



<http://www.diva-portal.org>

Postprint

This is the accepted version of a paper published in *Environmental Innovation and Societal Transitions*. This paper has been peer-reviewed but does not include the final publisher proof-corrections or journal pagination.

Citation for the original published paper (version of record):

Upham, P., Bögel, P., Sanchez-Chaparro, T., Mazorra, J., Pereverza, K. et al. (2026)
Applying a conflict typology to ecologies of intermediation: the case of a transitions
intermediary in Spain
Environmental Innovation and Societal Transitions, 58: 101072-101072
<https://doi.org/10.1016/j.eist.2025.101072>

Access to the published version may require subscription.

N.B. When citing this work, cite the original published paper.

Permanent link to this version:

<http://urn.kb.se/resolve?urn=urn:nbn:se:kth:diva-373225>



Applying a conflict typology to ecologies of intermediation: the case of a transitions intermediary in Spain

Paul Upham^{a,*}, Paula Bögel^{a,b}, Teresa Sanchez-Chaparro^{c,d}, Javier Mazorra^{c,d},
Kateryna Pereverza^e, Samantha Dijkstra-Silva^f, Johann M. Majer^g

^a Integrated Research on Energy, Environment and Society, ESRIg, University of Groningen, Nijenborgh 6, 9747 AG Groningen, The Netherlands

^b Vechta Institute for Sustainability Transformation in Rural Areas (VISTRA), University of Vechta, Driverstr. 22, 49377 Vechta, Germany

^c Escuela Técnica Superior de Ingenieros Industriales, Universidad Politécnica de Madrid, José Gutiérrez Abascal, 2, 28003, Madrid, Spain

^d Centro de Innovación en Tecnología para el Desarrollo Humano, Universidad Politécnica de Madrid (itdUPM), 28040 Madrid, Spain

^e Department of Sustainable Development, Environmental Science and Engineering (SEED), KTH Royal Institute of Technology, Teknikringen 10b, 100 44 Stockholm, Sweden

^f Technische Universität Dresden, Faculty of Business and Economics, 01062 Dresden, Germany

^g Institute of Psychology, University of Hildesheim, Universitätspl. 1, 31141 Hildesheim, Germany

ARTICLE INFO

Keywords:

Ecologies of intermediation
Conflict
Sociotechnical transitions
Values
Socio-cognitive
Interests

ABSTRACT

Within ecologies of intermediation, multiple intermediaries and their initiatives operate with overlapping remits and associated conflicts. To understand these, we propose a typology of conflict sources, applying this to the case of a university-based sustainability intermediary in Spain (itdUPM). itdUPM acts as an umbrella organisation for initiatives that connect stakeholders in pursuit of sustainability objectives. Analysing the case with its embedded sub-units, we distinguish between: (1) value conflicts connected to actors' identities and ideologies; (2) socio-cognitive conflicts related to the need to hold consistent and socially validated cognitions; (3) conflicts of interests, which emerge when actors' interests in terms of resource allocation, including power, are misaligned. We highlight the importance of a nuanced understanding of conflict types as part of intermediation processes, including those arising from the dynamic interactions between specific intermediation initiatives and their broader contexts. We also propose conflict management strategies to assist in this in practice.

1. Introduction

In the sustainability transitions literature, work on intermediation has been ongoing for more than two decades (Kivimaa et al, 2019). Both definitional and case-based, this literature has explored the various meanings, functions and contexts in which intermediation takes place, in both emergent and designed forms. Cases have involved intermediation in various contexts, such as in relation to specific technologies (e.g. Iakovleva and Rayner, 2024); also often in relation to action by municipalities - such as in response to their otherwise limited institutional capacity (e.g. Halbwachs et al, 2025); as well as in terms of their experimental actions (Lazarevic et al, 2024).

More recently, a sub-literature of intermediation ecology has begun to develop, in recognition of the complex, multi-actor and

* Corresponding author.

E-mail address: p.j.upham@rug.nl (P. Upham).

indeed multi-intermediary context in which intermediaries often function (Hyysalo et al, 2022; Soberon et al, 2022). In recognition of this complexity, this article develops, applies and discusses a typology of conflicts relevant to transitions intermediaries and their initiatives operating in relation to one another. For this purpose, we draw on the conflict management literature, derive a typology accordingly, and discuss its application to the case of an intermediary with multiple, interacting initiatives that themselves bring multiple stakeholders together. Here, the latter is the ‘intermediation ecology’ to which we refer and study. As Soberón et al (2022) observe, intermediation increasingly takes place in complex contexts of multiple organisations competing for resources and with overlapping responsibilities. Intermediaries also operate at multiple scales, with the net result being a ‘tapestry’ or ‘ecology’ of organisational agency and initiatives. This makes for an interesting but complex context in which intermediaries and their initiatives not only have to manage differences among stakeholders, but also differences between themselves in their spheres of operation. In our cases and conceptual framework, we address intermediation operating at multiple scales.

Kivimaa et al (2019) argue that full ecologies of intermediaries are needed to help facilitate and accelerate transitions: at system, regime, niche, process and user ‘levels’ (scales of activity). They emphasise not only the importance of this diversity of action per se, but also the diversity of motivations and whether intermediaries have emerged into their roles or have been designed into these, which has implications for how well they can perform the functions necessary as transitions facilitators. Summarily, systems intermediaries intentionally aim to facilitate change at all levels; regime intermediaries have similar aims but are tied to regime-level institutions or actors; niche intermediaries work with and for the interests of a particular niche; process intermediaries are more specific still, supporting e.g. a project or specific process in a niche; user intermediaries work at the most micro-level, helping users and translating their needs for providers (Kivimaa et al, 2019).

Building on Kivimaa et al (2019), Kanda et al. (2020) delineate three types of system-level intermediation: between entities in a network; between networks of entities; and between actors, networks and institutions. Soberón et al. (2022) develop this further, observing that the process of establishing intermediation ecologies itself merits more attention, including the management of processes of competition and collaboration among intermediaries in an ecology.

Within this context, the key research question addressed here is how to better understand the sources of conflicts that can be experienced within an intermediation ecology. In so doing, we explore a key function that intermediating platforms need to perform within an ecology, namely conflict management. As an area of study within sociotechnical or sustainability transitions studies, conflict is arguably under-researched, and even more so in the context of intermediation. Yet conflicts are inherent to any sociotechnical transition (Kates and Parris, 2003; Criplet & Harris 2019; Meadowcroft 2011). In the most well-known, levels-based ontology of transitions, the multilevel perspective (Geels, 2002), conflict is viewed as involved both within and between levels. Incumbents seek to maintain the status quo, while niche actors seek regime changes (Heiberg and Truffer 2022). Conflict is seen as part of the pressure to change regime configuration, and to open or take advantage of windows of opportunity (Geels and Schot 2007). Posited as associated with internal and external pressure for change, conflict within and between organisations may then lead to sociotechnical shifts that take different forms (substitution, hybridity etc.) depending on the timing and strength of the niche innovations etc. (Geels and Schot 2007). Hence from this perspective, conflict is often viewed as a necessary condition or even an enabler of transitions - albeit, again, with management of the social consequences of this only being attended to. While the just transitions literature in recent years as at least given more weight to transitions as involving normative, ethical questions (Sovacool et al, 2016), resolving associated conflicts per se arguably still merits much more attention.

This notwithstanding, a small number of studies in transitions research have highlighted the negative effects of conflicts between niche and regime actors (e.g. Smink et al. 2015). Connecting transitions studies and conflict research further reinforces the case that there are often negative consequences of conflict within and between organisations in the context of transitions. It is not surprising that, when pressure increases, regime actors often engage in institutional work to protect the status quo (Fuenfschilling and Truffer 2016; De Dreu & Gross, 2018). This institutional work includes lobbying to influence laws and policies, as well as “valorizing and demonizing” (Fuenfschilling and Truffer 2016, after Lawrence and Suddaby 2006).

Within an organisation, destructive conflict can spread within and beyond organisational boundaries (Jehn et al., 2013, Gelfand et al., 2012; Meadowcroft, 2011; Musallam et al., 2007). It can polarise actors and organisations (Rubin et al., 1994); fuel trends of societal polarisation emerging around transitions (Zilles and Marg 2022); and become institutionalised (Gray et al., Putnam, 2007). Here, we assume that these negative consequences of intra- and inter-organisational conflict can critically impair transitions and the work of intermediaries, if not managed in ways perceived as beneficial by those involved. Conversely, conflict can arguably catalyse transitions if creatively managed (De Dreu et al., 2010). In short, managing and resolving intra- and inter-organisational conflicts matters for sustainability transitions.

Other studies concur that conflicts between innovation actors at the niche level have been systematically overlooked in the transitions literature (Heiberg and Truffer, 2022). The latter point out that despite the value of key transition and innovation system frameworks such as Technological Innovation Systems (Hekkert et al. 2007), the decontextualisation inherent in such frameworks can lead to a “harmony fallacy” (Heiberg and Truffer 2022): conflicts among niche players may be assumed to not exist at all, and if transitions initiatives fail, it is because of a lack of coordination and information sharing between actors.

Here we aim to shed new light on conflict and its management as a multi-scale phenomenon within contexts in which multiple intermediary initiatives are operating. Yet while we develop and apply a framework to address problems of intermediation ecology in the broad sense, this is also intended to be applicable across transitions contexts. For this purpose, we connect transitions studies with conflict and negotiation research rooted in organisation and contributory sciences, to show how insights from diverse disciplines can provide new insights into conflict solutions across scales. By applying these insights to sustainability transitions at the micro- and meso-level of conflicts in particular, we also seek to contribute to the developing transitions literature that seeks to inform macro-level transitions theory with insights from individual- and group-based studies (in short, micro- and meso-level processes) (Bögel and

Upham 2018; Upham et al. 2020; Kaufmann et al. 2021; Upham et al. 2025). While we refer to conflict management options, our main purpose is to explore and typologies conflict sources, on the premise that understanding why conflict takes place can help consideration of its management.

