advisors' agency in performing their work in ways they find fit to drive transitions forward.

5. Discussion

In this section of the paper, our cases and findings are anchored and discussed within the wider context of institutional intermediaries and agency in sustainability transitions. In doing so, propositions are developed and introduced, as a way to channel theoretical ideas and arguments in ways that can contribute to theory and directions for further research (Cornelissen, 2017). Specific propositions are formulated that relate to the impact of influences on institutional intermediaries in sustainability transitions as well as the risks and opportunities of agency in policy implementation.

5.1. Multiple influences on institutional intermediaries

While previous literature has mainly focused on top-down and bottom-up influences on intermediary practices (e.g., Aspeteg and Mignon, 2019; Backhaus, 2010; Hyysalo et al., 2018; Matschoss and Heiskanen, 2017), we drew on the social psychology literature (Bögel et al., 2022; Bögel and Upham, 2018) and added the middle-out perspective as a third dimension of a tentative analytical framework (Fig. 1). When applying this analytical framework to our findings, we found that middle-out influences, together with top-down and bottomup influences, are determinant for intermediary practices. In that sense, our results contribute to the transitions literature and the social psychology literature by showing the existing complementarities between top-down and bottom-up levels of influence (as brought forward, e.g., by Nordt et al. (2024) and traditionally highlighted in the transitions literature), and middle-out influences typically stressed by the social psychology literature (Bögel and Upham, 2018). In line with e.g., Nordt et al. (2024), we found that levels of influences are interconnected, due to the simple fact that advisors are embedded in the overall institutional context of their profession, municipalities, countries, etc. For instance, the interpretation of their own task (middle-out) is influenced by the networks that advisors have around them (middleout) – e.g., how their colleagues interpret their tasks –, their clients (bottom-up) – e.g., how clients interpret the energy advisors' task – and policymakers/task-providers (top-down) – e.g., what is actually included in the task description.

Proposition 1. There are multiple influences that affect how individual institutional intermediaries operationalize their policy mission.

When testing the tentative analytical framework on the cases of institutional intermediaries included in the study, we found that, even if the three levels of influences have an impact on institutional intermediaries, the middle-out level plays a specific role at mediating the influences of the top-down and bottom-up influences (Fig. 4). Middle-out influences significantly affect how advisors interpret their roles and tasks, and how they prioritize and organize their work, thereby shaping their function and translating their policy mission into practice.

This finding contrasts with the literature on policymaking in transitions, where there is an underlying assumption that the outcome of a policy measure will follow the intentions from the policymakers (see e. g., Haddad et al. (2022) for an overview of the literature on transformative innovation policy). Our results nuance this picture by showing that institutional intermediaries are influenced by more than top-down policy missions.

Proposition 2. Middle-out influences on institutional intermediaries play a specific role in mediating the influences of the top-down and bottom-up influences.

In our study, it was clear that the advisors did not only follow the policy framework defining their missions, but they also brought in their own perspectives and develop behaviors to provide advice in ways they found most fit to fulfill their mission (something through innovative solutions) or even went beyond it (hence performing institutional work (cf., Fuenfschilling and Truffer, 2016), for instance by solving institutional failures (Garud et al., 2007)). This aligns with the notion of embedded agency, where it is considered that socio-technological structures do not only generate constraints on agency but, instead, provide a platform for the unfolding of institutional work driven by actors (Garud et al., 2007). This implies that policymakers should not expect to have full control of the implementation of policy measures. Instead, policymakers should be aware of the impact of individual agency in policy implementation and acknowledge that civil servants and other institutional actors are influenced by middle-out factors that result in a variety of practices. This can be considered as a strength of intermediaries since this knowledge and understanding of the local context and of their clients' specificities may increase the impact of policies (e.g. Hodson and Marvin, 2009b).

Proposition 3. Institutional intermediaries' agency translates in a variety of practices in policy implementation.

In this paper, we focused on institutional intermediaries that are employed and governed by public organizations to implement a certain policy mission. While our propositions reflect this focus, there is reason to believe that our findings and revised analytical framework (Fig. 4) are applicable to other types of intermediaries. For instance, in their typology of transition intermediaries, Kivimaa et al. (2019) account for varying degrees of change agency in pursuing sustainability transitions. While there is an obvious overlap between institutional intermediaries and transition intermediaries (i.e., when the given policy mission relates to sustainability transitions), the middle-out perspective can be useful to understand how other types of transition intermediaries contribute to accelerating transitions. Further, there is an opportunity to build on the work on innovation intermediaries by understanding intraorganizational aspects of intermediation using the middle-out perspective.

