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Representing Renewable Energy Communities: a social psychological approach to imagining the future

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Resumo

Esta dissertação adota uma abordagem crítica qualitativa para examinar como o futuro é representado na interseção entre a construção de significados aos níveis institucional e quotidiano, em relação às transições nacionais para energia renovável e particularmente às "Comunidades de Energia Renovável" (CERs), em Portugal. As CERs, introduzidas pela União Europeia, visam mobilizar a ação coletiva para a produção e consumo local de eletricidade renovável, e estão agora a ser integradas em Portugal, um país com alta produção de energia renovável, mas com problemas de participação pública e pobreza energética. O estudo analisa instituições formais (políticas e leis), que definem o que é possível, provável e desejável nos sistemas de energia, bem como a sua interpretação pelos sistemas mediadores (mídia e especialistas em energia) e público. Teoricamente, a pesquisa articula a teoria das representações sociais com a teoria das convenções. Empiricamente, a dissertação inclui quatro estudos. O Estudo 1 examina a representação dos futuros energéticos e das CERs nas políticas nacionais. O Estudo 2 investiga como os especialistas em energia interpretam as leis das CERs e imaginários energéticos futuros. O Estudo 3 analisa as representações das CERs na imprensa escrita. O Estudo 4 explora como diferentes "públicos energéticos" - participantes das CERs e aqueles afetados por grandes centrais solares - percebem o futuro energético. As principais conclusões destacam tensões entre noções concorrentes do bem comum nas CERs e discursos do futuro para legitimar modelos de CER que priorizam interesses comerciais e privados, obscurecendo a ação coletiva e benefícios sociais mais amplos.

Palavras-chave: representações sociais, sociologia pragmática, comunidades de energias renováveis, futuros, psicologia social da inovação jurídica, mudança social

Abstract

This dissertation employs a critical qualitative approach to examine how the future is represented through the intertwined dynamics of institutional and everyday meaning-making, regarding national transitions to renewable energy and particularly "Renewable Energy Communities" (RECs) in Portugal. RECs, introduced at the European Union level, aim to mobilize collective action for local renewable electricity production and consumption, and are now being integrated in policy in Portugal, a country with high renewable energy production but issues in public participation and energy poverty. The research analyses formal institutions (policies and laws) that define what is possible, likely, and desirable in public energy systems, as well as how these directives are interpreted and challenged by mediating systems (the media and energy experts) and the general public. Theoretically, the research synthesizes the theory of social representations with the pragmatic sociology of engagements and critique (convention theory). Empirically, the dissertation comprises four studies. Study 1 examines the representation of energy futures and RECs in national policies and legal frameworks. Study 2 investigates how energy experts interpret REC laws and future energy imaginaries. Study 3 analyses representations of RECs in the mainstream Portuguese press. Study 4 explores how different "energy publics" perceive the energy future, distinguishing between REC participants and those affected by large-scale solar projects. Key findings highlight tensions between competing notions of the common good in REC initiatives and reveal how actors use future-oriented discourses to legitimize REC models that prioritize commercial interests and private ownership, potentially overshadowing collective action and broader social benefits.

Keywords: social representations, pragmatic sociology, renewable energy communities, futures, social psychology of legal innovation, social change

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General introduction

The subject of this thesis is the social representations of the future that are accompanying the renewable energy transition, particularly through focusing on the new socio-technical idea of Renewable Energy Communities (RECs). Through this focus, this thesis seeks to understand how the future, energy transitions and their meanings are shaped in the interaction between technical-expert institutions and civil society, and what consequences this might have for a fair and inclusive green energy transition. More specifically, it aims to explore how new visions of the energy future – about how energy can or will, could or should be provided, distributed and used – are co-constructed and transformed by integrating two levels of analysis: i) the formal institutions (e.g. governmental policies and laws) that govern and regulate public energy systems – proposing what is possible, probable and preferable – and ii) how these proposals are interpreted and enacted, accepted and contested, by a range of actors situated in different social contexts. These questions will be explored theoretically by drawing upon the theory of social representations and the pragmatic sociology of engagements and critique (also known as convention theory). Empirically, they will be applied to the case of the new laws for “Renewable Energy Communities” and how they have been received in Portugal. RECs are legal forms and material socio-technical practices that are oriented towards mobilizing collective action for the local production and consumption of renewable electricity and have been introduced at the European level in the context of efforts to push for a green and inclusive energy transition agenda (Coenen & Hoppe, 2022; Hanke & Lowitzsch, 2020; Lowitzsch et al., 2020a).

Meaning-making and communication are at the centre of these socio-technical and socio-political processes and are therefore crucial to analyse for understanding not only how energy futures are imagined, but also how they are communicated and transformed as they move from one social context to another. Energy transitions are essentially and indistinguishably technical and social processes of change. They are composed of diverse assemblages of symbolic meanings, technological practices, institutional arrangements and forms of knowledge (Longhurst & Chilvers, 2019). As such, energy social research (e.g. Hess & Sovacool, 2020; Jasanoff & Simmet, 2021; Smith & Tidwell, 2016; Sovacool, Bergman, et al., 2020) has been oriented to both the institutional and everyday sites of meaning-making, yet it has not often examined in detail the power relations between these two levels – something that has been extensively addressed by social psychology.

In particular, social representations theory (SRT) has been one of the key socio-psychological perspectives concerned with meaning-making and its function in creating social change and maintaining stability at the intersection between the micro/everyday and macro/institutional processes that co-constitute societies (Castro & Batel, 2008; Tateo & Iannaccone, 2012). Its originator, Serge Moscovici, stated that “the central and exclusive object of social psychology should be the study of all that pertains to ideology and to communication” (Moscovici, 1972). In other words, SRT is oriented to understanding the relationship between cultural meaning, interaction and context, especially in the context of innovative or “strange” ideas (Moscovici, 2008). It has been extensively used to study how people make sense of new and complex scientific ideas and technologies, such as psychoanalysis (Moscovici, 1972), genetically modified organisms (Castro & Gomes, 2005) and renewable energy (Batel et al., 2016; Batel & Devine-Wright, 2015, 2021; Castro, 2006); and, more recently, has been used to examine the different ways that new laws – e.g. for sustainability – are received in society, and how this can lead to, or prevent, meaningful change (Castro, 2012, 2019a). As such SRT has several relevant tools to conceptualize and examine how social change and resistance happens through discourse and communication, from everyday interactions to institutional practices, and vice versa (Batel & Castro, 2018). However, SRT has not so far systematically engaged with and conceptualized the question of how people represent futures and especially in relation to technoscientific and legal change.

This has been more clearly conceptualized in studies of science and technology using the concept of “sociotechnical imaginaries” (Jasanoff & Kim, 2009, 2015) which elucidates the way that technoscientific projects are imbued with social representations of desirable futures that can sometimes clash with the futures which citizens envision for themselves and for their imagined communities (Felt, 2015; J. M. Smith & Tidwell, 2016). Imaginaries can thus generate excitement but can also be subject to controversy and contestation. Similarly, the perspective of pragmatic sociology of engagements and critique embraces the “moral” turn in the social sciences, which associates different ways of “engaging” with the future with different representations of “the good”, but in a way that adds more nuance than does the concept of sociotechnical imaginaries (Boltanski, 2011; Boltanski & Chiapello, 2018; Boltanski & Thévenot, 2000, 2006; Thévenot, 2005). Both are useful for SRT because they fuse together a focus on meaning with a conception of materiality, providing an invaluable guide to research on the socio-cultural dimensions of technological change.

These approaches also propose a novel way of understanding power relations that can be useful for social psychology's theorization of socio-political change, especially because it helps to integrate and conceptualize the relations between different "spheres" from which change is usually seen as emanating – the policy/legal sphere, the techno-scientific sphere and the public sphere – but also because it assigns a more positive role to the ambivalence or "polyphasia" that actors experience in contexts of uncertainty, such as when new laws and technologies are introduced (Batel, 2012; Castro et al., 2009; Mouro & Castro, 2012). Rather than seeing uncertainty as productive only of apathy or passive resistance, pragmatic sociology sees it as productive of the moments of creative reflexivity where actors must envision the future in an attempt to overcome uncertainty. It thus provides a sophisticated theoretical framework for classifying the plurality of competing "core values" (Castro, 2012; Keele & Wolak, 2008) as "orders of worth" that people refer to when they have to resolve disputes and other public situations of uncertainty, by justifying their actions, criticising those of others, and establishing compromises (Boltanski & Thévenot, 2006). Importantly, these orders of worth are not only used in the public sphere, but also in the political, legal and technoscientific fields, and pragmatic sociology offers relevant conceptual tools, as will be discussed, to better understand the relations between these fields and the specific moments where social reality is maintained or changed. As such, this thesis has followed a model of socio-technical change that is not only *critical* (Batel, 2020) in intent but, more importantly, *pragmatic* in character. That is to say, it adopts an epistemology and research strategy that is capable of considering changes at both the macro level of political economy and social change, and at the micro level of everyday life and the negotiations of meaning that take place within institutional environments and social fields. This perspective, made possible through the integration of social representation theory and the pragmatic sociology of engagements (Wallace & Batel, 2023), is oriented to the way people engage in action, their justifications, and the meaning they give to their action, thus linking specific representations of energy transitions to more general systems of meaning. What is novel about the perspective adopted here, however, is its focus on the ways that people orientate themselves towards the future and the role this plays in enabling or preventing meaningful change.

This thesis seeks to put these concepts to work in order to clarify the relations between different ways that the futures of energy systems are being represented – for instance, between the old and the new, the technical and the social, and the local and the global. However, rather than construing

transitions in such a dualistic manner, the perspective adopted here, treats the ideological dimension of energy transitions as animated by dialogical imaginaries that are constituted by a plurality of competing social representations of “the good”, namely around the desire for justice, security and autonomy, which highlights that the future, as conceptualized in this thesis, is at the heart of meaning-making and of the politics of energy transitions. As such, for approaching how the future is represented in relation to energy transitions, it is relevant to analyse it in relation to a more concrete object, capable of bringing to the fore the ideological dimension of meaning-making (Chiapello, 2003) – such as Renewable Energy Communities.

In recent years, one of the main battle lines in the energy transition pits larger, “centralized” developments against small scale and distributed or “decentralized” systems (Groves, Henwood, et al., 2021; Thombs, 2019; Wolsink, 2020b). Frequently associated with the latter is the notion of “community energy” and the perspective that a desirable energy system is not only one that is based on renewable energy, but one that realises renewable energy in a way that considers and even prioritizes the well-being and security of affected communities (Debourdeau & Nadaï, 2019; S. M. Hoffman & High-Pippert, 2005; Marquardt & Delina, 2019; G. Walker & Devine-Wright, 2008a). This perspective is often guided by the notions of energy democracy and energy citizenship (Lennon et al., 2019; Silvast & Valkenburg, 2023; Stephens, 2019; Szulecki, 2018a). It is a vision that seeks to involve people in processes of democratic decision-making, but also to keep the economic benefits of the development as local as possible, for example through community ownership of infrastructure.

The concept of community energy is not particularly new, but it has recently been institutionalized at the European level in the European Union’s (2018) Renewable Energy Directive (Heldeweg & Saintier, 2020; Lowitzsch et al., 2020b). As an object of research it is particularly relevant to the perspective adopted, not only because of its status as a new idea which is at once technological, legal and social, but because in its vulnerability to resignification, the notion of “community” is often a battleground between groups with different interests and ideologies (Taylor Aiken, 2017; Debourdeau & Nadaï, 2019; Liepins, 2000). This context provides an opportunity to explore how a complex socio-technical object is interpreted at the national and local levels. This research will thus look at the processes involved in the creation and establishment of the concept of Renewable Energy Community in the Portuguese policy and legal framework and how it is mediated to the public sphere by different groups and in different communicative contexts.

Thus, in the chapters that follow, the processes involved in the creation and generalization of the concept of “Renewable Energy Communities” in the Portuguese policy and legal framework will be explored. In particular, it will be analysed how this new idea is contributing to different expectations, visions and imaginaries of the energy future. Towards this end, a multi-method approach is adopted to explore the representations of, and relations between, key actor groups. This will include an analysis of the meanings of energy communities and energy transitions, highlighting how they are constructed not only by social representations of the past, but also by expectations of the future that are enabled and constrained by different institutional settings. Secondly, the thesis will examine the nuanced ways that these new meanings are mediated to the public by focusing on two different systems of communication—expert intermediaries and the mainstream press. Thirdly, an analysis will be conducted of how the energy future is being made sense of in civil society by comparing two different types of “energy public” – on the one hand, citizens of a rural area threatened by a large-scale renewable energy project and, on the other, citizens who are actively engaged in the promotion of Renewable Energy Community projects.

The overall aim of this dissertation is thus *to explore how social change is shaped, in the interaction between law and the public, by social representations of the future*. As such this thesis will attempt to answer the following research questions:

1. What are the future representations promoted by Portuguese energy laws and policies? In particular: (a) what are the tensions involved in the meanings of the future presented in new laws for RECs and self-consumption and (b) how are these tensions negotiated by different experts and in the regulation process? How has this changed over time?
2. What are the representations of the energy future and of RECs that are being mediated to “the public”? In particular: (a) how are expert intermediaries representing the future of RECs and the role of “the public”; and (b) how are RECs being represented and communicated in the mainstream press and by whom? How has this changed over time?
3. How is the energy future and RECs being represented by “citizens” in different situations? How does the legal definition, institutional practices, mediating systems and expert expectations of RECs enable and constrain their realization?

By answering to these more specific questions focused on the Portuguese energy transition and particularly on Renewable Energy Communities, this thesis aims to address the more overarching question of how people represent the future.

Organization and overview of the thesis

This thesis is organized into three parts. Part I is composed of Chapters 1 – 3 and introduces the conceptual framework and theoretical context. Part II is the empirical section and includes one context-setting chapter and four empirical studies (chapters 4 – 8). Part III presents the general discussion and conclusions of the thesis.

Chapter 1 presents an overview of the theory of social representations and pragmatic sociology of engagements, showing how together they can be useful for exploring the diverse ways that people, whether as professionals or citizens, for the collective or for themselves, represent the future. It introduces the concepts of institutional and everyday meaning-making and of the systems of communication that mediate between them. Drawing upon literature relevant to these different representational contexts, it introduces the concepts of “modes of projectivity”, “communicative formats” and the different “orders of worth” that people resort to when justifying their actions or imagining the collective future.

Chapter 2 constructs the empirical object of this thesis by first introducing the notion of “energy transitions” and arguing that they are essentially bound up with the concept of “modernity” and that, therefore, the category of “the future” is essential for understanding how socio-technical change comes about. This is illustrated by reviewing some of the key literature from science and technology studies (STS) on the imaginaries, visions and expectations of the energy future, as well as other literature on the social acceptance of renewable energy technology, energy law and citizenship. Drawing upon the theoretical perspective outlined in Chapter 1, this review is structured by examining how representations of energy transitions, and energy communities in particular, have been analyzed in the literature.

Chapter 3 presents the methodological approach used in this thesis, integrating it with the literature reviewed. It explains how the theoretical framework has guided the design of four empirical studies that follow and introduce “pragmatic discourse analysis” – the main technique used for analysing the collected data.

Section II is the empirical part of the thesis. It begins with Chapter 4, which introduces the Portuguese context. Rather than simply describing the contemporary situation, however, this chapter adopts a historical approach by reviewing a range of research on how the Portuguese energy system has been organized and represented at different periods. The central presupposition of this chapter is that in order to establish why the future is being imagined in a particular way it is also

necessary to understand how it has been imagined in the past. In addition, to drawing upon academic literature, this chapter thus also traces the evolution of energy law and policy in a schematic way by making reference to relevant documents and making use of the pragmatic sociological framework, which is increasingly used as an alternative to historical institutionalist approaches (Diaz-Bone, 2015). As such, it distinguishes five periods from 1933 to 2018 by locating changes in the main orders of worth and representations of the future circulating in the institutional sphere.

Chapter 5 presents the first empirical study. It examines how the energy future has been imagined in the institutional sphere in the period from 2019 to 2023, during which several laws and regulatory frameworks were published that transposed the new concept of Renewable Energy Community from the European Union's (2018) Renewable Energy Directive. The analysis is divided into three sections, covering the way the future, "decentralized energy" and the role of the public have been imagined.

Chapter 6 **examines** how the new laws for energy communities are constructed and construed by the mediating system of energy experts. Drawing from semi-structured interviews with a range of expert actors in the Portuguese energy sector, including those who belong to the legal, scientific, political and economic fields, it enquires into how energy communities have or have not been envisioned as a feasible and desirable response to the challenges of energy transition and climate change, and how it has been shaped by different types of expertise and discourses. It pays particular attention to the way that expert actors represent the future and how they negotiate their understandings of the object in relation to the future.

Chapter 7 analyses how the notion of Renewable Energy Community has been represented in the mainstream Portuguese press from 2017 to 2023. It does this by assembling a corpus of articles which mention "energy communities" in online versions of four of the main Portuguese newspapers, combining a quantitative analysis of their main structural features (e.g. length, type, authorship, represented voices) with a discourse analysis which examined the main values, future representations and forms of communication present in these articles.

Chapter 8 examines the representations of energy future negotiated by two different social groups. On the one hand, interviews were conducted with a range of so-called "energy citizens" – those "active" members of the general public who are frequently represented in official policy documents and promoted as central figures to Portugal's energy future. On the other hand,

interviews were also conducted with the self-ascribed “victims” of the “dark side of energy transition” – citizens of rural Portugal whose livelihoods and traditions are confronted with the threatening future of renewable energy industrialization (Blythe et al., 2018; Canelas & Carvalho, 2023; Pel et al., 2023). These citizens are absent in institutional representations of the energy future (chapters 5 & 6), but the analysis of the media revealed how they were frequently represented in reports on controversies over large-scale energy projects which cited energy communities as alternatives.

Finally, Section III will present a general discussion of the results and findings. There will be an overview of the results of each study and the most relevant theoretical contributions of the thesis. The first main contribution relates to the novel inter-disciplinary articulation of social representations theory and the pragmatic sociology of conventions in order to study how the energy future is being imagined and realised in the relationship between institutions and common sense. The second contribution is in showing how a socio-technical object, RECs, that ostensibly belongs to one specific vision of the future can in fact be re-signified in several ways and that this is indeed what is happening in Portugal, with the emergence of a new form of co-ordination that combines the market, industrial and projective orders of worth in pursuit of a decentralised “smart” energy future. The third contribution relates particularly to the relations between institutions and common sense and is revealed only by tracing *the representation of the public* as lacking “energy literacy” that is formulated by institutional representatives and realized in actual energy community projects, where the epistemic demand on citizens is high. Moreover, the formats by which the dominant visions of energy communities were communicated shapes the expectations of the public that access to energy communities is only for a certain type of public.

SECTION I. THEORETICAL APPROACH

Chapter 1

Meaning-making and future representations: an inter-disciplinary approach to social change¹

1.1. Introduction

Current social issues, such as the climate crisis and the transition to decarbonized energy systems, demand that contemporary social scientific theories are able to understand how people relate with the present and the past, but also with the future – as whom and for whom; for what and with what consequences. It is no surprise then that in recent years there has been a resurgence of conceptualizations of future perceptions, projections and imaginaries in the social sciences, especially in disciplines that deal with the relation between science and society (Beckert & Suckert, 2021; de Saint-Laurent et al., 2018). While some approaches have focused mainly on the contents or images of future representations (Groves, 2017), others have investigated how the future is anticipated and prepared by powerful actors such as governmental and corporate elites who seek to pre-empt threats to liberal-democratic life such as terrorism, pandemics and climate change (Anderson, 2010; Granjou et al., 2017). Still other perspectives have focused more on how projects techno-scientific change are legitimated by appealing to futures based on “sociotechnical imaginaries” of particular desirable forms of social life and moral order (Jasanoff, 2015; Jasanoff and Simmet, 2021). These approaches tend to emphasise the importance of institutions in conceptualizations of futures-making, rather than psychosocial processes of meaning-making or social re-presenting, with the consequence that less attention has been given to how the future is represented from other, non-expert and non-institutionalized positions and practices (Tidwell and Tidwell, 2018). The latter has been a key focus for social psychology, but also approached from very diverse perspectives, from cognitive-individualistic approaches (Szpunar and Szpunar, 2016) to cultural-collectivistic ones (de Saint-Laurent et al., 2018; Glăveanu et al., 2017).

Social representations theory (SRT) has been one of the key socio-psychological perspectives concerned with meaning-making and its function in creating social change and maintaining stability (Tateo and Iannaccone, 2012) but has not so far systematically engaged with and

¹ Sections 1.2. to 1.6. of this chapter have been published in the Journal for the Theory of Social Behavior (see Wallace & Batel, 2023).

conceptualised the question of how people re-present futures. The situation is similar with the increasingly influential French “pragmatic sociology of engagements and critique” (PS), an approach to the social world with affinities to SRT, but with a more elaborate and systematic conceptualisation of the range of ways that people practically engage with the world, and the different temporalities this involves (Thévenot, 2007; Mandich, 2019). One of the aims of this chapter is to critically compare and integrate SRT and PS, with a view to help identifying conceptual and analytical tools relevant to better understanding how social actors engage with the future and particularly how that happens in the relation between “expert” and “lay” spheres – a relation that is arguably at the centre of current societal approaches to “tame” or “transform” the future (Adam & Groves, 2007; Chilvers & Kearnes, 2019; Groves, 2015), especially in the context of the climate crisis.

In the next two sections some key aspects of both SRT and PS approaches will be presented, with a specific focus on how they have conceptualised people’s relations with the future. After integrating these ideas and contextualising them in reference to climate change and energy transitions, a proposal will be made for an interdisciplinary SRT and PS research agenda that seeks to understand how and why people re-present the future. In the final section (1.7), this agenda will be situated in relation to the approach of both SRT and PS to the study of institutions, and law in particular, with both approaches again being compared and integrated.

1.2. The future in social representations theory

The original aim of SRT, according to Moscovici (1988) was “to determine the link between human psychology and modern social and cultural trends” by focusing on everyday communication and thinking (Moscovici, 1988, p.225). Going beyond notions of attitude and opinion, this link was theorized as being constituted by social representations, which can be defined as,

“systems of values, ideas and practices with a twofold function: first to establish an order which will enable individuals to orientate themselves in their material and social world and to master it; and secondly to enable communication to take place among the members of a community by providing them with a code for social exchange and a code for naming and classifying unambiguously the various aspects of their world and their individual and group history.” (Moscovici, 1973, p. xiii).

With its origins in 1960s France with Moscovici's (1961/2008) research on lay knowledge of psychoanalysis, this conceptualization sought to analyse how laypeople made sense of scientific ideas, while positing that the key function and consequence of social re-presentation is "familiarization" or making the unfamiliar familiar. This is based on two psychosocial processes: *anchoring*, through which new objects and meanings are integrated into prior knowledge or representations, and *objectification*, through which abstract ideas are made concrete by making an image or metaphor correspond to an object (Wagner and Kronberger, 2001).

An important distinction of this approach vis-à-vis cognitivist approaches in social psychology is that familiarization is conceived of as inherently social, the result of the dialogical relationship between self, other and object (Marková, 2003) and shaped by inter-and intra-group communication and associated power relations (Bauer & Gaskell, 1999; Howarth, 2006; Batel and Castro, 2018). In other words, it proposes that it is the making, unmaking, and remaking of social representations in everyday interactions – or microgenesis – and how this is shaped by structural power relations and associated positionings that both create and shape social representations as constitutive of societies – or macrogenesis – and allows them to be rethought and transformed also at the collective level and in the future (Magioglou, 2008; Psaltis, 2012; 2015).

To analyse how social change unfolds, Moscovici (1988) developed the typology of polemical, emancipated and hegemonic social representations. The latter are those "uniform and coercive" representations that "prevail implicitly in all symbolic or affective practices" (Moscovici, 1988, p.221), while emancipated representations are "the outgrowth of the circulation of knowledge and ideas belonging to subgroups that are in more or less close contact" (ibid) with each creating its own version and sharing it with the others. Emancipated representations have a "complementary function" because they are a result of "exchanging and sharing a set of *interpretations* or symbols" (ibid, italics added), and this potentially facilitates compromises in situations of dispute. Compared to hegemonic representations, then, it could be said that their *interpretive* nature means that they involve a more active definition of re-presentation in which individuals *negotiate* between different definitions of a social object. Lastly, polemical representations are those generated and used in the course of controversy and should be viewed in the context of an opposition or struggle between groups. They are often expressed in terms of a "dialogue with an imaginary interlocutor" and "they entail mutually exclusive relationships" (ibid; see also Negura et al, 2020).

The purpose of these distinctions was to help investigate the dynamics of a social representation – how it forms as it “shifts from one realm to another” (Moscovici, 1988, p.221), yet there has been little research on this process, which would necessitate the inclusion of not only a time dimension (in terms of physical or “clock time,” Castro, 2015), but also, as will be argued, to consider how people pragmatically represent the future at the micro-level of action. Indeed, in the early 1990s, Moscovici (1994) began to call for a pragmatic re-orientation of the theory, often citing the works of Max Weber. This call was soon taken up by some SRT theorists with the future-oriented concepts of “anticipatory representation” (Philogène, 2002) and “representational project” (Bauer & Gaskell, 1999; 2008). The former is defined as a certain type of social representation that is “about things to come and so dominated by a forward-looking quality” (Philogène, 2002, p. 118). Because of the uncertainty of the “yet to come,” anticipatory representations let us “invest all our fears and hopes in a fashion that is much less constrained than the memories of the past or the grip of the present” (Philogène, 2002, p. 118). Similarly, the main innovation of Bauer & Gaskell’s (1999; 2008) model on the representational project was the addition, to the triad of self-other-object, of a fourth element – “project”. Social representations become conceived of as being “relative to a project, a “future-for-us,” an ongoing movement, an anticipation “not-yet” which defines both the object as well as people’s experience” (Bauer & Gaskell, 2008, p.343).

Despite the novelty of these concepts, they have not had much impact in the field, both in terms of further theoretical development of how people represent the future and in systematic empirical applications (Foster, 2011; but see Buhagiar and Sammut, 2020). In fact, the majority of empirical research that uses SRT still tends to ignore how people reflexively make and negotiate meaning (Daanen, 2009). One consequence of this is that social transformations and conflicts are analyzed post hoc instead of in a way that foregrounds the contingency of people’s meaning-making. Adopting a more naturalistic – or conscious (Daanen, 2009) – approach to research would begin to reveal the relations between the projects or uncertainties that people are immersed in and how they socially re-present objects towards the future.

From a theoretical viewpoint, we can begin to address this gap between representation of objects as identified *a posteriori*, and representation of the future in the making, by re-examining the relationship between social representation and action. Castro and Batel (2008) outline three ways that this has been conceived in SRT: the “constitutive proposal” states that action *is* representation (Wagner, 1998); the “functional proposal” views representations as capable of

“doing” things in the world (Howarth, 2006); and the “creative proposal” states that representations “have a role in giving rise to previously inexistent human actions” (Castro and Batel, 2008, p. 481). They also propose that the interrelations between these proposals can be illuminated via the distinction between “transcendent” and “immanent” representations (Harré, 1998), the former being a representation that exists “independently of a practice” (e.g. in legal acts such as an EU Directive which requires member states to adopt “community energy” practices) and the latter being when there is no existence outside of the relevant practice (e.g., ecological practices that are unconsciously performed for maintaining food subsistence).

This distinction between transcendent and immanent representations is useful in what Raudsepp (2005) states is an important task for SRT: “revealing the mechanisms whereby a person *uses* the system of social representations for thinking about social objects” (Raudsepp, 2005, p. 466; italics added). However, for understanding how social actors discursively and pragmatically represent the future it is important to also conceptualize how they are not always bound to the present but can also act in a reflexive and purposeful way which can involve representing the future before action takes place, for example through positing goals or expressing hope for a better world (Jovchelovitch and Hawlina, 2018). SRT is useful in this regard because its emphasis on co-constructed meaning-making avoids the trappings of individualistic theories of rational action. Meaning, even when action is reflexive and purposefully constructed, is always social because it is oriented also to others.

In the rest of this chapter, this line of thinking will be pursued in the development of a sociologically pragmatist approach to social representations theory, which helps in understanding how people represent the future. In doing so, Moscovici’s (1982, p. 183) notion of the “thinking society” – which “stresses the *agency* of social beings and their constant *engagement* in the reproduction and the transformation of social representations through communication and everyday discourse” (Castro and Batel, 2008, p. 479, italics added) – will be redefined and strengthened. While SRT has not often and systematically reflected on this relation between representation and agency (Potter and Edwards, 1999; Howarth, 2006), the concepts of anticipatory representation and representational project seem to be relevant conceptualizations to further develop.

1.3. The pragmatic sociology of engagements and critique

The pragmatic sociology of engagements and critique (PS), also known as “the sociology of conventions” and “the sociology of critical capacities”, began to take shape in France in the 1980s after a critical break from what was perceived as the growing orthodoxy of Pierre Bourdieu’s “critical sociology.” This break was led by one of Bourdieu’s former students and collaborators, Luc Boltanski, whose work is now receiving significant attention from anglophone sociologists (Susen and Turner, 2014).

Influenced by ethnomethodological approaches to the study of meaning-making, but also by social psychology, including the works of Moscovici (Boltanski, 2018; Boltanski & Thévenot, 1983), Boltanski along with Laurent Thévenot, developed the pragmatic approach from research on the expert classification practices of government economists, social scientists and management theorists (see also Desrosières, 1990). They soon turned their attention to the meaning-making operations of persons in everyday situations of uncertainty, foregrounding their creative and reflexive use of a wide range of heterogeneous cultural resources rather than attempting to explain their representations via mechanisms of objective social structures such as socioeconomic class, group identity or field position.

At the core of this approach is the concept of “convention”. Similar to the definition of social representations given above, conventions are not external forces upon action and meaning, but rather they are *action frameworks that enable coordination (including communication), interpretation, and evaluation* (Diaz-Bone & de Larquier, 2023). Actors can question, criticize, and switch between conventions, but the latter are often experienced as adequate and reliable for everyday coordination. Thus, conventions also perform the two functions defined by SRT above which can be summed up as *orientation* and *mutual recognition*.

Like later SRT (Foster, 2011; Batel and Castro, 2018), one of the main aims of PS was to overcome the epistemological separation of science and common sense, especially in regard to the social sciences themselves. “Reflexivity” was reconceptualized as not just an element of the sociologist’s craft (Bourdieu & Wacquant, 1992), but as a critical capacity of all actors (Boltanski & Thévenot, 2006). PS’s empirical focus was then on the plurality of social forms of evaluation that people use to co-ordinate their actions (Thévenot, 2007). PS, like SRT, can therefore be described as embracing a Weberian interpretive approach to the social sciences in which representation is inextricably psychosocial, embodied, socio-cultural and institutional, as well as

linked to different modes of action (Castro and Batel, 2008). At the same time, PS attempts to go beyond Weber's work by investigating why some social forms of evaluation are more legitimate than others (Lamont and Thévenot, 2000). This gave rise to three areas of conceptual development and related analytical tools that can be very useful for examining representations of the future, and that we are going to present next: regimes of engagement with the future; orders of worth within the regime of justification; and the "test of worth".

The early work on expert classification practices informed the development of an elaborate theoretical framework for analysing how people use those different forms of evaluation – or shared moral and cultural knowledge – in order to legitimize their actions and criticize those of others in a "regime of public justification" (Boltanski and Thévenot, 2006). Like later socio-cultural psychologists examining how people imagine collective futures (de Saint-Laurent et al., 2018), these ideas were influenced by the pragmatist philosophy of Mead (1932) and, in particular, his notion of the generalized other. The latter is the basis of the "ordinary sense of justice", by virtue of which, according to Boltanski and Thévenot, action and representation are, within this regime of public justification, always oriented to the common good (Boltanski and Thévenot, 2006). Put into SRT's terms, when immersed in public situations of discord or dispute – such as those when polemical representations are generated – rather than simply reverting to arguments associated with one's group, position, or individual interest, people could be said to be "polyphasic" (Batel, 2012) insofar as they can potentially deploy a plurality of social representations of the common good that are most appropriate to the situation at hand, rather than be rigidly attached to a single social representation that is determined, for example, by their social context or group identity.

PS has proposed that these social representations of the common good are "orders of worth", which can be defined as socially shared frameworks that guide behavior. Boltanski and Thévenot originally identified six orders of worth: *market* performance; *industrial* efficiency based on technical competence and long-term planning; *civic* equality and solidarity; *domestic* and traditional trustworthiness entrenched in local and personal ties; *inspiration* expressed in creativity, emotion or religious grace; and *renown* based on public opinion and fame. As with social representations, the use of orders of worth are essential to discursive practices that both enable and prevent meaningful social change, as they are the forms of practices of critique and social change (Boltanski & Chiapello, 2018).

Table 1.1. Orders of worth

	Inspiration	Domestic	Opinion	Civic	Market	Industrial	Projective	Green
Superior common principle	Flash of inspiration	Hierarchy, tradition	Opinion of others	Collective good	Competition	Efficacy, performance	Flexibility, connectivity	Sustainability
State of grandeur	Visionary	Benevolent, cautious	Reputation, fame	Official representative	Wealth	Functional, operational	Flexible, well-connected	Sustainable
Human dignity	Passion, creation	Common sense	Desire for recognition	Political self-determination	Private interest	Capacity for work	Spontaneous, innovative	Sufficiency, moderation
Repertory of objects	Spirit, body	Gifts	Names, brands	Laws, decrees	Merchandise	Means	Projects	Nature
Repertory of subjects	Children, artist	Superiors, ancestors	Celebrities	Collectivities	Businessmen, clients	Experts, operators	Partners, brokers	Naturalists
Necessary investment	Personal risk	Duty	Renouncing privacy	Renouncing particularism	Opportunism	Investment of time, money	Establishing connections	No discounting of the future
Relations of 'grandeur'	Singularity	Subordination, honour	Identification	Representation, delegation of interests	Possession	Mastery, expertise	Centrality in the network	Greening
State of harmony	Imaginary	Family	Audience	Republic	Market	System	Network	Ecosystem
Typical proof	Interior adventure	Ceremony	Event	Political mobilisation, vote	Transaction	Test	Mobilisation of network	Manifestation of ecosystem value
Expression of judgement	Flash of insight	Appreciation	Public opinion	Collective decision-making	Price	Effective, correct	Ease of connectivity	Environmentally friendly
Evidence	Certainty of inspiration	Example	Success, fame	Legal decision, result of vote	Money, benefits	Measure	Number of connections	Impact on environment
Position of 'smallness'	Routine	Vulgar, shameless	Unknown, trite	Isolation, division	Pauper	Inefficacy	Stagnation, prudence	Wasting, polluting
Source: Boltanski & Thévenot, 2006; Boltanski & Chiapello, 2017; Thévenot et al., 2000								

For this perspective, macro-level social change can be said to have taken place when and where a new order of worth appears, such as the more recent *green* order of worth based on representations of an ecological world (Thévenot et al., 2000) and the *projective* or *connectionist* order of worth, associated with the rise of neoliberalism and associated technologies, based on representations of a complex networked world (Boltanski & Chiapello, 2018). Thus, following Weber, the orders of worth model is constructed against the notion of individual values which can see no other solution than the “implacable clash of personal points of view” (Boltanski and Thévenot, 2006, p.221). In fact, because the deployment of orders of worth is constrained at least as much, if not more, by the social situation in which people find themselves, rather than by group identity (see also Batel, 2012), the possibility of arriving at a new agreement is never precluded, nor is the possibility of a new dispute.