Our case study intermediary - *itdUPM* (Centro de Innovación en Tecnología para el Desarrollo Humano/ Innovation and Technology for Development Centre) - is a university-based intermediary organization established in 2012, operating from the Universidad Politécnica de Madrid (UPM). *itdUPM* facilitates multiple multi-stakeholder collaboration initiatives relating to aspects of sustainability transitions as broadly defined, in diverse contexts (e.g., democratic and stable environments, humanitarian conflicts), and across multiple scales (urban, regional, national, sectorial). Such multiscalarity implies a need to consider intermediation levels with different ambitions (Kanda et al., 2020), hence here we discuss this additional layer of complexity.

Having set out a rationale for a focus on conflict in transitions generally and in intermediation ecologies in particular, the next section develops a typology of conflict types relevant to transitions, together with their general relevance to intermediation contexts. We then explain the case study organisation and the intermediation activities of its multiple sub-organisations, followed by an account of how intermediary and non-intermediary actors in these activities interact in sometimes conflicting ways. We use the conflict typology to characterise these conflicts and to discuss the potential for management. Throughout this discussion, we reflect on the role played by ecologies of intermediation and ecology intermediaries in the amplification and management of these conflicts. We conclude by drawing more general inferences for conflict management in the context of intermediation ecology.

2. Transitions, organisations and conflict

2.1. Conflicts in intermediation and in intermediation ecologies

Transitions intermediaries are actors, organizations or platforms that facilitate systemic change by bridging the gaps between stakeholders, fostering collaboration and enabling innovation. Their role includes managing knowledge exchange, aligning interests, and navigating power dynamics to promote sustainability transitions. Due to their “in-between-actors” position, intermediaries are often key actors in addressing conflicts. Indeed, the literature highlights that intermediaries may experience tensions due to competing interests among actors, and their effectiveness depends on how they manage these conflicts (Avelino et al., 2023; Sharma and Loginova, 2024).

At the same time, intermediaries are often in a conflicting or contested position due to their role as change agents in complex contexts. Indeed, intermediaries often face challenges related to securing resources and legitimacy in their roles (Bush et al., 2017; Hodson & Marvin, 2010; Klerkx and Leeuwis, 2009). Moreover, their position as neutral facilitators can be contested (Bush et al., 2017; Kivimaa, 2014; Klerkx and Leeuwis, 2009), and their role may evolve over time as transitions progress (Kivimaa, 2014; Klerkx and Aarts, 2013; Klerkx and Leeuwis, 2009), while they can have limited skills and capabilities to adapt to changing circumstances (Bush et al., 2017; Hargreaves et al., 2013; Hodson and Marvin, 2010; Stewart and Hyysalo, 2008).

The sustainability transitions literature acknowledges that intermediaries operate at different system levels (Kanda et al., 2020) engaging in both horizontal and vertical interactions to facilitate change, and are immersed in ecologies of intermediation (Soberón et al., 2022). Ecologies of intermediation are composed of a variety of intermediary actors, with different individual missions and objectives, mandates and levels of agency, as well as different positions and strategies, connecting actors and resources at different scales of a socio-technical system (ibid). Such ecologies are of a dynamic and complex nature and they are far from harmonious: interests, conflicts, competition, dilemmas, and power asymmetries can all be at play among the intermediaries that co-exist in the ecology (Kivimaa et al., 2019b; Van Lente et al., 2020; Soberón et al., 2022). Ecologies thus serve as a source of tensions and conflicts, compounding those faced by individual intermediaries. Moreover, we suggest that conflicts at the level of the ecology can exacerbate and amplify conflicts at lower intermediation levels. At the same time, ecologies of intermediation can be purposely cultivated to offer additional spaces and strategies to address conflict management (Soberón et al., 2022).

Within organisations, conflict is often imminent and pervasive, affecting individuals, teams, leaders, organisational cultures and even the performance of the organisation (e.g., De Dreu and Gelfand, 2008; Gelfand et al. 2012). Transitions likely increase many of these conflicts because organisations experience tremendous pressure to change, adapt and innovate (De Dreu and Gelfand 2008; Geels 2014; Akin & Mildenberger 2020). Organisation sciences and conflict management detail how organisations and society suffer when conflict spreads (Meadowcroft, 2011; Musallam et al., 2007), leading to impasses (Schweinsberg et al., 2022), destruction (Gray et al., 2007), competition (De Dreu, 2010), power struggles (Greer and Chu, 2020), intractability (Coleman et al., 2007) and even the institutionalisation of conflict (Gray et al., 2007). However, this literature also reveals important insights into the causes and conditions that lead organisations to thrive from conflict. A key theme is that not all conflicts are equal in nature or effect (Halevy and Cohen, 2019), and that different sources of conflict exist that require different solution approaches (Harinck and Druckmann, 2017; Majer et al., 2018; Majer et al., 2022). Starting with insights from organisation studies and conflict research, we introduce below the distinct sources of conflict in organisations and beyond.

2.2. Sources of conflict within and between organisations

Systematically categorising conflict by its source extends our understanding of conflicts in transitions, although in practice all three sources and hence types may be involved in any particular conflict, albeit with differing degrees of prominence. Conflict in organisations has multiple sources and can be classified as: (1) value conflicts revolving around identities, values, and norms; (2) socio-cognitive conflicts over shared understandings and information; and (3) conflicts of interests over scarce resources (De Dreu and

Gelfand 2008; Halevy and Cohen 2019). These can be elaborated as follows.

1. **Value conflicts** are particularly difficult to resolve because they involve actors’ identities and ideologies (Harinck and Ellemers, 2014; Schuster et al. 2020). Personal values are overarching goals that people pursue in life, such as freedom, protection of traditions, or universalism (Schwartz 1992). These personal values are a source of peoples’ identities; therefore, actors feel their identities threatened when conflicts involve their personal values (Harinck and Ellemers 2014). Value conflicts about what is right and wrong often escalate quickly, because people have so-called ‘sacred’ values, i.e. those that are particularly important to them, which can underpin the feeling that it is impossible to make concessions to others without abandoning one’s own personal values and identity (Tetlock et al. 2000). Congruence of values within organisations is important for positive internal cultures that are supportive of sustainability transitions (Klapper et al. 2020), and this requires managing conflict to the involved parties’ satisfaction.

2. **Socio-cognitive conflicts** are caused by the human desire to hold consistent and socially validated cognitions about oneself and one’s environment, in individual, group, and organisational contexts (Butera et al., 2019; De Dreu and Gelfand 2008). As such, socio-cognitive conflicts can in part be described as conflicts of information and perception, in the sense that parties have different view-points, ideas, and understandings about the same object (Butera et al., 2019). People are motivated to hold accurate and consistent perceptions about themselves, other social entities and the world around them. However these perceptions often diverge across individuals and groups, which can manifest in profound conflicts of understanding (ibid). For instance, in sustainability-related contexts, different, often unshared understandings, opinions, and beliefs about the issue, priorities, what constitutes relevant scientific data, and the corresponding implications for action (e.g. Glinik et al, 2024) may emerge.

3. **Conflicts of interests** emerge when the interests of one actor (individual, group, or organisation) are misaligned with other actors’ interests at the individual, group, or organisational level (De Dreu and Gelfand 2008; Gelfand et al., 2011; Kelley et al., 2003). In organisational contexts, each individual can be assumed to be motivated to acquire and protect resources that maximise their interests as they understand them. The access to scarce resources, the distribution of available funding, and the contribution of labour are inherent conflict themes in every organisation. These conflicts of interests can take many and complex forms, because maximising one’s own interests (e.g. environmental interests, reducing emissions in the supply chain) is often at odds with the interests of other actors, groups, or the organisation itself (e.g. economic interests: need for business travel, reducing sale prices), at the same time within and across each of these levels. However, contrary to received wisdom (Thompson and Hastie, 1990), it can also be that parties’ interests are not fully misaligned, nor diametrically opposed (Pruitt, 2012). Parties’ opposing interests commonly differ mostly in the priorities that parties assign to the conflict issues at hand, and understanding this can offer an entry point for finding win-win solutions that benefit both parties (Majer et al., 2022). On the other hand, while solutions may exist that are mutually beneficial for the actors involved (Pruitt, 2012; Gelfand et al., 2011), actors tend to assume conflicts to be zero-sum (Davidai and Tepper, 2023). If this cannot be rectified, the conflict potential from misaligned interests may spread throughout the whole organisation and can be a threat to the organisation itself; while, conversely, if resolved in a mutually beneficial way, there can be gains for the organisation as well the individuals involved.

Through this categorisation, we are, for instance, better able to disentangle the unique role of ideology or value-based conflicts in transitions (e.g. Heiberg and Truffer 2022), relative to treating these as one mixed form (Majer et al., 2018; Schuster et al., 2020). Table 1 depicts as a 3*3 matrix the many permutations that are possible in our approach, whereby intermediation system levels, types of actors and conflict types interact.

3. Methodology

3.1. Research approach and cases

The research design is a case study with embedded units of analysis (Yin 2018). It involves analysis of an organisation that intermediates via multiple collaboration arrangements or initiatives (the embedded units of analysis, or sub-units) at different geographical and systemic levels; these sub-units are also embedded within broader ecologies of intermediation. We describe the sub-units in more detail below, and we organise them in terms of the levels proposed by Kanda et al (2020). Five sub-units were selected for analysis, to cover all of the levels of systemic intermediation outlined by Soberon et al. (2022) (Table A.1 in the appendix). Each initiative organises and coordinates multiple stakeholders for different purposes, but in all of them, the organisation (itdUPM) has a primary function as a coordinating agent, connecting actors across institutional, organizational and sectoral boundaries. Fig. 1 illustrates the relationship between the different intermediaries analysed. These constitute an ecology in at least two senses:

Table 1
Permutations of conflict types and types of actors across systemic levels.

Types of Conflict	Among non-intermediary actors	Involving intermediaries	
	Between Actors	Between intermediaries and other actors	Between intermediaries
Value Conflicts	Permutation 1	Permutation 2	Permutation 3
Socio-Cognitive Conflicts	Permutation 4	Permutation 5	Permutation 6
Conflicts of Interest	Permutation 7	Permutation 8	Permutation 9

In the next section we describe the case study, its context and the methodology of study, before subsequently applying the above typology.