5.2. Risks and opportunities of agency in policy implementation

Acknowledging the agency of institutional intermediaries entails both new risks and new opportunities. As seen in this study, the different influences (i.e., top-down, middle-out, and bottom-up) resulted in different advising practices, implying that e.g., the outcome of the policy mission and client satisfaction may vary across contexts (in this case, municipalities). For instance, goal-oriented practices meet policymakers' goals but discourage innovative thinking. In contrast, experimenting practices can contribute to novel ideas and methods to reach more clients with a wider range of topics. Advisors preferring expertiseoriented practices might be hesitant to try out new methods and instead favor practices utilizing their knowledge and experience. Finally, while client-oriented practices enhance the advising service's reputation, solely focusing on clients' demands leads to the risk of (involuntarily) neglecting other groups may benefit from advice.

Proposition 4. Different institutional intermediation practices lead to differences in terms of policy outcomes.

In contexts where policies directly target the wider public, studies have shown that motives and interests are heterogeneous (e.g., Bergek and Mignon, 2017; Mahapatra et al., 2011). Therefore, the diversity of advising practices presented in this study represents opportunities for policy. Institutional intermediaries, like their clients or target groups, consist of a heterogeneous group of individuals. Having a portfolio of practices, preferences, and motivations represents potential for answering the needs, demands, and preferences from a heterogeneous group of citizens. Individual intermediaries also have knowledge about the local context and their different target groups and can thus adapt their services to suit the local demands. From a policymaker perspective, since it has been established that institutional work is important to solve institutional failures and drive change in society and in organizations (particularly public organizations), it is important to - not only acknowledge, but also - encourage agency (particularly among civil servants). It is also important to understand that institutional work and changes work best when a diversity of perspectives are at work. It is therefore important to recruit civil servants that have different experiences, backgrounds, interests and personalities.

Proposition 5. Differences in institutional intermediaries' middle-out influences and practices equip them to answer the needs, demands and preferences of a heterogeneous group of citizens.

Nevertheless, there are also risks associated with varying policy implementation. Due to advisor heterogeneity, inhabitants of different municipalities may receive varied services based on their assigned advisors, as noted in several interviews. This can result in clients experiencing inequalities or lack of transparency in what service they should expect from civil servants. Consequently, this may reduce the legitimacy of the policy measure. Given both the geographical spread and individual preferences, there is also a risk in good practices not being shared to a sufficient extent between the advisors. From a policymaker perspective, to maximize the opportunities and minimize the risks, it is important to encourage and facilitate the sharing of knowledge and experience between advisors and allow them to inspire each other to benefit from their differences. Hence, national and regional coordination play a key role to ensure coherence and continuous (collaborative) improvement of the policy measure.

Proposition 6. Differences in institutional intermediaries' middle-out influences and practices lead to experienced inequality and lack of legitimacy in policy implementation.

6. Conclusion

The aim of this paper was to explore how agency influences the practices of institutional intermediaries in operationalizing their policy missions. By integrating perspectives from the literature on (institutional) intermediation and social psychology, we proposed an analytical framework to account for influences of intermediaries' practices. Through a cross-case analysis of 22 interviews with municipal energy advisors in Sweden, we first showed that intermediaries use different practices when operationalizing their policy mission. This framework was also used to explain the impact of top-down, middle-out, and bottom-up influences on intermediaries' practices. We found that topdown and bottom-up influences are indeed important as they constitute the frame of the advisory function, and that middle-out influences are highly determinant in how advisors shape their role and operationalize the policy mission.

This paper has three main contributions. First, it contributes to the literature on intermediation by providing a better understanding of intermediaries' agency and the impact of middle-out influences. In particular, our analytical framework can be used in future empirical studies to provide new insights into intermediaries' practices, both in the context of transitions as well as for intermediaries performing institutional work. Second, it provides five propositions about the impact of influences on institutional intermediaries in sustainability transitions as well as the risks and opportunities of agency in policy implementation, which are aimed at channeling theoretical ideas and arguments in ways that can contribute to theory and directions for further research. Finally, this paper provides useful information for policymaking and the design of public or governmental employees' tasks and missions. By studying individual actors with a common policy mission, we provide new knowledge on how these actors operationalize their mission.

Given that our results are drawn on the Swedish context and on 22 interviews, we acknowledge that there are avenues for future studies increasing the generalization of the findings. In particular, we encourage studies of other geographic and institutional contexts, e.g., the operationalization of other (sustainability) policies or contexts where energy advising is organized in other ways, where the five propositions put forward in this paper can be tested and/or further developed. While we thoughtfully selected interviewees in order to ensure that we captured a broad spectrum of environmental factors potentially influencing the interviewees included in the study, the generalization of the results could be increased by the use of other methods, such as survey or secondary sources.

CRediT authorship contribution statement

Ingrid Mignon: Writing – review & editing, Writing – original draft, Validation, Supervision, Resources, Project administration, Funding acquisition, Conceptualization. **Lisa Bastås:** Writing – review & editing, Writing – original draft, Methodology, Investigation, Formal analysis, Data curation.

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Data availability

The authors do not have permission to share data.

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