Boltanski and Thévenot each subsequently developed this pragmatic approach in their own ways by going beyond the regime of justification and associated orders of worth and conceptualizing a number of other “regimes of engagement” – socially *acknowledged* ways in which humans are committed to their environment – which are common in contemporary Western societies (Boltanski, 2012; Thévenot, 2007). It is Thévenot’s conceptualization of different non-public or personal regimes of engagement – familiarity, planning and exploration – that have so far proven most useful for conceptualizing heterogenous temporalities and future-orientations (Tavory and Eliasoph, 2013; Mandich, 2019; Welch et al., 2020).

Table 1.2. Regimes of engagement

	Engaging in justification for the common good	Engaging in an individual plan	Engaging in familiarity	Engaging in exploration
Evaluative good	Worth (qualifying for the common good)	Accomplished will	Ease, comfort, personal convenience	Excitement by novelty
Information format	Conventional	Functional	Usual, congenial	Surprising
Capacity, power	Qualified, worthy	Autonomous, wilful	Attached to	Curious, explorer
Mutual engagement	Legitimate convention of coordination	Joint project, contract	Close friendship, intimacy	Play
Source: Thévenot, 2014				

In turn, Mandich (2019) added to this by systematizing the future-orientations implicit in each of these different public and non-public regimes of engagement:

“The future is “made and measured” within a logic of probability in the regime of the plan, within a logic of possibility within the regime of justification, within a logic of

practical anticipation in the regime of familiarity and within a logic of discovery in the regime of exploration.” (Mandich, 2019, p.3-4)

We take these four different forms of future-orientation together with associated orders of worth as our point of departure for a comparison and synthesis of PS with SRT. Additionally, and finally, we also take with us from PS to integrate with SRT, the notion of the test. In PS, tests can be viewed as testing the worth of an action or discourse, this is, as testing how others adhere to that discourse and related orders of worth in a given situation. This links to SRT’s ideas around the “stickiness” of representations – their ability to attract adherents and resist being ignored. Yet it remains unclear what exactly makes a social representation stick (Buhagiar and Sammut, 2020). The pragmatic test of worth proposed by PS is a useful concept in this regard insofar as it reveals the discursive relations between social representations and orders of worth that arise in critical or testing moments (Boltanski and Thévenot, 2006). In other words, the “realism” – or “tangibility” (Breakwell, 2014) – of a given discourse about the future and its ability to “attract” others and make them adhere to that discourse, will be determined by the ability of the speaker to objectify social representations and make them concrete via a test of worth.

Boltanski (2011) defined three types of tests: truth tests, reality tests and existential tests. “Truth tests” are those involving representations of a coherent world that are normally deployed and objectified by institutions to maintain or “constantly reconfirm” a certain relationship between symbolic forms and states of affairs. “Reality tests”, by contrast, posit a differential between what should be (value judgement based on an order of worth) and what is (factual judgement). “Existential tests” are the moments in which new ideas or deeply personal experiences that are not (yet) institutionalized in any form, are conferred with a “collective” character through sharing with others (Boltanski, 2011, p. 107).

One of the main proposals of this chapter is that this typology of tests and Moscovici’s typology of polemical, emancipated and hegemonic representations can be mutually enriching for an understanding of how representations of the future relate to social change. Truth tests bear a striking resemblance to SRT’s concept of hegemonic representation and, therefore, a hegemonic representation of the future would be observed in a “truth test” which represents the future as the same as, or complementary with, the past and that does not entertain alterity. Further, truth tests can be seen as performed through reification as a communicative format (one that *prescribes* representations, *excluding* the possibility of alternatives – Batel and Castro, 2018). In turn, “reality

tests” can be linked to the concept of emancipated representation in which a plurality of legitimate possible futures is acknowledged, and seen either as complementary or not, but always as different from the past. This recognition of plurality means that reality tests can be enacted through *consensualisation* as a communicative format (one that *recognises* the *heterogeneity* of representation – Batel & Castro, 2018). Lastly, a polemical representation of the future explicitly views different futures as both incompatible with each other and with the past. Whereas reality tests deploy certain emancipated representations (orders of worth), existential tests represent the critical moment when polemical representations *aspire* to become emancipated, that is, shared representations (see also Psaltis, 2012). This process would help explain the formation of a new order of worth, or of a radically new compromise between different orders of worth, or of the transformation of personal or local concerns into orders of worth. Before this can take place, the non-institutionalized nature of such representations means that they are, at least at an early stage in their micro-genesis, often communicated via artistic forms of communication, thus explaining the importance that has been ascribed to science fiction literature and other artistic forms (e.g., graffiti) for anticipating and creating social change (Glăveanu, 2018; Jovchelovitch and Hawlina, 2018).

To conclude this section and preface the synthesis between SRT and PS that will follow, it is worth pointing out that, again, these typologies of tests and regimes of engagement owe much to the Weberian tradition of the social sciences which places emphasis on individual *persons* as the “sole understandable agents of meaningfully oriented action,” without ignoring notions of the *collective* (Weber, 2019, p. 89). This insight is important for our task as it confirms the need to relate psychosocial dynamics (SRT) to social forms of action (PS). Only then can we pose the question: how are both personal and common futures represented?

We will now propose how to answer this question through a synthesis of SRT and PS, by suggesting that there are four key ways of re-presenting the future for both personal and common ends: through the regime of familiarity, through the regime of the plan, through the regime of exploration and through the regime of justification.

1.4. Future-orientations in the regime of familiarity

Many contemporary theories of time and temporality propose that, in people’s everyday lives, the future is actively made in the present rather than wholly determined by the past (Adam & Groves, 2007). The future is always “not yet” and, therefore, how people deal with situated uncertainty in

their lives is a key question for the study of how they make sense of future-oriented issues. However, while SRT's notion of familiarization is oriented to understanding how people deal with strangeness, unfamiliarity and novelty (de-Graft Aikins, 2012), there are limits to how far it can be applied to their attempts to represent an uncertain future.

As has been pointed out by de-Graft Aikins (2012), the key issue is that SRT's notion of anchoring – a key process for familiarisation – assumes that people are motivated by the desire to “be secure from any risk of friction or strife” (Duveen & Moscovici, 2000, p.37), thus implicitly treating the future as just another strange object which is “domesticated” into representations from a group's past (Wagner, 1998). This ignores other plausible reasons for the creation of social representations such as the “curiosity motivation and the attraction of novelty” (Jahoda 1988, p. 201; see also Magioglou, 2008) or, as in PS, the “imperative to justify” or an orientation to the common good (Boltanski and Thévenot, 2006).

PS addresses this issue by adopting a more naturalistic approach to the social world, in the sense that it aims to understand meaning-making in situations of everyday life, and especially in the critical or “metapragmatic” moments that may arise in them. Take, for example, an event that recently appeared in the media: climate-activist Greta Thunberg joining a protest against a wind farm that is adversely affecting indigenous communities (Paddison, 2023). What is *strange* about this for some people is that the representational link between Thunberg, wind turbines and fighting against climate change is brought into question. The reader of the news story is confronted with the possibility that renewable energy is not essentially “green”, as they believed, and this may lead to a critical re-evaluation, not only of wind turbines, but of the future.

Outside such “metapragmatic” moments, certainty is maintained not only because people anchor the strange into the familiar but because, in practice, they turn a blind eye to “the strange”, especially when it involves social conflict (Boltanski, 2011). For example, two friends who have previously disagreed about renewable energy avoid talking about the Thunberg story in order to maintain their friendship. This view is similar to Moscovici's (1994) late pragmatist reflections on anchoring as a social practice which posit that, in contemporary forms of everyday life, the encounter with the strange is deferred and the mode of familiarity upheld because,

“People [generally] try to avoid tensions and divergences and prefer a false consensus to a real dissensus [...] nobody seeks to anchor the speakers' representations, which are

left to float deliberately, everybody being ready to tolerate them” (Moscovici, 1994, p169).

According to Boltanski, this is true only up to a point. Action, in a regime of familiarity, has a threshold of tolerance and when this threshold is crossed actors are plunged into uncertainty (Boltanski, 2011). Thus, continuing the previous example, when the pro-wind energy friend casually states their case to a third friend who has not yet formed an opinion, the anti-wind friend may no longer be able to tolerate their false consensus.

This conceptualisation of how people experience the world in a mode of familiar anticipation sees representations as constitutive of actions and vice versa (Castro and Batel, 2008), but also of and by objects. For both PS and SRT, familiarisation is oriented to feeling at ease and maintaining order and fulfils a dual role of positioning the person in, on the one hand, a social group and, on the other, an environment which comes to resemble a personalised space or – when the regime of familiarity is collectivised as a “common-place” – something which is the focal point of shared attachments (Thévenot, 2014).

By bringing together PS and SRT, we can say then that familiarisation as involved in representing the future, rather than being defensively oriented to the past, entails that we *live* and *feel* the future, habitually without reflecting upon it. Our “practical sense of the forthcoming” (Bourdieu, 2000, p.211) is, above all, *affectively* experienced and expectations of the future are buried in words, actions and things. In this sense, *immanent* social representations can be considered to *constitute* the future, and empirical research aiming to uncover how the regime of familiarity is involved in representing the future should thus examine social practices in everyday practices (see Welch et al., 2020; Jodelet 1991).

1.5. Future-orientations in the regime of the plan

As was stated above, in contemporary social life people are not always immersed in the immanence of “practical moments”, where differences are tolerated, and representations are constitutive of anticipatory habits or routines that are oriented to “feeling at ease”. Rather, in situations characterized by a high degree of uncertainty, such as inter-group conflicts, action can also operate in “metapragmatic registers” where representation draws upon emergent elements of the world, taking on a purposive character. Indeed, in PS, where temporality is often seen as integral to

people's practices, taking up a "reflexive" stance towards the future is usually seen as a prerequisite for agency and autonomy (Joas, 1996; Mische, 2014).

The possibility of a purposive or instrumental orientation to action, or of an "explicitly anticipatory" orientation to the future, is also present in Bauer & Gaskell's (1999) concept of representational project. Their approach, presented as the "Toblerone model" (Bauer & Gaskell, 1999) and its later development, the "wind rose model" of social representations (Bauer & Gaskell, 2008), together with subsequent applications of it (e.g. Buhagiar and Sammut, 2020), assumes a primarily purposive relationship between representation and action. Their central concept – the "project" of a social representation – attempts to address the dual problem of how groups "think" about the future, as well as the ideological functions that a social representation of the future may serve.

This aspiration is shared by PS and especially in Thévenot's conceptualisation of the future-oriented dimension of action as belonging to the regime of the plan, which he also describes as "normal action", indicating its hegemonic status in contemporary neoliberal societies. Mandich's (2019) unpacking of the individual temporality that underpins engagement in a plan suggests that it is the same as the temporality posited by psychological and economic theories which presuppose rational goal-oriented individuals (Batel & Rudolph, 2021) who set themselves goals and work backwards, imagining the completed action before it is begun (Tada, 2018). This engagement in a plan relies on a "logic of probability" and, thus, as with the regime of familiarity, depends on a hegemonic representation of time as linear and deterministic, allowing plans to reliably project past knowledge and/or interests into the future.

This over-determination of the past on the future can be seen in bureaucratic institutional practices which are necessary for the functioning of everyday life but can prevent meaningful socio-technical change from coming about. Outside of the institutional arena, an important question that could be addressed by both SRT and PS is how the regime of the plan constrains the capacity for new "bottom-up" representations of the collective future to emerge. On the other hand, research could also examine how the *failure* of plans and representational projects – what Duveen (in Moscovici et al., 2013, p.113) describes as an "encounter [with] points of obscurity and resistance" – facilitates new representations of the future.

Contrarily to SRT, where the relations between thinking and doing inform the psychosocial grounding of the plan and the project (see Buhagiar & Sammut, 2020), PS has emphasised instead

the regime of the plan as a socio-material form which morally valorises “enterprising individuals” (Rose, 1998), as well as a situated practice that follows a logic of opportunity (Thévenot, 2007). As Mandich states, “the centrality of the plan mirrors a conceptualisation of the future as a field that can be occupied by human agency (as something that is there and simply has to be reached)” (Mandich, 2019, p.8) and, indeed, this representation of time is usually seen as hegemonic in Western capitalist societies (Adam & Groves, 2007). This social representation of an individually planned future manifests in a wide range of academic theories, popular philosophies and self-help guides, neoliberal social policies and educational institutions, and is facilitated by the mundane technical devices (e.g. calendars, alarm clocks, timetables) of everyday life. From this perspective, projecting oneself into the future is not a natural psychological state or capacity, but an action that depends not just on a particular meaning (e.g. of the self as active, autonomous, choosing) but also on material devices which allow a person to project themselves into the future. Thus, PS’s aim is not to completely discard the idea of representations of the future oriented by purposive rationality, but to analyse the socio-material conditions in which such representations are put into practice in everyday life (Thévenot, 2007).

Something missing from this conceptualization offered by PS is that there is a dialogic coordination in the regime of the plan (e.g. a “joint project” – Buhagiar & Sammut, 2020), well shown by SRT’s premise that a social representation of the future in a planning modality includes a specific instrumental orientation to others based on assumptions about how they will act. In other words, and as put by Weber, it is “through expectations of the behaviour of external objects and other people, and employing these expectations as a ‘condition’ or ‘means’ for one’s own rational ends, as sought after and considered objectives” (Weber, 2019, p.101), that we plan “with” others.

A clear example of this intersubjective dimension of the plan can be seen in Guignard et al.’s (2015) analysis of how university students emphasise their planning orientations to the future in self-presentation strategies, while distancing themselves from other orientations (e.g. familiarity, which may be interpreted as laziness). The future is, thus, not only a space that we can imaginatively occupy or unconsciously anticipate we can also be reflexively aware of the possibility of doing so, for ourselves but also for others. An orientation to the future is, therefore, a (valued) social representation in itself.

What has made the instrumentalist representation of the future “stick” (Breakwell, 2014) in our societies is the nature of the test – constant truth tests that reify the hegemonic status of

individuals' planning orientation to the future. In turn, this hegemony of the plan often leads to the labelling of collective, critical and utopian aspirations, based on alternative representations (Gillespie, 2008), of more communitarian and collectivistic ways of living, as “unrealistic” (Pepper, 2005).

Nevertheless, these conceptualisations still focus mainly on the regime of the plan as something individual (even if shaped by social structures and by what others think). But what about collective action in the regime of the plan? This has been partly addressed by Thévenot (2014): just as familiar engagements can become collective via *personal affinities to multiple common-places* (see above), engagements in an individual plan can also be viewed as *individuals choosing among diverse options in a liberal public* (see also, Lamont and Thévenot, 2000). In this liberal world, a personal, intimate or emotional concern about the future (regime of familiarity) has to be represented as a choice, a preference, or a stake that an individual makes between publicly available futures. Therefore, for these individual concerns or choices to become common or collective, there needs to be an “integration of differences (...) achieved by *negotiation* and bargaining between ‘stakeholders.’” (Thévenot, 2014, p. 18, italics added).

This suggests the possibility of people coming together in projects of joint intentionality, understood as an alignment of concerns and expectations that results in a “community of interest”, that is, one without pre-established rules, norms or group identities (Brinks, 2016). This is an important contribution and insight to SRT, given that it has historically been criticised for equating the group and its identity with a social representation and vice-versa (Potter & Litton, 1985). This has been reiterated by recent proposals, such as Buhagiar and Sammut's (2020) “action-oriented formula” for intergroup relations research, in which the subject is always a *we* – “a collective of conscious selves and others, who come together for a project of common intentionality” (Bauer & Gaskell, 2008, p.345). Buhagiar and Sammut embrace a pragmatist perspective which insists that both the object and its representation are always contextual. However, they do not go as far as to say that the project or a given imagined future is also constituted by the situation, as a radically pragmatist perspective would have it (Joas, 1996, p.160; see also Batel, 2012). Instead, Buhagiar and Sammut's “pragmatic context of action” is determined already by the group project (its “motivating cause” – e.g. the societal integration of Arabs in Malta), rather than the other way around. Thus, the group posits goals and, given that they are also thinking of the projects of others, they purposively choose the social representation that is most likely to achieve them. This means

that, like in theories of rational action, “actions are ‘caused’ by their (anticipated) consequences” (Coleman, 1986, p.1312), and not also by embodied and institutionalised social structures or the situational availability of cultural and material resources.

In sum, the regime of the plan as a way to represent the future can help understand how people may take up an instrumental, purposive, or self-interested relation to the future, but as a *regime* it also helps to explain why people may do so. That is, as a socially valorised mode of acting, it foregrounds the ideological primacy of technocratic planning, individual interests and “joint projects” in neoliberal societies. Yet, the regime of the plan still does not fully allow us to conceptualise how people might move from “joint projects” for the future, to representing collective futures based on a vision of the common good. In fact, by instead thinking about the project as just a particular type of orientation to the common good, we can begin to understand how distinct groups in conflict might mobilise incommensurable representations not always because of their pre-established interests or a desire to protect their group, but because of their situational understanding of what constitutes the common good. It is this which we will examine in more detail next.

1.6. Future-orientations in the regimes of exploration and justification

Pragmatic sociology has shown that social change does not necessarily entail emancipation from hegemonic forms and systems of domination (Boltanski, 2011; Bourdieu & Boltanski, 1976). Boltanski (2011) describes this as “dominating by change” – the process by which a hegemonic group embraces uncertainty about the future and supports change at a superficial level, while maintaining and reproducing asymmetrical power relations at a structural level. One example of this is the current “green” energy transition, which is mostly being performed by proposing a surface change in the move to renewable energy sources, but while doing it in a “business-as-usual”, neoliberal, capitalist and economic growth-oriented way (Batel and Rudolph, 2021; Sareen, 2020). This raises questions not only about how such social changes are legitimated by powerful actors, but also about how people can come to resist them, contest hegemonic regimes and representations, and enact their alternative visions of the future (Nicholson & Howarth, 2018).

Likewise, from the SRT perspective, it has also been emphasised by Batel and Castro (2018) that meaning-making is not independent of power relations and often works to reproduce them, but can also work to resist and contest them and, through that, create social change (Batel and Castro,

2018). It is therefore imperative to acknowledge that representing the future is deeply constrained and intertwined with structural power relations and hegemonic ideologies (such as instrumental plans), but also that there are other ways to imagine futures in order to create emancipatory socio-political change. To understand how such representations can come about, we can foreground the *regime of exploration* – in which people are practically oriented to discovering *new* ways of doing things – and the *regime of justification* – in which they reflexively represent these new practices as *possible* by anchoring them in orders of worth. It is our contention that, while each of the orientations to the future described in this paper – familiarity, plan, exploration and justification – can be both personal and collective, it is the exploratory and justificatory orientations that are most important for resisting domination and socially representing for emancipatory change.

In theorising the distinction between exploration and justification and how they concretely relate to each other, it is useful to first view them as modes of action that are constituted by anticipatory representations (Philogène, 2002). The anticipatory quality of representation is particularly important when people are oriented to the future in an exploratory and creative mode. Thévenot (2007) emphasises the *personal* nature of this type of engagement, but cultural psychologists have theorised how it can also have a collective dimension (Glăveanu, 2015), for example in innovative and radical social experimentations in which people pursue new forms of life, cooperation, and struggle. In these contexts, existential tests and polemical representations are important (as discussed below), but it is also possible that a prior stage of “prefigurative” politics (Monticelli, 2022) involves exploratory practices which *defer* tests. Boltanski (2011) has pointed out that the deferral or suspension of tests is a strategy of domination, but researchers who want to accompany critical projects could also examine how people defer tests: how they refuse to anchor new practices into established representations, in order to maintain unfamiliarity and explore it (de-Graft Aikins, 2012).

Such prefigurative political practices that embrace an exploratory orientation to the future often have radical potential but, as Centemeri (2022) writes, they may need to be linked to more general representations of the common good if they are to create meaningful socio-political change. This takes us back to the regime of justification and the orders of worth – *market*, *industrial*, *civic*, *domestic*, *fame*, *inspired*, *ecological*, and *connectionist*. Each order of worth also has its own relevant temporality, for example linear and long-term in the industrial order of worth; “future-generations” in the ecological order of worth; or short-term profit in the market worth. An

important point here is that this idea of a plurality of orders of worth with different temporalities supplements Philogène's (2002) proposal about the *emergent* quality of anticipatory representations by providing a range of possible alternative reference points for people to actively anchor their lived experiences in, thus strengthening the claim that anticipatory representations highlight the "dynamic and normative force" of collectively oriented efforts aimed at changing reality (Philogène, 2002, p.118).

To give an example, faced with the claim that a certain energy infrastructure will secure their community's future by providing cheaper electricity (market order of worth), a resident might take up a longer term representation of the future of the infrastructure by highlighting its relatively short lifespan (e.g. 30 years) and the lack of a decommissioning plan. The promise of short-term savings is irrelevant from this perspective of a *civic* and *ecological* critique of the long-term *industrial* deficiency of the project – a representation of the possible future impacts of the infrastructure on the community and on the environment. Thus, the regime of justification suggests that the functional power (Howarth, 2006; Castro & Batel, 2008) of social representations comes from their capacity to impose a given order of worth and its associated temporal order onto the world, or to replace one order of worth with another. A key research question to be addressed by a joint SRT and PS research agenda is therefore to establish the discursive strategies by which people actually use orders of worth in order to justify or contest certain proposed actions.

A second key question pertains to how people come to be engaged in the regime of justification. What are the conditions whereby people represent and resist the oppressions and power relations imposed and obscured by a particular order of worth, especially when the latter is constitutive of a representation of the future? One way to explore this is by examining how personal experiences and representations for personal futures can or cannot turn into collective demands or representations for the collective future. This would involve a more nuanced empirical focus on the pragmatic context of representation, in which the emergence of uncertainty becomes the primary condition for the re-imagining of the future.

To continue the example above, the industrial order of worth as materialised in the green energy transition and the related deployment of large-scale wind and solar farms near rural communities, is clearly encroaching upon people's engagement in the regime of familiarity. This happens, namely, by disturbing communities' relations with the places where they live and the futures they look forward to in those places (Groves, 2015), and by accentuating inequalities

between urban and rural communities (Batel & Küpers, 2023). As suggested by Boltanski (2011), the *sense of shared injustice* and increased level of reflexivity created by this disruption, motivates the creative contestation of hegemonic institutions in the regime of justification, in which a speaker posits themselves as “a spokesperson for a potential future community” (Boltanski, 2011, p. 100). It seems then that the spark that initiates the psychosocial process in which a new representation emerges for a collective future is the crossing of a threshold in which “floating representations” – that is, those which have failed, or have not yet been subjected to a *test of worth*, can no longer be tolerated (Moscovici, 1994; Weber, 2019).

Returning to the example of the green energy transition and the increasing contestations of the deployment of large-scale renewable energy infrastructures in rural communities (Batel & Rudolph, 2021), whether or not a community can successfully *contest* the deployment of those infrastructures depends, firstly, on their capacity to transform their forced *disengagement* from a regime of familiarity into an *engagement* with the regime of justification, namely, by making their personal concerns about the future representable to others. This *existential test* might be done discursively and with the help of material objects, for instance a visual image of the impact that the infrastructure will have (e.g., Devine-Wright et al., 2019, see also Blok and Meilvang, 2015). Once the representation enters the realm of public justification, becoming *emancipated*, the success of the community’s dissent will depend on the social legitimacy of their critique, and on the anchoring of their vision of reformist or radical alternatives in a *reality test*.

Reformist alternatives are those proposed within the order of worth that is being deployed by the out-group. For example, the in-group may denounce as inauthentic the out-group’s claims to a common good based on *green* justifications (e.g., the claim that lithium mining is essential for mitigating climate change because it is necessary for electric car batteries and for renewable energy storage), because the future represented (through lithium mining) fails the *reality test* of that order of worth (*current and future generations* and *eco-systems* are adversely affected by lithium mining). Such an emancipated representation becomes particularly powerful when it is objectified in a phrase like “greenwashing”.

Radical alternatives are constructed when the denunciation of the projected future is made from an order of worth different to the one promulgated by the out-group or the one that the in-group alternatively represents as implicit in the out-group’s project (Gillespie, 2008). This might happen, for example, when the in-group uses the *domestic* order of worth to represent and critique the

industrial nature of the out-group's project. In order not to be viewed from the perspective of the industrial order of worth as rigidly stuck in the past or of being a self-interested "NIMBY" (Not In My Backyard; Batel & Rudolph, 2021), the in-group must elaborate an alternative vision of the future that connects the world it seeks to defend with the problem the out-group claims to be solving – climate change – by redefining this problem as, for example, a consequence of the loss of traditional modes of life such as subsistence farming and local economies. Key to the success of such a discursive strategy is the ability of the in-group to represent a *realistic* future, not only in which such practices can be resuscitated and widely adopted in society, but in which they can address the threat posed by climate change in a more desirable – e.g., socially just – way than the ones proposed by the out-group.

This *emancipated* representation will only *stick* (Breakwell, 2014) and become *hegemonic*, then, by compromising, in radically different ways and via *reality* tests, with other orders of worth. Indeed, a creative new compromise between the *domestic* and *green* orders of worth seems to be at the core of a new representation of an ecological society, as shown for example in the transnational permaculture movement – based on representations of community and care – and other prefigurative, exploratory engagements such as those relating to the notion of degrowth and "the commons" (Centemeri, 2022; Centemeri and Asara, 2022). We thus contend that any such new and creative recombination of orders of worth in the context of a specific dispute or struggle against a hegemonic representation emerges in the wake of a *polemical representation* which then aspires to become emancipated through *existential tests* and the formation of new collective projects. The latter will be decisive in the ability of the newly emancipated representation of the future to become, via *reality* tests, *hegemonic representations* of the future.

Table 1.3. Typology of social representations of the future and examples for research

<i>Future-orientation</i>	<i>What is the future being represented for?</i>	
	Personal good	Collective good
<i>Anticipation in the regime of familiarity</i>	Maintaining self-identity and ease/safety coming from habituation <i>Representational Contents:</i> Non-conscious and conscious expectations of continuity expressed in practices / immanent representations	Shared attachments and commonplaces (e.g., defending the identity of a specific place or of Earth). <i>Representational Contents:</i> Identifying representations of familiarity and security (e.g. representing as threats to collective well-being a future that departs from tradition; proposing solutions that maintain attachments)
<i>Probability in the regime of the plan</i>	Self-projection through individual plans. <i>Representational Contents:</i> Reflexively setting a goal and defining steps; probabilistic “if-then” reasoning and transcendent representations (in a neoliberal, plan-oriented, society)	Shared plans or projects (e.g., Arabs' integration in Malta, as proposed by Buhagiar & Sammut, 2020). <i>Representational Contents:</i> Identifying representations of freedom (liberation of a group from domination by the other group).
<i>Possibility in the regime of justification</i>	Forming self-identity as group/collective identity based on participating in the common good and belonging to a specific order of worth. <i>Representational Contents:</i> Identifying orders of worth (Market; Industrial; Civic; Inspiration; Domestic; Renown; Green; Projective; others?) through analysis of anchoring and objectification in communication processes (i.e., meanings, images, metaphors, grammar in e.g., interviews, everyday practices, campaign posters...); cognitive polyphasia (how tensions between orders of worth are negotiated or not). ‘Other’ plays primary role in anchoring process.	Shared injustices and exclusions (e.g., Black Lives Matter within the Civic Order of Worth); proposing change within existent societal structures.
<i>Discovery in the regime of exploration</i>	Excitement by novelty/creativity <i>Representational Contents:</i> Suspension of self-identity through perspective-taking; taking on the identity of the other and/or the object	New social representations (e.g., based on afro-futurism) <i>Representational Contents:</i> Shared creative uses of language and objects for representing new ideas, pre-figurative practices or concerns – for constructing a new order of worth/radical change
<i>How are representations of the future ‘tested’?</i>	<p><i>Truth tests</i> – If hegemonic representations; Reification is used as communicative format (e.g., National governments repeatedly stating the need to “accelerate the energy transition”); objectification is tautological and immediate.</p> <p><i>Reality tests</i> – If emancipated representations; Consensualisation is used as communicative format (e.g. workers in closing petrochemical industries arguing for a “just” energy transition); objectification is critical and reflexive, differences recognised and potentially accommodated within existent orders of worth.</p> <p><i>Existential tests</i> – If polemical representations; objectification is rejected (because not yet possible) in favour of exploiting contradictions and agonism (see Barry & Ellis, 2014) as communicative format (e.g. defending local intangible and affective attachments by contesting the validity of plans and industrial and market orders of worth).</p> <p><i>Deferring tests</i> - Maintaining unfamiliarity and exploring it, rather than immediately objectifying it with a pre-established social representation of the future.</p>	

1.7. The interaction between institutions and everyday life in shaping the future

This chapter has so far shown how the study of both social representations and conventions explores how meanings and social relations are shaped and transformed in everyday life. It has also set out the plurality of future-oriented discursive processes that lead to some meanings becoming more prominent than others. However, it has not yet discussed the way that these frameworks approach the analysis of institutions.

For SRT, the analysis of institutions revolves around the interplay between the “reified” and “consensual” spheres. The reified sphere encompasses established norms and knowledge, such as science, politics and law, which aim to *rationalize* and organize the world. In contrast, the consensual sphere or “everyday life” embraces diversity and creativity, accommodating multiple perspectives and meanings. PS has a similar understanding of the relation between institutions and everyday life, but views instead the tendency towards *generalization* (“rise in generality”) as the key attribute of the former, and the term “reification” is reserved for specific situations of oppression (see Thévenot, 2011).

In the following, an attempt will be made to clarify these different approaches. Ultimately, SRT’s understandings of “reification” and “consensualisation” as *discursive formats* (introduced above in section 1.3.) will be retained, but the notion of a “reified sphere” will be replaced with a less active conception of institutions by more decisively distinguishing them from conventions/social representations. On the other hand, the key features of SRT’s reification (prescription and prioritization) will be viewed as internal to the regime of justification. One of the main differences between this approach and the notion of reified/consensualised universes is that this choice is not guided by a specific (set of) value(s) or social representation(s) (i.e. rationalisation, instrumentality or hierarchy) and is not restricted to certain types of activity (e.g. policymaking) or social fields (e.g. “science”). Instead, the regime of justification can be viewed not only as a regime of engagement but also as a universe of meaning composed of a *plurality of worlds of value* or *orders of worth* (as defined above) which are used in response to the demands of a situation.

1.7.1. The “incompleteness” of institutions and the need for interpretation

Both SRT and PS view institutions more or less in the same way as collective agreements that are formalized through rules (Castro, 2019a; Diaz-Bone, 2012). The key question, however, is how

such institutions are viewed in relation to social representations and actions. From the perspective of PS, Salais (2023) has perhaps offered the strongest and simplest definition of this relation by stating that “conventions are the language of the demos and rules the language of the power” and that this is the key to “decrypting the state.” For SRT, the emphasis is on the significant power that laws and governing institutions exert upon social representations and actions. This power dynamic between institutions and everyday life, often overlooked by PS (Boltanski, 2011), shapes societal meanings and structures. Thus,

“The institutional universe and its system of rules thus offer consensual universes, and the groups operating within them, some stability by stabilizing, at least temporarily, their dilemmatic and heterogeneous possibilities.” (Castro, 2019b, p.57)

While PS would agree that institutions *offer* people some stability, this is different from saying that it is the institution itself that does the *stabilizing*. Instead, PS defines institutions as inherently “incomplete” (Salais, 2023; Diaz-Bone, 2012) and must be subjected to in-situ interpretations with the use of conventions:

“The meaning of institutions is incomplete, and actors have “degrees of freedom” in many situations how to interpret and how to “handle” institutions. For this, they refer to conventions as additional interpretative resources to decide on the meaning (relevance)” (Diaz-Bone & de Larquier, 2023, p.22).

There are two contrasting explanations about the source of these conventions. The first, “Durkheimian”, explanation suggests that institutions are completed by the conventions that are already embedded in everyday social relations. This approach is similar to the one assumed by SRT. The other explanation is that institutions are seen as becoming complete through “collective learning” (Diaz-Bone, 2015). In other words, new legal rules can become *objects* of representation and their “incompleteness enables collective learning and materializes collective learning processes” (Diaz-Bone, 2015, p. 26). Importantly for the research questions addressed in this thesis, the incompleteness of institutions suggests the impossibility of them anticipating all future situations. A lack of readily available conventions means that reflexive, creative and sometimes critical action is required. An example of this would be the institutional changes introduced to a country as a result of international agreements, as is the case with EU Directives relating to climate

change and energy policy, especially when the country does not have much experience with the practices targeted by the Directive (Castro, 2012).

The distinction between institutions and social representations/conventions is therefore crucial for understanding legal innovation and social change. This is primarily because the effectiveness of institutions depends on their acceptance by relevant actors, who may critique them based on their coherence or incoherence with established meanings and practices. Diaz-Bone (2012) categorizes four perceived situations based on the relation between institution and convention, each judged differently in terms of the functioning of the institution (see Table 3). These situations range from stable and coherent to unstable and incoherent, with implications for social order and the potential for change.

Table 1.4. Four types of situation in the relation between institution and representation

Relation of institution and convention(s) is:	Functioning of institution is judged as:	
	“uncritical”	“critical”
Coherent	(1) normality/reliability	(2) blockage/hegemony
Incoherent	(3) dynamic/change	(4) crisis/failure

A similar model has been constructed in SRT (Castro, 2019a). While intended to establish homogeneous practices, laws can remain contested and do not eliminate contradictory values:

“When certain values and representations are institutionalized by the state through their incorporation in laws, this can open conflicts in which the legal and the legitimate are viewed and discussed as non-equivalent, or as openly clashing” (Castro, 2019b, p.57).

Despite this, institutional actors often uphold their hegemony by limiting alternative representations (situation 2). On the other hand, the “consensual sphere” embraces plurality and heterogeneity, strategically mobilizing social representations to interpret and contest reified meanings (situation 4). Innovation can arise within this sphere, influencing both the creation of new institutions (situation 3) and the integration of legal innovations into everyday life (situation 1). SRT maintains that this interaction between the reified and consensual spheres has a bi-directional flow: from the consensual to the reified, where new ideas gain consensus and shape new institutions and laws, and from the reified to the consensual, where legal innovations aim to transform behaviours and discourses within society. However, this model has mainly focused on the interrelations between situations 2 and 4.