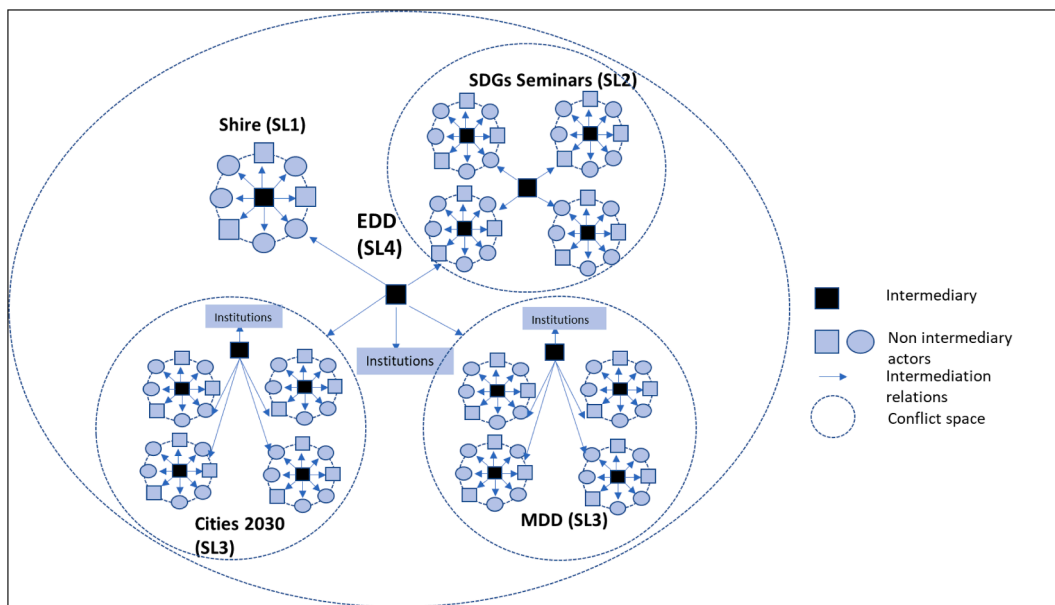


Fig. 1. Relationships between the different subunits analysed in the case study.

- All initiatives are supported by itdUPM, which serves as an umbrella organisation with dedicated staff mandated to perform intermediation functions across the various subcases. The initiatives interact with each other as part of itdUPM's strategy and share organisational resources.
- The intermediaries analysed converge within the ecology formed around the El Día Después initiative (EDD)—a multi-sectoral platform in which itdUPM is also mandated to perform ecology intermediary functions. In this context, the initiatives interact with one another within the framework of multi-sectoral efforts aimed at driving a transition toward a more sustainable social model in Spain. EDD is one of the subcases analysed and is further described below.

The cases were selected for their capacity to shed light on conflict in intermediation ecology. That is, it was observed a priori that the cases satisfied the conditions of both (a) being involved in a form of intermediation ecology; and (b) involving different types and degrees of conflict. In particular, the cases delineate different conflict spaces where it is possible to observe:

- Conflicts that arise (a) between (non-intermediary) actors; (b) between actors and intermediaries; and (c) between intermediaries, across different systemic intermediation configurations or levels.
- The role of broader intermediation ecologies in which the intermediary initiatives are embedded in amplifying or resolving these conflicts.
- The role of the ecology intermediation function (Soberón et al., 2022) in managing conflicts within initiatives that are embedded in an intermediation ecology.

They are thus purposefully selected cases that allow us to probe the value of the conflict typology (itself developed from theory, namely the literatures of conflict and its management). The conflict typology was retroductively (inferentially post-hoc) fitted to the cases. However the cases were not chosen with the system levels in mind. Rather, we use the system levels to both connect with pre-existing work in this area (Kivimaa et al, 2019; Kanda et al, 2020; Soberon et al. 2022), and to show how the conflict typology can be integrated with that work.

Appended Table A.1 describes the name of each case; the domain (transitions field) that they operate in; their scope; and the system level of intermediation to which they predominantly correspond (Soberon et al. 2022), again bearing in mind that while the latter typologies of system levels reflects analytical distinctions, in practice initiatives often function in relation to more than one system level. As explained above, due to their specific interest for this research, we particularly focus on the relationship between the ecology intermediation initiative El Día Después and the others.

The data consist of re-analysed case material, to which some of the authors had access, plus supplementary, follow-up interviews. Re-analysis of the cases was in terms of the conflict typology, with the interviews being used for verification and clarification purposes. At least two interviewees were related to each sub-case. The analytical statements in the results section are researcher inferences from both the primary and secondary data: they summarise observed connections between the case data and the conflict typology. As said, the fit of theory to data is retroductive (Danermark et al, 1997).

Below, we provide more detail on each intermediary initiative, with an abbreviating identifier for subsequent reference, again using the system level of intermediation to which they predominantly correspond (Soberon et al. 2022).

System level 1: Alianza Shire. Providing energy services in refugee camps (Shire)

The Alianza Shire (Shire), established in 2014, develops innovative projects and business models to improve energy services for both refugees and host communities in Ethiopia's Shire region, home to 60,000 Eritrean refugees as of 2019. This intermediary initiative brings together Iberdrola, Signify, Acciona.org, AECID (Spanish Agency for International Development Cooperation), and itdUPM, each contributing distinct expertise: private sector know-how and innovation, institutional support, funding, and facilitation. The initiative represents a Level 1 systemic intermediation by itdUPM, as itdUPM acts as an intermediary between the various partner entities. The initiative is embedded in a wider ecology of intermediaries both at the national level (in Spain and Ethiopia) and at the international level. For more information about this case see [Moreno-Serna et al. \(2020\)](#) and [Moreno-Serna et al. \(2021\)](#).

System Level 2: UPM seminars. Supporting organizational change at Universidad Politécnica de Madrid (SDGs Seminars)

The "Technology and Innovation for the Sustainable Development Goals" (SDGs Seminars) program, launched between 2018 and 2020 at the Universidad Politécnica de Madrid (UPM, a medium-sized public technological university in Madrid), was an intermediation initiative aimed at strengthening the university's scientific and sustainability impact through the enhancement of collaboration capacity and fostering the dialogue with external stakeholders. The program was funded and conceived by the Vice-Rector's Office for Research, Innovation and Doctorate and was facilitated by itdUPM. This initiative illustrates Level 2 systemic intermediation, as itdUPM acted as an intermediary between various networks, including academic, business, and public administration networks. More information about this case is available at [Ezquerro-Lázaro et al. \(2021\)](#).

System Level 3: Madrid Deep Demo. Facilitating the transition towards climate neutrality in the city of Madrid (MDD)

In 2019, Madrid joined the EIT Climate-KIC "Healthy and Clean Cities Deep Demonstration" program with the goal of achieving carbon neutrality by 2030 through transitions management governance. The initiative, locally known as "Madrid Deep Demo" (MDD), aimed to drive systemic change by fostering cross-sector collaboration. EIT Climate-KIC supported the city by appointing strategic partners to provide decarbonization guidance and by working with itdUPM to facilitate a transitions arena for local stakeholders. The initiative officially concluded in 2022, although many of its actions continue to be embedded in a national platform called Cities 2030, a multi-actor space promoting the decarbonization of Spanish cities, also facilitated by itdUPM, among other actors. The initiative represents a Level 3 form of systemic intermediation, as itdUPM acted as an intermediary between various networks of public, private, and civil society organisations and the institutions represented by the European Cities Mission. More information is available at [Moreno-Serna et al. \(2024\)](#) and [Soberón et al. \(2023\)](#).

System level 3: Cities 2030. Facilitating the transition towards climate neutrality of cities in Spain (Cities2030)

Cities 2030 is a multi-stakeholder space for collaboration and innovation aimed at supporting the transition of Spanish cities toward climate neutrality within the framework of the European Cities Missions. The initiative develops activities and offers services to facilitate the transformation toward healthier and more sustainable cities, including facilitating multi-stakeholder collaboration among cities, public and private sector organizations, academia, civil society, and citizens; aligning and coordinating multilevel collaboration at the European, national, and local levels. The initiative provides a range of tailored services for cities and the broader ecosystem of actors, focusing on learning, collaboration, co-creation and implementation of multi-cities projects and social engagement; The platform is driven by the Ministry for the Ecological Transition and the Demographic Challenge (MITECO) through the Biodiversity Foundation and the Spanish Office for Climate Change. The platform is facilitated by itdUPM and ClimateKIC, who interact with a wide array of other organizations at the local and national level, including sixteen municipalities, ten NGOs and civil society organizations, nine academic partners and more than twenty private organizations. The platform is embedded in a wider intermediation ecology at the national and European level which includes initiatives related with carbon transitions in cities.

System Level 4: El Día Después. Cultivating an effective ecology of intermediaries in a context of national transition (EDD)

"El Día Después" (EDD) emerged as a transitions initiative during the COVID-19 outbreak in March 2020, with the goal of uniting diverse intermediaries and actors to collectively interpret the rapidly changing context and promote collaborative actions for systemic transformation toward sustainability. To achieve this, four intermediation spaces were established, focusing on environment and health, social inequalities, international cooperation, and city transformation. The initiative, still ongoing, represents a Level 4 form of systemic intermediation, as itdUPM takes on an ecology intermediation role, mediating between various intermediaries, actors, networks and institutions - see [Soberón et al. \(2022\)](#) and [Soberón et al. \(2023\)](#).

The ecology intermediation initiative is connected to and supports the other four intermediation initiatives described as part of this case study. In particular, the international cooperation space served as one of the learning and exchange platforms for Alianza Shire, while the city transformation space fulfils the same role for MDD and Cities2030. Moreover, Cities2030 was a direct outcome of EDD, as it was one of the intermediation initiatives incubated here. The SDGs Seminars initiative acts as a platform to strengthen the university's relationship with socio-economic actors through the participation in various EDD spaces of UPM professors, researchers, and UPM administrative personnel. This initiative has also laid the groundwork for developing proposals and securing funding through European research calls. Finally, EDD serves as a space for exploring the conditions necessary for more effective collaboration across various initiatives, fostering dialogue among intermediaries, taking the first steps toward building a community of practice.

The interactions of the different intermediaries within the EDD ecology take on varying configurations. For example, some are bilateral, such as when the SDG Seminars and MDD engaged with one another in an effort to contribute university-based knowledge to the city decarbonization program. *Cities 2030* and MDD represent the local and national dimensions, respectively, of initiatives with a similar focus. *Shire* and refugee-related initiatives interact with MDD and *Cities 2030* around themes such as just decarbonization and green employment. In any case, all of these initiatives are also embedded within broader thematic ecologies beyond EDD.

3.2. Data collection and analysis

As noted, the data sources firstly consist of secondary information, plus additional and re-analysis of new empirical material relating to the intermediation initiatives. The secondary material comprises previous journal articles as referenced above. In addition, new interviews were conducted as described below. These interviews were conducted in all of the initiatives referred to above, to clarify and validate our understanding of the types of conflict experienced.

3.2.1. Interviews

Ten interviews were conducted with itdUPM team members directly involved in the intermediation initiatives. The team members represented a diversity of profiles, including individuals with extensive experience (some having been with itdUPM since its founding in 2012) and also more recently recruited members. Appended Table A.2 specifies the position at itdUPM of the people interviewed and the connection of each person to the different subunits analysed. The interviews ranged from 25 to 58 minutes in length and were conducted between October 2024 and February 2025. They were semi-structured and focused on the following key themes:

- The role and significance of conflicts in the team members' intermediation work.
- The types of conflicts that arose in the intermediation initiatives they were involved in.
- The influence of the ecology and the ecology intermediation initiative analysed (EDD) in terms of conflicts and conflict management in the other analysed initiatives.
- Strategies for managing those conflicts, as well as the barriers and enablers encountered in conflict management.

Interviewees were initially asked to identify any conflicts freely, and later, were presented with the categorization proposed in [section 2](#) (conflicts centring on values, socio-cognitive factors and interests). A discussion followed to help categorize the conflicts that the interviewees referred to. It is worth noting that the categorization process led to the identification of additional conflicts, and that no conflicts outside of these categories were identified.

3.2.2. Coding and analysis

All interviews were recorded and transcribed. The text was coded according to the proposed categorization (values, socio-cognitive differences, and interest differences) (Saldana, 2009). Secondary codes were inductively created to identify sub-categories of conflict sources and conflict management strategies. Two independent researchers coded the text, and regular meetings were held subsequently to share the coding, reach a consensus in case of differing opinions, and extract the secondary codes. It was assumed that it was possible for each case to involve multiple types of conflict (and this was indeed often the case). More specifically, we observe that when a conflict can be observed in relation to any of the initiatives (as is inevitable for any organisation), the complexity of this often involves all three types of conflict. For example, in Shire, there is typically a fundamental value conflict between the actors regarding the value of different humanitarian approaches, but this leads to, or is intertwined with, cognitive and interest conflicts. We describe these and other interconnections in the next section.

4. Applying the conflict typology to intermediation and its ecologies

Applying the conflict typology helps to identify and categorise the variety of conflicts evident in intermediation and the intermediation ecology associated with itdUPM. In this section we begin with examples of these, grouped into the three conflict categories, and then discuss some of the issues that this raises. For each conflict category, we distinguish between two types of conflicts: in a first subsection, those that arise among actors involved in the initiative and that are mediated or managed by the intermediary, who, conflict-wise, acts as an external party; and, in a second subsection, those in which the intermediary is directly involved, stemming from their specific role and the dilemmas inherent to intermediation. These conflicts can happen between intermediaries and (non intermediary) actors and between intermediaries themselves

It may be noted that some of the specific conflicts, involving both non-intermediary actors and intermediaries, would or may arise in the context of a single intermediary. However we posit that the existence of the ecology amplifies, complicates and increases the likelihood of differences that need to be resolved. On the other hand, ecologies of intermediation offer additional spaces and strategies to address conflict management. This dual role—as both a source of conflict and a mechanism for its management—is illustrated through the interactions of intermediation initiatives across system levels 1 to 3 with EDD (system level 4 or ecology intermediation initiative) and their corresponding ecologies of intermediation.

Appended Tables A3 to A5 provide more detailed information regarding the range of conflicts observed in the embedded units of analysis, with exemplar quotations from the interviews; appended Table A6 summarises the conflict management approaches also observed. We structure the following section in terms of two sub-sections for each conflict type: conflicts among non-intermediary actors, and conflicts involving intermediaries directly. Both concern conflict in contexts where intermediaries are active, but the conflicts involve different sets of actors.

4.1. Value conflicts in intermediation

4.1.1. Conflicts among non-intermediary actors

Value-based conflicts have emerged in every intermediation initiative analysed. In some cases, these conflicts arise at the meso

level, when incumbent organizations involved in the intermediation initiative hold values that conflict with the new logics being introduced as a means to achieve system changes. For example, in Shire, a partnership committed to introducing innovative business models for providing energy services in humanitarian contexts, value conflicts were common in the early stages of the initiative, particularly around whether refugees should be required to pay for services—illustrating the tension between humanitarian values and the profit-driven approaches of the private sector.

Similarly, in MDD and the Cities2030 platform, ideological divides between political parties sometimes generate tension when trying to implement goals that should be ideologically neutral, such as climate neutrality, but are often assumed to be related to specific political positions. Conflicts include those around issues such as the importance of environmental objectives versus economic factors, or the role that citizens should play in governing transformative urban initiatives. Should they be mere service recipients, or should they have an active role in the design, funding, and management of these initiatives?

In both cases, the initiative seeks external sources of legitimacy (such as long-term political agendas in the humanitarian field for Shire, or the European Mission for Climate-Neutral Cities for MDD and Cities2030) to justify these goals as independent of any political trend towards the politicisation of climate change policy (Hanson, 2024), or pre-existing beliefs within organizations. The intermediation ecology function is especially useful here. Indeed, EDD, through its spaces and various reflection and learning initiatives, facilitates connections with international best practices and relevant European and global actors who can lend credibility to these innovative institutions.

On the other hand, value-based conflicts also arise at the micro level, where personal convictions clash with the systemic change being pursued. This is evident in MDD and Cities2030, when activists, civil society groups, or public administrators were uncomfortable interacting with the private sector, particularly large incumbents. A similar dynamic surfaced in UPM Seminars, where some professors and researchers felt uneasy collaborating with certain companies or sectors, believing it compromised their scientific independence or academic freedom, affecting their ability to conduct research closely aligned with a transformative agenda.

In these cases, the initiative's role focuses heavily on fostering interpersonal relationships. Specifically, it emphasizes recognizing individuals beyond their roles or identities within specific organizations, creating bonds that transcend these opposing identities. A complementary strategy is encouraging stakeholders to experience the conflict management process as a "new and fresh" opportunity, highlighting innovative approaches that inspire collaboration while maintaining optimism. Once again, this relational work is highlighted by EDD in its intermediation ecology approach, particularly through fostering informal interactions and trust-building events (especially face-to-face meetings) that encourage empathy and understanding among stakeholders.

4.1.2. Conflicts involving intermediaries

Value conflicts also impact the work and legitimacy of intermediaries. Young, highly qualified intermediaries can struggle to gain recognition in the context of hierarchical and gerontocratic institutions that view them as mere administrative support, as experienced by Seminars and also in EDD. Moreover, service- and care-related roles, such as those performed by intermediaries, may be perceived societally as low-prestige activities. These implicit biases shape the legitimacy of intermediaries.

Integrating into an ecology of intermediaries such as EDD can provide a community of practice that empowers individuals. However, it can also generate additional tensions, as these spaces grant intermediaries legitimacy, thereby accentuating the discrepancy between internal and external perceptions, which could amplify personal discomfort.

Conflicts also arise among intermediaries within an ecology, particularly when different competing long-term sustainability visions co-exist. In the case of EDD, tensions emerged when older paradigms—such as the "social contract," which emphasizes meritocracy and views employment as a moral and social duty—clashed with newer values centred on diversity, inequality awareness, and community well-being. EDD navigates these tensions through the creation of spaces in the ecology that surface and openly discuss these differences. In particular, EDD is currently working on implementing open feedback and reflective processes in order to foster inclusivity and mutual understanding and introducing collaborative governance elements. Additionally, EDD is also experimenting with dialogue-based initiatives which can help make these differences visible without necessarily forcing a convergence of values, instead seeking medium- and short-term courses of action that remain compatible with both perspectives.

4.2. Socio-cognitive conflicts in intermediation

4.2.1. Conflicts among non-intermediary actors

Socio-cognitive conflicts were highly prevalent in the intermediation initiatives analysed, particularly at the meso level, where tensions often arose between sectors due to differing work approaches and varying degrees of cross-sector understanding. In the context of our cases, public institutions sometimes perceived private-sector partners as uninformed about regulatory requirements, leading to assumptions of both incompetence and inefficiency. Conversely, private-sector actors may view public institutions as bureaucratic and slow-moving, while public entities may regard private partners as overly profit-driven. These entrenched prejudices, which were present in all experiences analysed, further exacerbate conflicts over methodology and collaboration. Addressing these challenges requires targeted training, capacity building, and initiatives that foster interpersonal relationships—an area where EDD has played a key role by creating a structured dialogue space between public and private actors.

Another prevalent conflict emerges from the tension between long-term strategic thinking and short-term operational priorities. In initiatives such as MDD and Cities2030, many actors struggle to grasp systemic, long-term approaches—such as experimentation, mutual learning, and portfolio-based innovation—because they are accustomed to project management frameworks focused on immediate outcomes. This challenge is further compounded by the misalignment between political cycles and the timelines required for transformational projects to yield meaningful results. A similar dynamic is observed in Shire, where funders demand short-term

impact, even though systemic changes often take time to materialize.