Diaz-Bone (2012) emphasizes the explanatory power of the pragmatist approach in analysing *transitions between situations* and suggests that research should examine the *strategies* employed to stabilize or destabilize the relationship between conventions and institutions. This pragmatic perspective proves valuable in understanding the uncertainty surrounding institutions, especially concerning their (trans)formation. SRT has also been attentive to these dynamics, conceptualising legal innovation as a process which unfolds in four stages: emergence, institutionalization, generalization, and stabilization (Castro et al., 2009). In the emergence stage, social struggles shape key representations and ideas, often through parliamentary debates and scientific evidence. Democratic processes and diversity characterize this phase. During institutionalization, new ideas are translated into institutional regulations, with various groups vying for influence over their definition and implementation. New institutions may emerge to reinforce these agreements. In the generalization phase, laws encounter civil society via “mediating systems”, where reactions vary from acceptance to contestation or ambivalence. For example, new planning laws which aim to accelerate “energy transitions” may clash with previously institutionalised demands for environmental impact assessment as well as newer demands for public participation in decision-making.

Without disputing this general *model* of change, the pragmatist approach to conventions and institutions would at least argue for a focus on the practices of interpretation within each stage. This relates to a second important distinction made by PS between a concept of law as an “external constraint” upon action and a conception of law as “endogenous” to action (Diaz-Bone, 2015, p.26). While SRT is often ambiguous on this issue (but see Batel & Castro, 2009), the pragmatic approach firmly places itself in the latter camp. Rather than the inherent prescriptive and hierarchical force of the “reified sphere”, laws and new legal proposals are in fact *interpreted and enacted by actors in situations*. This is not to say, of course, that laws are open to *any* interpretation, but that “interpretation has to be applied to complete them and put them into practice” (ibid). Again, one of the key points here is that legal statements tend towards *generality* and actors must relate these to *particular* situations and actions in order to *test* them. As Bessy et al. (2011) state,

“The majority of legal texts cannot be regarded as prescriptions for immediate executable actions. Instead, they offer principles and this is the reason why they need to be translated into the practical context. Therefore, actors conceive legal rules as something whose meaning can be negotiated. Because of a missing agreement about the

meaning of the legal rule, the chance to achieve collective action is undermined. The tenor of this agreement about how to interpret these texts is necessarily influenced by actor's ideas, values and interest, who realized these agreements" (Bessy et al. 2011, p. 17, quoted by Diaz-Bone, 2015 p. 27).

This pragmatist understanding of the discursive processes underlying institutions as involving a fundamental interplay between the general and the particular is reminiscent of Billig's (1985) critique of the cognitive approach to categorization. From this perspective, it is the iterative movement between categorisation and particularisation that explains not only the ability to transcend the limits of familiar categories (Potter & Wetherell, 1987), but also the possibility of critique and socio-political change. Thus, just as Billig (1985, p.87-88) describes the focus on categorization without particularisation as implying an image of the subject as an efficiency-oriented bureaucrat, homogenizing institutions as "the reified sphere" which *acts upon* everyday life implicitly inscribes them in the *industrial* world. This is not to say that formal institutions do not have a *formalizing* tendency, but that this is distinct from the representation of the social world that they convey and the social relations that they reproduce or create.

One of the main theoretical proposals that can be made here, then, is that this interpretative translation of laws into everyday life (and vice versa) is inherently future-oriented and, therefore, analysis should consider the different ways that actors relate to and represent the future (Wallace & Batel, 2023). As Diaz-Bone states, the "mobilization" of institutions is done by "relating them to a given constellation of conventions which are present as a plurality of *possible* logics of coordination" (Diaz-Bone, 2015, p.27, italics added). Rather than a linear model of legal innovation, the pragmatist approach emphasises the complexity and contingency of socio-political change due to the fact that there is a system of conventions that runs parallel to institutionalisation processes. These conventions not only follow similar processes of emergence and generalisation, but because they are not institutionalised as laws they have to be repeatedly "tested" in everyday life.

In sum, PS distinguishes itself by drawing a clear line between "convention" and "institution," which, as Diaz-Bone (2012) notes, creates a relational space between the two phenomena. This stands in contrast to other approaches that tend to collapse convention into the broader concept of institution. Moreover, Diaz-Bone (2012) identifies methodological and theoretical issues with such approaches, particularly in their inability to bridge macro-level theories with micro-level empirical

investigations (e.g. the question of how hegemonic, emancipated and polemical representations are experienced and used). This limitation underscores the need for perspectives which consider institutions not as acting entities but as *tools* used by actors in specific situations, guided by conventions and social representations.

1.7.2. “*Choosing values*” as “*investing in forms*”

After the distinction between institution and representation/convention, and between two conceptions of the relation of law to action, it is also necessary to say more about how such interpretive practice unfolds. SRT holds that institutions such as national laws reflect *chosen* values and representations, formalizing certain norms while excluding others (Caillaud et al., 2021; Mouro & Castro, 2012; T. R. Santos & Castro, 2023). As Castro (2019b) states,

“Each institutional system of rules—of the institutional/reified universe—takes the shared, but also dilemmatic (i.e. contradictory, heterogeneous) representations and values of common sense and makes options—of inclusion, exclusion and, mostly, of prioritization of certain representations and values over others” (Castro, 2019b, p.57, italics added)

This notion of *prioritization* tends to be held as the essential feature of the reified sphere. It holds that because the State is the ultimate basis upon which law and other forms of classification are constructed, this *choosing* of some values over others need not appeal to some external principle of the common good for legitimation (Castro, 2019b). Rather, Castro (2019b) proposes that the subsequent legitimation of law follows one of two argumentative paths which link representations and values to State institutions: the path of *necessity* and the path of *contingency*. The former is typically employed by institutions:

“One way of dealing with these conflicts – or of arguing before or during them – or even of trying to prevent them, is to make agreed limits seem instead natural limits. The more *agreed limits* are made to seem *natural limits*, are made to seem integral to “*how the world is,*” the easier it is to argue for them, and to demonstrate that they have “inherent” legitimacy” (Castro, 2019b, p.57, italics original).

Again, it is remarkable how close this conception is with certain dynamics described by PS. Indeed, Castro (2012) draws upon the work of Latour (2010) in this formulation, which is closely associated

with PS (Blok, 2013; Blokker, 2011). In the latter, this “path of necessity” is conceptualised instead as a “test” (as described in section 1.3.) while “prioritization” is intrinsic to what PS conceptualises as an “investment in form” (Thévenot, 1984):

The notion of “investments of form” stresses the treatment of persons and things in forms or formats that help maintain them at a certain level of generality by establishing equivalences. In such cases, general characterizations, classifications, and standards are envisaged in material terms on the basis of costly operations that give form to persons and things and facilitate – for a price – subsequent coordinations that rely on these being in “in good form”. On the model of a productive investment, the actors expect to receive a benefit in exchange consisting in ease of coordination. Investments of form are differentiated according to the extension of the scope of validity, in time or space, of the establishment of equivalence, and also according to consistency of the material support by which the equivalence is sustained (Boltanski and Thévenot, 2006, p.359).

A good example of this – and the one from which the concept derives – is the coding operations upon which statistical production depends, such as occupational nomenclatures (Thévenot, 1984). Codified “forms” are, thus, not reducible to inter-subjective meaning-making alone, but involve established *procedures* for dealing with the flux of the world and their *material* equipment, without which they would be impossible. However, statisticians inevitably find themselves in situations where there is uncertainty about how to codify persons and things into *standard* (i.e. *industrial*) forms, e.g. when a new and unfamiliar occupation emerges. In such situations, statisticians must engage in interpretive work in order to establish a collective agreement, typically drawing upon and negotiating between other conventions. This work is “costly” not only because of the time that is taken to negotiate but also because to arrive at an agreement some other possibility must be “sacrificed” (Boltanski & Thévenot, 2006). The use of the latter term rather than *excluded*, avoids the assumption of an *a priori* strategic intent to maintain power imbalances. Moreover, the construction of this key concept in pragmatic sociology was instigated by the observation (similar to that of Billig, 1985, see above) that the cognitive psychology of mental categories did not examine “the relations between the form of *general categories* constituted for the purposes of reckoning through legal procedures for example, and the *particular forms* used by individuals in their *interpretations*” (Thévenot, 1984, p.4).

Another way of describing the notion of investment in form, from an SRT perspective, is as the reified sphere collapsed into the consensualised one. Thus, *orders of worth* are in principal open to both technical experts and “the public” alike. Indeed, it is this symmetrical availability of moral representations of the common good which means that, in contemporary liberal democratic societies, institutions have to not only publicly justify their choices by drawing upon shared symbolic resources but, also, that this “justification work” must involve fulfilling the requirements of specific “tests of worth”. If a claim or law is judged to not pass a test – i.e. appearing contingent – then it leaves itself open to critique.

Furthermore, as seen in the above quotation, an “investment in form” takes place in a single moment but can have a durable and large-scale impact. Thus, while SRT proposes that laws formed in the reified sphere may gradually become consensual in a process of bodily inscription or “naturalisation” (Castro, 2019b), the conventions approach to law argues that the validity of laws depends also on the testing of a particular order of worth and the durability of its material support. One of the factors of the latter is its ability to almost automatically deal with coding situations. Again, Thévenot (1984) emphasises how it is the human “capacity to relate to the future” (Elster, 1979, p. 10) which is essential to this process of investment in form. The institutional materiality of this capacity is exemplified by the now taken-for-granted “standardization of time” in the form of international time zones (Zerubavel, 1982).

The main point here is that the *choosing of some values over others* that SRT assumes takes place in the “reified sphere” is not determined only by the authority enshrined in the State or any ideological project. Rather, theoretically disentangling the reified sphere encourages a more complex picture of institutional innovation that, inter alia, acknowledges how laws depend on the agency of institutional actors to negotiate between a *plurality* of principles of justification which are each deemed to be legitimate.

1.7.3. Law composing the plurality of values

PS maintains that, at each stage of legal innovation, actors are usually required to negotiate between a plurality of orders of worth. Adopting the Weberian metaphor of the polytheism of values, Teubner (1997) argues that in complex modern societies law is an “amalgam of heterogeneous social rationalities”, deriving from various “normative machineries of production” such as market relations, political relations, and scientific and technical practices, to which different definitions of

justice correspond (Boltanski & Chiapello, 2018) Thus, while the institution of law has its own rationality based on the distinction between the legal and the illegal, it is how it observes and negotiates between the pluralism of the other “social rationalities” that is decisive for social-political change.

Building on this perspective, Leader (2000) has described the plurality of justifications that compose the *judgements* of law, e.g. in legal disputes, but also more broadly in the space that links the *pursuit of justice* with the *pursuit of social change*:

This space presently exists as an uncertain mix of principles, and for this uncertainty we pay a price: the law sets out, in the minds of its framers, to protect the weak from the strong, but subverts that objective with the very tools deployed to try to reach it. The reason for this failure is not that the law is poorly enforced, or in the grip of special interests, but rather that it contains a tacit principle of social justice that cuts in an unpredictable way across the official ones. It is a principle, as was said, that tries to make room for change within organizations, while protecting certain victims of it. As it stands, however, the principle does a good deal of damage. We need to control and to supplement it. In failing to do so, democracies pursue one form of justice that undermines the other types of justice lying at their foundations” (Leader, 2000, p. 56).

According to Leader (2000), these “official” justifications are of two types: *civic* justifications espousing fundamental rights extended towards the common good and *consensual* justifications adopting contractual agreements between individuals, usually in support of a *market* mode of coordination. Moreover, as noted by Affichard et al., (2023, p.9) a consensual justification “presupposes that individuals are disposed in an engagement in a plan that assures them a projection of themselves into the future.” The third, “tacit”, justification is based on the *industrial* order of worth but without its orientation to the common good. Leader (2000) describes this type of justification as “functional” because it “justifies a use of power on the fact that it fulfils a particular legitimate purpose” (Leader, 2000, p.62).

This use of power is well-known – though also not usually recognized as a “legitimate” justification – to scholars of energy justice (Jenkins et al., 2016) and of the social acceptance of renewable energy (Wüstenhagen et al., 2007), as it is often deployed by State agencies to justify planning decisions that are in the “national interest”, for instance, because new energy infrastructure is required for the State to reach its decarbonization targets (Carvalho et al., 2019;

Valqueresma et al., 2024). It is because this type of justification is not recognized as such that power imbalances are often attributed as something intrinsic to the relation between the so-called reified and consensual spheres. But while the claim that one is pursuing legitimate objectives serves as a justification of the use of power, “functional” arguments can also be used to critique power, e.g. when there is no discernible relation to an objective, or the objective is widely deemed as illegitimate.

In institutions, the roots of the functional principle or *industrial* order of worth often “lie in fears of the abuse of power, coupled with respect for the need to achieve certain purposes for which that power exists in the first place” (Leader, 2000, p.77). However, in practice, this type of justification often has de facto priority over other orders of worth and this raises questions of justice, especially in the current neoliberal context where much of the state’s activity is outsourced to civil society actors and private companies (Froud et al., 2017; Jessop, 2010). Yet, as Leader argues, once potential abuses have been prohibited, it is functional justifications which “provides a method by which those associated can deal with an open-ended future” and respond to demands for change (Leader, 2000, p.77). The other types of justifications are not able to satisfactorily deal with this demand because either the possibilities have been limited by the terms of the initial contract or the rigid hierarchy of rights dictate what is possible.

The tensions between these different types of justification are well illustrated by competing discourses around energy transitions seen, for example, in the notion of the “energy trilemma” (Heffron et al., 2015)., the discourse of a “just transition” can be viewed as a compromise between, inter alia, the *legitimate objective* of decarbonization and the *fundamental rights* of fossil fuel workers (Bouzarovski, 2022). In addition, Leader’s (2000) perspective can also elucidate more nuanced legal uncertainties and problems regarding legitimate expectations of regulatory exceptions or compensation to the “losers” of energy transitions which may prevent or stifle the possibility of legal change (Cotula, 2014; F. Green, 2020). For example, is it workable to say that governments are entitled to accelerate transitions to renewable energy only if fossil fuel companies’ fundamental rights and previously established bilateral contracts are respected in a way that makes them the beneficiaries of such a change? From this perspective, the lack of recognized or official legitimacy of *functional* justifications at least partially explains the resilience of fossil fuel companies (Serkin & Vandenberg, 2017).

As this example shows, it is therefore important to examine how the plurality of legitimate justifications relate to each other and how their composition comes to constitute what is legal and illegal. Rather than following a logic of reification, Affichard et al (2023) note that there are additional legal principles, such as *proportionality*, which regulate the negotiation or composition that is institutionalised. Indeed, this principle was introduced precisely to limit the tyranny and failure to recognise plurality (Perulli, 2005). Thus,

“[I]t is in so far as law is not formalistic and regulated solely by an internal logic, but fulfils external normative requirements and relies on political definitions of the common good (cities), that it can serve to limit the use which the strongest make of their strength. [...] Imposing norms could burden social existence with excessive inflexibility if law were not also the very site of compromise, because, not being inscribed in a particular city but retaining the trace of different legitimate definitions of the common good, it is led to work constantly – that is to say, to reduce the tensions between the heterogeneous requirements that make up its system” (Boltanski & Chiapello, 2018).

In other words, if the plurality of orders of worth provides actors with specific resources to use in everyday life, law sets constraints on this use and is therefore the “mode of public inscription” in the form of “general rules” which preserves the traces of different orders of worth (Boltanski & Chiapello, 2018). The “precautionary principle” (Cameron & Abouchar, 1991) is another example of a possible logic that is internal to the legal field, and which plays a role in the composition of collective agreements (i.e. institutions) and strategic environmental assessments (Braunisch et al., 2015; Josimović et al., 2021). Moreover, it is a particularly future-oriented principle which represents the future in terms of the risk of harm, but which clashes with objectives to stimulate development and increase market competition (J. F. de Carvalho et al., 2010).

In sum, from the perspective of PS it is necessary to distinguish between institutions and conventions while, at the same time, not making an *a priori* distinction between different types of knowledge, arranging them hierarchically and inscribing them in certain groups. The point is to study how these institutions – their properties and their relations – are constructed in practice. Integrating this approach with SRT involves not only shedding light on the *materiality* of processes of anchoring and objectification but raises the question of whether or not the various “communicative forms” identified by SRT (as discussed below) can also be seen as forms in this pragmatist sense.

1.7.4. Forms of communication and mediating systems

As has been described in detail, the composition of institutions, conventions and social representations shapes various aspects of decision-making at the state level. But there is also the need to conceptualize how new laws and policy directives are subsequently *realized* (Affichard et al., 2023). PS has examined how legal norms undergo transformations in their format and implementation. For instance, European directives exhibit a mediate and finalist character, blending EU-determined objectives with Member States' responsibilities. Fundamental social rights may take on different forms to align with alternative normative aims, such as social clauses in free trade agreements or voluntary certification standards (Cheyns & Thévenot, 2019). These alternative realizations often require compromises that deviate from traditional legal norms, leading to retroactive effects on the original legal framework (Affichard et al., 2023). Thus, in addition to law being the site of a compromise between a plurality of competing orders of worth, it is also important to consider the *mediation* of law to the public. This involves the *enactment* of legislation, and the creation of bodies charged with its implementation and the “concrete and effective practice” of state agencies. For Portuguese sociologists of law, this has been one of the main explanatory factors for the “gap” between law-in-books and law-in-action (Guibentif, 2014).

The realisation of law has been a key focus for SRT, which defines “mediating systems” as encounters between institutions and everyday life where specific forms of knowledge and/or communication are used (Caillaud et al., 2021; Castro & Batel, 2008; Morant, 2006; Morant & Edwards, 2011). These systems can lean towards institutions, such as organisations responsible for formulating and enforcing laws, or towards civil society, like the mainstream press, and represent the meeting point where social representations converge, allowing for the acknowledgment or denial of alternative perspectives (Caillaud et al., 2021). From this perspective, the discursive strategies and forms of communication employed by mediating systems are crucial for legal innovation and imagined futures more broadly because they facilitate the accommodation or exclusion of alternative viewpoints and possibilities (Gillespie, 2008; Batel, 2010).

Following the proposals made in the previous sections, mediating systems are conceptualised here as *more or less conventionalised situations of communication*. More conventionalised

situations, such as that of the “mainstream press”, are constituted by durable forms of communication which have been well described by SRT (Moscovici, 2008; Castro & Gomes, 2005). By contrast, situations in which “technical experts” act as “intermediaries” – insofar as they attempt to provide “non-experts” with useful knowledge of institutions – can be described as less conventionalised situations. In these types of situations, actors creatively and strategically enact institutions and social representations via discursive formats (Batel & Castro, 2018).

1.7.4.1. Technical expertise as “mediating system”

Expertise and the relationship between experts and lay-persons has been one of the main objects of research in the field of science and technology studies (Collins & Evans, 2003; Rip, 2003; Wynne, 2003). The key insight of this work has been that expertise is “co-produced” by institutions, scientific practices and broader social meanings, and performed in situations of public engagement (Jasanoff, 2003). While challenging the distinction between “reified” and “consensual” or “common sense” knowledge, much of this research has emphasized the discursive “skill” involved in mediating between technical and lay meanings.

Similarly, research in SRT has examined situations where technical experts – e.g. legal and mental health professionals – draw upon diverse social representations and discursive strategies in their interactions with the public. Reconstructing the notions of the reified and consensual universes as ideal type discursive formats, Batel & Castro (2009) have analysed how technical experts justify the minimization of public participation opportunities in situations where they are legally mandated. As a discursive format, reification is defined as “monological” and “associated with strategic action” insofar as it is used for *displacing the representation and knowledge of others*. And is a feature of “encounters where there is the attempted enforcement of a version of reality, presented as the only true one” (Batel & Castro, 2009, p.420). Thus, through the discourse analysis of interviews with technical experts, they found that this type of argumentation involved two key characteristics: an *explicit prescriptive orientation* and the *presupposition of inequality between members*. Consensualisation arguments, on the other hand, are defined as arguments that demonstrate an *awareness* of the plurality of possible meanings and actions. According to Batel & Castro (2009), this type of argumentation has “more clear potential for achieving dialogical understandings,” i.e. mutual agreement. The consequence of this is that, in expert mediating system, there is a wide scope for new laws to be re-signified in relation to the interests and values

of specific groups. Recalling Leader's (2000) argument, the dangers of over-reaching *functional* justifications (e.g. of descending into reification) in the context of the devolution of the state's activities to such groups means that it is particularly important to study these discursive processes.

Further problematising the distinction between reified and consensual universes of meaning, Morant (2006) has shown how mental health professionals are able to act as "bricoleurs" by creatively recombining diverse scientific theories and social representations of mental ill-health in response to uncertain and ambiguous situations. However, this is not to say that unequal power relations do not have an important role in shaping meanings, and Morant notes that the voice of mentally ill clients tends to carry less weight than that of their professional care givers in defining the experience of mental ill health. Such situations recall the dynamics, outlined above, of "existential tests" (Boltanski, 2011) and raise interesting questions about how professionalised actors can dialogically engage with "the other" while negotiating institutionalised hierarchies. There is a need for the pragmatist approach to institutions to take this discursive dimension into account (Diaz-Bone, 2017), as it instead focuses on the *material* environments of law and the "form shaping" practices of different actors, especially legal experts and other "intermediaries" (Bessy, 2015).

1.7.4.2. The mainstream press as "mediating system"

Mediating systems such as the press, TV, and social media play significant roles in communicating new laws to the public, drawing on diverse conventions to do so and, thus, influencing the transformation or stabilization of social representations. Moscovici's research on social representations of psychoanalysis in the French press in the 1950's (Moscovici, 2008 [1961]) identified three distinct communicative forms: propaganda, propagation, and diffusion, each with unique characteristics and roles in shaping public discourse (but see Buschini & Guillou, 2022).

Propaganda is a form that aligns the audience with a specific viewpoint, often employing techniques like in-group identification, stereotyping, and dichotomization of groups. It is typically used in conflict situations or during controversies, with functions that include organizing representations to fit in-group projects and creating coherent, detailed new representations of objects. It also aims to regulate behaviour, eliminate conflicting objects, and assert identity. Propagation, on the other hand, aims to orient group members, establishing a link between behaviours and norms. This modality integrates a social object into an existing representation and

is explicitly goal oriented. It acts as an integrative form, reconciling divergent views between Self and Other.

Lastly, diffusion involves disseminating a variety of views and maintaining distance from any clearly defined Self or Other. Its function is to spark discussion and attract interest. Characteristics of diffusion include the presence of unaddressed tensions and contradictions, a variety of voices, interests, and values, and a discontinuous trajectory of elements. In this form, the sender adapts and mediates information to the reader, who is typically not part of a highly structured group. The use of implicit representations is common, with discursive strategies that involve the author's non-involvement, the use of familiar frames of reference, and a non-structured approach to the content. Rhetorical devices such as expert references and irony are often employed, and the style is generally concrete, attractive, and rapid.

Each form – propaganda, propagation, and diffusion – plays a distinct role in media representations, influencing how audiences perceive and interact with social objects and issues. Propaganda seeks to unify and direct, propagation aims to integrate and orient, while diffusion focuses on spreading diverse views and stimulating conversation (Castro & Gomes, 2005).

1.7.5. Dialogues with the institutional other and state conventions

While offering useful concepts for analysing everyday life, PS has not often explored how new laws are engaged and enacted by “the public”. This has been another main focus of the social psychology of legal innovation (Bertoldo & Castro, 2019; Caillaud et al., 2021; Castro & Mouro, 2011). One notable example is Castro & Santos’ (2020) analysis of how artisanal fishers make claims about their rights and duties in the context of new environmental laws which impact their profession (e.g. establishing catch limits; restricting locations and periods). Transposing the self-other schema onto the analysis of interviews with fishers, they find that the latter frequently use *reported speech* – the discursive strategy of quoting Others or Self in one’s own discourse – in order to represent the relation between self and “*institutional other*” and to negotiate between different values:

“Reported speech, by constructing what is said as independent of the speaker, offers it a kind of empirical robustness or ‘factuality’, useful in warranting stances taken in a dispute or in criticizing others. Fishers seemed to frequently use it for quoting institutional-Others talking to them, and themselves talking to institutional-Others. We

decided then to focus on these *dialogues with absent Others* – that is, with interlocutors that fishers rarely see but whose definitions of the *common good* bind them – for exploring how through them they articulated views of such definitions and of the new meanings they carry, *and* how they constructed representations of Self and Other” (Castro & Santos, 2020).

This perspective is particularly amenable to the synthesis of SRT and PS that has been developed in this chapter. On one hand, it reiterates that one of the contributions of SRT to PS is its focus on classifying the different types of meaning-making processes and discursive strategies that people use to move between different regimes of engagement. On the other, Castro & Santos’ (2020) study can be re-framed as showing how fishers pragmatically re-signify their personal troubles into public issues. Faced with the generality of institutionalised *green* order of worth, the perspective of the fishers was at risk of being particularised as self-interested, i.e. unworthy, in a way that is similar to the attribution of “NIMBY” in renewable energy disputes (Batel & Rudolph, 2021). In order to avoid this while at the same time constructing a legitimate critique, the fishers adopted the discursive strategy of reported speech in order to present themselves as competent citizens (Castro & Santos, 2020, p.261).

Castro & Santos (2020) also show how this discursive strategy acted as a “semantic barrier” to dialogue with alternative representations. Instead of demonstrating “pragmatic versatility” (Thévenot et al., 2000) or “cognitive polyphasia” by critiquing the state’s *green* justification from within, they instead could only deploy *civic* justifications about their basic rights as citizens and workers. Moving further in the pragmatist direction, the authors conclude by suggesting that what PS describes as a *clash of worth* (Boltanski & Thévenot, 2006) can be partially explained by the lack of *actual* dialogues between the fishers and the institutional other, the regularity of which “could foster more reflection in bi-directional forms, and the representations of both fishers and their governing institutions might show higher reciprocal awareness and transformation” (Castro & Santos, 2020, p. 262).

Useful in this context is the concept of “state conventions” (Storper & Salais, 1997), developed by research on the different ways that the state is imagined and discursively used as a way to coordinate actions. Storper & Salais (1997) defined three types of convention of the state: external, absent, and situated. As Salais (2023) puts it, these state conventions are each composed by a general scheme which,

“Simultaneously defines the nature of the common good, the rationality (or reasonability) mutually expected by the participants, and their capability or lack thereof to contribute to the realization of the common good. Reciprocally, this scheme is at the heart of the conventional agreement formed between the actors in each situation. Each actor expects the others to behave in a certain way, each actor knows that the others expect him to act in this way, and so on. From this agreement will spring the role expected of the state and a sharing of responsibilities for the common good. The precise functioning differs among the three types of conventions of the state. The *presence* of the state has objectivity and real effect only through the mediation of the convention of the state on which people in the situation are agreeing. One should not forget, as empirically observed, that in the same situation actors may bring different conventions of the state, which create tension, compromise, or failure. It follows in each case a specific form of state’s action in direction of the common good. A key issue is the disposition of institutions to respect and support the freedom of the demos with regard to its participation to the common good” (Salais, 2023).

This typology of conventions has been useful for analysing socio-historical change, such as the rise of neoliberalism in which the convention of the “external state” – guided by a policy of economic planning, full employment and public ownership – gave way to the convention of the “absent state”, with the latter representing a form of conservatism aiming to limit legislative production except for in the creation of “independent” authorities to which “it delegates the competitive regulation of different sectors of activity, such as in monetary or financial matters, or in network industries” (Bessy & Didry, 2023, p.20). However, it can also be useful to guide inquiry into how the state is represented by citizens directly affected by its powers and how this relates to the (self-) representation of the good citizen that is conveyed both in laws/policies and by citizens themselves (e.g. as “reasonable and competent” – Castro & Santos, 2020).

Returning to the study of Castro & Santos (2020), it is clear that the fishers were often guided by the desirability of an *external* or interventionist state and oriented against the *absent* state, and at other times it was the other way around. However, it is the *situated* state – “relying on the personal engagements of the participants” and an “assumption that participants have a capability to act *appropriately to the situation*” (Salais, 2023, italics added) – that is imagined by the authors in their conclusion, in so far as they express the desirability of the fishers to deploy “their extensive

knowledge of and their concern for marine resources” in their engagements with the state and its representatives in frequent situations of public participation (Castro & Santos, 2020).

Thus, in addition to the benefits of foregrounding the plurality of legitimate orders of worth in studies such as that of Castro & Santos’ (2020), integrating the concept of state conventions would augment analyses of how people negotiate an understanding of new laws in relation to an imagined “institutional Other”. Following comparative research into the different grammars of commonality and the priority given to particular orders of worth in different national political cultures (Lamont & Thévenot, 2000), this conceptualisation of state convention could be used to inquire in a similar way into both what citizens *expect* from institutions but also, as Castro & Santos (2020) in effect show, how they are normatively imagined in relation to a desirable future.

1.8. Conclusions

In this chapter two different social scientific approaches to meaning-making and social change have been analyzed and compared through the lens of future-oriented representations – Social Representations Theory and Pragmatic Sociology. The affinity between the two approaches has been highlighted and directions for further integration suggested (see Table 1), with a view to promoting a more systematized interdisciplinary research agenda on how people represent the future, and specifically how that happens in the relations between expert-political and lay spheres.

As both PS and SRT research has shown over the years, scientific-expert-political systems often have the power to pre-empt the future in accordance with their own agendas, often conflicting with the familiar or disruptive representations of the future of affected communities and individuals. For the latter, representing the future might involve all the ways of engaging with the future at the same time, even if to different degrees, depending on available resources. In fact, in current neoliberal capitalist societies, well-being and the good life often depend upon a mix of maintaining familiarity and engaging with existent normative demands of “projecting and planning ourselves into the future”, as well as in the increasing needs to create disruptive change that addresses collective grievances and injustices (Fischer, 2014). This implies then that, when analysing representations of the future, and as proposed in Table 1, it is useful to use the analytical tools from SRT and PS discussed so far to identify which types of future are being represented, for what and with what consequences for individuals and groups/the collective.

Lastly, this chapter has emphasised that a renewed critical agenda for SRT should not only pursue the plurality of future-orientations in social representation, but also their entanglement with a moral dimension of social action, especially the common good – re-enforcing Jodelet’s (2021) recent call for SRT to investigate discourses of the “common” in the field of politics. In fact, the proposal here presented demands that the future and its representations are considered not only as a “representation of” or a “representation for” (Buhagiar & Sammut, 2020), but also as a “representation with”, within and across groups, including the commons and alternative collective futures.

Chapter 2

Energy transitions between institutions and everyday life

2.1. Introducing energy transitions

In scholarly terms, the notion of “energy transition” is typically used to describe historical shifts in the primary sources of energy in society and the technologies used for energy conversion. Notable examples include the move from wood and water to coal in the 19th century, and the subsequent transition from coal to oil in the 20th century. Studies of these transitions have demonstrated that historical shifts in energy sources have coincided with significant societal changes, including industrialization, urbanization, and the rise of consumer culture (Fouquet & Pearson, 1998; Podobnik, 2006). However, the term “energy transition” is now also widespread in everyday life (Araújo, 2014). Over recent decades, the provision of energy in society has evolved from a topic primarily discussed by technical experts to a broader social and political concern. It is the subject of political debate and public policy, is a frequently reported issue in the mainstream media, and is even likely to find its way into the conversations, disputes and practices of everyday life. In short, the role of energy in society is now more “visible” – both figuratively and literally – than ever before and has become a distinct object of social representation (Batel & Küpers, 2023; Bridge et al., 2018; Pasqualetti, 2000).

This increased visibility of energy is inseparable from the increasing precarity of its supply, principally as a result of the climate crisis, but also of other related types of issues such as geo-political and economic crises and the emergence of new technologies. As such, while there are many distinct socio-political concerns about energy, it is the *uncertainty about the future* of energy provision which is primarily shaping these concerns. The UN Sustainable Development Goal for affordable and clean energy, for example, identifies energy as “central to nearly every major challenge and opportunity the world faces [...] be it jobs, security, climate change, food production or increasing incomes, access to energy for all is essential” (United Nations, 2018).

While it may be clear to many that change of some kind is taking place, there is widespread uncertainty about what change will or should look like. There are a plurality of expectations and desired directions of change, but it is usually difficult to imagine what the end state will actually be. For some, the transition to a low-carbon energy future is expected to be as transformative as

past shifts with profound and perhaps unforeseeable social, technological, and geographical impacts (Jiusto, 2009), while for others the energy future can be arrived at in a logic of continuity with the present, primarily through technological and economic fixes, and a future drastically different from the present is unimaginable and undesirable. More important, perhaps, is whether energy futures are legitimised by what Castro (2019b) calls “the path of necessity” or the “the path of contingency”. In other words, will particular new technologies, and the laws that enable and promote them, be justified as the only response to an insecure climate changed world or as one option among many? Will decision-making about the energy future “open up” to the plurality of meanings through processes of psycho-social *consensualisation* or will the space of possibilities be “closed down” (Stirling, 2007, 2014; Vigni et al., 2022) through psycho-social processes of *reification*?

In this chapter, some of the main ways that the energy future has been imagined will be presented by drawing from the range of literature which uses concepts like sociotechnical imaginaries, visions and expectations, with a particular focus on how the new idea of “Renewable Energy Communities” is being imagined. After situating the theoretical approach presented in the previous chapter in relation to these literatures, section 2.3. will “construct the object” (Bourdieu & Wacquant, 1992) by introducing the notion of Renewable Energy Communities and sketching the role of energy law/policy, the public and systems of mediation in energy transitions. Section 2.4. will attempt to show some of the ways that these three dimensions are articulated together through representations and practices drawing from each of the eight *worlds* defined by Boltanski & Thévenot (2006).

2.2. Situating the theoretical approach: expectations, visions and imaginaries

The centrality of historical change and future-orientations to energy transitions means that it is difficult to think about past and present energy transitions without thinking about the notion of modernity (Giddens, 1990; Wagner, 2012). Current efforts to transition from fossil-fuel based energy systems can also be understood in relation to the concept “reflexive modernity” in the sense that attention is often directed at the modernization process itself and its associated risks (Beck et al., 2003; Kropp, 2018; Rudek & Huang, 2024). This reflexive modernisation is indicated by the rise of a research field focused on the “social acceptance” of renewable energy innovation and associated technologies (Wüstenhagen et al., 2007), a field of knowledge-making which often starts

out with implicit or explicit instrumental goals to make the deployment of renewable energy technology either more just or more efficient (Batel, 2018; Bidwell & Sovacool, 2023), and which originally emerged from research on risk perception, assessment and management (Wolsink, 2018).

This approach to studying the social dimensions of energy transitions is at odds with a critical and theoretically informed approach which considers the broader *ideological* constellations underlying socio-political processes of energy transition (Batel, 2020b; Brand & Wissen, 2013), such as the emergence, institutionalisation and generalisation of new ideas and norms (Castro & Batel, 2008). More than simply examining public representations of technology and technological representations of the public, however, foregrounding ideology means that such representations are linked to more general representations about the nature of society – what it is and what it should be (Boltanski & Chiapello, 2005; Elcherath et al., 2011). It also means focusing on *communication* of these meanings, examining how they are structured by self-other relations in different social situations and practices, such as policymaking or media reporting, and on how they are institutionalised in legal and regulatory forms.