Intermediation ecologies can amplify these conflicts by bringing transformative initiatives into contact with more established paradigms, which may yield quicker results due to their reliance on well-known frameworks. However, ecologies also serve as critical learning spaces. Through its ecology intermediation function, EDD has facilitated capacity-building initiatives centred on emerging systemic transformation paradigms, such as portfolio approaches and systemic finance, equipping stakeholders with the tools needed to navigate these tensions effectively.

4.2.2. Conflicts involving intermediaries

Intermediaries, their initiatives, and intermediation ecologies themselves are not immune to socio-cognitive conflicts. One common issue found in our empirical material is the expectations gap surrounding intermediaries' roles. In initiatives such as MDD and Cities2030, private-sector entities sometimes perceive their intermediation roles as obstacles, preferring direct collaboration with municipal authorities. Meanwhile, public-sector actors view intermediaries as crucial connectors, fostering collaborative governance and capacity building. Additionally, intermediary initiatives are often seen as purely technical or administrative support rather than as strategic change agents operating at an organizational level. This dynamic has been particularly evident in relation to Shire and Seminaries. Clearly defining the intermediaries' responsibilities and influence within structured learning spaces can help to mitigate these conflicts, but remains a potential area of conflict.

This type of conflict around different ways of understanding intermediaries' roles also emerged among the intermediaries studied—specifically between Shire (SL1) and Seminars (SL2) on one side, and other initiatives such as EDD, MDD, and Cities 2023, which happen at higher systemic intermediation levels. According to some accounts, there was a perception that the umbrella organization, itdUPM, increasingly saw its core role at high systemic levels and viewed initiatives like Shire or Seminars as not fully aligned with this overarching model, which occasionally generated some conflicts between intermediaries. Making the umbrella organisation of the existence of different levels of intermediation and their distinct value may offer a meaningful way forward.

Another challenge stems from the evolution of the intermediary's role in a dynamic environment of systemic change. In MDD, Cities2030, and EDD, team members have faced friction as they transition from operational, short-term tasks to more strategic, long-term roles—often without the necessary skills or vision for systemic-level work. These transitions become particularly complex when intermediaries operate at higher systemic levels, sometimes generating conflicts between intermediaries within an ecology. Once again, the role of EDD has been crucial in building intermediation capacities. By creating spaces for reflection on the evolving role of intermediary initiatives, EDD helps facilitate skill development and strategic adaptation, ensuring effective navigation of the complexities of systemic transformation.

4.3. Conflicts of interest in intermediation

4.3.1. Conflicts among non-intermediary actors

Conflicts of interest were highly prevalent across all the analysed initiatives, particularly at lower systemic levels, such as in Shire. Conflicts of interest were also more common in initiatives where itdUPM had not had the opportunity to establish prior trust relationships through earlier intermediary initiatives.

One of the most common sources of tension was resource competition, where allied organizations found themselves competing for funding or leadership roles, ultimately undermining the very purpose of their collaboration. Another frequent source of conflict stemmed from market-driven interests. In initiatives such as MDD and Cities2030, companies engaged in collaborative arrangements sometimes prioritized their market position over collective goals. This was evident when private firms promoted technology adoption that aligned with their commercial interests rather than the broader collaborative vision.

Conflicts of interest also arose in relation to control and influence, often manifesting as silos and a lack of collaborative capacity or vision. In multiple initiatives (Shire, Seminaries, Cities2030, and EDD), founding organizations were reluctant to cede control to newer participants, leading to tensions around decision-making authority. At a micro level, clashes emerged across all initiatives. Disputes over representation—such as who appears in official communications or takes credit for achievements—often strained working relationships.

The presence of an intermediation ecology can further complicate these conflicts by increasing the number of competing organizations and individuals. However, both individual initiatives and broader ecologies implement strategies to anticipate and mitigate these tensions. Proactive measures include designing inclusive spaces and establishing legitimate arenas where coalitions and agreements can be formed to align stakeholder incentives. When conflicts do arise, management strategies such as negotiation and consensus-building help manage disputes effectively.

4.3.2. Conflicts involving intermediaries

Conflicts of interest also occur among intermediaries themselves. All the initiatives analysed, being under the same umbrella organization, sometimes competed for internal resources. Other conflicts involved only a subset of the initiatives. In EDD, for example, founding intermediation organizations resisted relinquishing control to newer participants, leading to tensions over decision-making authority. Additional friction arose from unequal resource allocation, as some intermediaries invested more in their intermediation role than others, leading to perceptions of unfairness and imbalance. Another example of conflict of interest between intermediaries is the situation that emerged between the SDGs Seminar initiative and MDD over the institutional anchoring of an academic advisory committee derived from the Seminar initiative and linked to one of MDD's projects. Both intermediaries sought to retain control over this body, leading to tensions.

Intermediaries and their initiatives may also become directly involved in interest conflicts due to their role as change agents. For instance, the horizontal governance structures facilitated by intermediaries can challenge traditional hierarchies, making centralized governance bodies uneasy about their autonomy and authority—an issue that surfaced notably in Seminaries.

In the cases analysed, the intermediaries recognized that the intensity of these conflicts was closely linked to the pace of change and the failure to implement an adaptive strategy. In retrospect, rather than introducing disruptive shifts, a more effective approach would have been to gradually implement reformist measures, ensuring the sustainability of long-term processes. Hence the involvement of an intermediation ecology can intensify aspects of a conflict problem, to the extent that traditional organizations perceive an even greater loss of control. Arguably, this situation requires a Copernican shift in perception: rather than perceiving their operation as an individual entity, organizations need to reconceptualize themselves as part of broader organisational ecosystems. This shift in perception may not be welcomed.

5. Discussion

5.1. Utility of the conflict typology

As said, previous literature in the field of transitions management acknowledges the presence of conflicts in intermediation and intermediation ecologies (see, for example, [Klerkx and Leeuwis, 2009](#); [Hodson & Marvin, 2010](#); [Kivimaa, 2014a](#); [Bush et al., 2017](#); [Avelino et al., 2023](#); [Soberón et al., 2022](#); [Sharma and Loginova, 2024](#)). However, to the best of our knowledge, this is the first attempt to explicitly examine conflicts in intermediation and to develop and apply a corresponding typology that both helps to explain that conflict and offers directions for remediation, mitigation, and ideally, transformation for constructive dialogue and resolution.

The proposed conflict categorization (conflicts of values, interests, and of a socio-cognitive nature) has - in our view - proven useful and has helped to generate and make sense of rich analytical material collected for this study and several prior, related studies. In the absence of a conflict categorization, the perception of the ‘umbrella’ intermediary in the case was that conflicts were scattered across different themes, without a deeper understanding of conflict sources and types. Our experience is that the act of categorizing and naming conflicts can help intermediaries have a more integrated and systematic approach to conflict management and to identifying general strategies. This more integrated approach was lacking at itdUPM and there was not a common vision regarding the role of conflicts in the organization and how to handle them.

Indeed, as acknowledged in the transitions and transformation literature generally ([Kates and Parris, 2003](#); [Criplett & Harris 2019](#); [Meadowcroft 2011](#)) it was clear in this case that conflicts are inherent to systemic change and transitions processes. All the professionals interviewed agreed that conflict and its management are fundamental aspects of their daily work as intermediaries. However, there were discrepancies regarding their specific role in handling conflicts. In some initiatives, professionals saw their role as minimizing the visibility of conflicts, while in others, it involved anticipating problems or making conflicts visible and channelling them in a constructive way. In other words, some perceived conflict as a negative force to be avoided or even concealed—including their own internal conflicts—to prevent destabilizing collaboration within the initiative. Others, however, adopted a more constructive perspective, viewing conflicts as opportunities for growth and transformation. Making these positions visible as a starting point for analysing the conditions that shape them is one of the practical contributions of this study.

Intermediary professionals interviewed in this research agreed that understanding the deeper levels of conflict, such as value-based and socio-cognitive conflicts, is widely relevant. By identifying foundational tensions, an intermediary can better comprehend the architecture of a specific conflict. This allows it to implement preventive actions: to anticipate and prepare an appropriate environment for mitigating the emergence of conflicts. Additionally, as said, these conflicts can in principle be channelled such that they transform into opportunities for dialogue, enabling a positive and productive experience that fosters collaboration and growth.

5.1.1. Conflicts stemming from multi-stakeholder collaboration

Collaboration contexts that span multiple domains and stakeholders inevitably generate conflicts, as these stakeholders often operate with differing logics, timelines, priorities, and organizational cultures ([Carollo and Guerci 2018](#); [Van Dick et al. 2018](#); [Bögel et al. 2019](#)). The conflicts analysed here arose from multiple sources, with the three categories frequently overlapping. At lower systemic levels, where operational and tangible objectives dominate, the conflicts in this case were often interest-based. However, very often, these conflicts had deeper foundations at the socio-cognitive or even value dimension. Indeed, socio-cognitive and value-based conflicts tended to create deeper, foundational tensions, which manifested as conflicts of interest particularly in situations where there were constraints on resources and time and where interpersonal trust was lacking. This resonates with previous literature analysing the causes and architecture of conflicts of interest ([Druckman & Zechmeister 1973](#); [Zhang et al. 2015](#)), and which acknowledges that this type of conflicts should be considered in a wider context that includes consideration of differences in terms of people’s values, which may or may not also relate to their cultural characteristics. In this case, at higher systemic levels (ecology level), cognitive and value conflicts became more prominent, often centred around the expression of different or even competing narratives. Nonetheless power balances between specific actors, and hence conflicts of interest, remained relevant.

5.1.2. Conflicts stemming from the roles and agency of intermediaries

In systemic change processes, resistance to change is common. It came as no surprise, therefore, that a root cause for conflicts in the intermediation initiatives analysed here is related to the roles, agency and visibility of the intermediaries, which aim to facilitate and mediate systemic change processes towards sustainability-related objectives (for other, comparable cases, see for example, [Bush et al., 2017](#); [Hodson & Marvin, 2010](#); [Klerkx and Leeuwis, 2009](#); [Kivimaa, 2014a](#); [Ehnert 2023](#)). Paradoxically, the resistance experienced

can sometimes emerge from organizations that are supposed to drive, fund and/or play other key roles in these processes, in addition to incumbents. This may be for many reasons, such as path dependencies, organizational and individual power dynamics, or a lack of understanding of what the change really implies. Whatever the cause, change often provokes an “organizational immune response” seeking to preserve the status quo (Gilley et al. 2009). A key question remains: to what extent should intermediaries act as agents of change and exercise agency, as opposed to focusing solely on their intermediary roles? Some interviewees stated that adopting a reformist stance—controlling the pace of change—was important. However, the extent to which this conservative approach risks becoming conformist remains an open question—one of which the intermediary in question was keenly aware.

A key dimension here is what happens across systemic levels. At lower levels, many actors fail to recognize that they are part of a systemic transformation process (they could frame the process more as a “project” or a “technical exercise”). Cognitive-based conflicts around the specific role of the intermediary arise both between actors and intermediaries and among intermediaries themselves. As the systemic level increases, the intermediary’s role must evolve. Initially, the focus may be on short-term operational facilitation (project mode), but – arguably - it should shift to long-term facilitation aimed at creating shared visions and more strategic collaborative arrangements. Intermediaries and actors may struggle to adapt to this transition. Moreover, higher levels of intermediation (the ecology level) often involve moving from single-organization efforts to collaborative intermediation involving multiple intermediary organizations (see for example, [Soberón et al. 2022](#) or [Moreno-Serna 2024](#)). This shift generates additional conflicts between intermediaries and actors, between actors, and between intermediaries themselves.

5.2. Addressing conflicts

Appended Table 6 shows the strategies that were put in place in the initiatives analysed, linked to the primary conflict type addressed. As can be seen, intermediary initiatives need to put in place strategies to anticipate conflict—such as training, capacity building and awareness; fostering interpersonal relationships; inclusive design and attention to diversity; and adaptive change management— as well as strategies to handle conflicts once they have appeared - e.g. negotiation and consensus building; yet, based on our experience as described here, strategies of anticipation seem to be more common at higher systemic levels (ecology). Formalization of decision-making and management processes is key at lower systemic levels, in order to create a good ground for conflict prevention and management. At higher levels, a more flexible approach is necessary, as in this case a key intermediation function is providing spaces for learning and adaptation ([Soberón et al. 2022](#)).

In any case, at all levels of intermediation, it seems essential to establish an explicit and continuous conflict management process. This means embedding conflict management as a fundamental organizational practice rather than treating it as an occasional intervention. It also entails fostering fresh perspectives and cultivating enthusiasm to help shift the focus beyond conflict.

5.3. Implications for ecologies of intermediation

We have sought to contribute to the literature on intermediation ecologies in several ways. First, by providing specific terms, themes and examples with which to better understand the challenges and difficulties associated with intermediary ecologies. While previous literature has already identified intermediary interactions as a source of conflict—[Soberón et al. \(2022\)](#), for instance, highlight three key challenges: competition and misalignment among intermediaries, the need for adaptive capacities in dynamic transitions environments, and the potential disconnection between an ecology’s composition and the demands of systemic change—little attention has been given to the interaction between the ecology and the specific conflicts arising within the intermediation initiatives of which the ecology is comprised. In this regard, interactions between specific intermediation initiatives and their ecologies can either amplify or mitigate the conflicts that they face. A common response can be resistance to change, an inherent feature among organizations in many intermediation initiatives that aim to contribute to systemic transformation processes. The relationship between individual initiatives and the broader ecology can serve, on the one hand, to legitimize change, while, on the other, it can intensify the sense of disorientation and loss of control experienced by incumbent organizations.

Second, the study contributes to the *conceptualization* of the “ecology intermediation role”—intermediation aimed at deliberately enhancing the effectiveness of intermediation ecologies as a whole – by adding new functions and nuances to those identified by [Soberón et al. \(2022\)](#). From this perspective, the role of intermediation ecologies goes beyond articulating their embedded initiatives at macro, meso, and micro levels; it also involves serving as a facilitating platform for the management of value-based, socio-cognitive, and interest-driven conflicts inside these initiatives. Understanding the conflicts that emerge within specific instances - which can have very different scope, ambitions and intermediate at different systemic levels - of the ecology, is crucial for designing effective spaces that serve this purpose. Without such anchoring in concrete initiatives, intermediation initiatives functioning in relation to each other risk becoming abstract and ineffective.

Another finding of the study is the recognition of the potential of an ecology intermediation function to operate at the micro level, particularly in fostering the legitimacy and empowerment of individuals acting as intermediaries, through supporting communities of practice. Individual intermediaries often find themselves in challenging positions, as their identity is sometimes undervalued within the organizational environments in which they operate. This lack of recognition undermines their effectiveness in their intermediary role in general and specifically in conflict management. Empowering this group and securing their legitimacy is thus essential. Indeed, we propose conceptualizing this as a potential ecology intermediation service.

Finally, this study sheds new light on how intermediation ecologies can address the misalignment among intermediaries - a major ecology challenge identified by e.g. [Kivimaa et al. \(2019\)](#); [Van Lente et al \(2020\)](#) and [Soberón et al \(2022\)](#). It has become evident through our analysis that this issue is deeply rooted in socio-cognitive and value-based dimensions, a perspective that had not been

sufficiently explored in previous studies. While previous conceptualizations emphasize the role of ecology intermediation in building shared narratives (see for example [Soberón et al. 2022](#)), our findings suggest that their function is not so much about unification and consensus as it is about making deeply rooted differences visible and constructively channelling them. In many cases, achieving a common narrative is neither possible nor desirable, as consensus often entails imposing certain values over others ([Boegel et al, 2023](#)). Thus, rather than striving for forced agreement, intermediation ecologies should – arguably - foster inclusive spaces for dialogue where differences are acknowledged, accepted, and managed in a constructive manner, ensuring a respectful exchange of perspectives.

5.4. Critical reflection

In terms of critical reflection on the study, a first point of note is regarding the nature of the intermediary relationships studied here - that is, the object of study, and in particular the specific type of intermediary ecology. We describe the initiatives studied as intermediaries because they each connect multiple partners to particular ends. They are complementary and operate in an ecology in the sense that they all converge within the ecology formed around the El Día Después and they all contribute in differing ways to achieving objectives set by ItdUPM. Nonetheless, there are other types of intermediary ecology that could be studied and that will of course experience different conflict dynamics. Notably, the fact that all subunits analysed operate under the same umbrella organization constitutes a significant contextual factor, one that may not apply in other settings. Still, we expect the types of conflict that are experienced in other contexts will likely fall into the categories set out here.

Second, appended Tables 2-4 identify specific sources of conflict that are not so much between the intermediaries, but are within them, and/or are among the different stakeholders that the intermediaries connect. These conflicts thus exist in the intermediary ecology, but they do not arise from intermediary-to-intermediary interactions. Intermediary ecologies, while being identifiable as discrete phenomena, are not in practice separate from their own contexts and complexities. In some ways, therefore, this study is as much about an intermediary ecology in situ or in vivo, as it is about intermediary ecology conflict per se. This will usually be so in others cases, too.

Third, although conflict management strategies have been identified (appended Table 6), these have not been discussed in relation to existing theory, nor have they been the focus of the analysis. The aim of this case study has primarily been to explore the types of conflicts in different intermediary configurations and to derive implications for intermediation ecologies.

Fourth, the scale of the conflicts that we have considered in our empirical cases may be considered to be rather minor, relative to those that may be experienced outside of an intermediation ecology context. For example, relative to conflicts between owners or representatives of labour and capital, or where environmental stakes are high. Nevertheless, the conflicts involved in our ecology situated in Spain are, arguably, representative of analogous contexts, certainly in Europe, and the conflict source typology itself has wider application.

Finally, it may be noted that that conflict resolution and management are not synonymous, and that here we use the arguably weaker term ‘management’. While definitional issues in this respect are important, we have treated them as out of the scope here, due to their complexity. There are ongoing scientific debates regarding what constitutes good solutions for conflict in sustainability transitions, for example regarding whether a partial impasse might be viewed as constituting some form of beneficial solution ([Patterson et al., 2024](#)), or whether win-win agreements should always be sought ([Majer et al., 2024](#)). These unsettled questions cannot be resolved through the empirical data presented, nor via the theoretical framework offered. Nonetheless, these and other questions persist.

6. Conclusion

We have argued that sustainability transitions studies needs to pay more attention to the experience of conflict that is inherent in sociotechnical change. Conflict will fundamentally impair transitions if it becomes intractable over time and institutionalised in the form of contradictory logics and protracted rivalries. Such conflict patterns can be further reinforced by a societal consensus that specific conflicts are legitimate ([Gray et al., 2007](#)). Disputants’ actions can then become rule-like and extremely resistant to change, eventually diffusing across actors, organisations and within society ([Gray et al., 2007](#)).

Micro-level strategies for conflict management can be the starting point for better managing conflicts at larger scales, involving more stakeholders. Based on a three-fold typology of conflict from conflict research, we have outlined strategies to address conflicts on the micro- and meso-level of individuals and organisations. These strategies could, for example, be used for negotiation training, as well for adapting organisational structures to allow for better conflict management in general, including in the work of intermediary organisations involved in transitions management ([Soberón et al. 2022](#)).

Conflict management strategies need to be implemented with an awareness of intermediation ecologies and the various interactions that can emerge between specific intermediation initiatives and the broader ecologies in which they are embedded. Additionally, the development of appropriate spaces for conflict management can also be facilitated at the ecology level, creating links between the macro, meso and micro levels through the function of ecology intermediation.

Insights from conflict research can help to manage these intra- and inter-organisational conflicts productively, but conducive policy contexts favouring negotiation rather than ‘winning’ are a precondition. We hope that this study encourages further work on how to use insights from conflict studies, and how to design transition policies, both relating to transitions intermediaries individually and in ecologies, and more generally. Overall, a multi-scalar understanding of conflict in transitions management has the potential to enhance values diversity and productive debate ([Haslam et al. 2003](#)), increasing the likelihood that transitions processes connect people rather than divide them; indeed that transitions oriented towards sustainability take place at all.