That “the future” is a category of meaning that plays a pivotal role in social, political and technological change has been shown in science and technology studies (STS) through concepts such as expectations, visions and imaginaries (Berkhout, 2006; Jasanoff & Kim, 2015; van Lente, 2012). Before we examine how the conceptual framework proposed in the previous chapter can be used to study the relation between future-orientations and meaning-making, on the one hand, and the relation between institutions and social representations on the other hand, it is first necessary to briefly describe these three concepts and how they are used to study energy transitions.

Firstly, in studies of socio-technical innovation, *expectations* are seen to actively shape present activities and decisions in various fields, especially in technology and innovation, and are the building blocks of broader narratives and more concrete “*socio-technical visions*” (Berkhout, 2006; Longhurst & Chilvers, 2019). Expectations circulate among engineers, firms, and governments, creating a dynamic environment where certain research directions are justified, and certain technological promises become widely accepted (van Lente, 2012). This leads to dynamics like the pressure to fulfil these promises, and the interaction between various actors committed to or selecting from these technological options (Lente & Rip, 1998). Sovacool, Hess, et al. (2020) point out that energy innovations tend to exhibit a unique pattern in how expectations circulate due

to their less volatile nature, substantial investments, and the blend of public and private interests (see also Lösch & Schneider, 2016). These expectations often tie in with broader ideas of modernity, as seen in the expansion of private automobile use (Stefanelli, 2021) and the development of new mobility technologies such as electric vehicles (Bergman et al., 2017; Graf & Sonnberger, 2019). While they enable novel directions, they can also become constrictive, leading to global races and strategic games that ultimately reduce choice (Sovacool, Hess, et al., 2020).

Secondly, the study of sociotechnical change also involves analysing broader cultural meanings, predominantly with the concept of “sociotechnical imaginaries”. Jasanoff and Kim (2009), in their comparative research on the relation between nuclear power and nationhood in the United States and South Korea, originally defined sociotechnical imaginaries as “collectively imagined forms of social life and social order reflected in the design and fulfilment of nation-specific scientific and/or technological projects” (Jasanoff & Kim, 2009). They later recalibrated the empirical scope of sociotechnical imaginaries to include the representational projects of non-state actors such as corporations (Hockenhull & Cohn, 2021a; E. Smith, 2015), techno-scientific experts (Ballo, 2015; Vicente & Dias-Trindade, 2021) and citizens (Felt, 2015; Smith & Tidwell, 2016), emphasising how imaginaries are *co-produced* not only by different interests and actor positions, but also by diverse forms of knowledge, institutional arrangements and material practices (Jasanoff, 2015; Longhurst & Chilvers, 2019).

In regard to symbolic meanings, research on sociotechnical imaginaries is similar to that which uses concepts such as “storylines” and “frames” insofar as it focuses on how narratives are used in political conflicts and coalitions, especially in policy-making and collective action. These perspectives have revealed dominant narratives, particularly in the Global North, where renewable energy transitions often aim to preserve the status quo through technology-focused and economic growth-oriented solutions (Jasanoff & Simmet, 2021). However, they have also revealed how dominant narratives can be contested by alternative visions from counter-hegemonic actors like social movements or new industry entrants. Concepts such as spatial and place imaginaries have also been utilised in research on energy transitions and environmental disputes (Chateau et al., 2021). Feola et al. (2023), for example, explore how collective memories and future visions of a place interact, influencing the justification of various socio-material developments and sustainability projects. They find that “place-framing” serves as a key mechanism linking past

experiences and future aspirations, playing a pivotal role in shaping or contesting sustainability transitions.

These three approaches to the energy future therefore provide insights into how different groups utilize new ideas to construct common goals and public legitimacy, maintaining or challenging power relations, and resisting or promoting change (Sovacool, Hess, et al., 2020). In terms of their underlying theory of future-orientations, their differences are similar to the philosophical distinctions between pre-symbolic, materialist and symbolic modes of temporal representation (Groves, 2017). The particular potency of the concept of sociotechnical imaginaries, however, is due to an object-oriented ontology that aims to integrate these three dimensions of future-orientations, refusing to reduce social change to meaning-making alone.

Thus, a sociotechnical imaginary is not merely a representation or discourse, constituted by powerful symbols, which strategically conceals the real interests of the powerful or, similarly, that projects meaning onto reality. Rather, because they are co-produced by socially valued forms of knowledge, organizational relations, and technological practices, sociotechnical imaginaries are similar to an understanding of ideology as “a shared set of beliefs, inscribed in institutions, bound up with actions, and hence anchored in reality” (Boltanski & Chiapello, 2005, p.). That is, they both “describe attainable futures and prescribe futures that states believe ought to be attained” (Jasanoff & Kim, 2009, p. 120). In other words, they *guide the actions* of institutional actors, technical experts and citizens, shaping what they perceive to be possible.

2.3. Constructing the object: energy institutions, mediating systems and publics

2.3.1. The promise of energy communities as an alternative imaginary of the future

Multiple sociotechnical imaginaries can be circulating in any given context and are often in tension. Thus, in opposition to hegemonic and institutionally reified, stabilized or “locked-in” discourses of economic growth and passive consumption, alternative visions of the energy future are emerging, based around key principles such as degrowth, the commons and energy democracy (Longhurst & Chilvers, 2019; Feldpausch-Parker, Endres, Peterson & Gomez, 2021). These principles are often promoted as essential in the fight against climate change and are generating new social movements and practices that are often seen as new ways of *re-politicizing* the energy system, pursuing alternative goals and re-imagining the future (Seyfang et al., 2014; Seyfang & Smith, 2007; Smith et al., 2016; Walker & Devine-Wright, 2008).

In recent years, these ideas have risen from the grass-roots to the mainstream (Savaresi, 2019), with the European Union's (2018) re-cast Renewable Energy Directive (REDII) promoting bottom-up initiatives and energy democracy, emphasizing citizen participation in local energy projects with the new concepts of Renewable Energy Communities (RECs) and Citizen Energy Communities (CECs). REDII posits RECs² as legal forms organized around specific ownership, democratic governance and non-commercial purposes, with their main aim being to provide energy-related services or socio-economic and environmental benefits to their members and/or the local community (Roberts, 2020). Thus, energy communities are increasingly seen as a promise of a just and sustainable energy future for Europe (Horstink et al., 2020; Wittmayer et al., 2021) and a key driver of “energy democracy” (Burke & Stephens, 2017; Van Veelen, 2018). At first sight this is a significant departure from the previous four decades of EU energy policy, which had been heavily influenced by neoliberal principles resulting in a centralized electricity production infrastructure dominated by major energy multinationals (Fearn, 2023a; Groves et al., 2013; Laes & Bombaerts, 2022; Toke & Lauber, 2007).

Despite its manifold positive connotations (Creamer et al., 2019), the lack of a single definition of “community energy” has meant that it has been particularly vulnerable to resignification (Taylor Aiken, 2016; Walker et al., 2010). As Walker & Devine-Wright (2008b, p. 497) argue, “the word community has a long history of evolving and fluid meaning and has been used for numerous ideological and rhetorical ends.” More recently, Nadaï (2019) has suggested that the social movement of “community renewable energy” is entering a new phase, characterized by four main aspects: the types of local initiatives are multiplying; their extension and institutional recognition are taking place in countries other than the UK and Germany, where they were first appeared; some local initiatives are developing new articulations with the market and market-making; and, lastly, some local initiatives are developing new ways of “commoning” around energy (Becker, Naumann, et al., 2017). These last two aspects, representing a typical clash between *market* and *civic* orders of worth, suggests a divergence and tension in the meaning, functioning and purpose of RECs.

The potency of the “community renewable energy” idea is seemingly twofold: it is at once appealing to a range of actors for its *difference* from the status quo and because of its inherent *polysemy* which, paradoxically, renders it vulnerable to co-option by the status quo (Roberts, 2020).

² In this dissertation, the acronym REC is used to refer to Renewable Energy Communities as specific legal object, the term “energy communities” is used to refer to the broader idea or when it is used as such in social practice.

Thus, as a policy agenda that claims to be oriented to citizens, local communities and the common good and that requires the mobilisation, familiarisation and acceptance of different technologies and novel practices by diverse social groups, and which all EU member states are obligated to implement, the new legal concept of RECs is an ideal case for examining the dynamism and tensions of sociotechnical imaginaries – how they emerge and are sustained, contested and/or transformed by different actors situated in a variety of socio-political settings.

From this perspective, it would be naïve to view the emergence of RECs as wholly determined by a single meaning, narrative or even concrete legal principles and goals (e.g. energy justice or the *civic* order of worth). Indeed, when REDII was published, the EU Commission explicitly represented self-consumption and RECs as not only ways to achieve a just transition but also as a way to mobilize investment, increase competition, ensure technological efficiency and create public acceptance of renewables (Coenen & Hoppe, 2022; Iliopoulos, 2021). Technological innovation of “distributed energy systems” are playing a key role (von Wirth et al., 2018; Wolsink, 2020a), as is illustrated by the growing volume of technical studies devoted to the subject with the consequence being that RECs are increasingly seen as a means for balancing the supply and demand of electricity (e.g. Dóci et al., 2015; Mello & Villar, 2023; Simões et al., 2021).

There are two key uncertainties that make RECs particularly vulnerable to co-option. The first is the question of who constitutes an energy community and how law and policy define community membership and ownership in different contexts (Savaresi, 2019). To this end, REDII proposes a criterion of “proximity” but leaves it to Member States to further define what this means. The second uncertainty is RECs’ ambiguous relation with other legal forms of citizen participation in the energy transition, especially those that are also outlined in the Renewables Directive such as Citizen Energy Communities and individual self-consumption.

Adopting the concept of sociotechnical imaginaries for the study of energy communities thus necessitates going beyond the mere mapping of different visions, by also looking at the nuanced interactions between different types of practice, forms of knowledge and institutions, or what Hoffman et al. (2021, p.4) call “the nitty-gritty of (re)organising material infrastructures and their social equity outcomes in specific ways.” Most of the research using the imaginaries concept has often failed to fully deploy this co-productionist paradigm, especially its dual focus on explanation and process (Jasanoff & Simmet, 2021). This has led to analyses which are content to simply identify positions and describe perspectives on energy transition or a certain energy related

technology or issue, rather than interpreting *how* new representations of “desired or undesired futures take shape and solidify through social collectives, institutions, and public performances” (Jasanoff & Simmet, 2021, p. 2) and what they do. With this critique, Jasanoff and Simmet (2021) thus re-assert the potential of sociotechnical imaginaries research to *integrate* the different dimensions of energy transitions – culture, policy, publics, sociotechnical systems – rather than reductively focus on one of these dimensions, as is often the case in energy social science research.

While taking up the theoretical framework proposed in the previous chapter, this thesis takes the concept of sociotechnical imaginary as a useful guide to empirical research on energy transitions. The perspective poses several important and interesting research questions and points the researcher in the right direction. However, as stated in the previous chapter, the theoretical point of departure of this thesis is that the approaches of pragmatic sociology and social representations theory can offer more powerful tools for understanding and explaining representations of energy futures, particularly those which are emerging around the notion of energy communities.

Indeed, the sociotechnical imaginaries framework tends to overlook the different types of practice or “regimes of engagement” with the future that they are constituted by and pre-figure. Moreover, they often overlook the imaginaries and agency of communities themselves (Tidwell & Tidwell, 2018). Perhaps for these reasons, recent studies (e.g. Nyberg et al., 2017; Cowell and Devine-Wright, 2018; Laes et al., 2023; Rommetveit et al; 2021; Ballo and Rommetveit, 2023) have begun to integrate insights from French pragmatic sociology of engagements, especially the concept of “orders of worth,” which captures a range of social representations used in justifications and critiques that manifest in both physical environments and institutions.

2.3.3. The role of the public in energy transitions

Despite institutionalized prerogatives, energy futures are increasingly plural and diverse. From the SRT perspective, it can be said that in recent years energy, as a representational object, has entered the “consensual sphere” and become a *public* issue. As a result of climate change and the energy transition agenda, there has been a proliferation of different representations of energy in everyday life, with the most basic perhaps being the opposition between renewable and fossil fuel-based energy in the Global North.

As energy has become more visible in society, the capacity to articulate associated concerns and envision alternative futures is no longer the preserve of nation states, but also extends to

citizens, corporations and non-governmental organisations. The technical, economic and environmental issues of energy systems, once the domain of engineers and planners (Castan Broto, 2016; Batel & Küpers, 2023), are now integral to decision-making across various social contexts, from individual choices to geopolitical strategies.

The role of the public in energy systems is thus studied from a wide range of social science perspectives (Chilvers & Longhurst, 2016; Marres & Lezaun, 2011). Many studies have examined the values, beliefs and goals of various types of community energy project (Becker & Kunze, 2014; Parkhill et al., 2015; Sloot et al., 2019). The same can be said for social scientific studies of controversies and disputes surrounding the deployment of renewable energy technologies (Batel, 2020b; Eranti, 2018; Hanger et al., 2016). These two research domains can be seen as two sides of the same coin: on the one side, there is an attempt to understand why and how the public actively pursue alternative energy projects to large-scale centralized ones and, on the other, the aim has been to understand how and why the public oppose energy projects. The subjects of these types of research can, therefore, be broadly defined as “energy publics” (Chilvers & Longhurst, 2016).

However, these studies of community acceptance and energy citizenship (Devine-Wright, 2006) rarely attempt to situate the meaning-making practices of their subjects to the “institutional Other” and mediating systems. Following the perspective put forward in Chapter 1, the way people envisage their futures is shaped by multiple self-other relations and by the epistemic and cultural resources they can mobilize. The relation between non-expert and expert imaginaries of the energy future has also been studied by Smith & Tidwell (2016) who found that,

“while non-experts have the capacity to articulate alternative visions of good societies that challenge the nationally dominant ones, material infrastructures and the lack of political power to modify them may cause these to remain localized rather than circulate at broader levels where they could be realized through policy action” (Smith & Tidwell, 2016).

Indeed, the view that “ordinary” people have at least some degree of agency and “critical capacity” (Boltanski & Thévenot, 1999), rather than being mere passive embodiments of structural forces and collective representations, is particularly prominent in research on community energy. According to Becker & Kunze (2014), a key feature of many community energy initiatives is their “value-oriented” action (as opposed to private profits) and it is often noted that the early pioneers

of community energy held idealistic aims of combatting climate change and empowering local communities, occasionally aligning themselves with a radical politics which espoused visions of degrowth and energy descent (e.g. Transition Towns).

As Coenen & Hoppe (2022, p.259) write, the origins of RECs can thus be seen as “a critical civic response to centralist, capitalist, and eventually developments that are considered harmful to the environment and have restricted the autonomy of local and regional communities.” In addition, like the communitarian critique of liberalism, the emergence of community energy can be seen as a response to the failures of energy liberalization across EU Member States to address climate change and energy poverty (Coenen & Hoppe, 2022). This *civic* representation of energy communities will be discussed further below. The key point here is that *orders of worth* play an important role in mediating between institutions and the public.

2.3.2. The role of laws and public policies in energy transitions

State institutions, where rules for action are created by drawing upon certain shared representations and values while others are excluded or deemed less important (Castro & Santos, 2020), are often viewed as the key domain for current efforts to re-imagine energy systems (Newell, 2019; Pichler, 2023; Pollitt, 2012; A. Smith et al., 2005). The historically “locked-in” technocratic and centralized modes of energy governance have meant that, while public legitimacy may be an objective, there has been little dialogue with the public concerning policy choices (Chilvers & Longhurst, 2016). Instead, these choices have been typically shaped by forms of technical knowledge and expertise, especially from economics (Cowell & Webb, 2021; Eaton et al., 2021; Pollitt & Shaorshadze, 2023; Sareen, 2020). Moreover, these forms of knowledge tend to represent “the public” in ways that serve particular interests, projects and imagined futures (Barnett et al., 2012; Walker et al., 2010). In short, despite rising societal concerns, energy transitions are *de-politicised* (Kuzemko, 2015).

More recently, legal expertise has been playing an increasingly important role in shaping low-carbon transitions (Bogner, 2024; Brummer, 2018; Huhta & Romppanen, 2023). Despite its historical presence since the 19th century, energy law has only recently crystallized as a specialized field, mainly due to the ascendancy of climate change as a primary political issue (Huhta, 2021). This field has unique characteristics distinguishing it from others. It stands out for being heavily intertwined with other legal domains, such as environmental and climate law, with which it shares certain regulatory and policy objectives (McCauley & Heffron, 2018). Additionally, and as seen in

REDII, its international or transnational nature exercises a strong influence on national and local regulatory landscapes (Heffron & Talus, 2016).

Law and regulation are usually seen as important for transitions to renewable energy, especially for facilitating public investment and creating market confidence by ensuring clear rules and simple procedures (Silva & Martins, 2023). However, the institutionalization of new legal principles and norms often proceeds slowly, reflecting societal resistance and the complex interplay of global, national, and local interests. Moreover, energy law's development tends to occur in silos, lacking a holistic approach that balances competing goals (Heffron, 2021). Policy and law makers often focus on three central challenges in transforming energy systems in response to climate change. These challenges, known as the “energy trilemma,” include securing reliable energy, ensuring low-carbon supplies, and making energy accessible and affordable (Bridge et al., 2018). Recent years have seen a so-called “ethical turn” in energy law with the rise of “energy justice” as a key tenet and goal (McCauley & Heffron, 2018; McHarg, 2020; Sovacool et al., 2016).

While the predominant doctrinal approaches to legal study treat energy law as “a sealed system” which can only be studied through methods unique to the “science of the law,” (Huhta, 2022, p.2; Vick, 2004) various social science approaches argue that emergence and generalisation of new laws and legal principles can be better understood by considering the ideas, social representations, conventions or sociotechnical imaginaries in which they are anchored and objectified (Dizon, 2024). Indeed, ideas have been shown to play a pivotal role in shaping policy and law in a wide range of contexts, influencing problem identification, agenda setting, and are often based on deep cultural assumptions (Béland, 2009). These ideas are often strategically framed and communicated to justify policy shifts (Daviter, 2018). Ideas play an important role in energy law and policy, firstly in terms of explicit principles and rights, but also in terms of the more implicit symbolic meanings and narratives in which principles and rights are embedded, for instance the idea of “solidarity” (Huhta & Reins, 2023).

Thus, and as will be seen in more detail in section 2.4., the so-called “energy trilemma” is anchored in different social representations and orders of worth: energy security is deemed important in the *industrial* world; the environmental sustainability of energy provision is justified by the *green* order of worth; and the equity of energy transitions is anchored in the *civic* order of worth. The competing nature of these challenges implies the difficulty in reconciling them, with

each aligning differently with government objectives, corporate investment strategies, and citizen expectations, and thus influenced by the distribution of economic and political power.

In the context of renewable energy policy, Wolsink (2020b) gives the examples of “smart grids”, “clean coal”, and “decentralized” as distinct representations or “ideational frames”. The notion of *decentralized* energy is particularly interesting for the conflation that is made between political and technical meanings via a spatial metaphor, as well as its dialectical relation to the notion of “centralization”. This opposition has generated a range of analogous dichotomies in energy transitions discourse, such as old vs. new; monopolistic vs. democratic; national vs. local; passive consumers vs. active citizens; top-down vs. bottom-up (Thombs, 2019). Often framed in the policy arena in dilemmatic ways, such oppositions can exclude the plurality of other meanings and practices pre-figuring alternative and non-hegemonic futures (High & Smith, 2019). Moreover, they can also obscure the psychosocial meaning-making processes that result in the setting up and crystallization of dichotomised meanings (Howarth, 2006). Thus, socially constructed meanings also play an important role in giving a moral orientation to otherwise seemingly neutral technical terms, objects and processes which can, from this perspective, can be identified as non-human actors (Boltanski & Thévenot, 2006; Latour, 2007).

In the wake of REDII, much of the legal science literature has remained focused on the classical question of what energy communities are, attempting to construct a “non-ideological” or neutral definition (Moroni, Antoniucci, et al., 2019). Indeed, this was the approach followed by the EU. Rather than choosing to prescribe a certain type of community energy, REDII aimed to appreciate its “panoply of different interpretations” (Creamer et al., 2019; Walker & Devine-Wright, 2008b) and openness, while at the same time defining certain key principles, such as autonomy, effective control and proximity. For the EU, this move towards decentralization will boost renewable energy but also enhance energy efficiency, investments, and public acceptance of renewables. Yet, this openness of meaning is now thought to be encouraging the co-option of the concept by commercial interests (Roberts, 2022). As a critical response to this, Taylor Aiken (2016) has proposed the concept of “phatic-community” to describe instances when the qualifier “community” is used as a symbolic gesture empty of any real practical content.

Critical researchers have also begun to question whether RECs are currently being informed by neoliberal or communitarian ideologies (Kumar & Taylor Aiken, 2021; Laes & Bombaerts, 2022; Taylor Aiken, 2018), reawakening the debate on what “community” means in the context of

community energy (Walker et al., 2022). On the one hand, community energy is often viewed as an opportunity to counter neoliberal energy governance, viewed as a withdrawal of state through the privatisation of previously state-owned energy assets. On the other hand, it is sometimes argued that community energy initiatives “are as much *part of* neoliberal governance as they are a response to it” (van Veelen, 2019).

2.3.4. The mediation of energy futures: expert intermediaries and the press

The previous chapter defined mediating systems as situations where the interaction between institutions and the public becomes routinized or “conventionalized”. Following this definition, the most commonly researched mediating system in energy transitions research is the study of “intermediaries”. In the broadest sense, this term is used to refer to “actors who enable and foster the exchange of knowledge and skills; and who connect, and mediate between different actors in order to support innovation and learning” (van Veelen, 2019, p.117; Geels & Deuten, 2006; Hargreaves et al., 2013; Kivimaa et al., 2020). Intermediaries are thus seen as performing “relational work”, enabling local knowledge to be transformed into global knowledge and vice versa (Barnes, 2019; Geels & Deuten, 2006). These functions can be performed by a range of different types of actor, such as industry associations, public bodies, non-governmental organizations or consultancies (Busch et al., 2021).

While the essential feature of intermediaries is usually seen as their spatial “in-betweenness” rather than their specific form of expertise (van Veelen, 2019), the approach developed in the previous chapter instead emphasises the dialogical meaning-making practices of intermediaries. Viewing intermediaries as actors who mediate between institutions and the public by negotiating between different conventions and representations has two consequences for the design of research on intermediaries. On the one hand, it refines the object of analysis to specifically examine the way that intermediaries communicate novel and complex ideas to “the public”. On the other hand, it widens the scope of actors who can perform this function, as it is often private energy companies, for example, which are the first point of contact for the public for energy issues. This is another way of approaching the question, studied by van Veelen (2019), of how intermediary spaces are shaped, which she posits as “fundamental for understanding whose vision for a low-carbon transition is enacted” (van Veelen, 2019).

The mainstream news media also play a key role in mediating energy imaginaries and publicizing new laws. Indeed, the analysis of media representations of climate change, energy transitions, and related environmental issues is a growing field, with much of this research showing that the press predominantly aligns on the imperative for a renewable energy transition (Gkiouzepas & Botetzagias, 2017). More specifically, research on energy transitions in the media has explored the discourse surrounding the deployment of renewable energy technologies and infrastructure (Batel, 2020b). Objects of analysis include controversies over wind farm siting (Hindmarsh, 2014; Holstead et al., 2017), bioenergy development (Zschache et al., 2010; Skjolsvold, 2012), and smart meter deployment (Peters et al., 2018; Hielscher & Sovacool, 2020). Additionally, the media framing of energy innovations, particularly their risks and benefits, is an emerging focus (Ganowski et al., 2018; Chen & Rowlands, 2022). Furthermore, recent research, has highlighted the impact of media on shaping expectations around new technologies. Kriechbaum et al.'s (2018) study of photovoltaic technology in Germany and Spain illustrates how media coverage can influence public perception through creating and maintaining “hype”. Magnusson et al. (2021) found a predominant use of “social frames” in the media to describe “grassroots energy initiatives”, particularly in Denmark, reflecting a strong community energy culture.

Two main assumptions underlie most media research on energy transitions. First, media as a reflection of public sentiment towards, or “social acceptance” of, new technologies (e.g. Romanach et al., 2015); second, critical approaches examine the media's role in constructing common sense meanings, showing how they are often aligned with vested interests (e.g. Gamson & Modigliani, 1989; Krohn & Damborg, 1999) and shaping public awareness of energy trends, influencing policy and, ultimately, affecting the adoption of new technologies. However, the majority of the analyses of energy transitions in the news media has not focused on the discursive construction of meaning through the representation of self-other relations. Concepts like sociotechnical imaginaries (Hirt et al., 2022), “storylines” (Hielscher & Sovacool, 2020), and “frames” have illuminated various nuances and dynamics but there is a notable gap: the role of power relations, expectations, and moral orientations in the process of meaning-making and communication. There is, then, a need to delve deeper into the actual processes of meaning-making in the media.

2.4. The eight worlds in the interaction between institutions and everyday life

Following the distinction made in Chapter 1 between institutions and conventions/representations, this section will discuss how the dimensions of energy transitions so far mentioned – laws/policies,

expert intermediaries, the press and the public – have been represented in social sciences’ energy research literature so far by drawing upon diverse orders of worth, as well as other social representations, conventions and regimes of engagement. Other researchers are beginning to use these concepts for similar purposes. For example, Cowell & Devine-Wright’s (2018) use of the orders of worth framework in their study of the design and implementation of public participation and energy infrastructure planning policies led to the insight that,

“It is not simply that government is enacting a desire to depoliticize decisions; actions are also a reflection of the uneven extent to which practices that affect the engagement of publics are believed to work or to be legitimate or desirable, and there are limits to this in the energy field, sometimes requiring new apertures for local participation or national political representatives” (Cowell & Devine-Wright, 2018, p.513).

At the same time, the broader conventionalist perspective can be used to consider how institutions are shaping energy practices and how institutions are made sense of in everyday life, as is explained by Rommetveit et al., (2021):

“These legal and institutional dimensions effected a displacement of engagement and justification that, we claim, remains insufficiently accounted for in existing research. We include the concept of regimes of engagement to capture the diverse ways in which energy users make sense of and deliberate about energy. Furthermore, we argue that such regimes are reconfigured, mediated, and prefigured by powerful institutions, technologies, and innovation actors.” (Rommetveit et al., 2021, p.479).

In the following, then, the plurality of worlds theorised in pragmatic sociology will be used to review some of the key energy social science literature on the relation between institutions and the public. This will be done at the level of energy transitions in general, as well as a more specific focus on how RECs have been represented. The latter will build upon Laes et al., (2023), who have hypothesised how RECs might be anchored in the different orders of worth.

2.4.1. The industrial world

In recent years, a significant amount of research has shown how energy transitions are mainly being pursued by nation states in a technocratic way and legitimized by discourses of “growth”, “development” or “modernization” (Bergius & Buseth, 2019; Haddad et al., 2022; Kim, 2017;

Shear, 2010; Wanner, 2015) and the pursuit of “techno-economic fixes” (Genus et al., 2021; Levidow & Raman, 2020). Underpinning all of these discourses is certain key social imaginary significations of modernity (Castoriadis, 1990), namely, the human capacity to reason and the expectation of ever-increasing mastery of nature (Wagner, 2012). In the framework of Boltanski & Thévenot (2006), these ideas belong to the *industrial* world. From this perspective, justifications are usually made on the basis of increasing the *efficiency* of processes and contributing to scientific and technological *progress* for the benefit of all. Thus, *industrial* arguments tend to refer to technical performance and emphasise *expertise* as a basis for achieving excellence in system management and design. Imagining RECs in the *industrial* world, Laes et al., (2023) state that,

“Industrial justifications of energy communities invoke the benefits they can bring for a more efficient energy system management, such as avoiding congestion on local grids or providing flexibility to the system by adapting demand to renewable energy supply on a local community level” (Laes et al., 2023, p. 52).

Beyond this, the logic of *industrial* worth can also be seen in that REDII formalizes and broadens the concept of energy communities to align with wider energy and climate objectives. The aim, therefore, is to “scale up” community energy initiatives and there is a growing volume of research which is attempting to find ways for this to be done (Petrovics et al., 2022; Schmid & Taylor Aiken, 2023). This raises questions about what is lost when locally distinct practices are generalised and exported to other contexts (Geels & Deuten, 2006; Voß, 2015).

As was noted above, the role of scientific knowledge is essential to the rise of new policy discourses and paradigms and this also applies to the notion of REC. Social scientific disciplines such as social psychology, geography and innovation studies have had a key role in shaping the policy discourse around RECs (Debourdeau & Nadaï, 2019). Specific approaches to the study of socio-technical change, such as “Transition Management” and the “Multi-Level Perspective” seek to help develop efficient policies, especially on the European scale (Shove & Walker, 2007). These types of knowledge tend to represent local communities as instruments or tools for public action, with the aim being to replicate and upscale them as widely as possible, in order to transform sociotechnical regimes and landscapes, usually within a logic of “sustainable development”. But they also do so in a highly normative way, often conveying very specific ideas about what a community is or should be (Schmid & Taylor Aiken, 2023).

The two faces of the industrial world – on the one hand, the common good justification of efficiency and planning the future for all and, on the other, the pursuit of the plan for its own sake – have been well demonstrated by research on the sociotechnical construction of “energy security” as a central goal of energy governance. This goal is generally accepted as a *public* issue because it is justified by the need to “keep the lights on” and underlying social representations of comfort, safety and progress (Bridge, 2015; Groves, 2017). However, through the mediation of dedicated administrative bodies and expert practices of “demand forecasting” and its associated socio-technical apparatuses (Groves, 2017), this goal can quickly become abstracted from its context and pursued in isolation, not only from other goals such as “energy justice”, but also from its generative representation of the good life, built into the model as the expectation of economic growth and, thus, increased demand.

Through this circular logic which turns possibilities into probabilities (Groves, 2017), a “narrative” or “path” of necessity (Castro, 2019b; Owens & Cowell, 2011) is constructed which is used to legitimate the further development of new energy infrastructures. The increase in electricity demand is represented not as a socio-political *choice* but, “as an independent variable subject to *natural laws* inferred from past data” (Groves, 2017, p. 34, italics added). This process demonstrates how the *reification* of the energy future is both psycho-social and socio-technical. As Groves (2017, p. 34) states, “if abstracting makes comparison between different future outcomes possible by constructing a space of possibilities, emptying makes possible a series of choices that might change this space of possibility, thus superimposing new maps of the future over old ones”. Similarly, Brondi et al., (2014) have described the discursive strategies that policymakers use to maintain the desirability of a traditional centralized energy system with top-down governance and large-scale production sites controlled by experts. In particular, a configuration of representations of energy as a *strategic resource* and of the public as *disruptive* “energy citizens” (Brondi et al., 2014) acts as a “short circuit” which displaces alternative possibilities and maintains business-as-usual.

In addition, the *regime of the plan* can also pre-figure the representations and actions of intermediary actors such as renewable energy developers. This is demonstrated particularly well in Rudolph & Kirkegaard’s (2019) study of the implementation of wind energy in rural Denmark, where developers not only represent rural areas as empty and in need of development but also by *forecasting* further decline based on negative stereotypes of place and the public. Thus, this is done

through the use of reification as a communicative format or what Groves (2015) has described as the *colonisation of attachment*, a “failure or refusal on the part of developers and decision makers to recognise constitutive values.” It is easy to understand, then, why claims of injustice in the context of the deployment of renewable energy infrastructures are most commonly aimed at the industrial world and its pretensions to mastery and instrumental rationality. The news media has also been shown to play a key role in mediating these technocratic discourses of the energy future to the public, giving voice to the perspectives of experts and industry elites (Hirt, 2024; Valqueresma et al., 2024).

Lastly, to demonstrate the symmetry of the orders of worth perspective, the *industrial* world is also important in everyday life. Several studies have pointed out that protestors in environmental conflicts use the public good of efficiency as the basis of their arguments (Botetzagias & Karamichas, 2009; Lafaye & Thévenot, 2017), often deploying their own technical expertise to counter the claims of institutions (Delicado, 2013; Pereira et al., 2018). The concept of the *regime of engagement in a plan* has also been used to describe how people reason about their experiences with smart energy devices, describing the need to “stay in control” amidst the threat of dystopian automation and discussing probable future investments (Ballo & Rommetveit, 2023). Indeed, as described in the previous chapter, engagement in the regime of the plan is often conceptualised in relation to agency (Thévenot, 2007) and is therefore also important in other *worlds*. However, just as “top-down” plans can colonise peoples’ place-attachments, the uncertainty that results from energy infrastructure proposals – especially when accompanied by a lack of information or consultation – often makes it impossible to plan the future (Batel & Küpers, 2023).

2.4.2. The market world

In the *market* world, human action is motivated by the desire for gaining wealth or advantage through commerce. Order and social coordination arise through the market and dignity is positioned as the capacity for self-interested behavior and a desire for private property. Perhaps the order of worth that is least associated with energy communities, Laes et al. (2023) suggest simply that the *market* justification of energy communities rests “on the novel profitable business models enabled by them” (Laes et al., 2023, p.52).¹ Thus, it will be important to explore if energy communities are being imagined and justified with the market order of worth in novel and unanticipated ways.

From a critical perspective, market justifications are often seen as the basis of a *neoliberal* regime of energy provision (Wanner, 2015). While neoliberalism is notoriously difficult to define (Wacquant, 2012), its most common usages in political philosophy refer to a doctrine based on the premises of privatization (i.e., the expropriation of common goods), valorising private enterprise, creating markets, and shaping the state apparatus based on a private enterprise model (Harvey, 2005). These arrangements are criticised on the basis that they lead to economic inequalities and treat energy as a commodity (Devine-Wright, 2006).

Neoliberalism is also associated with certain social representations about how one ought to live. An idea of a rationally calculating, choosing and strategizing individual is usually seen as the key premise of neoliberal conception of the human being (Teo, 2018; Batel et al., 2016). From this perspective, the ideal neoliberal subject – the entrepreneurial or enterprising self (Foucault, 2008) – would be at the heart of the *market*-based imaginary of energy communities. Pragmatic sociologists have conceptualized the future-orientations of this neoliberal self in terms of *the regime of the plan* and the economy of contracts.

Energy imaginaries centred upon the market order of worth entail the creation of new “subjectivities”, ways of understanding the self that are commensurable with neoliberalism. Examples of this in energy provision include the roles for the public that were made available and promoted by the liberalization of EU electricity and gas markets and privatization of state-owned energy companies, namely the notion of the rational consumer who has the right to switch energy supplier in pursuit of the best price (Lennon et al., 2020; Nguyen & Batel, 2023). Thus, in addition to the re-asserting the hegemony of technocratic forms of decision-making, one of the consequences of the neoliberalization of energy provision is the ascendancy of the *contract form* as the primary way of regulating relations between people. Along with the logic of profit-seeking opportunities, this type of arrangement reinforces the short-term future-orientations of the market order of worth. The primacy of the market order of worth is also seen in studies on people’s “willingness to invest” in distributed renewables, such as RECs, which typically mobilise concepts and research instruments derived from neoclassical economics, such as cost-benefit analysis and discrete choice experiments (Sousa et al., 2023; Ovaere, 2023), where communities are conceived of as an aggregate of individual investors (Brauwer & Cohen, 2022).