CRediT authorship contribution statement

Paul Upham: Writing – review & editing, Writing – original draft, Conceptualization. **Paula Bögel:** Writing – original draft, Conceptualization. **Teresa Sanchez-Chaparro:** Writing – review & editing, Writing – original draft, Formal analysis, Data curation, Conceptualization. **Javier Mazorra:** Writing – review & editing, Writing – original draft, Formal analysis, Conceptualization. **Kateryna Pereverza:** Writing – review & editing, Conceptualization. **Samanthi Dijkstra-Silva:** Writing – review & editing, Conceptualization. **Johann M. Majer:** Writing – original draft, Formal analysis, Conceptualization.

Declaration of competing interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

Supplementary materials

Supplementary material associated with this article can be found, in the online version, at [doi:10.1016/j.eist.2025.101072](https://doi.org/10.1016/j.eist.2025.101072).

Data availability

The data that has been used is confidential.

References

- Avelino, F., Hielscher, S., Strumińska-Kutra, M., De Geus, T., Widdel, L., Wittmayer, J., Dańkowska, A., Dembek, A., Fraaije, M., Heidary, J., Iskandarova, M., Rogge, K., Stasik, A., Crudi, F., 2023. Power to, over and with: Exploring power dynamics in social innovations in energy transitions across Europe. *Environ. Innov. Soc. Transit.* 48, 100758. <https://doi.org/10.1016/j.eist.2023.100758>.
- Bögel, P., Pereverza, K., Upham, P., Kordas, O., 2019. Linking socio-technical transition studies and organisational change management: Steps towards an integrative, multi-scale heuristic. *J. Clean. Prod.* 232, 359–368. <https://doi.org/10.1016/J.JCLEPRO.2019.05.286>.
- Bögel, P.M., Upham, P., 2018. Role of psychology in sociotechnical transitions studies: Review in relation to consumption and technology acceptance. *Environ. Innov. Soc. Transit.* 28, 122–136. <https://doi.org/10.1016/j.eist.2018.01.002>.
- Bush, R.E., Bale, C.S.E., Powell, M., Gouldson, A., Taylor, P.G., Gale, W.F., 2017. The role of intermediaries in low carbon transitions – Empowering innovations to unlock district heating in the UK. *J. Clean. Prod.* 148, 137–147. <https://doi.org/10.1016/j.jclepro.2017.01.129>.
- Butera, F., Sommet, N., Darnon, C., 2019. Sociocognitive conflict regulation: How to make sense of diverging ideas. *Curr. Dir. Psychol. Sci.* 28 (2), 145–151. <https://doi.org/10.1177/0963721418813986>.
- Carollo, L., Guerci, M., 2018. Activists in a suit': Paradoxes and metaphors in sustainability managers' identity work. *J. Bus. Ethics* 148, 249–268. <https://doi.org/10.1007/S10551-017-3582-7>.
- Coleman, P.T., Vallacher, R.R., Nowak, A., Bui-Wrzosinska, L., 2007. Intractable conflict as an attractor: A dynamical systems approach to conflict escalation and intractability. *Am. Behav. Sci.* 50 (11), 1454–1475. <https://doi.org/10.1177/0002764207302>.
- Danermark, B., Ekström, M., Jakobsen, L., Karlsson, J.C., 1997. Generalization, scientific inference and models for an explanatory social science. *Explain. Soc.: Crit. Realism Soc. Sci.* 73–114.
- Davidai, S., Tepper, S.J., 2023. The psychology of zero-sum beliefs. *Nat. Rev. Psychol.* 1–11. <https://doi.org/10.1037/pspi0000378>.
- De Dreu, C.K., 2010. Social conflict: The emergence and consequences of struggle and negotiation. *Handbook of social psychology*. <https://doi.org/10.1002/9780470561119.SOCPSY002027>.
- De Dreu, C.K., Gelfand, M.J., 2008. Conflict in the workplace: Sources, functions, and dynamics across multiple levels of analysis. In: De Dreu, C.K., Gelfand, M.J. (Eds.), *Conflict in the workplace: Sources, functions, and dynamics across multiple levels of analysis*. *The Psychol. Confl. Confl. Manage. Organiz.* 3–54.
- Equerra-Lázaro, I., Gómez-Pérez, A., Mataix, C., Soberón, M., Moreno-Serna, J., Sánchez-Chaparro, T., 2021. A dialogical approach to readiness for change towards sustainability in higher education institutions: the case of the sdgs seminars at the universidad politécnica de Madrid. *Sustainability*. 13 (16), 9168.
- Fuentschilling, L., Truffer, B., 2016. The interplay of institutions, actors and technologies in socio-technical systems—An analysis of transformations in the Australian urban water sector. *Technol. Forecast. Soc. Change* 103, 298–312. <https://doi.org/10.1016/j.techfore.2015.11.023>.
- Geels, F.W., 2002. Technological transitions as evolutionary reconfiguration processes: a multi-level perspective and a case-study. *Res. Policy*. 31 (8-9), 1257–1274. [https://doi.org/10.1016/S0048-7333\(02\)00062-8](https://doi.org/10.1016/S0048-7333(02)00062-8).
- Geels, F.W., 2014. Reconceptualising the co-evolution of firms-in-industries and their environments: Developing an interdisciplinary Triple Embeddedness Framework. *Res. Policy*. 43 (2), 261–277. <https://doi.org/10.1016/j.respol.2013.10.006>.
- Geels, F.W., Schot, J., 2007. Typology of sociotechnical transition pathways. *Res. Policy*. 36 (3), 399–417. <https://doi.org/10.1016/j.respol.2007.01.003>.
- Gelfand, M. J., Fulmer, C. A., & Severance, L. (2011). The psychology of negotiation and mediation. In S. Zedeck (Ed.), *APA Handb. Indust. Organiz. Psychol.*, Vol. 3. Maintaining, expanding, and contracting the organization (pp. 495–554). American Psychological Association. <https://doi.org/10.1037/12171-014>.
- Gelfand, M.J., Leslie, L.M., Keller, K., de Dreu, C., 2012. Conflict cultures in organizations: How leaders shape conflict cultures and their organizational-level consequences. *J. Appl. Psychol.* 97 (6), 1131. <https://doi.org/10.1037/a0029993>.
- Glinik, M., Holzmann, P., Rauter, R., 2024. Tensions of sustainability in the establishment of new ventures and their managerial responses. *Clean. Prod. Lett.* 6, 100062. <https://doi.org/10.1016/j.clpl.2024.100062>.
- Gray, B., Coleman, P.T., Putnam, L.L., 2007. Introduction: Intractable conflict: New perspectives on the causes and conditions for change. *Am. Behav. Sci.* 50 (11), 1415–1429. <https://doi.org/10.1177/0002764207302459>.
- Greer, L.L., Chu, C., 2020. Power struggles: when and why the benefits of power for individuals paradoxically harm groups. *Curr. Opin. Psychol.* 33, 162–166. <https://doi.org/10.1016/j.copsyc.2019.07.040>.
- Halbwachs, M., Gustafsson, S., & Perez Vico, E. (2025). "We can't do everything ourselves." - Why Swedish municipalities deliberately promote intermediation in governing the mobility transition. *Environmental Innovation and Societal Transitions*, 56. <https://doi.org/10.1016/j.eist.2025.100998>.
- Halevy, N., Cohen, T.R., 2019. Intergroup conflict 2020. *Negot. Confl. Manage. Res.* 12 (2), 161–173. <https://doi.org/10.1111/ncmr.12148>.
- Hanson, J., 2024. Looking beyond climate contrarianism: nationalism and the reterritorialization of climate discourse in Spain's Vox party. *Nordia Geograph. Public.* 53 (1), 39–61. <https://doi.org/10.30671/nordia.121511>.