As has been shown by Fearn (2023) and Helm (2002), the neoliberalization of energy markets has largely been a failure as a result of its internal contradictions. Throughout the 1990s, the idea

of minimizing government involvement in energy markets and restricting their regulatory power was considered advantageous and aggressively pursued in a number of countries. However, this approach faced significant issues. The market-based regulatory system, which neoliberals claimed would yield the best outcomes, proved ineffective due to challenges in fostering competition. Moreover, consumers did not act as ideal entrepreneurial agents; only a small fraction actually switched suppliers to find the best deals. The variety of tariffs became overwhelming, leading to the rise of a new platform-capitalist industry dedicated to facilitating price comparisons between companies.

2.4.3. The civic world

The civic order of worth is built on notions of membership in a political community, with equality in membership and regulated conditions of access. Individual compliance with the general will is the basis of stature, based on an innate capacity of people to “have access” to this general will which defines rights and duties through forms of free political association. These notions have been influential in energy policy in a number of ways, including in the construction of electricity networks which link urban and rural populations and in welfare state models of “social” energy tariffs (Huhta & Reins, 2023; Kumar & Taylor Aiken, 2021; Poupeau, 2007).

In more recent years, there have been two main *civic* visions of the energy future. On the one hand, there are those visions based on the discourse of “just transition” and which argue for a *fairer* energy transition (Bailey & Darkal, 2018; Goldthau & Sovacool, 2012; McHarg, 2020) and, on the other hand, there are visions based on the ideas of “energy citizenship” and “energy democracy” that argue essentially for increased citizen *participation* in the energy transition (Szulecki, 2018b; Wahlund & Palm, 2022). These discourses are by no means mutually exclusive, but they are often prioritised by different groups and can amount to divergent goals and proposals. One way of differentiating them is in terms of their scale and in their relationship to the State.

The idea of a “just transition” originated in the trade union movement as a response to the detrimental effects on coal-workers that a transition to renewable energy would have (Dunphy & Lennon, 2023; Stevis & Felli, 2015; A. Thomas, 2021). In their study of energy imaginaries in Portugal, Carvalho et al. (2022) show how a “just transition imaginary” generates arguments for state intervention and the need for strong social policies that can protect fossil fuel workers and

low-income families, with the issue of energy poverty at the forefront. This is the argument of Healy & Barry (2017):

“A just transition could require that the state intervene more actively in the political economy to create jobs in “green” sectors, in part to compensate for now-abandoned fossil-fuel-based sectors, and that state and capital (and those more able to pay higher associated taxes, for example) absorb carbon capitalism's negative social externalities, and provide a welfare safety net and adequate compensation for people and communities that have been marginalized or negatively impacted by a low carbon energy transition” (Healy & Barry 2017, p.455).

Thus, demands for a “just transition” seem to depend on what Salais (2023) calls the convention of the “external State,” i.e. an underlying representation of a *centralized* state-led energy transition, and to a delimited set of injustices, mainly around the rights of workers.³ On the other hand, *energy citizenship* discourses are usually based on a representation of a “situated State” (Salais, 2023) which will facilitate a citizen-led *decentralized* energy transition (Nguyen & Batel, 2023). At a deeper level, the difference between these two civic discourses is that one focuses more on the question of *representation* while the other focuses on the question of *citizenship* – both of which are at the heart of what Wagner (2012) calls the “political problematic” of modernity.

The discourse of *citizen participation* seeks to redefine the role of the energy consumer into an active and empowered energy citizen who can produce and consume their own energy, but who can also take part in collective decision-making (Wahlund & Palm, 2022). Thus, it is predominantly with this *civic* discourse that RECs have been anchored and, thus, often proposed as a way of managing energy systems that is distinct from both state intervention and market systems (Moroni, Antoniucci, et al., 2019). Indeed, Heldeweg & Saintier (2020) note that REDII’s proposals for RECs are shaped by the principles of “associative democracy” (Hirst, 1994), while others claim that they are heavily informed by the values of the International Cooperative Alliance (self-help, self-responsibility, democracy, equality, equity and solidarity). Likewise, Laes et al. (2023) state that,

³ Though more recently there have been increasing academic attempts to expand its meaning towards a more “holistic” conception of justice (see McCauley & Heffron, 2018).

“Civic values are commonly mobilized in support of energy communities, for instance, in the broad claim that they support ‘energy democracy’, as well as in the justification for certain decision-making procedures in energy communities, for instance, the ‘one-member-one-vote’ rule implemented in energy cooperatives” (Laes et al., 2023, p.52).

This definition is ostensibly promoted in REDII, with the central principles of “open and voluntary participation”, “effective control” and “autonomy”. Thus, rather than generating excitement through the representation of technological novelty, *citizen participation* discourses attempt to stimulate people by creating expectations of increased *autonomy* and *empowerment* (Chiapello & Fairclough, 2002).

Indeed, these are the central ideas in much of the discourse on community renewable energy. Similar to the observation made above of the industrial world, *empowerment* can be oriented towards both a personal and common good (Ewart, 1991). As Parkhill et al. (2015, p.61) state, it refers to “both a sense of personal control and power to effect change, and to a group’s ability to control community resources, engage in collective decision-making and achieve shared goals”. Underscoring the importance of the *regime of the plan* to both personal and collective empowerment, these authors also demonstrate the importance of a *shared vision* when it comes to community energy initiatives (Parkhill et al., 2015). In their apparently most radical vision, then, RECs are viewed as a means to regain control over the energy system, promoting energy democracy both internally within a collective and externally as a counterbalance to the dominance of incumbent energy companies (Coenen & Hoppe, 2022). Thus, it can be said that a certain representation of RECs – understood as “communities of interest” (Dudka & Magnani, 2024; Mihailova et al., 2022; Moroni, Alberti, et al., 2019) – are bound up with a relatively *new* articulation of civic worth insofar as they seek to enable “the recovery of a universalistic model of citizenship after the crisis of welfare capitalism regimes” (Barbera et al., 2018) and challenge the hegemony of neoliberal forms of citizenship.

It is important to point out that there are two essential tensions in this civic discourse of empowerment. The first is based on the opposition between “top-down” and “grassroots” forms of change (Horvath, 1999; Parkhill et al., 2015). This tension can largely be mapped on to the already noted differences between visions of a “just transition” and a “decentralised transition”, associated with the conventions of the external and the situated state respectively (Salais, 2023). The second tension, however, is at the heart of the question of citizenship. That is, it is based on the fundamental

uncertainty about the relation between *individual* autonomy (freedom from constraint, or freedom from domination) and *collective* autonomy (democracy; Wagner, 2012). As forms of energy citizenship, both types of autonomy are in opposition to the hegemonic *industrial-market* regime of energy provision which views the citizen as *passive*. However, it has also been shown that the principle of autonomy is increasingly anchored in the same underlying imaginaries and neoliberal capitalist economic logics (Coy et al., 2023; Lennon et al., 2019). One way this has been happening is by prioritising *individual* autonomy at the expense of *collective* autonomy by treating “energy citizens” in an individualistic way which paradoxically views them as both rationally calculative economic agents and as passive users of technology (Strengers, 2013; Nguyen & Batel, 2023).

Despite these tensions, attempts have also been made to articulate a *civic* vision of the energy future which addresses both the questions of political representation and participation, as well as the fundamental *economic* questions posed by modernity (Wagner, 2012; e.g. Routledge et al., 2018; White, 2020). In particular, the dominant meaning of energy itself is criticised as a choice between *commodity* and *strategic resource*, that largely excludes the possibility of energy as solely a *social necessity* and its provision being seen as a common good and a fundamental right (Aronson & Stern, 1984; Daggett, 2019; Devine-Wright, 2006). This is linked to the questioning of economic growth as a measure of the common good, and new proposals for an economic policy based on the idea of *degrowth* (Dunlap & Laratte, 2022; Kerschner et al., 2018; Kunze & Becker, 2015; Rommel et al., 2018; Vandeventer et al., 2019). Importantly, this emerging imaginary of the energy future is generated also by the meanings and objects of the *green* and *domestic* worlds.

2.4.4. The domestic world

Research on sociotechnical imaginaries has often emphasized their tendency to be constructed and mobilized by nation states (Hirsch, 2020; Jasanoff & Kim, 2013). These imaginaries are mainly generated by notions of national *development* and *progress* that belong to the industrial and the civic worlds, but they also frequently draw upon symbols of national *sovereignty*, *identity* and *security* which belong to the *domestic* world (Berling et al., 2022; Felt, 2015; Kim, 2017). Moreover, while a purely *industrial* representation views energy transitions as autonomous from politics, and a *civic* representation holds them accountable to the public, the *domestic* representation of energy transitions is that they should be used for nation building and national security in an ethos of “technological self-reliance” (Kim, 2017). This anchoring of imagined

energy futures in the *domestic* world facilitates their mediation between institutions and everyday life. As is shown by Felt's (2015) study of anti-nuclear imaginary in Austria, *domestic* representations are mediated particularly well through public performances by politicians which "become deeply etched in the nation's collective memory" (Felt, 2015, p.110), mainly because they create a sense of *shared belonging* and cultivate public *trust* in institutions.

However, imaginaries of the energy future in the *domestic* world are not exclusive to technonationalist projects. The reference to heritage, communal identity, relations of closeness, familiarity, and habits facilitates particularly well representations of the energy future which foreground smaller social units such as the family and local communities, and they can be imagined in the same way as have been the nation state. As Rommetveit et al. (2021) state, "the home is the paradigm of the regime of familiarity" and is particularly important to imaginaries of energy and energy transition which centre upon people's everyday consumption practices and how they are attuned to their personal environments through relations of care and dwelling (Groves, Shirani, et al., 2021; Jasanoff & Simmet, 2021; Pink & Leder Mackley, 2016). Thus, visions of the energy future which involve new technologies often prophesise processes of *domestication*.

Beyond the figure of the home, there is now an abundance of energy social science research on people's "place-attachments" and "place-identities" (Devine-Wright & Peacock, 2024). These concepts are constructed in opposition to the NIMBY (Not In My Back Yard) interpretation of negative responses to large-scale energy infrastructures, a discourse which can be seen as belonging to the *industrial* world, insofar as it is tacitly based on a *deficit* model of public knowledge (Devine-Wright, 2006), but also de-contextualises or "empties" the lived experiences and plural meanings of community and place. This academic perspective emphasises that, contrary to the perspective of the *industrial* world, local (and, particularly, rural) places are the sites of diverse and meaningful practices which are tied up with community well-being. As has been shown in the literature on community energy, shared place-attachments can often be the basis of imagined energy futures (Chateau et al., 2021; Cherry et al., 2022).

However, there is a distinction between these shared place-attachments and their representation by the *domestic* order of worth (see Chapter 1) which is vital to understanding the manifold transformations that everyday notions of "the local" and of "place" are subject to when they are taken up as a policy discourse and institutionalised. With some irony, then, the *domestic* order of worth has been used to represent the plurality of place meanings and community energy practices

with the rise of “localism” (Amin, 2005; Catney et al., 2014; Geoghegan & Powell, 2009) and “neo-communitarianism” (Davies, 2016; Fyfe, 2005; Jessop, 2010) as public policy discourses. As was seen in the United Kingdom in the mid to late 2000s, these discourses reflected a shift in focus towards community-based initiatives which viewed the voluntary sector and local participation as a mode of government, situated between the market and the state, which could foster economic development and social cohesion. While claiming to be oriented to “the local”, this approach was accused of smuggling in *industrial* and *market* values of professionalism and economic rationality over grassroots participation (Fyfe, 2005).

From this perspective, “community energy” is less an actual concrete entity and more a rhetorical tool of a localist imaginary (Debourdeau & Nadaï, 2019). Indeed, in EU policy documents and public statements, discourses of localism and communitarianism are seemingly at the heart of the concept of “energy community”. As Laes et al, (2023) state,

“Applied to the case of energy communities, we can see that the argumentation that such communities can contribute to the establishment or tightening of local social bonds by bringing community benefits through cooperation is central in the EU discourse on the topic” (Laes et al., 2023, p.52).

Thus, in addition to the *civic* principles of energy communities listed in section 2.4.3, RECs also have the additional requirement that they are controlled only by members that reside in *proximity* to the projects owned and developed by the community.¹ Thus, as a publicly performed vision of the energy future, the *domestic* order of worth is typically deployed in combination with the *civic* order of worth with the effect that collective autonomy is *essentialised* or *naturalised* as based in *local* communities, or as “communities of place” rather than as “communities of interest” or a “national community”.¹ Without a compromise with the *civic* order of worth, a purely *domestic* representation of the energy future might be oriented more towards a return to traditional ways of living that involve shunning modern technologies and reducing energy consumption, and valuing the local bonds between people as an end in itself rather than as a means to “empowerment”.

2.4.5. The inspired world

While imaginaries based on the industrial order of worth emphasise the importance of continuity, stability and economic growth (Yang et al., 2018), researchers have also found that discourses of transformation and excitement, usually the preserve of the private sector, are increasingly being

used in energy policy and sustainability debates (Blythe et al., 2018). One example of this is seen in the renewal of the notion of “revolution” which has been facilitated in the last decade by the emergence of new digital technologies, but also by the implicit horizon of the expectations, constitutive of the *inspired* order of worth, which prophesizes an imminent *break* or “tipping point” in the energy transition. It is this expectation that underpins Jeremy Rifkin’s (2016) vision of a “third industrial revolution” which has been seen as the origin of the notion of the “Green New Deal,” a policy agenda to *create* a green economy out of the ruins of the fossil fuel infrastructure (J. Green, 2022; Schneider et al., 2022; Trincado et al., 2021):

“At this critical juncture in history, the Green New Deal story lines need to be put together in a coherent economic and philosophic narrative that can create a sense of our collective identity as a species and bring humanity into a new worldview, giving us a glocal heartbeat. Absent the story, all the ideas get lost in a jumble of items, none of which connect to the others. Every idea becomes fought-over non sequitur, sapping us of the strength for the imaginative leap needed to take us into the next era of history” (Rifkin, 2019, p.211).

This agenda aims to strategically recuperate past imaginaries of societal progress objectified in the notion of “New Deal”, while also *affectively* engaging the reader via images of collapse (Brozović, 2023; Meadows et al., 1992). The main point here is that this narrative is pre-figured by an *inspired* orientation to the future which values the role of imagination, stories and visionaries in driving change. This orientation is shared by much of the research on energy futures which uses concepts such as imaginaries and storylines, which can thus also be said to be implicitly mobilizing the *inspired* order of worth insofar as they attribute ideas with the main role in shaping socio-technical changes, rather than also examining the role of practices, structures, power relations, institutions and technologies (Jasanoff & Simmet, 2021; see Ruotsalainen et al., 2017 as an example).

However, Rifkin’s imagined future also shows (and, indeed, explicitly argues) that the most influential and powerful visions weave together into a coherent narrative a variety of representations and conventions – including, in the case of the Green New Deal, a convention of the external and interventionist Keynesian state (Salais, 2023). This pragmatic versatility is a discursive strategy often associated with the *projective* order of worth. Indeed, Rifkin’s critique of a fragmented battle of ideas that leads to an array of siloed local projects can be interpreted as a

projective critique of the *inspired* and *domestic* worlds (see Boltanski & Chiapello, 2018; and section 2.4.8. below).

In the commercial arena, the *inspired* order of worth is also seen in the significant and sustained “hype” about “smart” energy technologies which promise to decentralize how energy is generated and automate how it is distributed and consumed, increasing efficiency and decreasing resources use whilst at the same time creating exciting new markets (Ballo, 2015; Rommetveit et al., 2021; Strengers, 2013). Beyond this promise of new efficiencies and profits, a key characteristic of these energy futures, however, is that they seem to fetishize change and the future, i.e. discontinuity from the past is viewed as valuable regardless of what the future will be. Bringing to mind SRT’s notion of reification as a discursive strategy, Schiølin (2019) has conceptualised this as *future essentialism* – a “colonization of the future which provides no real alternatives to the imagined future” and which depends on “fixed imaginaries of the past”.

Analyses of these types of imagined future usually focus on how they are constructed first by corporate and technological elites before being mediated to the policymakers and the public. Schiølin (2019), for example, shows how in the promotion of the “fourth industrial revolution”, elite experts used three discursive strategies – a “dialectic of pessimism and optimism”, “epochalism” and “inevitability” – to persuade policymakers. Subsequently, Vicente & Dias-Trindade (2021) have examined how this same imaginary has been mediated to the public via the mainstream press in Portugal, finding that it has “been essentially crystallising corporate opportunities, centred in the world of business and state administration and its experts” (Vicente & Dias-Trindade, 2021, p. 717). Thus, again, this shows that the *inspired* order of worth is typically used more as rhetoric to attract attention and stimulate enthusiasm about representations of the future that are anchored more strongly in other orders of worth. Importantly, this rhetoric can also function to obscure alternative possibilities and narrow the focus on a particular scale (e.g. national economy) with the consequence that potential effects at other scales (e.g. the planetary or the household) are removed from public conversation.

Thus, while it is evident that the *inspired* order of worth has not been constitutive of institutions in the same way as the other orders of worth have been, it is clear that it has important function as a symbolic resource to *stimulate enthusiasm* and create productive *expectations* (Beckert, 2016; Chiapello & Fairclough, 2002). This is also increasingly the case with the concept of energy communities. As Laes et al., (2023) state,

“The claim that a widespread adoption of energy communities will lead to a ‘revolution’ or ‘radical transformation’ of the energy system with yet still unknown (but intuitively positive) consequences is a good example of inspirational justification” (Laes et al., 2023, p.53).

In other words, the *inspired* order of worth is used less to represent and test what energy communities are than it is a way of rhetorically relating them to the broader energy landscape and to creating expectations of imminent change. Thus, *industrial* plans for *upscaling* energy communities might be accompanied by the rhetoric of “revolution”, even if this is perpetuating hegemonic logics of growth and expansion. This conflation of the industrial and the inspirational is evident in studies of “strategic niche management” which presuppose that local energy cooperatives are inherently oriented to “radical innovation” (Hufen & Koppenjan, 2015).

However, there are also ways that the inspired world is playing a more concrete role in the realisation of energy futures. Just as eschatological futures serve important ethical purposes by providing moral guidelines about how to act in the present (Stackhouse, 2007), the inspired order of worth can become an effective means of subject formation (Schiølin, 2019). Like each of the other worlds, the world of inspiration also has an idealised subject as the passionate, curious and creative visionary who breaks from the habits of everyday life. In the context of energy transitions, this *inspired* subject can be seen in the notion of the “early adopter” – a segment of consumers often portrayed as “idealists and enthusiasts” who are “less concerned with cost and performance” (Bergman et al., 2017). Thus, more than simply engaging in the rational behaviour or the engagement in a plan of “Resource Man” (Strengers, 2013), the ideal early adopter of energy innovation engages in a *regime of exploration* because they are willing and capable to try something new, to experiment with the unknown and to become “testers” (Cardullo & Kitchin, 2018).

Again, this representation of an *inspired* subject is objectified in, and implicitly promoted by, scientific research which use social practice theories to show the “emergent, generative and creative” dimensions of everyday consumption (Pantzar & Shove, p. 149; Hobson, 2013). More than mere rhetoric, then, this representation of the *inspired* subject can become institutionalised in policy and realised by intermediaries who aim to shape the environment into forms that are amenable to this type of engagement (Soutar et al., 2022), for example in the establishment of “experimental zones” and “technological incubators”. In the absence of the state, intermediaries

themselves can be expected to engage in a “profound form of sensemaking characterized by a willingness to interrogate and reconfigure their existing routines and frameworks,” as Valdez et al., (2019) find in their research on imaginaries of electric vehicles. Moreover, in these contexts the distinction between intermediaries and citizens is often blurred, with early adopters typically seen as male (Hansen et al., 2022), highly educated and oriented to learning via active participation in intermediary spaces such as internet forums (Hyysalo et al., 2018).

2.4.6. *The world of fame*

Imaginaries of the energy future often emphasise the value of becoming “the first” to implement a new technology or of being a “pioneer” of the energy transition. These kinds of discourses are widespread in policy documents and in the media (Valqueresma et al., 2024). One example of this is seen in the notion of the UK’s industrial policy concept of “SuperPlaces”, which consistently emphasizes the positive reputational value that can accrue, both to the country and to the particular regions, by being the host of “world-leading” energy industrial clusters which will be “envied around the world” (Devine-Wright, 2022).

Though it is often unacknowledged in empirical research, these visions of the energy future are at least partially justified by the *fame* order of worth, in which various entities (people and things) are valued according to the (expected) judgements of their (imagined) public audience. This order of worth is highly relevant to the emerging discourse around energy communities. As Laes et al (2023) point out,

“A good example [of the fame order of worth] in the context of energy communities is the claim that community ownership of local renewable energy infrastructures generally leads to higher public acceptance and more favorable opinions towards renewable energy in general” (Laes et al., 2023, p.52).

This justification was frequently seen in speeches given by EU Commission officials around the time of the publication of the Clean Energy for all Europeans package (European Commission, 2019). At the Citizens Energy Forum, the then President of the Commission, Jean-Claude Juncker, stressed the importance of providing an enabling framework for energy communities because “they increase public acceptance of the energy transition” (European Commission, 2018, June 5). At the Euroactiv conference on the future of the European Internal Energy Market two months later, Vice-President Maroš Šefčovič, who was in charge of the Energy Union, stated: “we believe that this

new framework should provide a solid legal basis for more consumers to invest in renewables generation and to increase acceptance, from NIMBY to PIMBY” (European Commission, 2018, October 18). Likewise, in 2021, the new President of the Commission, Kadri Simson, affirmed that “decentralised production, self-consumption and energy communities have significant potential in terms of emission reduction, the affordability of energy, job creation and public acceptance of renewable projects.”

The notion of acceptance at the center of these expectations is based on the notion of “public opinion” and, thus, a social representation of the public as audience or crowd which is predominantly associated with political science and in the “official” representations of the state (e.g. via polling). This “investment in form” (Thévenot, 1984; see Chapter 1) allows for “public acceptance” to be quantified and predicted, generating expectations and models of a linear growth in acceptance (e.g. Ribeiro et al., 2018). This representation of the public also plays an important role in the public engagement strategies of renewable energy companies (Ryder et al., 2023).

From this position, RECs are expected to generate acceptance in two interrelated ways. First, there is the almost self-evident notion that, through direct participation in RECs people will develop a more favorable attitude towards renewable energy in general (Bauwens & Devine-Wright, 2018). Secondly, the notion of “public opinion” as a proxy for acceptance leads to the assumption that the publicity from energy communities creates a *positive image* for renewable energy more broadly (Lagendijk et al., 2021). From this perspective, the concept of Renewable Energy Community is valued in the same way as a *brand image* is, and like all good brands they allow their holders to accrue status and good standing.

The value of *public opinion* for energy futures is also seen in analyses of “hype” as entailing discursive strategies by which energy futures that are constructed and legitimated by policy actors or techno-scientific actors are mediated to the public by private companies (Hockenhull & Cohn, 2021). Boltanski & Thévenot (2006) state that the world of fame is particularly vulnerable to critique, and this is unsurprising considering that “overpromising” has been identified as key feature of decarbonization hype strategies (Frisch, 2023). The vulnerability of *fame* as a justification is also seen in contemporary criticisms of “greenwashing” (Nyberg & Wright, 2012). In these cases, the critique is founded on the suspicion of instrumentality – of using the worth inherent in one world to attain benefits in another (see Taylor Aiken et al., 2022; Schmid & Taylor Aiken, 2023).

2.4.7. *The ecological world*

Since they are today predominantly a response to the climate crisis, the ecological world might be thought to be the most relevant to the object of energy transitions. The idea of “renewable” energy is often seen as inherently ecological in comparison to the industrial significations of fossil fuels. However, as described in Chapter 1, from the perspective of pragmatic sociology, nature can be anchored, objectified, and valued in a plurality of different ways. Thus, as Jasanoff & Simmet (2021) have shown, the term “renewable” is easily anchored in material and technological significations rather than socio-political and cultural ones, thus excluding ideas and practices of *renewal* that long predated the arrival of renewable technologies.

Studies from this perspective, as well as from that of SRT (e.g. Batel et al., 2015; Batel, 2020), have shown how people often value nature in terms of “natural beauty”, “natural heritage” or “sustainable development”. Departing from this, the new *green* order of worth (Thévenot et al., 2000) is based on principles of renewability, future generations and the planet as an integrated ecosystem. As noted by Blokker (2013), however, green justifications can be difficult to make because they entail extending commonality to non-human actors and, thus, a relaxation of demands for “common humanity” and what qualifies as “ecological” is both more loosely defined and more politically diverse (Blokker, 2013). In terms of energy transitions, it is conceivable then that “green” justifications might be used to legitimize technocratic expert or authoritarian rule, indeed this is what has happened in China (Li & Shapiro, 2020).

In late modernity, *green* arguments are routinely used in combination with other topics, such as health and economics, often leading to compromises with other orders of worth in the formation of new laws. As Chateauraynaud (2015) states, this leads to “a proliferation of totalising mechanisms that brings resources and constraints together into a broad discursive matrix” using concepts such as “natural capital”, “green economy”, “independent scientific expertise”, and “public consultation”. Institutions are never able to completely assuage doubt about their capability to avoid environmental disasters and crises (Chateauraynaud, 2015). When disasters do occur, not only are planning policies brought into question, but there is often an impact on lay representations and new normative resources become available to everyday meaning-making. In other words, “the public” is increasingly capable of contesting discourses, laws and practices that *reify* the environment by combining *green* rhetoric with devices from other worlds.

Research on “green engagements” in everyday life has explored whether sustainability is, as Blok (2023) says, “in the process of establishing itself as a novel and distinct convention of moral-political coordination.” While some contend that a sustainability convention, based on principles of proximity, increased individual and collective capabilities and participative democracy, has solidified (Buclet & Lazarevic, 2015), others maintain that such discourses of sustainability are inherently “compromised” ideals (Blok, 2023). Indeed, Laes et al., (2023) state that it is green worth that unites the plurality of interpretations of RECs: “The common denominator in justifications of energy communities is the argument that they will help unlock investments in local renewable energy production, thereby contributing to the ‘greening’ of the energy system” (Laes et al., 2023, p.53). The actual *green worth* of such arrangements is often difficult to pinpoint, however, and it might be more accurate to speak of a conflation or co-option rather than a compromise. These kinds of so-called green discourses are increasingly common in the mainstream media, especially in advertising campaigns by energy companies. For example, one of the world's largest energy companies currently has a television advertisement in Portugal encouraging consumers to take an active role in the energy transition by adopting 100% green energy, with the slogan, “Make a contract with Nature” (Iberdrola Portugal, 2024).⁴

Pragmatic sociologists are, therefore, increasingly examining these everyday environmental practices less in terms of a universalizable *green* order of worth than with the concepts of regimes of engagement and grammars of commonality. This line of thinking has shown how direct political actions can be based upon shared attachments to “common-places” which emerge from everyday environmental practices (Centemeri, 2022; Koveneva, 2011). Centemeri’s (2018) study of the permaculture movement, for example, emphasises the diversity of attachments and valuations underpinning “everyday environmentalism” (Schlosberg and Coles, 2016). Blok & Meilvang (2015) have shown how the familiar attachments of residents to urban green spaces can be impeded by objective-oriented top-down forms of governance which prevent these residents from upholding them as “common-places”. At the centre of this debate about green engagements is the tension between *justice* and *care*. Whereas the former is based on detachment and equivalence, the latter is based on the specificity of emotional attachments and of considering one’s relation to those

⁴ Iberdrola Portugal (2024, June 5), *Faça um contrato com a Natureza* [Video]. YouTube. <https://www.youtube.com/watch?v=7q-57s8zppQ&t>

typically beyond the limits of the “common good,” such as non-human living beings and future-generations (Centemeri, 2023).

Despite the fertility of this research on the ecological world of justifications and attachments, it has not been explicitly related to engagements with energy transitions. In fact, energy technologies are often seen as “grey” rather than “green” (Angelo & Wachsmuth, 2020; Blok, 2023). Outside of pragmatic sociology, however, everyday *green* energy futures do not amount to much more than discourses of sustainable consumption (Shirani et al., 2015), for example by consuming renewable electricity rather than fossil fuels or by using less energy. These discourses can also be used to legitimate forms of social control and hierarchical power relations (Burlat & Mills, 2018; Hobson, 2002; Žuk & Žuk, 2022; Nguyen & Batel, 2023). In a similar vein to pragmatist arguments about the necessity of *care*, Jasanoff (2022, p. 44) has compared two imaginaries of sustainability at the centre of solar energy transitions, based on the metaphors of “spaceship” and “stewardship”. While the former is articulated through *universal criteria* of sustainability, the latter foregrounds “concern for those whose lives will be affected, who wins or loses, and who is responsible for the costs of transformation.”

It is from the position of “spaceship” that institutional visions of renewable energy futures use “green justifications” when they are rhetorically represented as a means for achieving “carbon neutrality” (Karhunmaa, 2019; Pollard, 2019; Tozer & Klenk, 2018). Indeed, many studies have shown how, in visions of low-carbon energy futures, the green order of worth is often deployed in a compromise with the *market* and *industrial* orders of worth (Foltyn et al., 2023; Vasstrøm & Lysgård, 2024). The fragility of this compromise has opened the door to criticisms of “greenwashing” which are intensifying with emerging radical critiques of institutional agendas such the European Green Deal (Dunlap & Laratte, 2022; see also Aronczyk et al., 2024).

These critiques raise the question of whether *renewable* energy is still understood as inherently “green” or if it is more accurate to position it as an empty signifier (Nadaï & Labussière, 2018), in the same way as the term “community” can be seen as “phatic” (Taylor Aiken, 2016), which is then open to being qualified in different ways. As such, there is an open question about what constitutes an authentically *green* justification of a “real” energy transition (Dunlap & Laratte, 2022). The emerging consensus is that such a discourse should also be based, not only on a fundamental ethos of *care* and *stewardship*, but also on principles of climate, environmental and energy justice (Menton et al., 2020), that tend to be based upon a *civic* order of worth, and emerging

political economic discourses such as *degrowth*. As will be also proposed in the next section, the pragmatic sociology's concept of the test of worth invokes the need to study how claims of (un)renewability are or are not viewed as legitimate and the role that institutions such as law play in supporting such claims.

2.4.8. The network world

It should by now be clear that each *world* offers distinct resources for both justification and critique, as well as for imagining the future. In *The New Spirit of Capitalism*, Boltanski & Chiapello (2018) chart the emergence of an eighth, “projective” order of worth based on a representation of the world as intrinsically networked. As will be seen, this order of worth is unique insofar as it has developed by “recuperating” various features of other orders of worth. One of the main and most relevant features of this *projective* order of worth is its emphasis on establishing flexible and diverse networks and partnerships in view of realizing innovative projects. Indeed, influential futurists and theorists such as Rifkin (2015) have envisaged an energy future based upon a model of “collaborative commons” (see also Kostakis & Bauwens, 2014). These ideas are also shaping the concept of energy communities. As Laes et al., (2023) state,

“Applied to the case of energy communities, justifications that stress the innovativeness, the diversity of organizational and ownership structures, and the embeddedness of energy communities in wider social movements and networks all stem from this projective commonwealth” (Laes et al., 2023, p.53).

This representation of energy communities is typical of the *projective* order of worth because it blends together beings from other worlds, bringing them under the fundamental signifiers of flexibility and versatility – values that are required for life in the network world (Boltanski & Chiapello, 2018).

Though it absorbs various features of the other worlds, *projective* representations stand in stark contrast to the stereotypical *civic-domestic* image of community energy, at least in the UK (Devine-Wright, 2019). The first key feature of the projective vision of energy communities is, thus, its break from the civic world's *methods* (e.g. collective action, solidarity) for pursuing the goal of positive social change, which it views as constraining, bureaucratic and divisive. For this, the *projective* order of worth absorbs the *domestic* order of worth's valorisation of family organisation,

trust and local ties, which are reconceptualised as partnerships, collaborations and connections (Boltanski & Chiapello, 2018).

A change of this kind has taken place in the UK policy context. As observed by Devine-Wright's (2019, "instead of enabling grassroots action in every community, the focus turned towards local authorities and local enterprise partnerships," with a focus on growth, job creation, skills and infrastructure improvements, led by the business sector and local leaders. Thus, beyond mere citizen participation, the projective order of worth underpins visions of the energy transition which involve collaboration and "synergies" between diverse groups of "stakeholders", public-private partnerships and processes of "co-creation" or "co-production" (Becker, Naumann, et al., 2017). However, it is unclear if suitable *tests* are in place to ensure that these processes are open to all or if they are being pursued in a way that excludes certain people while prioritising others.

Secondly, while the projective order of worth recuperates the domestic world's *relations*, it is antagonistic towards what it perceives as its *inertia*, *immobility* and a lack of desire for *innovation*, characteristic of the *inspired* world. Indeed, as Devine-Wright (2019) states, "community energy initiatives often arise from a focus on the needs and requirements of the local area rather than being motivated by systemic change." Moreover, from the projective perspective these traditional initiatives are restricted by relations of *proximity* whereas "in a network world, everyone seeks to establish links that *interest* them, and with people of their choice" and "spatial distance is not relevant" (Boltanski & Chiapello, 2018, italics added). Thus, in contrast to the grass-roots localism of "Community Energy", the UK's newer concept of "Local Energy" has evolved into support for "smart local energy systems," characterised by "digitalization of information sharing and a holistic approach integrating heat and power generation, distribution, storage and consumption, as well as mobilities" (Devine-Wright, 2019, p.894).

Thirdly, for Devine-Wright (2019) the two visions presuppose different representations of the public. While the *civic-domestic* imaginary of Community Energy valorises "citizens and members of communities of place or interest, who work collectively and often voluntarily, motivated by nonmarket values," the emerging projective imaginary of "Local Energy" posits "individuals as consumers, making choices and acting in energy markets." Thus, while both approaches "suggest an active rather than passive role for individuals in energy transitions, the rational actor model that presumes individuals to be self-interested utility maximisers is more consistent with LE than CE." (Devine-Wright, 2019, p.895).

While generalisations cannot be made from this critical comparison between old and new models for community energy initiatives, the growing literature on RECs suggests that several other features of the projective order of worth are at play in their representation. Particularly noteworthy is the insistence on the openness and plurality of meaning, reflected also in the ever-increasing research on the diversity of available business models, and the related “pragmatic versatility” when it comes to political questions (Lafaye & Thévenot, 2017). Thus Moroni et al., (2019) attempt to construct a “non-ideological” definition and model, proposing the term “energy-related communities”, to denote groups of individuals who voluntarily accept certain rules for the purposes of shared common objectives relating to energy.

This clearly implies the centrality of collective, social action, framing energy communities as “intentional communities” (Brunetta and Moroni, 2012; Sanguinetti, 2012; Hausknost et al., 2018; Schäfer et al., 2018) or “communities of choice” (Ergas, 2010), rather than communities of chance or fate associated with proximity and locality or state management of the economy. From this perspective the key feature that defines the community of an energy community is *intentionality* (Moroni et al., 2019). Thus, rather than a non-ideological definition of energy communities, what is advanced here is a representation of community as a *joint project*. The latter is central to the networked or projective order of worth and there are potential crossovers between the literature cited by Boltanski & Chiapello (2018) as emblematic of the projective city, and those cited by early advocates of “intentional communities” or “contractual communities” (e.g. MacCallum, 1970). It is also likely that this vision of energy communities has an affinity with the concept of the *situated state* (Salais, 2023), in so far as it refuses totalising definitions and forms of implementation and control, instead opting to mobilise the context specific capabilities and common sense knowledge of communities of relevance.

However, it is also possible that this valorisation of openness, flexibility and situatedness might lead to inequalities of power and reification. This leads into a final point about the *projective* order of worth in relation to energy communities which is that, because they involve new forms of technology, they are also facilitating new markets and forms of expertise that are redistributing agency. Thus, building on Boltanski & Chiapello’s (2018) notion of a network world, Rommetveit et al. (2021) have described an emerging “techno-epistemic network” regime of energy governance, the main characteristic of which is “how it mobilizes sources of knowledge and authority for the sake of overall societal purpose.” These changes can be described as a re-

signifying institutionalisation of publicly available meanings by new forms of technical expertise. The shift towards automation and delegation to third parties means that citizens are *tacitly* envisaged in a more passive role, even if these visions rhetorically make use of ideas of “empowerment” (Strengers, 2013). Rather than enabling new forms of citizenship and political decentralization, this shift potentially brings back in a form of totalization and control centered on automation and third-party market creation aimed at extracting users’ behavioural data. From this perspective, imaginaries of digitalized and interconnected “smart” energy communities can be seen as a “form of surveillance capitalism in the making” (Rommesteit et al, 2021, p.24).

A more positive and civic infused version of the techno-epistemic network is offered in Ruotsalainen et al.'s (2017) “emancipatory and transformative socio-cultural vision” of a decentralised peer-to-peer society which has, at its core, “self-organising citizens who have been empowered by automation, ubiquitous digital communications, and the declining costs of energy, living and production.” Rather than the pricing mechanisms of the techno-epistemic network, the authors emphasise here how peer-to-peer networks rely instead on social relations, making use value freely accessible through common property regimes. In this vision’s insistence on “artisanal” originality and the value of self-expression, it is clearly anchored in what Boltanski & Chiapello call the “artistic critique” of capitalism. From this perspective, participants in RECs would be motivated by “intrinsic” worth and an “aspiration for self-governing groups”, rather than monetary compensation, and they would contribute to “modular tasks” according to their interest and skills. However desirable this vision may be, it clearly lacks a “social critique” of capitalism, not mentioning issues such as energy poverty and the multiplying injustices that are accompanying energy transitions.

In terms of how network imaginaries of energy communities are being *generalised*, Groves, Henwood, et al. (2021) have shown how visions built upon the normative idea of “flexibility” are being mediated to the public by expert intermediaries. Thus, techno-scientific expert intermediaries are key proponents of the both *projective* order of worth and the *techno-epistemic network* in energy transition imaginaries. Cherry et al. (2017), for example, have shown how expert imaginaries of low-carbon housing involve “designing out” the role of occupants in order to achieve emissions reductions while at the same time maintaining their current lifestyles. Rather than considering the nuanced and personalised ways that people relate to their domesticated spaces, then, these expert imaginaries represent the public as passive users.

As is shown by Rommetveit et al (2021), this is not necessarily regarded as a negative outcome by “early-adopters” who encourage the change while demonstrating “concern for the normative implications of this displacement.” Following the framework of PS, if the new “techno-epistemic network” is understood as an *order of worth*, it can be hypothesised that it also includes the emergence of new forms of *social critique* and *rights-based claims* (e.g. the right to privacy), that were not as previously relevant to the energy domain, nor to the main types of social critique of the energy system from the perspectives of the civic and domestic worlds. In line with the broader imaginary of radical decentralization, at the centre of these arguments is an essential distrust in institutions. As noted by Rommetveit et al. (2021), this possible critique – and thus, vision – “is hampered by a lack of regimes of engagement; that is, institutions and networks through which that interest could be channelled.” As a result, a particular dystopian version of an automated energy future is typically represented by citizens as inevitable.

Again, as Boltanski & Chiapello (2018) argue in the context of employment law, for a *projective* vision of energy communities to be realised in a *legitimate* way it will therefore be necessary to institutionalise new projective *tests* of worth which restrict the flows of power inherent to the network world (Castells, 1999; Deleuze, 2006), for instance by legally guaranteeing the possibility of citizen participation for all; by designing mechanisms which address energy poverty and ensure distributive justice; and ensuring data protection.

2.5. Concluding remarks

This chapter has introduced the empirical domain of this thesis. It began by introducing the notion of energy transitions and establishing the importance of future-orientations. The analysis of the latter using concepts such as sociotechnical imaginaries was related to the theoretical approach developed in Chapter 1. The importance of institutions, mediating systems and everyday life for energy transitions was set out in section 2.3., as was the concept of “Renewable Energy Community.”

The EU’s institutional mainstreaming and up-scaling of the “community energy” movement demonstrates how grass-roots techno-political practices, ostensibly oriented against the status quo, can gradually become adopted by new actors with different, though sometimes overlapping, interests. Rather than ends-in-themselves that are rooted in local contexts, RECs are now promising to take on more instrumental functions in the energy transition, namely to increase public

acceptance of renewable energy technologies and associated infrastructures; mobilize private financial investment; contribute to energy efficiency and lower electricity bills; and providing flexibility to the electricity system. In addition, with the legal formalization of energy communities, their goals and activities have been broadened. In short, energy communities are currently based on *transcendent representations* (Harre, 1998) – they are “floating” or detached from actual practices – and are set to be interpreted and tested, anchored and objectified in new contexts and practices. Establishing how this has subsequently been done is a key goal of this thesis.

Putting pragmatic sociology’s plurality of *worlds* to work, section 2.4. set out some of the main representations and conventions that have shaped processes of emergence, institutionalisation, generalisation and stabilisation (Castro et al., 2009) of energy transitions, with a particular focus on RECs. This review highlights the need to establish if a *single* view of energy communities and the energy future has been prioritised, or if there is space given to a plurality of “orders of worth” – alternative ways of representing the common good (Boltanski & Thévenot, 2006). Moreover, it illustrated the importance of discursive strategies and forms of communication for mediating imaginaries to the public sphere. It is therefore important to examine which voices mediating discourses are presenting.

In a historical moment characterised, on the one hand, by increased questioning of neoliberal modes of thought and practice in certain domains of political, social and economic life and, on the other hand, their re-deployment in others (Carvalho, 2024; Nguyen & Batel, 2023), the mainstreaming of RECs provides an excellent context to investigate the clash between different representations of the future and of the common good in mediated discourses that are also trying to make sense and take a position in relation to those different processes.

Chapter 3

Research strategy and an overview of the approach

3.1. Introducing the methodological standpoint

The first two chapters of this thesis have attempted to show that meaning-making practices are essential to processes of social change. It has been argued that the *future-orientations* of these practices are important, particularly in contexts of widespread uncertainty such as energy transitions. However, it was also observed that the importance of the future is under-theorized by the theory of social representations and social psychology more broadly. To address this lacuna, a new conceptual framework was proposed that integrates the psychosocial underpinnings of social representations theory (SRT) with the pragmatic sociology of engagements and critique (PS), as well as drawing upon insights from science and technology studies – the discipline that has been most interested in questions of futurity. The second aim of these chapters was to show the importance of the interrelations between the formal institution of law and everyday life for how social change unfolds. Institutions were theorized as systems of rules that are only complete by social psychological processes of meaning-making and conventionalized practices of communication.

The principal aim of this dissertation is, therefore, *to explore how social change is shaped, in the interaction between law and the public, by social representations of the future*. In Chapter 2, energy transitions and Renewable Energy Communities (RECs) were introduced as objects of analysis well suited to this aim. This chapter will describe how the latter is coherent with the theoretical approach developed in Chapter 1 and its *methodological standpoint*. One of the benefits of our theoretical framework is that it functions both as a highly abstract theory which facilitates interpretation and understanding and as a more practical “theory of the middle range” which informs research design and analysis (Merton, 1967).

Methodology can be conceived as that realm of an approach which develops coherent strategies for empirical analysis. Towards this end, this chapter will argue that the two perspectives which inform our theoretical framework – PS and SRT – have complementary methodological standpoints but offer concepts for different levels of analysis. While the methodological standpoint of PS has been described as a “complex pragmatist situationalism” which foregrounds the situation

as the unit of analysis (Diaz-Bone, 2011), SRT has adopted a range of methodological standpoints (Wagner, 1998; Batel & Castro, 2018). However, following the systematic conceptual comparison of Chapter 1, it will be seen in this chapter that both perspectives can be said to combine pragmatist positions with structuralist thinking (Diaz-Bone, 2011; Favereau & Lazega, 2002; Moscovici, 1994). The combination of these approaches, in conjunction with the object of research, leads to a research strategy that is qualitative and iterative, involving a weaving back and forth between data and theory.

In the next sections, we will continue this introduction of the research strategy with a discussion of its underlying epistemological and ontological assumptions, and how they relate to key concepts. This culminates in a diagrammatic process model (Figure 1) of some of the key notions underpinning the theoretical framework. This will facilitate the discussion of the relation between theory and methods, and in the subsequent section the research questions will be presented, and a brief overview will be given of the data gathering and interpretation methods that are used to address them in Part II of this dissertation.

3.1.1. Epistemological considerations: interpretivism over positivism

Epistemological issues in social research concern the question of what is regarded as acceptable knowledge. While the majority of social psychological research tends towards a positivist approach, the empirical studies conducted for this dissertation is *interpretivist*, an epistemological position in line with both SRT and PS (Diaz-Bone, 2011; Batel & Castro, 2018). The underlying premise of interpretivism is that there is a fundamental difference between the subject matter of social science and natural science. Whereas the latter is interested in the laws which govern the actions of material objects, the former's focus on people and their institutions requires that social scientists are able to grasp the *subjective meanings of social action*. The interpretivist approach can therefore be said to be orientated primarily to *understanding* human behavior rather *explaining* it.

Put differently, interpretivism is “concerned with the empathic understanding of human action rather than with the forces that are deemed to act on it” (Bryman, 2015, p.26). This is a key underpinning of both PS (Diaz-Bone, 2011) and SRT (Batel & Castro, 2018). The former's claim that there is a plurality of *orders of worth* available for use in justifications and critiques of social action only makes sense insofar as they are empirical realities which are perceptible by people in everyday life. While much of the empirical research using SRT ultimately adopts a positivist

understanding of the concept of representation which views group membership and inter-group relations as forces that act upon people, determining what they think and do, there is also a more interpretive approach which foregrounds that social representations are actively constructed in contexts of communication (Wagner, 1998; Batel & Adams, 2016; Potter & Wetherall, 1998).

As Diaz-Bone (2011) observes, the aim of this kind of methodological position is to avoid the assumptions of both methodological individualism and methodological holism. The former, common in mainstream psychology, analyses individual interests, aims and decisions as explanations for actions, while the latter presupposes that supra-individual entities such as group membership and social structure determine these interests and decisions, but also meanings and actions. From the pragmatist perspective, these two positions are charged with over-emphasising agency and structure respectively. While SRT has tended towards the latter position, much of its theorisation adopts a pragmatist position where the situation or communicative context is the unit of analysis (Moscovici, 1994; Batel & Castro, 2018) and emphasises, like PS, the creative and critical capacity of actors to dialogically construct and *use* social representations (Batel & Castro, 2008). Both positions are avowedly against methodological individualism (Batel & Adams, 2016; Diaz-Bone, 2015).

In these contexts, the role of the social scientist is to reconstruct people's "common-sense thinking" and hence to interpret their actions and their social world from their point of view. In this regard, both PS and SRT have much in common with the symbolic interactionist claim that the individual is constantly interpreting the symbolic meaning of their environment (including the actions of others). As Blumer (1962, p. 188) notes, this position requires the researcher "to catch the process of interpretation through which [actors] construct their actions." Moreover, Bryman (2015) observes how there is also a third level of interpretation going on because the researcher's interpretations of the data must be further interpreted in terms of the concepts, theories and literature of a discipline (see below, section 3.2.4).

While there is a difference between the interpretations of actors and the researcher's interpretation of those interpretations, the concepts of PS are intended to minimise this gap (see Boltanski & Thévenot, 2006, pp.25-42). Orders of worth, for instance, are not ideal typical constructions of the researcher but are socio-cultural resources based on moral principles which are circulating in societies as a result of a long process of institutionalisation of political philosophies. On the other hand, the psychosocial processes described by SRT allow the researcher

to understand what is happening when people make interpretations, suggesting for instance that unfamiliar objects are *anchored* into prior knowledge. The notion that meaning making is inherently *intersubjective*, encourages the researcher to focus their attention on how people, for instance in an interview situation, construct relations between self and other. This allows for the identification of *discursive strategies* whereby the self is brought closer to, or kept away from, the position of the other.

As such, the question of what counts as knowledge in this research is the extent to which the interpretations made by actors can be made sense of with the theoretical categories established in Chapter 1. The steps outlined by Batel & Castro (2018) for their “pragmatic discourse analysis” are useful for organising these various stages of interpretation of data and shall be outlined in section 3.2.4. Lastly, the key move made in this thesis is to shift the analytical focus from how people and institutions interpret *past* actions to how they imagine *future* actions. As will be seen, studying how the future is interpreted and represented by different actors requires not only the selection of appropriate empirical contexts (e.g. proposals for future energy communities), but also specific approaches to data collection and analysis. Integral to these choices is the underlying ontological assumptions of the research strategy.

3.1.2. Ontological considerations: constructionist *and* realist

Social ontology questions focus on understanding the nature and “reality” of social entities. The primary debate centres on whether social entities should be viewed as objective realities that exist independently of social actors or as social constructions formed through the perceptions and actions of those actors (Bryman, 2015). These perspectives are known as objectivism or “realist” and constructionism or “anti-realist”, respectively. However, as both SRT and PS can attest, this binary opposition is overly simplistic. In fact, both SRT and PS are based on an ontology that combines realist and anti-realist standpoints (Diaz-Bone & Larquier, 2023; Wagner, 1998).

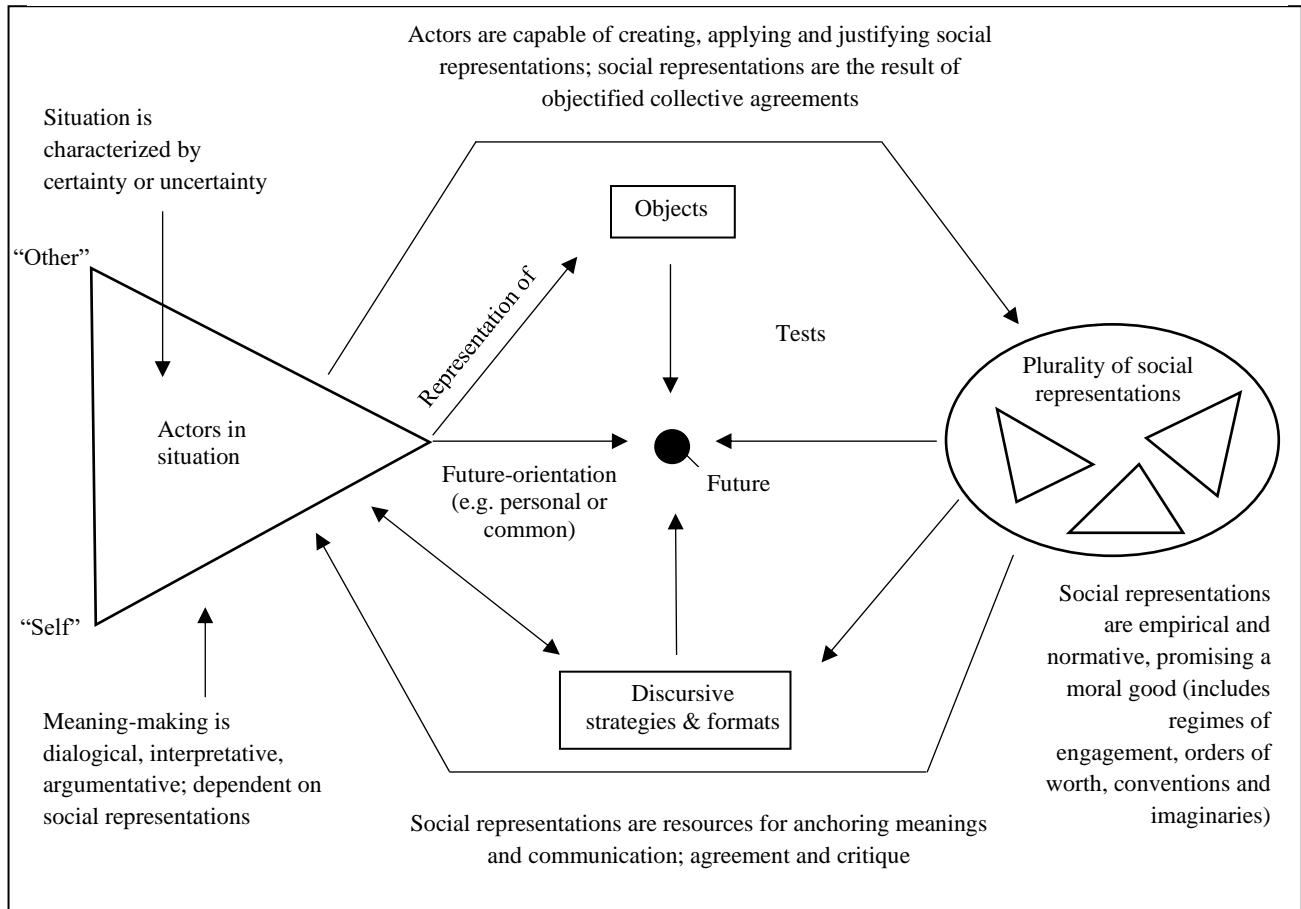
In PS, this is particularly clear in research on statistical measurements, which are analysed as social constructions which invent new realities through material practices and devices (Desrosières, 1990). Statistical objects such as unemployment rates, gross domestic product and energy efficiency are at the same time based on a conventionalised agreement and are made “real” by practices of *objectification* (Diaz-Bone & Larquier, 2023). While qualitative and critical SRT researchers typically position themselves as social constructionists (Batel & Adam, 2015),

“objectification” is one of its key psychosocial processes. Both SRT and PS thus emphasise that these meanings are not only in human minds and bodies, discourses and actions, but are also objectified in the material environment as a result of past processes of agreement, qualification and testing. For instance, a wind turbine comes to represent *ecological* and *civic* values only insofar as it has been shown to contribute to decarbonization and community development respectively. In situations of dispute, where these claims can be contested by other actors, the need for a new test of worth may arise and only by proving the worth of a socio-technical arrangement can legitimacy be temporarily secured. Thus, both approaches can be said to be oriented to the central problem that social constructionist ontology leads to when “it disregards the relative solidity and permanence of social entities, and their resistance to change” (Chiapello & Fairclough, 2002, p.196).

Despite the importance of “objectification” to both theories, the agency (and especially the

Figure 1. Social representations of the future from the methodological standpoint of pragmatist situationalism

(Adapted from Diaz-Bone, 2011; and Bauer & Gaskell, 2008)



recalcitrance) of objects in constraining and facilitating discursive situations is less emphasised in SRT than it is in PS. The latter – along with actor-network theory – has been influential in the so-called “pragmatic turn” of the social sciences which sought to build upon the philosophical assumptions that social order is the practical accomplishment of ordinary actors, as well as integrating the agency of non-human actors in these practices (Latour, 2007; Schatzki et al, 2005). These ontological considerations are particularly relevant for this research because of the importance of the *materiality* of energy systems, but also of institutions more broadly. The tangible objects of regulatory documents and procedures, for instance, both enable and constrain the interpretations that actors can make, and thus should be considered in the interpretations which the researcher makes. Moreover, combining epistemological interpretivism with ontological

pragmatism means that meaning-making practices can be seen as integrating micro and macro-level realities, since it is in situations that their effects and interrelated ontologies are realised (Diaz-Bone, 2011). This is particularly relevant for the different types of social representation we have introduced in Chapter 1, including the plurality of orders of worth and regimes of engagement.

Importantly, the focus of qualitative and constructionist approaches to SRT usually involve a closer analysis of language than is typical in PS. From the perspective of the latter, Diaz-Bone (2011) has acknowledged the potential for the inclusion of questions of language, proposing that discourse analysis could be used to reconstruct conventions – e.g. orders of worth – as deeper structures of the knowledge order. SRT’s focus on anchoring and self-other relations allows this proposal to be taken a step further because it draws attention to the creative uses of language whereby new ideas become associated with older ones. It also encourages the researcher to look for meanings that are more implicit in discourse, while being careful not to project this meaning or to over-interpret a text.

The close analysis of discourse in relation to situations allows the research to follow how arguments and representations of the future are generated from deeper structures of experience, expectation, and self-other relations. This approach necessitates a definition of an analytical category capable of bringing all of these elements together. Departing from Jasanoff (2015), but also following Chiapello & Fairclough (2002), we adopt for this purpose a concept of “imaginaries” defined as, “representations of how things might or could or should be” (Chiapello & Fairclough, 2002, p.195). These imaginaries may be reflexively represented and enacted as actual practices – imagined activities, subjects, social relations, etc. – objectified in “hardware” (plant, machinery, etc.) and “software” (management systems, etc). As Chiapello & Fairclough (2002) state, the knowledges of the knowledge-economy and knowledge-society are imaginaries in this sense – projections of possible states of affairs, “possible worlds”. Indeed, the plurality of *worlds* in question have been theorised by PS and presented in Chapters 1 and 2. Thus, similar to Jasanoff’s (2015) definition of sociotechnical imaginaries as being “animated” by “*forms of social life and social order*,” the analyses presented in this dissertation will use the term *imaginaries* to refer to discursively stabilised arrangements of regimes of engagement, orders of worth and other social representations.⁵

⁵ This is a view of imaginaries that is, therefore, also similar to the definition of “spatial imaginaries” in human geography (Watkins, 2015).

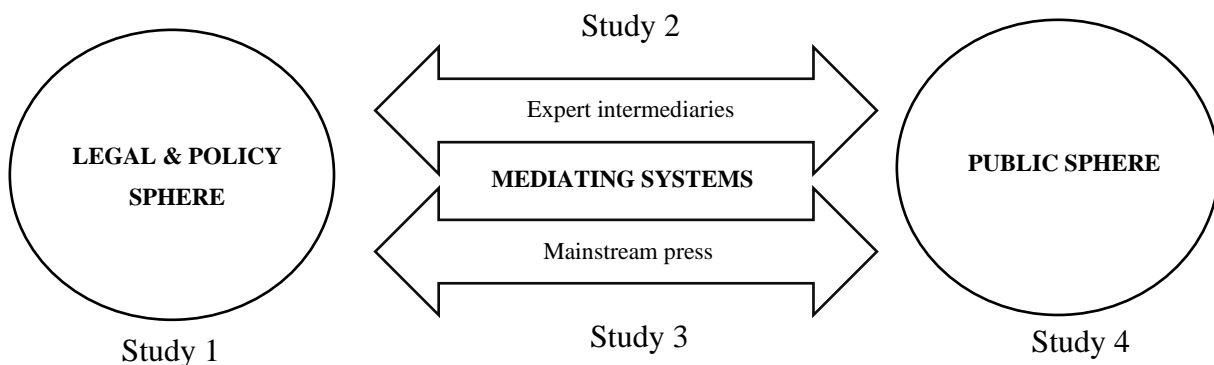
3.2. Research design

The previous section established the methodological standpoint and key tenets of this dissertation's research strategy. This section provides a brief overview of how this translated into the design of four empirical studies. It will begin by restating the aims, objectives and research questions, and then proceed to briefly describing the data gathering and analysis methods that were used. While the specific methodologies of studies 1 and 3 will be discussed in their corresponding chapters, the approach to qualitative interviewing used in studies 2 and 4 will be discussed in section 3.2.3. Likewise, the method used for qualitatively analysing textual data will be discussed in section 3.2.4. since it was used across all four studies. The final section will reflect on some of the practical and considerations that influenced the research design, and some of its limitations.

3.2.1. Aim, objectives and research questions

As stated above, the overall aim of this dissertation is *to explore how social change is shaped, in the interaction between law and the public, by social representations of the future*. As such, it departs not only from the theoretical approach of SRT and PS to meaning-making practices, but also from their approach to the relation between these practices and institutions. Indeed, the social psychology of legal innovation, discussed in Chapter 1, provides a useful directive to empirical research insofar as it proposes a model of social change in the interaction between policies/laws and common-sense knowledge/social practices (Castro, 2019a; see Figure 2).

Figure 2. Four studies between legal & policy sphere and the public sphere



Following this model of change, the objective was to design a research project which could explore the future-oriented meanings that are constructed in and by *institutions*; the way that these

meanings are subsequently communicated to the public by *mediating systems*; and, lastly, how these meanings are construed and negotiated by *citizens* in relation to their own situational projects. More specifically, this research sought to address the following three sets of research questions:

1. What are the future representations promoted by Portuguese energy laws and policies? In particular: (a) what are the tensions involved in the meanings of the future presented in new laws for RECs and self-consumption and (b) how are these tensions negotiated by different experts and in the regulation process? How has this changed over time?
2. What are the representations of the energy future and of RECs that are being *mediated* to “the public”? In particular: (a) how are expert intermediaries representing the future of RECs and the role of “the public”; and (b) how are RECs being represented and communicated in the mainstream press and by whom? How has this changed over time?
3. How is the energy future and RECs being represented by “citizens” in different situations? How does the legal definition, institutional practices, mediating systems and expert expectations of RECs enable and constrain their realization?

The following section will link these three sets of questions to the four empirical studies that comprise Part II of this thesis.

3.2.2. The four studies

As shown above, the methodological position of PS/SRT requires that the *situation* is taken as the unit of analysis. However, situations are not restricted to face-to-face interactions and pragmatic sociologists have utilized a diverse range of research methods, from ethnographic observation to statistical techniques. The four studies in this dissertation also use a range of different methods for data gathering and analysis, namely by examining documents (e.g. policy, legal and media texts) and conducting qualitative interviews. In the following, the logic behind the gathering of data from these sources will be outlined, as will some of the methodological choices that were made.

Study 1 (Chapter 5) aimed to address the first set of research questions. The analysis of key policy and legal documents associated with the energy transition and RECs from 2019 until 2023 specifically addressed RQ1a, while RQ1b was addressed through an analysis of two public consultations for updates to the electricity system regulatory frameworks in 2019 and 2021. The

study and interpretation of documents is an oft-used strategy in PS for identifying the “implicit categories and conventions and to infer [...] the logic of practices” (Diaz-Bone, 2011, p.57). Similarly, Study 1 attempted to establish how future representations have shaped recent energy policy narratives, and how a range of actors have imagined the energy future in the wake of new laws for RECs and self-consumption through the analysis of policy, legal and regulatory documents. More specifically, it attempted to establish how social representations (of the future) have been used to construct and construe the novel object of RECs and how these are enabled and constrained by the discursive formats and self-other relations specific to certain institutional settings. This study thus followed a strategy which selected for analysis introductions and executive summaries, but also the sections which corresponded to the representational objects of “the future;” “the public;” and “Energy Communities,” located with a keyword search.

The second set of questions, oriented to the mediating systems of expert intermediaries and the mainstream press, were addressed by Studies 2 and 3 respectively. The former analyzed how different types of energy sector expert – e.g. policy-makers, engineers, social scientists, lawyers – were imagining the energy future and the implementation of RECs (RQ2a), while the latter analyzed how RECs have been represented in the mainstream media, focusing on four of the most popular online publications with diverse readerships.

Expertise has been one of the main research objects of science and technology studies, but it has also been extensively analyzed by social-psychologists and, in particular, via the perspective of SRT (e.g. Morant, 2006; Batel & Castro, 2008). The study of expert classification systems was also formative for PS (Boltanski, 1979; Desrosières, 1990). Qualitative interviews tend to be the main research method used in these studies, and they were also the basis of Study 2. Despite the focus of Chapter 6 being expertise as a mediating system (RQ2a), its design was also oriented to the first set of research questions, as many of these experts performed a plurality of roles in different contexts. For example, one energy lawyer regularly advises people about new laws for RECs but was also involved in writing these laws. In addition, many of these experts were also active in the press. Study 2 thus allowed for a more in-depth analysis of the social representations and issues identified in Study 1. At the same time, since interview questions sought to bring to the fore how interviewees envisaged the role of the public, interpretation could therefore be made about expertise as a mediating system. Future-oriented discursive strategies were a major focus of this study, but it is important to note that taking the interview situation as the communicative context

meant that these strategies revealed more about the broader expert imaginaries than it did about how expert knowledge was being communicated to the public. This question would be more adequately addressed in Study 3.

The press has been analyzed extensively from the SRT perspective (Batel, 2020a; Boager & Castro, 2022; Moscovici, 2008; Valqueresma et al., 2024) and researchers using the PS perspective are now starting to develop methods for examining the orders of worth deployed in the media (Kukkonen et al., 2021; Luhtakallio & Ylä-Anttila, 2023; Ylä-Anttila & Kukkonen, 2014). Most studies of the press employ longitudinal research designs, often using quantitative methods to gain insight into how the structure of reports (e.g. authorship and type of article) and their discourses change over time. This is the approach that was adopted in Study 3, with press articles collected from 2017 to 2023. This timespan allowed the research to identify and assess the role of “critical discourse moments,” – periods that involve events which may challenge the “established” discursive positions (Carvalho, 2010) – such as the publication of new laws in 2019 but also more recent crises associated with the pandemic and the Russia-Ukraine war. One of the objectives was to assess how RECs were anchored by different orders of worth and how this changed over time (see Chapter 7 for more details on how this was done). The main focus of this chapter, though, was how orders of worth were discursively constructed via different conventionalized modes of communication, and the role this had in representing the future.

Study 4, responding to the third set of questions, originally aimed to examine how the energy future and RECs were being imagined in everyday life by citizens. However, the early stage of RECs’ implementation and the empirical insights of the previous studies led to a more specific focus on two different cases of “energy publics” (see Chapter 2). On the one hand, there was those who the legal-policy sphere and energy experts represent as “active citizens” attempting to establish REC projects, mainly in urban areas, and on the other hand there were those citizens opposing the development of large-scale solar photovoltaic plant in rural Portugal, which the mainstream media and social scientists describe as “sacrificed” citizens (see RTP, 2022; Canelas, 2021). This discursive situation was relevant to the third set of research questions because, as will be seen, RECs were frequently represented in relation to large-scale solar projects. Moreover, it allowed for a fruitful comparison of representations of the energy future, and how different self-other relations and discursive contexts (e.g. rural vs urban) played a role in these representations.

3.2.3. Designing and conducting interviews

Studies 2 and 4 were based on semi-structured and in-depth interviews with experts and citizens respectively. In both studies, informed consent was obtained prior to the interviews, allowing the interview to be recorded, transcribed and published on the condition of interviewee anonymity (see Annex 1).⁶ Interviews took place both in person and online, and their duration was between 1 and 1.5 hours for Study 2 and between 30 minutes and 1 hour for Study 4.

Qualitative interviewing is another research method common to both PS and SRT. As Diaz-Bone (2011) observes, pragmatic sociologists have, from the beginning, conducted interviews “to explore the interpretative processes of actors using categories or constructing classifications.” Likewise, interviews were used in this research to establish how different types of actors were making sense of RECs and representing them in relation to the future. The interest in specific types of actors meant that a purposive approach to sampling participants was adopted, with the selection of interviewees guided by prior data collection (Bryman, 2015; p.410). Following the iterative approach of grounded theory (Strauss & Corbin, 1997), insights from the first interviews (as well as the parallel studies of documents and the media) enabled the identification of other relevant actors to interview, as well as important issues to raise. Two early interviewees, from an energy cooperative and a state energy agency, became gatekeepers to a succession of additional interviewees from REC projects and other professional organizations respectively. Opportunistically, through the local knowledge of an interviewee from one nascent REC project, contact was made with several people who were living in proximity to the proposed large-scale solar plant (see Chapter 8).

Despite being guided by similar research questions, the different types of participants of each study necessitated distinct approaches to the research situation. The experts of Study 2 were at ease in discussing technical matters, even when the need arose to simplify or explain their discourse (due largely to the interviewer only having – at best – “interactional expertise”; see Collins & Evans, 2003). The citizens of Study 4, by contrast, were often less at ease in discussing these matters to the same degree of complexity. The most significant example of this was in regard to the interview question, “when you think about the energy future, what does it look like to you?” This worked extremely well as an opening question for the experts, with initial moments of

⁶ Ethics approval was also obtained from the university for this research as a whole.

uncertainty being assuaged through the articulation of long and sophisticated accounts. When it was used as an opening question with the first non-expert interview, however, the result was a period of silence and an apology. This issue led to a revision of the two interview guides for Study 4, with the choice to instead begin by asking the participant about their experiences rather than their expectations. With the “active citizens” this entailed asking about how they became involved with the REC project, while with the “sacrificed citizens” it meant asking about when they first heard about the large-scale solar project (see Annex 2 for interview guides). Moreover, with the latter group, some of the interviews took place on or near to the proposed infrastructure site, while others utilised maps of the area as a visual cue.

In short, in all of the interviews the aim was to put the participant at ease and, by doing so, encourage them to construct longer accounts. This approach is in line with other research on the everyday experiences and understandings of energy technologies which show the value of using less structured methods in comparison to opinion polls or questionnaires that obscure the situated and nuanced processes of meaning-making (Devine-Wright & Devine-Wright, 2010; Qualter, 1995; Legget & Finlay, 2001). This aim was also aided by a conversational approach to interviewing, with the interviewer also occasionally providing personal experiences and anecdotes in order to stimulate the interviewee’s imagination (Seidman, 2006). Like other aspects of the interview design, follow-up questions were often gleaned from prior interviews or documental analysis. Occasionally, and particularly in the expert interviews, the interviewer would bring to the discussion a generalized type of response by another type of actor (e.g. a policymaker or an engineer) to see how the interviewee interpreted this “other” position.

Overall, the aim of the interviews with citizens was to gradually construct a situation in which the interviewee felt comfortable to explicitly imagine the future. In practice, this meant usually reserving that question for the end, perhaps building on a specific expectation that was mentioned in passing. Similarly, the interviews with experts tended to also end with a question about the future. Rather than a strategy for ensuring epistemological validity, however, this was done in order to see if the intervening conversation had brought to light new ideas or issues which might be relevant. Moreover, if the participant had not yet offered an *evaluation* of the future, then they were asked to assess how likely it was that their expected or desired future would materialise. Thus, in general, the interviews with experts followed an hourglass shape, starting and finishing with the

most abstract questions. The interviews with citizens, on the other hand, began with concrete questions and gradually became more abstract.