- Hargreaves, T., Hielscher, S., Seyfang, G., Smith, A., 2013. Grassroots innovations in community energy: The role of intermediaries in niche development. *Glob. Environ. Change* 23 (5), 868–880. <https://doi.org/10.1016/j.gloenvcha.2013.02.008>.
- Harinck, F., Druckman, D., 2017. Resolving conflicting interests and values. *J. Confl. Resol.* 61 (1), 29–55. <https://doi.org/10.1177/0022002715569774>.
- Harinck, F., & Ellemers, N. (2014). How values change a conflict, in: De Dreu, C.K. (Eds.), *Social conflict within and between groups*. Taylor & Francis, London, pp. 19–36.
- Haslam, S.A., Eggers, R.A., Reynolds, K.J., 2003. The ASPIRe model: Actualizing social and personal identity resources to enhance organizational outcomes. *J. Occup. Psychol.* 76 (1), 83–113. <https://doi.org/10.1348/096317903321208907>.
- Heiberger, J., Truffer, B., 2022. Overcoming the harmony fallacy: How values shape the course of innovation systems. *Environ. Innov. Soc. Transit.* 42, 411–428. <https://doi.org/10.1016/j.eist.2022.01.012>.
- Hekkert, M., Suurs, R.A.A., Negro, S., Kuhlmann, S., Smits, R.E.H.M., 2007. Functions of Innovation Systems: A new approach for analysing technological change. *Technol. Forecast. Soc. Change* 74 (4), 413–432. <https://doi.org/10.1016/j.techfore.2006.03.002>.
- Hyysalo, S., Heiskanen, E., Lukkarinen, J., Matschoss, K., Jalas, M., Kivimaa, P., Juntunen, J.K., Moilanen, F., Murto, P., Primmer, E., 2022. Market intermediation and its embeddedness – Lessons from the Finnish energy transition. *Environ. Innov. Soc. Transit.* 42, 184–200. <https://doi.org/10.1016/j.eist.2021.12.004>.
- Iakovleva, M., Rayner, J., 2024. Accelerating the deployment of SMRs in Canada: The importance of intermediaries. *Environ. Innov. Soc. Transit.* 53, 100918. <https://doi.org/10.1016/j.eist.2024.100918>.
- Jehn, K., Rispens, S., Jonsen, K., Greer, L., 2013. Conflict contagion: A temporal perspective on the development of conflict within teams. *Int. J. Confl. Manage.* 24 (4), 352–373. <https://doi.org/10.1108/IJCM-05-2011-0039>.
- Kanda, W., Kuisma, M., Kivimaa, P., Hjelm, O., 2020. Conceptualising the systemic activities of intermediaries in sustainability transitions. *Environ. Innov. Soc. Transit.* 36, 449–465. <https://doi.org/10.1016/j.eist.2020.01.002>.
- Kates, R.W., Parris, T.M., 2003. Long-term trends and a sustainability transition. *Proc. Natl. Acad. Sci.* 100 (14), 8062–8067. <https://doi.org/10.1073/pnas.1231331100>.
- Kaufman, S., Saeri, A., Raven, R., Malekpour, S., Smith, L., 2021. Behaviour in sustainability transitions: A mixed methods literature review, 40. *Environmental Innovation and Societal Transitions*, pp. 586–608.
- Kelley, H.H., Holmes, J.G., Kerr, N.L., Reis, H.T., Rusbult, C.E., Van Lange, P.A., 2003. *An atlas of interpersonal situations*. Cambridge University Press, Cambridge, UK.
- Kivimaa, P., 2014. Government-affiliated intermediary organisations as actors in system-level transitions. *Res. Policy*. 43 (8), 1370–1380. <https://doi.org/10.1016/j.respol.2014.02.007>.
- Kivimaa, P., Hyysalo, S., Boon, W., Klerkx, L., Martiskainen, M., Schot, J., 2019. Passing the baton: How intermediaries advance sustainability transitions in different phases. *Environ. Innov. Soc. Transit.* 31, 110–125. <https://doi.org/10.1016/j.eist.2019.01.001>.
- Klapper, R., Berg, L., Upham, P., 2020. Probing alignment of personal and organisational values for sustainability: An assessment of barrett's organisational consciousness model. *Sustain.* (Switzerland) 12 (18), 1–20. <https://doi.org/10.3390/su12187584>.
- Klerkx, L., Aarts, N., 2013. The interaction of multiple champions in orchestrating innovation networks: Conflicts and complementarities. *Technovation* 33 (6–7), 193–210. <https://doi.org/10.1016/j.technovation.2013.03.002>.
- Klerkx, L., Leeuwis, C., 2009. Establishment and embedding of innovation brokers at different innovation system levels: Insights from the Dutch agricultural sector. *Technol. Forecast. Soc. Change* 76 (6), 849–860. <https://doi.org/10.1016/j.techfore.2008.10.001>.
- Institutions and Institutional Work* Lawrence, T.B., Suddaby, R., 2006. In: Clegg, S., Hardy, C., Lawrence, T.B., Nord, W. (Eds.), *The Sage Handbook of Organizational Studies*. Sage Publications, London, pp. 215–254.
- Lazarevic, D., Mokkila, S., Kivimaa, P., Lukkarinen, J., Toppinen, A., 2024. Municipal experimental policy engagements in the built environment. *Environ. Innov. Soc. Transit.* 52, 100888. <https://doi.org/10.1016/j.eist.2024.100888>.
- Majer, J.M., Columbus, S., Schweinsberg, M., 2024. The behavioral negotiation perspective can reveal how to navigate discord in sustainability transformations constructively. *Proc. Natl. Acad. Sci. U.S.A.* 121 (47), e2414256121. <https://doi.org/10.1073/pnas.2414256121>.
- Majer, J.M., Loschelder, D.D., Windolph, L.J., Fischer, D., 2018. How sustainability-related challenges can fuel conflict between organizations and external stakeholders: A social psychological perspective to master value differences, time horizons, and resource allocations. *Umweltpsychologie* 22, 53–70.
- Majer, J.M., Schweinsberg, M., Zhang, H., Trötschel, R., 2022. Conflict strength: Measuring the tension between cooperative and competitive incentives in experimental negotiation tasks. *Collabra: Psychol.* 8 (1), 35330. <https://doi.org/10.1525/collabra.35330>.
- Meadowcroft, J., 2011. Engaging with the politics of sustainability transitions. *Environ. Innov. Soc. Transit.* 1 (1), 70–75. <https://doi.org/10.1177/0022185618814056>.
- Moreno-Serna, J., Sánchez-Chaparro, T., Mazorra, J., Arzamendi, A., Stott, L., Mataix, C., 2020. Transformational collaboration for the SDGs: The Alianza Shire's work to provide energy access in refugee camps and host communities. *Sustainability*. 12 (2), 539.
- Moreno-Serna, J., Sánchez-Chaparro, T., Stott, L., Mazorra, J., Carrasco-Gallego, R., Mataix, C., 2021. Feedback loops and facilitation: catalyzing transformational multi-stakeholder refugee response partnerships. *Sustainability*. 13 (21), 11705.
- ... & Moreno-Serna, J., Sánchez-Chaparro, T., Purcell, W.M., Kordas, O., Lumbrales, J., Mataix, C., Spengler, J.D., 2024. Promoting Urban Net Zero Transitions Through Multi-Level Governance: The Intermediary Role of Systemic Collaborative Platforms. *Sustainability*. 16 (21), 9470.
- Musallam, N., Coleman, P.T., Nowak, A., 2007. Understanding the spread of malignant conflict: A dynamical systems perspective. *Peace Confl.* 16 (2), 127–151. <https://doi.org/10.1080/10781911003691591>.
- Pruitt, D.G., 2012. A history of social conflict and negotiation research. *Handbook of the history of social psychology*, p. 431.
- Rubin, J.Z., Pruitt, D.G., Kim, S.H., 1994. *Social conflict: Escalation, stalemate, and settlement*. McGraw-Hill Book Company.
- Schuster, C., Majer, J.M., Trötschel, R., 2020. Whatever we negotiate is not what I like: How value-driven conflicts impact negotiation behaviors, outcomes, and subjective evaluations. *J. Exp. Soc. Psychol.* 90, 103993. <https://doi.org/10.1016/j.jesp.2020.103993>.
- Schwartz, S.H., 1992. Universals in the content and structure of values: Theoretical advances and empirical tests in 20 countries. *Adv. Exp. Soc. Psychol.* 25, 1–65. [https://doi.org/10.1016/s0065-2601\(08\)60281-6](https://doi.org/10.1016/s0065-2601(08)60281-6).
- Schweinsberg, M., Thau, S., Pillutla, M.M., 2022. Negotiation impasses: Types, causes, and resolutions. *J. Manage.* 48 (1), 49–76. <https://doi.org/10.1177/01492063211021>.
- Sharma, V., Loginova, J., 2024. Just transition out of coal-fired power: Policy lessons from Australia's automotive sector closure. *Environ. Innov. Soc. Transit.* 51, 100835. <https://doi.org/10.1016/j.eist.2024.100835>.
- Smink, M., Negro, S.O., Niessen, E., Hekkert, M.P., 2015. How mismatching institutional logics hinder niche–regime interaction and how boundary spanners intervene. *Technol. Forecast. Soc. Change* 100, 225–237. <https://doi.org/10.1016/j.techfore.2015.07.004>.
- Soberón, M., Ezquerro-Lázaro, I., Sánchez-Chaparro, T., Moreno-Serna, J., Dóci, G., Kordas, O., 2023. Supporting municipalities to develop collaboration capability to facilitate urban transitions and sustainability: Role of transition intermediaries in Madrid. *J. Clean. Prod.* 426, 138964.
- Soberón, M., Sánchez-Chaparro, T., Smith, A., Moreno-Serna, J., Oquendo-Di Cosola, V., Mataix, C., 2022. Exploring the possibilities for deliberately cultivating more effective ecologies of intermediation. *Environ. Innov. Soc. Transit.* 44, 125–144. <https://doi.org/10.1016/j.eist.2022.06.003>.
- Sovacool, B.K., Heffron, R.J., McCauley, D., Goldthau, A., 2016. Energy decisions reframed as justice and ethical concerns. *Nat. Energy* 1, 16024 internal-pdf//65.167.196.199/_Energy.
- Stewart, J., Hyysalo, S., 2008. Intermediaries, users and social learning in technological innovation. *Int. J. Innov. Manage.* 12 (03), 295–325. <https://doi.org/10.1142/S1363919608002035>.
- Tetlock, P.E., Kristel, O.V., Elson, S.B., Green, M.C., Lerner, J.S., 2000. The psychology of the unthinkable: Taboo trade-offs, forbidden base rates, and heretical counterfactuals. *J. Pers. Soc. Psychol.* 78 (5), 853–870. <https://doi.org/10.1037/0022-3514.78.5.853>.
- Thompson, L., Hastie, R., 1990. Social perception in negotiation. *Organ. Behav. Hum. Decis. Process.* 47 (1), 98–123. [https://doi.org/10.1016/0749-5978\(90\)90048-E](https://doi.org/10.1016/0749-5978(90)90048-E).

- Upham, P., Bögel, P.M., Dütschke, E., 2020. Thinking about individual actor-level perspectives in sociotechnical transitions: A comment on the transitions research agenda. *Environ. Innov. Soc. Transit.* 34, 341–343. <https://doi.org/10.1016/j.eist.2019.10.005>.
- Upham, P., Kaufman, S., Bögel, P.M., Raven, R., 2025. Behaviours and practices in socio-technical systems and sustainability transitions: editorial to the virtual special issue. *J. Clean. Prod.* 511, 145674. <https://doi.org/10.1016/j.jclepro.2025.145674>.
- Van Dick, R., Ciampa, V., Liang, S., 2018. Shared identity in organizational stress and change. *Curr. Opin. Psychol.* 23, 20–25. <https://doi.org/10.1016/j.copsyc.2017.11.005>.
- Van Lente, H., Boon, W.P., Klerkx, L., 2020. Positioning of systemic intermediaries in sustainability transitions: Between storylines and speech acts, 36. *Environmental Innovation and Societal Transitions*, pp. 485–497.
- Yin, R. K. (2018). *Case study research and applications*. Sage, London.
- Zilles, J., Marg, S., 2022. Protest and polarisation in the context of energy transition and climate policy in Germany: Mindsets and collective identities. *Ger. Polit.* 1–22. <https://doi.org/10.1080/09644008.2022.2059469>.