3.2.4. Analysing and interpreting qualitative data⁷

While the type of qualitative data differed across each of the studies, all of the data was interpreted by following the same analytic procedures outlined by Batel & Castro (2018) in their attempt to combine the tools of discourse psychology with SRT. This approach entails, first, a thematic analysis of the data to demarcate their semantic *contents* and, second, a pragmatic discourse analysis to examine *how* and *why* these contents were used – in other words, their underlying discursive *processes* and *functions*. This two-stage analytical procedure is in line with the methodological standpoint detailed above, insofar as it entails an analysis of the interpretations that actors make and takes situational self-other relations as the unit of analysis. In the following, some general features and relevant aspects of these two stages of qualitative analysis will be presented.

Firstly, the thematic analysis aimed to identify patterns of meaning in the different types of text (i.e. legal documents, media articles or interview transcripts; Braun & Clarke, 2006), identifying the main actor interpretations of the object under study – i.e. RECs and their expectations of future developments. This was done first in an *inductive* way by reading through all of the texts and coding them according to main topics that arose. In the interviews with energy experts, for example, this meant bringing together all of the passages of interviews under categories such as “the energy future”, “the meaning and purpose of RECs”, “legal transposition and implementation” and “role of the public”.

This first round of coding tended to mirror the interview guide (in the document analysis, it largely mirrored the keyword search – see Chapter 5). The first benefit of this was that it facilitated the systematic comparison of interviewee claims about each of these topics. Another benefit was that it revealed common topics that were not anticipated by the research design, for example the exclusion of net-metering by the regulator or comparisons of RECs with large-scale solar plants. Thus, the inductive identification of themes was useful in this context, because they could be subsequently fed back into future interviews. Thirdly, inductive thematic analysis enabled the identification of recurring metaphors (e.g. “energy literacy”) and expressions that pointed towards

⁷ All Portuguese language legislative, regulatory and policy documents, as well as the press articles, were translated to English by the author prior to analysis with the help of automatic translation software.

underlying social representations and self-other relations. Fourthly, analysing the texts inductively allowed for the identification of different types of discursive situation, such as those when justifications, or critiques of others, were being made, or when the past was being reflected upon, or when projections were made about personal or common futures. Different *others* (e.g. the state, experts, the public) could also be identified, as could specific types of *self-other relations* (e.g. we versus them).

This first stage of thematic analysis set the scene for the subsequent *deductive* and theoretically driven analysis of the data in which inductively coded claims could be interpreted in relation to the framework of *orders of worth* and different *future-orientations* (e.g. implicit anticipation or explicit plans or possibilities). Interpretations were made with reference to a codebook, derived from the main publications of PS, of the main subjects, objects and relations that belonged to each of the orders of worth (see Chapter 1, Table 1.1.), but also by referring to the literature reviewed in Chapter 2. One of the benefits of this was that analysis could identify a wider range of both implicit and explicit tensions between meanings. In addition, the *absence* of certain orders of worth could be identified as much as their *presence* (Howarth, 2002). As Batel & Castro (2018, p.740) state, “it is often in what is left unsaid that we can diagnose the operations of power.” In other words, the analysis and interpretation of absence/presence is important for understanding the stability and change of meaning because it draws attention to which futures are prioritised, which are excluded and by whom.

This initial thematic analysis only addresses some of the research questions, however. It helps to identify the main constellations of social representations of the future, but it cannot shed much light on *how* and *why* these social representations are constructed and used in psychosocial processes of negotiating, promoting and contesting change. Towards this end, Batel & Castro (2018) show how a subsequent stage of discourse analysis is necessary, which entails analysing meanings in relation to their discursive context (Billig, 2008). In other words, the researcher must situate meanings in relation to each other, but also by attempting to gain an understanding of actors’ practical strategies by examining how they situate their own position in relation to that of imagined others, and how this facilitates the representation of the object.

In order to better link this method of analysis to the methodological standpoint of PS/SRT, it is necessary to make some theoretical clarifications. Firstly, Batel & Castro (2018) state that one of the aims of this second stage of analysis is to discern the functions that representations serve and

“what strategic interests are being pursued.” The presuppositions of PS/SRT, however, suggests that the researcher should be careful not to presuppose that actors are motivated by strategic interests (see Thévenot et al., 2000). Thus, the definition of discursive strategy adopted in this research is closer to Bourdieu’s (Lamaison and Bourdieu, 1986; p. 111) conceptualisation of strategy as a “feel for the game” or a “practical sense of things”. Importantly, this perspective emphasises the importance of actors’ past “experience of the game” which tends to manifest through techniques of the body and different levels of skill, but also emphasises actors’ situatedness in the present, their capacity for improvisation and a practical anticipation of the forthcoming (Mandich, 2019).

Secondly, being attentive to materiality means that different situations and institutional settings not only *constrain* self-other relations (Batel et al., 2015; Di Masso et al., 2011), but also *enable* them. Again, this caveat reminds the researcher to not presuppose that representations of the future are the simple outcome of the interests, identities and political projects of certain groups or actor positions, but rather that they are shaped by the discursive situation. Indeed, this is in line with the “cognitive polyphasia” and “pragmatic versatility” attributed to actors in both SRT and PS (Batel & Castro, 2018; Thévenot et al., 2000). The broader communicative context plays a role in this too. For example, the responses to regulatory consultations (Study 1) facilitate different ways of expressing oneself than in face-to-face interviews. Indeed, in the latter, the interviewer actively encourages the interviewee to imagine the future.

The discourse analysis conducted across the four studies in this dissertation therefore aimed to reconstruct the internal logic of texts, situating the various themes in relation to each other and establishing *how* discursive tensions between different orders of worth were brought together (e.g. forming a compromise) or kept apart (e.g. in a critique). Following Bauer & Gaskell (2008), this stage of analysis was essential to identifying how actors represented self, other and object *relative to a project*, that is, a “future-for-us,” an ongoing movement, an anticipation “not-yet” which defines both the object as well as people’s experience (Bauer & Gaskell, 2008, p.343). In other words, the analysis of how and why certain meanings were used was constantly guided by the questions of futurity at the heart of the theoretical approach constructed in Chapter 1. This entailed looking at not only how actors negotiated between self and other, but also between past and future, leading to the identification of a range of future-oriented discursive strategies (e.g. certain grammatical forms to push contents away from the present) and communicative formats (e.g.

dichotomizing different future possibilities) that were being used for promoting and resisting change (see Chapter 1 for a summary).

In the final analysis, these insights allowed conclusions to be drawn about the Portuguese energy transition; about which actors were promoting hegemonic representations of the energy system and of RECs and which – if any – were contesting these representations and proposing alternative futures. Moreover, this led to critical observations and recommendations about the need for certain discourses to be institutionalized and realized through the setting up of new accountability tests (Sareen & Wolf, 2021). In other words, by analysing future-orientations of social representations, this thesis links the micro-level of meaning-making and communication with the macro-level of institutions and socio-political change.

3.3. Final considerations: practical influences and limitations of the research design

In this chapter, the overall research strategy of this dissertation has been detailed. The key aim was to concretely link the theory and method, showing how the perspective developed in Chapter 1 and the empirical context reviewed in Chapter 2 have led to a set of research aims, objectives and questions, and to distinct methodological choices. While we believe that this link between theory and method is coherent, it has also been influenced by practical issues, such as the impact of the pandemic in the first two years of the research project and to cultural, linguistic and epistemic barriers. It is worth reflecting on these influences not because they lessen the worth of the research but because they point to avenues for further research, which shall be discussed in more detail in Part III.

As for many social scientists, the pandemic meant that conducting interviews online rather than in-person became something that was a necessity at first, and subsequently normalised. Conducting interviews in-person was always preferred, when possible, but ultimately both Studies 2 and 4 employed both methods. Though the effects of this difference are hard to assess, it was thought not to significantly influence the interview or the findings.

More significantly, the pandemic reshaped the original idea of this research project from being cross-national comparative research on imaginaries of the energy future in 2019 to being a single country case study on the institutionalisation, mediation and realisation of RECs by the end of 2020. While the eventual decision to focus only on Portugal was due mainly to the richness of the

context for examining the transposition of EU Directives, it was also influenced by the uncertainty about whether travelling to another country for fieldwork would be feasible. It therefore might be seen as a limitation of this research that only one national context was investigated, but it would not have been feasible to develop and conduct a cross-national research project at the same level of depth. There are therefore ample opportunities for future research to compare the conclusions of certain of the four studies (and the research as a whole) with other national contexts.

Another set of practical influences on the research were generated by the author of this dissertation not being a Portuguese speaker and not initially having an extensive knowledge of the cultural and political climate of the country, or of the structure of the energy system that was to become the main context of the research. This epistemic barrier influenced both the choice to focus on a single national context and to focus on legal innovation and expertise, as these domains facilitated a synoptic view of the context and early interviews with experts allowed for the clarification of certain technical issues, which guided the subsequent search and interpretation.

The linguistic barrier had a more significant effect on the choice of research methods, with participant observation and focus groups with both experts and citizens – methods that were initially preferred – being ruled out. Thus, one of the main limitations of this research design is that without the above-mentioned methods the full scope of the theoretical framework could not be explored. For instance, the research on citizens in Chapter 4 would have been augmented by conducting focus groups or, better, attending and observing their group meetings in order to view their practices and regimes of engagement. Nevertheless, and as stated above, the methodological choices that were made in this research are entirely coherent with the theoretical perspective and research questions that were arrived at.

SECTION II. EMPIRICAL RESEARCH

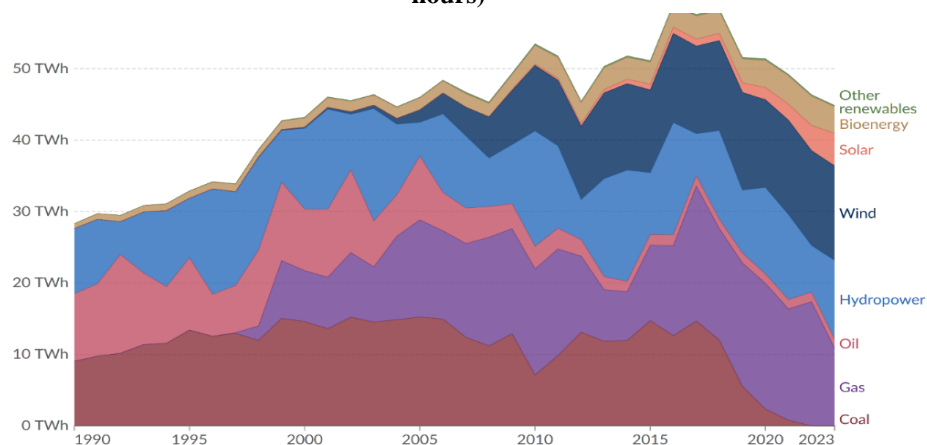
Chapter 4

Historical dynamics of law and social representations in Portugal's electricity sector between 1926 and 2019

4.1. Introduction

Like many countries around the world, Portugal is currently undergoing a significant shift in its energy infrastructure, influenced by domestic resource limitations, environmental priorities, and the impact of European Union membership. Historical political decisions, such as the focus on hydro and wind power, coupled with a scarcity of fossil resources, have strongly shaped Portugal's energy system. Imported oil (46%) and natural gas (24%) still represent the majority sources in the country's total energy supply (IEA, 2022). While the share of electricity in the final consumption is steadily increasing (25.1% in 2021), a significant volume of this is generated from burning natural gas (35.7%), with the use of coal ending in 2021. However, in 2022, the vast majority of electricity generation came from renewable energy sources (59.4%), namely wind (51.6%), hydro (34.2%) and solar PV (13.5%). Indeed, domestic energy production has been steadily increasing over the last two decades, mostly as a result of the successful roll-out of wind energy infrastructure and the continued role of hydro power. Recent years have seen a turn in focus to developing the country's solar capacity, a resource which is abundant in Portugal though underdeveloped compared with other countries.

Figure 3. Portuguese electricity production by source 1990 – 2023 (terawatt-hours)



Source: Brown & Jones, 2024

While these indicators track Portugal's energy system's technological evolution, they do not capture the complex interplay with socio-political events and discourses that have both shaped and been shaped by it. Indeed, political crises and social movements have played a significant and well-known role in the country's energy policy. Most notably, the end of the dictatorship in 1974 was soon followed by public opposition to plans for the development of a nuclear power station. Similarly, joining the EU in 1986 prompted a heightened focus on environmental issues. The European push towards a unified electricity market led to reforms aimed at deregulating the previously state-controlled, monopolistic energy sector.

The early 2000s saw an acceleration in renewable energy investments, spearheaded by the Portuguese government and the then state-owned energy company EDP, driven by public discourse on climate change and a financially informed energy policy. The 2010 financial crisis temporarily slowed renewable energy advancements, but recent initiatives like solar photovoltaic auctions have stimulated fresh investments. Parallel to this, since 2002, there have been numerous regulatory changes to encourage small-scale solar energy production, targeting decentralized electricity generation by individuals and businesses through incentives and simplified licensing. Yet, challenges such as the initial high cost of technology, reduced feed-in tariffs in the early 2010s, registration expenses, limited capacity for grid connections (413 MW in 2020), and government-set subsidies have impeded consistent growth in this area (Silva & Sareen, 2021).

Like other Southern European countries, Portugal is often viewed as a "late starter" when it comes to RECs (Coenen & Hoppe, 2021). However, it is important to avoid the fallacy of "Mediterranean syndrome" (Eder & Kousis, 2001) and "Southern laggards" (Börzel, 2003) which perpetuates the stereotype of a democratic deficit and citizen disengagement in the Southern European countries (Gonçalves, 2002). In fact, while Portugal may suffer from a cumbersome and centralised political bureaucracy, it also has a rich tradition of radical politics and local associationism which came to light in the aftermath of the 1974 Carnation Revolution (Santos, 1982). While there is currently only one renewable energy cooperative in Portugal, there are also a number of electricity distribution cooperatives that have been operating in the north of the country since the 1930s (Alves, 1999; Delicado et al., 2023). However, a long history of tensions between local communities and central government representatives (Afonso & Mendes, 2015) raises questions about how the public is imagined in the context of proposals for future RECs.

For these reasons it is clear that in order to understand how and why the energy future is being imagined in the present, we first need to understand the past. While there has been a number of studies which have examined, on the one hand, the environmental, economic, legislative, technological and political causes and consequences of these historical changes in energy policy (Araújo & Coelho, 2013; Bento & Fontes, 2015; Guerreiro et al., 2022; Soares & Silva, 2014) and, on the other, the symbolic dimension of Portuguese energy policy at a single point in time or in relation to a single issue (Carvalho et al., 2022; Pereira et al., 2016, 2018), there has been less attention given to the long-term historical co-evolution of principles of energy law and policy imaginaries or conventions.

The main aim of this chapter is, therefore, to capture the specificity of the present by providing a historical account of the emergence of new conventions in energy law and policy. In particular, it aims to establish how the succession of energy imaginaries is currently pre-figuring the new concept of “Renewable Energy Communities,” the latest and most extensive attempt to involve the public in energy production and re-imagine the energy system.

The following sections provide a brief account of Portuguese energy law from 1926 to 2023. At a broad level, it aims to foreground the changes in conventions and representations of the future that influenced the way that energy production and consumption was represented in this period. On the other hand, it will examine if and how alternative forms of energy production and the public have been progressively represented. By drawing from a range of social scientific literature, and through an analysis of the expectations, justifications and narratives contained in different legal and policy documents, it shows how there has been an evolution in the dominant conventions and representations of the Portuguese energy system.

In the first period, the fascist *Estado Novo* regime blends the past and the future into a paternalist and technocratic promise of energy modernity. In the second period, after the democratic revolution of 1974, energy policy is framed as the pre-emptive plan of the “external” state in anticipation of future economic shocks and as the expression of a collective desire for economic – but also *political* – modernity. In the third period, the principles of market competition and technological innovation become ends in themselves, decoupled from any underlying justification in terms of social progress. While the “external” state of the first period gradually gives way to the convention of the “absent” state, increased state support for renewable energy policy suggests an emerging tension (see also Batel & Küpers, 2023). In the fourth period, an

imaginary of Portugal as a renewables pioneer is consolidated but at the expense of civic worth. The fifth phase sees a neoliberal reaction to the previous decade's policy of green industrialisation, with policy decisions increasingly informed by econometrics and market instruments. This narrative of the evolution of energy discourse in the Portuguese legal/policy sphere sets the scene for the contemporary period, analysed in the Chapter 5, during which there is an emergence of a more reflexive orientation towards the future and the rise of discourses of energy citizenship and public participation, which come into tension with principles of market competition, technical efficiency and centralist control.

Table 4.1. Timeline of key events and legislation in Portugal

PERIOD	KEY EVENTS
1926 - 1974	Approval of Portuguese Constitution of 1933 (Estado Novo); Law for the production of electricity from hydraulic installations (1927); Law for the Electrification of the Country (1944); First “oil shock” (1973); Carnation Revolution (1974).
1974 - 1985	Nationalization of power sector, creation of EDP (1976); Creation of The Ministry of Industry and Energy (disbanded 1995); Approval of first feed-in tariff scheme (1981); Abandonment of nuclear power; National Energy Plan (<i>Plano Energético Nacional</i> , 1984) – need established for energy efficiency and alternative energy sources.;
1986 – 1999	Accession to EU (1986) subsidies for innovative energy technologies. First environmental laws, beginning of focus on renewable energy sources (1987); Start of energy sector liberalization; first wind energy pilots; investment subsidies for reducing oil dependency (1988); Creation of environmental and energy institutions (e.g. ERSE); creation of Energy Acquisition Contracts (CAEs; 1995); Establishment of feed-in tariffs and further liberalization efforts; plans abandoned to fully privatize EDP; protocol
2000 – 2010	Legislation to keep the national electricity transmission grid under public control; E4 energy program focusing on efficiency and RES (2001). EU Directive establishing rules for liberalized electricity market (2003); Establishment of the Iberian energy market (MIBEL); termination of CAEs and creation of CMECs (2007); restructuring of EDP; extended feed-in contracts; Renewables (hydro & wind) become the largest share of electricity for consumers; revision of renewable energy plan focusing on cost efficiency; Financial crisis and Troika bailout (2010).
2011 – 2018	Completion of energy market liberalization; privatization of major energy companies; shift towards economic efficiency in RES policies; Simplification of incentives for solar mini-production; emphasis on reducing energy consumption; reluctant stance towards RES from a centre-right government; Creation of the Ministry of Environment and Energy Transition; Publication of Roadmap to Carbon Neutrality 2050.

4.2. Visions of energy modernity in the *Estado Novo* (1926 – 1974)

There were two interrelated energy transitions gaining pace in Portugal in the first half of the 20th century: the transition from biomass to electricity and the transition from coal-fired thermal plants as the main source of electricity to hydroelectric plants (the first was opened in 1898). This transition was not without the ecological destruction characteristic of modernity, with the early proliferation of thermal plants and small dams determined by the needs of the textile industry in the north of the country and leading to the degradation of the Ave River (Alves, 1999).

It was issues of political economy, however, that played the key role in the further development of hydroelectricity. By the end of World War I, 82.2% of electricity production in Portugal was still provided by thermal plants and dependency on coal imports was having an increasingly detrimental impact on the national economy (Jacinto, 2004). The entanglement of these transitions was also geographical as the provision of hydroelectric power was only feasible if it served more than one municipality. Thus, a year after establishing a law for the exploitation of hydraulics (*Decreto n.º 13112*), in 1927 the government passed legislation (*Decreto n.º 14772*) that enabled them to promote the formation of organisations for the construction of regional electricity distribution networks (Matos & Silva, 2004). As Matos (2022) notes, this law is usually considered the starting point of state intervention policy in the electrical sector.⁸

4.2.1. *Electrifying the country and the creation of the great dams*

The implementation of this modernist vision was hampered by a number of economic and political crises in the years that followed, and it was not until after WWII that the issues of “energy dependency” and “rural electrification” entered the scene, creating a political establishment more firmly oriented towards modernization of the country. And so, it was in the 1940s that construction began on the network of a great dams that would dominate Portugal’s electricity system for the rest of the century (Matos, 2022). In 1944, the “Law on the Electrification of the Country” (*Lei n.º 2002/44*), established the foundation for structuring Portugal’s electrical sector, encompassing the production, transportation, and distribution of electricity. This legislation also created the legal framework for centralization and state control in this domain, defining the national electrical

⁸ While only 14.9% of municipalities has access to electricity in 1918, by 1945 this figure had risen to 92%. Of course, this does not mean that all towns in these municipalities had access to electricity and the level of private consumption long remained much lower than the European average (Silva & Matos, 2004).

network as “the ensemble of public structures aimed at the production, transportation, and distribution of electrical energy,” and designating hydroelectric power as the cornerstone of electricity production in Portugal.

One of the main aims of this overhaul was to “bring to small population clusters the benefits of electrical energy,” which were viewed as “a factor in economic development, social progress and improved living standards” (*Decreto Lei n.º 43335/60*). To achieve this promise of modernity, the government sought to correct the notion of an electricity system organised according to liberal market principles, which had so far failed to bring electricity to the rural areas in which more than half of the population were located (Madureira, 2007). From this perspective, private capital had too much autonomy and the government aimed to restrict the rights of companies in line with their duty to serve the national interest. For the same reasons, however, the government also restricted the private individual’s “right to demand the removal of lines,” which was causing “technical inconveniences” (*Decreto Lei n.º 43335/60*). By 1956, however, questions were being raised about why the country was still not showing adequate signs of modernisation. The Minister of Economy lamented the lack of agricultural productivity, which was reinforcing trends of rural exodus and emigration, pointing to the need to create new forms employment and better living conditions in order to fix the population to the land. Bringing electricity (and modernity) to rural areas was seen as a cure to these ills.

Subsequently, in 1957, the “Report on Rural Electrification” was published. Authored by a commission of technicians, and representatives from various general directorates, municipalities, farming and concession companies, this report concluded that, “happily or unfortunately, we are still a long way from this phase of agricultural development, and therefore from the correlative applications of electrical energy” (quoted in Alves, 1999, p.5, own translation). This conclusion was arrived at through the analysis of two interrelated problematizations. On the one hand, electricity was seen as incompatible with current agricultural practices which were based on a surplus of labour power and, when necessary, the use of internal combustion engines. On the other hand, the purchasing power of rural populations was seen as far too low to justify the investment in network infrastructure. This resulted in a policy paradox: how to bring to rural areas the convenience, comfort, hygiene and cleanliness and the feeling of social equality and human dignity that electricity provides? The commission provided the answer: “it is essential that a substantial increase in the purchasing power and therefore in the standard of living of rural populations is

promoted by *other means*” (ibid, p.6, italics added). In short, the commission considered that rural electrification would not be a profitable operation and should not be seen as the vehicle that transports the country into the future. As a result, the corporatist regime could not justify the provision of State aid, leading to the further concentration of the distribution network in urban centres.

Three years later, in 1960, considering the still insignificant consumption and extensive infrastructure requirements of some places, the state seemed to admit the *utopian* nature of their objective of nation-wide electrification while, at the same time, re-affirming its promise:

“In these cases, it will have to be confessed, albeit with regret, that the hour of electrification has not yet struck. Within a healthy economy and even good politics, since it is not possible to do everything at the same time, it is essential to prioritize the problems, giving priority to solving those that present more favorable conditions. In due time it will come - and will come - the turn of the rest.” (*Decreto Lei n.º 43335/1960*, p.4-5).

The intervention of the expert commission highlights a tension between the domestic-industrial *Estado Novo* regime with the *market* order of worth. Indeed, as Madureira (2007, p.635) has pointed out, the irony here was that it was the *Estado Novo*’s anti-liberal market policies that accentuated geographical asymmetries and impeded the development of an integrated national network:

“The hypothesis is therefore put forward of an asymmetrical development, in which the better positioned regions strengthened their positions of access to more competitive forms of energy distribution linked to economic modernization, whilst regions with few initial infrastructures did not manage to recover from their state of backwardness. This situation dragged on for a long period of time, which meant that the implantation of electric networks exacerbated regional disparities” (Madureira, 2007, p.638)

By confining companies to regional markets, networks that were physically close to one another could neither cooperate nor compete. By the end of the century, the inefficiencies of this period would play a role in justifying the transition to a liberalised energy market. Before that, however,

they would lead instead to *increased* State intervention in the energy system, culminating in the nationalisation of the sector in 1974.

4.2.2. The “myth of rural electrification” and the cooperative ideal

While electricity companies found it viable to operate only in densely populated urban areas, ensuring a large number of consumers within a small network, the countryside was not destined to remain in darkness. Many in rural areas yearned for the benefits of technical progress and the light it brought. Consequently, various solutions emerged to extend electricity to these regions, a concept that was still quite novel for most people.

In some cases, entrepreneurs managed to generate or procure electricity for local distribution, often in industrial centres scattered across the countryside. Among them there were those who recognized that collective strength could make this possible when individual initiatives were too hesitant to risk potential losses. Cooperatives stood out in this context, striving to create common services in various areas without the guarantee of profit. This approach was rooted in the belief in mutual aid and assistance, which had a strong tradition in the working class and later extended to diverse areas such as consumption, housing, and agriculture. However, it is important to note, as Alves (1999) does, that it was not a grassroots popular movement that was at the genesis of the cooperative organization of rural electricity distribution networks. On the contrary, it was the work of a very restricted elite, which involved people with higher education and rural landowners.

According to Alves (1999), the cooperative model emerged in the 1930s in Portugal and was framed as a viable solution in various sectors, including the electricity sector. Raul Tamagnini Barbosa, in his 1930 publication “Aspects and Modalities of Cooperativism”, played a crucial role in defining this approach (Costa, 1978). At that time, the social function of electricity and the restrictive role of profit-driven producers and distributors were hotly debated. This led to calls for public authorities to spearhead electrification efforts, aiming for the “progressive socialization of economic life.” The state, concerned with the general interests of society, saw municipalization as a potential pathway.

In line with progressive foreign practices, the cooperative model appeared to be a reasonable solution for developing services where private initiatives were reluctant to take risks. Legally, cooperatives were established under the Commercial Code of 1888, which required them to adopt one of the corporate forms provided for general companies (Alves, 1999). Regardless of the form,

cooperatives, referred to as “cooperative societies,” were subject to the same regulations as public limited companies concerning the publication of their founding documents, changes, obligations, and responsibilities. They were required to have a minimum of ten partners and could be designated as either limited or unlimited liability cooperatives (Alves, 1999).

The Vale d'Este Electric Cooperative (CEVE) was established in 1931, “at a time when rural electrification was a myth,”⁹ and exemplifies this ideal of rural cooperativism. Unlike private companies, these cooperatives reinvested any profits into enhancing equipment, improving financing conditions, and expanding the distribution network rather than distributing them to shareholders. Numerous other electricity distribution cooperatives emerged, particularly along the coast around Porto and Aveiro, where cooperativism was more widespread. These cooperatives responded to the urgent need for electrification, with more than two dozen still active by 1943 (Alves, 1999).

However, as Alves (1999) points out, these cooperatives depended heavily on human effort and the dedication of their administrators, who served without personal gain, driven solely by “conscience and an ideal of serving the common good” (Alves, 1999, p.37, own translation). In an increasingly profit-driven society, individuals willing to serve selflessly were scarce. Moreover, the cooperative ideal often clashed with the corporate ethos that flourished under Salazar’s Estado Novo regime in the 1930s. Although the regime tolerated cooperatives, it sought to control them by placing trusted political figures within their ranks and stifling their propaganda and ideals of unity and federation, primarily due to the socialist connotations and mobilizing power of cooperative movements (Alves, 1999).

A second source of explanations commonly given to explain the difficulties that these organizations faced was in the character of the Portuguese people. This is seen, for example, in Raul Tamagnini Barbosa’s argument that, “disbelief in cooperativism was a consequence of the lack of a collective spirit.” He went on,

“The Portuguese are essentially individualistic and fiercely selfish, perhaps as a result of not having a social education, still dragging the heavy shackle to which seven centuries of friar education led him, resulting in his lack of solidarity with his members, the most complete absence of selflessness towards the cooperative, to which everything

⁹ From the cooperative’s 1956 Annual Report and Accounts, quoted in Alves (1999), own translation.

they demand and for which they sacrifice nothing” (quoted in Costa, 1978, p.242, own translation).

Regardless of the veracity of this account, it is a discourse that accompanies the history of cooperatives in Portugal, highlighting the ideological tensions and often contradictory forces of the broader society. Thus, as Alves (1999) shows, while some cooperatives thrived, many struggled and eventually abandoned their cooperative ideals. As a result, few electricity distribution cooperatives remain today (CEVE is one), with many having either dissolved or transitioned into conventional commercial or industrial companies focused on profit.

Under the *Estado Novo* regime, then, Portugal’s emerging electricity system was increasingly organized according to principles of state intervention in the economy. The state granted public service concessions to privately owned energy companies and provided them with incentives to invest in energy production infrastructure that was “of primary interest to the Nation” (*Decreto Lei n.º 43335/1960*, p.3). This *corporatist* and *technocratic* mode of coordination can be described as a state compromise between *domestic* and *industrial* orders of worth. On the one hand, there was a paternalist orientation towards society which aimed to shape the “customs and mentalities” of the public, including the concessionaires (*Decreto Lei n.º 43335/60*). From this point of view, the state is justified in its actions because of its inherent benevolence, whereas the public are viewed as naturally self-interested and irrational, with concessionaires lacking a refined notion of public service and landowners motivated by “whim” (*Decreto Lei n.º 43335/60*).

On the other hand, energy legislation of this period displayed a cautious orientation to the future based on technical planning and steady progress. Together, these two perspectives formed a domestic-industrial compromise which aimed to “discipline production” and allow private companies to serve the national interest “without fear of confrontation with the most similarly advanced foreign bodies” (*Decreto Lei n.º 43335/1960*, p.6). Understanding that the *Estado Novo*’s regime of energy provision was justified and coordinated largely by these orders of worth is essential for understanding the way that energy sector actors would imagine and enact the energy system for decades to come. It is also important for anticipating the *clashes of worth* that will repeatedly constitute the critical moments of Portugal’s renewable energy transition, when a hierarchical and technocratic state comes up against competing *market* and *civic* demands. In diverse forms, the spirit of modernity would continue to guide Portuguese energy politics: on the

one hand, as a promise of a better future and, on the other, as a reminder of the failures of an over-reaching state.

4.3. Revolution and the new horizon of expectations (1974 – 1985)

With the democratic revolution of 1974, the *domestic-industrial* arrangement of energy policy was dismantled, with different representations of *civic* worth vying to replace the previously hegemonic logic of *domestic* paternalism and national sovereignty. In addition to this critique of the past, this period saw Portugal, like other countries, faced with increased economic precariousness which was compounded by a sudden oil crisis (Araújo & Coelho, 2013).

Whereas other countries were undergoing privatizations, the revolutionary spirit of popular justice (B. de S. Santos, 1982) led to the nationalization of the Portuguese electricity sector in 1975 (*Decreto Lei n.º 205-G/75*). All energy services and installations existing in the national territory were transferred to the state, which meant the end of the model of public service concessions, with a monopoly handed over to the operation of a public company (Electricidade de Portugal – EDP, created by *Decreto Lei n.º 502/76*), on an exclusive basis (Soares & Silva, 2014).

The new Portuguese Constitution, drafted in 1975 and eventually published in April 1976, set out a radical but short-lived socio-economic agenda oriented towards the “development of socialist relations of production, through the collective appropriation of the main means of production and soil, as well as natural resources, and the exercise of the democratic power of the working classes” (Article 80). While it did not set out specific principles or aims for energy policy, this document prescribed the responsibility of the state to “promote the rational use of natural resources, safeguarding their capacity for renewal and ecological stability” (Article 66). What followed suggests that rather than ignoring the energy sector, the latter was inextricable from the broader industrial policy that itself constituted the main vector of the socialist-modernist horizon of expectations.

4.3.1. Nuclear imaginaries and the emergence of the civic order of worth

With the main governmental objective of developing and integrating the country’s energy supply, EDP renewed the pursuit of the three main goals of the 1960 law: total electrification of the territory; improving the quality of the services it provided; and tariff standardization (EDP, 2019). Rather than renewable energy, however, at this point the new government’s main bet for the future

was to continue with plans – proposed by the Estado Novo in 1971 – to develop a nuclear power plant (Barca & Delicado, 2016). As Pereira et al. (2018) point out, “the pro-nuclear sociotechnical imaginary [fit] well into the new revolutionary spirit, framed under the MFA’s [Armed Forces Movement] 3D slogan: to democratize, to decolonize and to develop.” At the center of this vision, however, were growing concerns about energy security and energy dependence.

Amendments to the Portuguese Constitution in 1982 included the addition of a primary duty of the state “to adopt a national policy for energy that is in keeping with conservation of natural resources and a balanced ecology, while promoting international co-operation in this field” (CPR, Article 81, Paragraph L). While this statement signalled the further emergence of *green* (ecological balance) and *civic* (international cooperation as opposed to national sovereignty) discourses in Portuguese energy law, the constitution refrained from espousing any guiding vision about what kind of energy resources should be developed and used.

The new National Energy Plan (PEN 82) soon followed, representing the future in terms of security of supply and its economic implications, with nuclear energy posited as the main vehicle to secure abundant electricity and future prosperity for the nation. While environmental concerns were beginning to play a role in energy governance outside of Portugal, especially in the European Union (Scheuer, 2005), the priority here was given to the recovery of the economy and the use of national resources (Araújo & Coelho, 2013). This plan, greatly influenced by the “nuclearists” of EDP (Pereira et al., 2018), started from economic parameters that were favourable to nuclear, and it was concluded that this form of energy had an economic advantage over coal or renewable energy.

PEN 82 was stifled after a sustained campaign of public opposition based on the emergence of what Pereira et al. (2018) call a new “civic epistemology” (Jasanoff, 2011) – a spirit of public participation and democracy. The underlying moral basis of anti-nuclear arguments, however, was less *civic* than it was *ecological* (based on arguments learned from other anti-nuclear movements taking place at that time in other countries), but also – and perhaps more decisively – *industrial*: arguments which challenged the economic rationality of a nuclear energy future. As Pereira et al. (2018), following Hecht (1998), state, while there is a certain continuity between the imaginaries of development pre and post revolution, it is important to distinguish between nationalistic and nationalised organisations, the former mobilising the *domestic* order of worth and the latter, *civic*. Following this, the nationalisation of the energy sector and the revolutionary constitution can be

viewed as based on a justification of *civic-industrial* development and progress commensurate with the past future but, at the same time, there was also a critique of the past's *domestic* order of worth. The latter was represented, on the one hand, by notions of national *sovereignty* which in practice resulted in international isolation and, on the other hand, as an explicitly hierarchical and paternalist relation to "the public." This confrontation between state and society is important for understanding the trajectory that Portugal's future energy transitions would follow.

In contrast to the view of absolute continuity between the authoritarian past and the ostensibly democratic present, it is evident that the institutional representation of the public in the 1980s was different to that of the Estado Novo. Whereas the ruralisation rhetoric of the latter "intended to design a virtuous rural community where technical assistance and moral indoctrination were part of the same endeavour" (Saraiva, 2016, p. 67), the public was now represented in relation to the democratic imaginary of modernity where public participation and deliberation was welcomed and public legitimacy was a political necessity (but see Batel & Küpers, 2023). Indeed, Pereira et al. (2018) point out that the state's response to the public opposition to nuclear energy was not to suppress or even ignore, but to engage with the public via mass educational campaigns, on the one hand, and with direct and public dialogue with dissenting experts, on the other.

Importantly, while the state was motivated by this spirit of democracy, its actions were clearly generated by an information deficit model of the public's understanding of science (Wynne, 1996; Cotton, 2018). As Pereira et al. (2018) observe, while "a pluralist or combative style of public knowledge making emerged after the revolution, it was gradually diffused over the following years, leading to the stabilization of democratic institutions and their knowledge claims, and to a more technocratic and less participative culture" (Pereira et al., 2018). Consequently, though "public participation" was essential to preventing a nuclear future from materializing, the imaginaries of development and innovation based on the moral imperative of *progress* would continue, eventually finding realization in renewable energy technologies (Batel & Küpers, 2023) that were still viewed as unaffordable at this time (Pereira et al., 2018).

4.3.2. A dispute over low-voltage electricity distribution

Parallel to the controversy over nuclear energy and broader uncertainty about the security of supply, in this period a dispute emerged between the State and the municipalities regarding the organization of the distribution of low voltage electrical energy, including supply to final

consumers (Soares & Silva, 2014). In effect, it was necessary to make the legal regime of public monopoly of EDP compatible with the rights of local authorities, which had been in charge of low voltage distribution activities for several years, investing in the construction of the respective networks. This dispute culminated in the institution of a compromise solution, based on the legal concession of the activity of distributing low voltage electrical energy by municipalities to EDP, in accordance with a legal regime defined by the national legislator, regulated by a standard contract (Soares & Silva, 2014).

In 1982, a new piece of legislation (*Decreto Lei n.º 344-A/1982*) observed that the wording of the various ordinances of the controlled price regime “did not clearly show the intention to establish fixed prices,” and this explained why the regime was being violated by several distributors who were purchasing electricity from EDP and selling it to their consumers at a lower price. From this perspective, the resulting “market distortions” put at risk the ability of the centralised state to manage the grid and plan for the future in the public interest:

“Overriding reasons of public interest do not, however, allow this situation to continue, as it is not possible to program and make the economic planning of the territory effective if energy distributors can, arbitrarily, create a distortion factor as important as the price of electrical energy, which is why the fixed price nature of energy sales is defined, beyond any doubt” (*Decreto Lei n.º 344-A/1982*, p.9).

Thus, in keeping with this new *civic* self-understanding of the state, energy sector legislation of the post-revolutionary period frequently referred to the “public interest” while maintaining the opposition to free competition between energy distributors that the legislation of the Estado Novo period established. This second continuity between the two regimes had been confirmed by the post-revolution law *Decreto Lei n.º 329-A/1974* which established the power of the Secretary of State for Supply and Prices to set the price regimes for goods and services.

In terms of convention theory, this period of Portuguese public policy can be broadly characterised as being governed by the strong economic planning orientation characteristic of conventions of the “external state” and the “civic-industrial compromise” (Boltanski & Thévenot, 2006), also seen in France’s pursuit of nuclear energy (Hecht, 1998). The essence of these conventions is a future represented in terms of progress, evolution and modernisation and the premise that such a future can be achieved for the public by deliberate intervention in the economy by a scientifically informed and democratically elected elite. Energy was central to this horizon of

expectation, with the electrification of the country seen as a pre-requisite to the quality of life and level of comfort promised by modernity, as it was during the Estado Novo and in countless other countries. As a correlate to this, expectations of growth collided with the sudden awareness of the finite nature of fossil fuels and their geopolitical insecurity. “Energy dependence” emerged as a key policy problem in a country with great aspirations but without its own supply of fossil fuels to meet them. As we will see in the following sections, the emerging representation of “renewable energy” provided Portugal with an opportunity for both economic and political progress.

4.4. European integration and the beginning of energy market liberalization (1986 – 1999)

Portugal joined the European Economic Community in 1986, and it was during this period that strong economic growth was beginning to make environmental problems more evident (Araújo & Coelho, 2013). In the same year, legislation was approved that encouraged the diversification of energy sources, including renewable resources, namely through the creation of a system of incentives for the rational use and development of new forms of energy, and a regime for the production of electrical energy by independent producers. The Program of the XI Constitutional Government (1987-91) advocated, for the first time, the use of endogenous natural resources for energy production, a reference that became a constant subject in the government programs that followed (Araújo & Coelho, 2013). In 1988, the process of re-privatization of a substantial part of the capital of energy companies began (Silva, 2011), following the example of other, especially “core”, countries in moving towards energy market liberalization (Hess, 2011; Nylander, 2001).

4.4.1 The market critique of the inefficiency of state monopoly

In the 1990s, Portugal's energy policy prioritized economic growth, often framing decisions in neoclassical economic terms and placing less emphasis on controlling pollution emissions (Soares & Silva, 2014). The 1995 Resolution of the Portuguese Council of Ministers (No. 38/95) explicitly stated that pollution emission controls should not impede economic development. This period also saw the beginning of energy market liberalization alongside the establishment of energy purchase agreements. These agreements assured coal and gas electricity producers a stable income for periods of at least 15 years, covering both fixed and variable production costs, thereby preserving their profitability post-liberalization (Silva, 2011).

Throughout the early nineties, Portugal adopted several energy policy programs aimed at enhancing competitiveness, ensuring energy security, and – to a lesser extent – protecting the environment. These initiatives included both regulatory measures to streamline production and network access, and economic measures such as funding from energy programs and an “environmental premium” for electricity from renewable energy sources. The government's approach continued to be characterized by neutrality towards different renewable sources, offering support only to financially viable projects or stimulating experimentation with new technologies with the support of European funds (Bento & Fontes, 2015).

Since 1944 the figure of the “small producer” of electrical energy had been recognized as a relevant reality whose specificity justified its own legal regime. The law which created EDP in 1975 also allowed for this figure, encouraging the “self-production” of electricity, but restricted this activity to natural and legal persons – private, public or cooperatives – who produced it as an accessory, rather than it being their main purpose. The transition from traditional public sector monopolies to a market-based system now involved removing these legal barriers to private initiatives and implementing regulatory measures to ensure market competition.

Significant legislative steps included the Independent Power Production Law (*Decreto Lei n.º 189/88*), which allowed public and private entities and individuals to generate and sell renewable electricity to the grid. Further legal amendments recognized the role of entities operating exclusively in electricity production from renewable sources. The 1988 law (*Decreto Lei n.º 189/88*) established a special regime for “small electricity producers,” encouraging the use of renewable resources and cogeneration to reduce external energy dependence and promote efficient energy use. Thirty years later, this law would be retrospectively seen by renewable energy industry actors as, “the first step for the country to modernize and develop the electricity sector,” because it opened the door to private investment and thus to increasingly affordable and proven renewable energy technologies.

This legislation was part of a broader shift towards pro-competition regulation (Soares & Silva, 2014). Key to the liberalization movement, was the argument that a “network industry” like electricity and natural gas could operate more efficiently with multiple operators than under a single-operator regime. This was evidenced by the success of American electricity trading pools and the energy surplus exchange practices managed by NORDEL, the association of Nordic country network operators (Soares & Silva, 2014). It was, of course, also influenced by neoliberal

economics that were coming to define the EU's approach to its emerging common market, and the electricity market in particular (Nylander, 2001).

The period also introduced the concept of eligible customers who could freely purchase energy on the market or directly from independent producers, bypassing distributors in high-voltage transactions (Soares & Silva, 2014) and established a host of independent administrative entities such as ERSE, the national energy system regulator. It was not until 2007 that the liberalized electricity market was finally created, giving customers the freedom to choose their electricity and natural gas supplier. The gradual liberalisation of the energy sector in Portugal in the nineties was thus broadly in-keeping with convention theory arguments about the emergence of the “absent state” in network industries (Bessy & Didry, 2023) and the role of the *market arguments* that increasing competition is for the common good. However, when it came to renewable energy this drive towards free markets came into tension with the civic-industrial and ostensibly “green” orientation towards the future.

In 1995 the government created a market device called an Energy Acquisition Contract (CAE) to attract investment in new natural gas power plants that the country needed but that the State could not or did not want to finance. CAEs established that producers who invested in these plants would receive remuneration for their investment and availability and would be compensated for all the costs they would incur to produce. These contracts committed the state to long-term subsidies for private companies but, due largely to the new priorities for a renewable energy transition, they were terminated in 2003. This led to the creation and implementation, in 2007, of Contractual Balance Maintenance Costs (CBMC) to provide compensation to companies for any deficit suffered as a result of selling energy in the liberalized market and to maintain the financial neutrality of the State. This had the effect of structuring the deficits of the electricity system for decades.

4.4.2. Economic versus technological modernism: government support for renewables

As has been pointed out by several social scientists and commentators, the project of a nation-wide transition to renewable energy was, from the beginning, bound up with an imaginary of Portuguese integration with European modernity, in the wake of the authoritarian and corporatist regime of the Estado Novo (Afonso & Mendes, 2015; Delicado et al., 2016; Frois, 2012; Santos, 1982). As Helm (2002) has argued, “keeping government out of energy markets and limiting their discretion were

seen as desirable features of the regulatory framework' through the 1990's." While the 1988 law (*Decreto Lei n.º 189/88*) should be viewed in the context of market liberalization, it also encouraged energy production by guaranteeing producers lucrative sales tariffs and by designating energy production as an activity of national interest giving it a special status in the context of laws governing foreign investment and technology transfer (Soares & Silva, 2014). As pointed out by Toke & Lauber (2007, p.687), while state incentives such as feed-in tariffs are not neoliberal, they "developed in an institutional setting that was shaped by ordoliberal preferences and its concern for the common good [which] emphasizes competition, opportunities for smaller market players against monopolistic practices, and the internalization of external costs." While neoliberalism expects markets to emerge spontaneously, ordoliberalism advocates for state agencies as a way of combating market power and its monopolistic tendencies (Davies, 2016; Diaz-Bone, 2016).

Among the main justifications of this legal change was the perceived need for coherence and transparency in order to provide certainty for new economic actors and, thus, stimulate market activity. In addition, this transformation of energy law – and especially the figure of the "small producer of electrical energy" at its centre – was represented by the government as necessary in light of the oil shocks of the 1970s which highlighted the precarity of depending on a single finite energy source. In this context, the State declared its intention to take advantage instead of a diversity of resources:

"The optimized use of national energy resources is a necessary vector for development and economic progress. The various oil shocks, with the resulting worsening of our country's dependency conditions, must also be remembered at exactly the moment when the international energy situation is not so cloudy and when the Portuguese face the great challenge of showing that they know how to invest, valuing existing resources that are not yet used" (*Decreto Lei n.º 189/1988, p.2*).

The above statement, taken from the preamble to *Decreto Lei n.º 189/88*, shows the multiple discourses and meanings circulating in Portuguese energy policy at this time. Most importantly, it epitomises the broader Portuguese self-understanding of perpetually being on the cusp of modernity (Frois, 2012). In this document, the specific character of this discourse is the boundary between the past of isolation and precarity, and the future of European investment, ingenuity and abundance. The conditions are seen as ripe for enacting this future and the possibilities afforded by the new law call upon the Portuguese to prove their market-industrial worth.

In addition to the liberalization of the energy sector, the 1990s were marked by a greater public perception of environmental problems and by the development of the state structure for the exercise of environmental policy, largely to respond to EU demands, but also to use channelled community funding for these matters (Araújo & Coelho, 2013). While the Government's concern with the environmental impact of energy *consumption* found its first clear legislative expression in 1982, it was only in 1994 that energy policy priorities for introducing natural gas, increasing renewable energy, and promoting energy efficiency were systematically established. In this context, the program of the XIV Constitutional Government (1999-2002) was of particular importance, as it established the promotion of renewable energy and the reduction of carbon dioxide emissions and the greenhouse effect as key policy goals. However, it should not be understated that these policies were an outcome of the broader international energy policy consensus, influenced by the Kyoto Protocol and the willingness of the EU to promote renewable energies by channelling funds to member states.

4.5. The mainstreaming of renewables (2000 – 2010)

The evolution of Portugal's energy sector from 2000 to 2010 continued to be significantly influenced by EU directives and national initiatives focusing on renewable energy, particularly wind turbines, and energy efficiency. The EU's Renewable Energy Directive (2001) and Portugal's E4 Program (Direção-Geral de Energia e Geologia, 2001) were pivotal, setting ambitious goals for using endogenous resources and modernizing the energy system. The early 2000s saw new legislation to support these goals, further propelled by the second European energy package in 2003, reflecting the influence of the environmental movement and the need for sustainable energy sources (Araújo & Coelho, 2013).

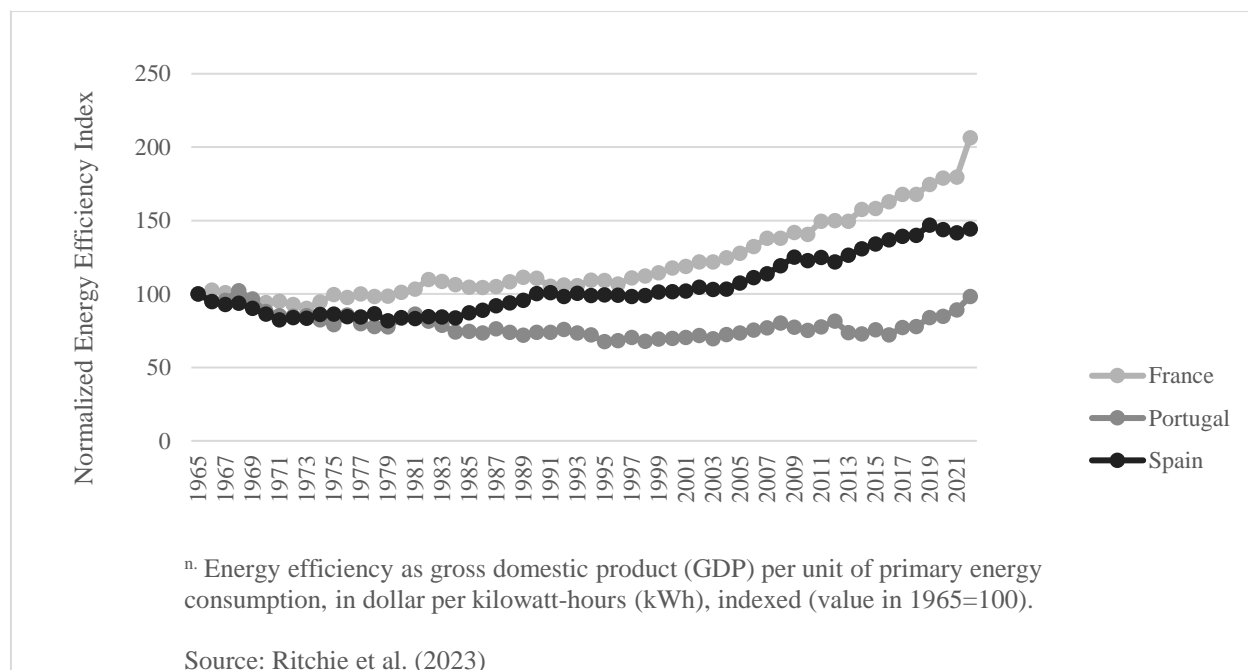
This period marked a convergence of energy and climate policies at the EU level, aiming for reduced greenhouse gas emissions, increased renewable energy share, and improved energy efficiency by 2020. The National Energy Strategy, introduced in 2005 and updated in 2010, outlined comprehensive goals aligning with the European Energy and Climate Package. It emphasized security of energy supply, competition, and environmental sustainability, with initiatives to increase renewable energy's market share and improve energy efficiency. Legislative updates aimed to transpose EU directives, focusing on market liberalization, protecting vulnerable

customers, and supporting renewable energy, reflecting a strategic and integrated approach to addressing energy challenges and promoting sustainable development.

4.5.1. Renewable modernism: a green-industrial compromise

The E4 Program (Energy Efficiency and Endogenous Energies; Direção-Geral de Energia e Geologia, 2001) aimed to establish a dynamic compromise between technical-economic feasibility and environmental sustainability. With the intention of increasing (in addition to energy efficiency and compatibility of energy consumption with the environment) the security of energy supply, this program gave special importance to the consolidation of the expansion of natural gas, cogeneration and the use of endogenous energies, in order to diversify access to energy sources available on the market (Soares & Silva, 2014). The program was designed by the Ministry of Economy to cover

Figure 4. “Energy modernization” in Portugal, France, and Spain (1965-2021)ⁿ



all economic sectors of the Portuguese economy during the period 2001-2002, modernizing the Portuguese economy by strengthening national competitiveness through a consistent and integrated approach to energy demand and supply. In other words, the E4 Program explicitly represented energy policy as a means to modernize the nation. The years that followed showed that the goals to develop endogenous energies were more of a priority than those to enhance energy efficiency.

In fact, and as Figure 4 shows, if GDP is taken as a measure of “modernization,” the Portuguese energy sector has played a lesser role than in other European countries.

Compared with the law of 1988, the situation represented in *Resolution of the Council of Ministers No. 154, of October 19, 2001* is one of considerable urgency in which Portuguese energy intensity and fossil fuel imports have reached new heights with significant consequences for the consumer’s energy bill and national competitiveness. Along with security of supply, these two issues are at this point still explicitly positioned as the three main principles of energy law and policy. In this context, the E4 Program proposed a number of measures of a regulatory nature, such as subsidies to investment (direct and via tax) to a support system for prices (feed-in-tariffs). Adopting these measures, it was claimed, would lead to “a reversal of the situation and point to new paths for the evolution of the national energy framework” (*Resolução do Conselho de Ministros n.º 154, 2001, p.1*).

Despite the rising costs of investing in wind energy, the state persisted with its plans, achieving rapid capacity growth in the early 2000s through lucrative feed-in tariffs for developers. As Bento & Fontes (2015) have shown, state support played a crucial role in this period, maintaining a stable regulatory environment for wind energy market growth. Importantly, this context of certainty meant that incumbent actors had strong incentives to re-deploy their expertise and resources to the new sector, rather than resist change (Bento & Fontes, 2015). However, uncertainty began to emerge about negative externalities. As Soares & Silva (2014) point out, with the 2005 National Energy Strategy it was already possible to identify an emerging concern with containing the costs that the promotion of RES was generating for the public treasury, even if the costs with the fossil powered power plants through the agreements for the transition to the market (e.g., CMEC) also represented a large share in the overall electricity system costs. In anticipation of this nascent problem, the state began to look for market mechanisms that could simultaneously liberalise the sector and continue to increase the share of renewable energy in the market, finding one in the concept of “green certificates”, for which a legislative framework was created and a platform for their negotiation envisaged (Soares & Silva, 2014).

While the state during this period was increasingly aware of an increase in environmental awareness of the Portuguese public, this was problematised mainly as diffuse local opposition to renewable energy projects, according to a “NIMBY” representation (Figueiredo & Fidélis, 2003). Accordingly, industrial conventions of progress and efficiency justified and coordinated the

placation of these relatively unsupportive publics (Delicado et al., 2014), with measures such as allocating 2.5% of cash flow to municipalities hosting wind farms effectively reducing local resistance to turbine installation and enhancing public legitimacy (Bento & Fontes, 2015). Additionally, the establishment of local production centres around Viana do Castelo, Aveiro and Viseu for wind turbine components contributed to increased public acceptance of the technology (Delicado et al., 2016). While this period can thus still be primarily seen as being coordinated by a *civic-industrial compromise*, there is a clear difference in the character and use of *civic* justifications. Further, the *market* order of worth plays an increasingly important role, as do *green* justifications.

Subsequent social scientific analyses of (and during) this period concluded that the discrepancy between high levels of environmental concern and low levels of public participation could be explained by “a centralized administrative tradition [which] undermines the chance of participation of civil society actors in decision-making” and in which renewable energy development remained a product of pre-determined political decisions taken from above (Carvalho et al. 2014; Delicado et al. 2014; Delicado 2015b). From a historical point of view, such analyses also indicate that during this time there was an emerging representation about the desirability of public participation in the energy transition. Indeed, as pointed out by Carvalho et al. (2014), in 2008 a Climate Change Forum was created to promote interactions between government officials and civil society representatives but ultimately evolved towards a top-down structure where there was limited space for active participation and feedback (Carvalho et al. 2014).

On the verge of economic crisis, and in a context of rising electricity prices, 2010 saw a shift in the way that energy policy was framed, in line with what Frois (2012) described as the renewed impetus of technological modernisation under the Socialist Party government of Prime Minister José Socrates. Firstly, the discourse of “energy revolution” emerged in a range of key pieces of legislation. “Taking the lead” in this revolution was represented as one of the main objectives of the government’s programme which also promoted energy policies as central, “in a scenario of international turbulence and rapid change,” to reconverting and modernizing the Portuguese economy (*Resolução do Conselho de Ministros n.º 29/2010*, p.1290). In line with this modernist and quasi-nationalist discourse, the National Energy Strategy 2020 (*Resolução do Conselho de Ministros n.º 29/2010*) prioritised the notion of “energy independence” – a term which was used at once to refer to energy and financial independence from both fossil fuels and “the outside”. It also

emphasised the wealth that would be created from the renewable energy revolution and the thousands of jobs it would lead to (Batel & Küpers, 2023). We can thus see, in this period, a return to explicit *civic* justifications for energy policy precisely at a time when there was growing public resentment of the energy transition (Delicado et al., 2013).

Discourses of competition, while present in this document, were secondary to discourses of growth and independence. Rather than being seen as an end in itself, economic “competitiveness” was portrayed as the goal for the country and explicitly linked to “generating benefits for society that are progressively internalized in the price of final energy” (*Resolução do Conselho de Ministros n.º 29/2010*, p.1289). The consumer is still problematised as a subject whose energy consumption behaviour needs to be made efficient and effectively managed, however this is now also conveyed in the moralising discourses of “the fight against waste” and promoting “more responsible behaviours.” This will continue to be facilitated by “promoting innovative projects such as smart grids, electric vehicles and the decentralized production of renewable energy” (*Resolução do Conselho de Ministros n.º 29/2010*, p.1289). While the link between these technological proposals and behavioural change is not explicitly specified, we can still see in this period a discursive anchoring of the energy future in both *inspired* and *domestic* orders of worth, which value innovation and individual responsibility respectively.

4.5.2. Demand side management and the emerging agenda of decentralized energy

The E4 program had established, for the first time, the objective of changing the behavior of energy consumers, with the notion of “demand side management” entering the policy discourse, particularly in relation to transport and buildings.

“Another aspect of the energy problem is that of efficiency in its use, which encompasses efficiency in energy systems, supply and demand for final energy, but also the valorisation of 'non-uses' through the promotion of rational demand of useful energy. Efficiency on the demand side presupposes an adequate assessment of useful energy needs for different human activities and needs. It is known, for example, that public transport allows people to move at a lower energy and environmental cost per capita and per km than individual transport. Likewise, efficiency on the demand side in the built environment, that is, in buildings, makes it possible to achieve comfort and health conditions in indoor environments through the very conception, design and construction

of urban space and buildings, reducing significantly the use of commercial energy” (Ministério da Economia, 2001, p. 3).

Whereas the image of modernity had up until this point mainly been associated with energy supply, it was now energy demand and the activities of consumers that constituted the “extraordinary challenge” requiring “a great effort to modernize society” (*Resolução do Conselho de Ministros n.º 154/2001*, p.11). In a situation reminiscent of the 1960s energy policy in which policymakers lamented the lack of public uptake of previously established possibilities and opportunities, the new focus on demand side management aimed to understand why consumers had not yet taken advantage of some changes, namely in the tariff structure, which made it possible to manage energy bills more effectively, as well as new technological solutions and the modernization of production equipment. As will be seen in the next section, this failure of demand side innovations would continue throughout the decade.

Demand side ambitions also signified rising environmental concerns and the changing role of environmental discourses. On the one hand, the new policy direction was informed by an awareness of the dissemination of environmental values in Portuguese society and the simultaneous demand for “higher standards of comfort and well-being” (Ministério da Economia, 2001, p. 3; see also Figueiredo & Fidélis, 2003). On the other hand, the citizen was now represented primarily as the “user” and their practices were a phenomenon that should be subjected to “energy and environmental quality criteria according to values modernly referenced to the concept of sustainability” (Ministério da Economia, 2001, p. 5).

Accordingly, the new law (*Decreto Lei n.º 68/2002*) which regulated low-voltage electrical energy production activities, was the first piece of Portuguese legislation to explicitly envision a *decentralized* energy future:

“Without calling into question the guiding principle of the organization of the national electricity sector, and most especially of small producers whose contribution cannot be neglected from a perspective of optimizing energy resources, it is necessary to take into account the natural evolution of the electricity market that has occurred in the meantime, where new technologies for the decentralized production of electrical energy emerged. In fact, nowadays it is already possible to see the existence of a new reality: low voltage producers-consumers, who use, among other equipment, synchronous generators,

asynchronous generators, photovoltaic panels producing electrical energy autonomously, in fairness measure your needs” (*Decreto Lei n.º 68/2002* p.10).

In contrast to the law of 1988, there was a shift in the framing and style of discourse employed in this legal text. Whereas the former was anchored in a political imaginary of collective national struggle towards modernity, the underlying imaginary of change here is based on a metaphor of natural evolution of technology and innovation, a metaphor which was used by neoliberal thinkers in order to frame a society governed by market principles (Foucault, 2008). Furthermore, while the main aim of the 1988 law was to protect the public from the insecurity of supply that comes from the over-dependence on the import of finite resources, this 2002 law was oriented to encouraging innovation seemingly for its own sake by accommodating new technical possibilities for decentralized energy production and thus “giving space for the figure of energy producer-consumer to emerge” (*Decreto Lei n.º 68 2002*, p.10).

In addition to this narrativization and framing of the new activity of low-voltage decentralized electricity production, this law established for the first time the rights of “producer-consumers.” Oriented to maintaining the connection to the public electricity distribution network, from “the triple perspective of self-consumption, supply to third parties and delivery of surpluses to the grid” (*Decreto Lei n.º 68/2002*, p.10), the producer-consumer was given the rights to consume or transfer the electrical energy produced to third parties; to deliver surplus production to the public grid; and thus to connect, when necessary, to the distributor’s network. While these three fundamental rights established citizens as *actors* in a network of contracts and electricity flows, the law also set out a range of duties that would today be seen as a burden and a further disincentive to participation.

In 2007, recognizing the underwhelming uptake of electricity microgeneration systems under the 2002 legal framework, Portugal introduced a new law (*Decreto Lei n.º 363/2007*) to simplify the regime for micro-production of electricity. This law, part of the SIMPLEX 2007 policy program for the modernization of public services and everyday life, aimed to streamline the process for installing and operating microgeneration units (República Portuguesa, 2007). It replaced the previous bureaucratic system with a simple electronic registration, significantly reducing the time from application to operation. Entities with a low-voltage electricity contract could now easily become micro-producers by registering online and undergoing a technical inspection within 120 days of provisional registration. However, there was a limit that micro-producers could not feedback more than 50% of their contracted power into the grid. This decree also simplified

invoicing and commercial relationships, allowing transactions to be settled in a single operation covering both electricity produced and consumed. Additionally, it introduced two remuneration schemes to incentivize the use of renewable energy sources, particularly promoting solar thermal collectors for individual producers and energy audits for condominiums. This was in line with efforts to encourage the adoption of solar hot water systems, reinforcing the broader strategy to boost renewable energy use within the national energy strategy framework.

From the perspective of pragmatic sociology of conventions these rights and duties can be viewed on the one hand, in terms of the “consensual” convention central to the economy of contracts which supports the *market mode of coordination* (Leader, 2000; Affichard et al., 2023). On the other hand, they can still be viewed from the point of view of the *regime of the plan* where “functional” considerations are paramount (Thévenot, 2000; 2019). Thus, while couched in the language of fundamental rights of the civic order of worth, the 2002 law signified the emergence of a mode of coordination of “the public” based on a compromise between the market and industrial orders of worth. The definition of *contractual relations* between “producer-consumers” and energy companies and the definition of the *technical procedures* necessary to participate in decentralized activity are both, as Affichard et al. (2023, p.6) put it, “based on the engagement in a plan which supports the capacity of projection on the future ensured by a functional relation to the environment.”

As the 2002 law itself states, these two faces of the regime of the plan are, on the one hand, oriented to providing certainty and transparency to economic actors in order to stimulate investment in the energy transition and, on the other, oriented to maintaining the stability of the public electrical grid in the context of demands for innovation. As Leader (2000) explains, this functional justification is oriented by “the need to accommodate change,” for “productive innovation” that none of the contracting parties – new economic actors such as renewable energy companies – could foresee at the time of its establishment (Leader, 2000, p.55; Affichard et al., 2023). While energy sector liberalization was initiated in the 1990s, the 2002 law can therefore be seen as the first signs of a neoliberal “governmentality” (Nguyen & Batel, 2023) and representation of the public in Portuguese energy institutions. Nevertheless, the investment during this period remained much more in technologies that reinforced the centralized nature of the system (e.g. large-scale wind power plants and hydroelectric dams) than in decentralized grids and demand side management.

4.6. Neoliberalization of renewables, inclusivity and the rise of solar (2011 – 2018)

Following the onset of the global economic downturn in late 2008 and the escalation of the sovereign debt crisis from 2010, Portugal was compelled to seek international financial aid, leading to the May 2011 Memorandum of Understanding under the European Financial Stabilization Mechanism. This accord required the government to implement several energy policy reforms aimed at further liberalizing electricity and gas markets, reducing reliance on foreign energy, curtailing the surplus costs of electricity production, revising fiscal incentives to ensure the coherence of national energy policies, and enhancing integration and competition within energy markets (Soares & Silva, 2014).

Amid financial distress, these reforms ignited a heated debate on the future of national energy policy, particularly the focus on renewable energy sources. The substantial government support for the latter over the previous decade – as well as the costs incurred from ending power purchase agreements with conventional coal-fired plants – was blamed for the sharp increase in residential electricity prices (Bento & Fontes, 2015). In the context of growing economic and political crisis, opposition to renewable energy surged in the media and it became a prominent topic in the 2011 general election (Delicado et al., 2013), which saw a centre-right coalition come to power on a platform of austerity politics and the relegation of environmental concerns in energy policy, the latter was underscored by the enactment of *Decreto Lei n.º 25/2012* which paused new renewable energy licenses (Andreas et al., 2019).

4.6.1. Renewable austerity: a market-industrial compromise

The new government's National Action Plan for Renewable Energy (*Resolução do Conselho de Ministros n.º 20/2013*) articulated detailed aims and projections for the energy future and rhetorically balanced the goal of reducing energy dependence with the need to guarantee the security of supply. Instead of an all-out pursuit of renewable energy development and its promise of abundance, the emphasis was placed on promoting a “balanced energy mix” (*Resolução do Conselho de Ministros n.º 20/2013*, p.2022). In strict alignment with EU policy, the 2010 target of 31% of gross final energy consumption from endogenous renewable sources remained unchanged,

but it was stressed that this target would be “met at the lowest cost for the economy” (*Resolução do Conselho de Ministros n.º 20/2013*, p.2023).

Compared with the 2010 strategy, the language of this document became more technical, pragmatic, and matter of fact. Rhetorical flourishes such as “energy revolution” were replaced with more concrete and formal terms such as “economic rationality,” and “climate change” was replaced with less alarmist terms such as “sustainability,” with alignment with the European 20-20-20 framework affirmed from the outset. This neoliberal de-politicization (Woronov, 2019) of the policy rhetoric was mirrored by the specific objectives and measures that were proposed. For instance, the goal was declared to eliminate any previously proposed policies that had not already been implemented or were difficult to quantify and replace them with new measures or by reinforcing existing measures that were lower in cost and easier to implement. It also articulated the need for the structured assessment of the costs and benefits of the measures each plan recommended and sought the establishment of a joint monitoring system for the two plans.

Despite the reductions in environmental and renewable energy ambition, the replacement of a feed-in tariff for wind energy with free market principles was deferred until 2020 (Bento & Fontes, 2015). Rather than a contradiction, this pointed towards a cautious and technocratic future-orientation, typical of the *industrial* order of worth. But whereas up until this point Portuguese renewable energy policy had been guided by a compromise of *industrial* conventions with *civic* and *green* worth, from this point on the energy future is anchored in a compromise between the *industrial* and *market* orders of worth, typical of neoliberalism (Madra & Adaman, 2014)

Along with the claim of freeing electricity consumers from the burden of financing investment in renewables, PNAER’s objectives were legitimized by a redefinition of the problem based on the assumption that the energy efficiency measures outlined in the concurrent National Action Plan for Energy Efficiency (*Resolução do Conselho de Ministros n.º 20/2013*) would lead to a future reduction of demand. This also justified the roll-back of support for less mature technologies, which were instead left for EU level research and development initiatives, as was typical for Portugal – particularly in the case of the development of wind energy in the 1980s and 1990s (Bento & Fontes, 2015). In order to establish if they were advantageous for the national economy, all future project proposals would be assessed on a case-by-case basis, via cost-benefit analysis and comparisons with international benchmarks. The new plan thus aimed to review the objective relative weight of each RES in the national energy mix and respective incorporation targets to be achieved in 2020,

according to their production cost (levelized cost of energy) and consequent operating potential under the market regime. As Soares & Silva (2014) point out, a new logic underlined this plan: the evolution of future production capacity and technological choices became subordinated to a logic of economic rationality and free initiative on the part of promoters, whose investment decisions were no longer dependent on subsidy mechanisms or guaranteed remuneration and risk mitigation, in accordance with the regime introduced by *Decreto Lei n.º 215-B/2012*.

4.6.2. Rise of the prosumer: a new vision of modernity?

In the 2013 PNAER, renewable energy was also valued for its “decentralized nature” which allow “for a more balanced territorial distribution of investments, contributing to greater regional and local development” (*Resolução do Conselho de Ministros n.º 20/2013*, p.2079). Despite this, the notion of decentralized energy is rarely used in this document, except for in a brief discussion of solar energy. Indeed, the importance of the latter is still attributed to the role it will have in increasing decentralized production, with the plausibility of larger-scale solar installations seen as dependent on “the evolution of costs” (ibid).

While still proceeding towards the future with caution, this document signalled an intent to engage in experimentation with alternative technologies, something that the previous government was less inclined towards. However, rather than policies for decentralization and self-consumption, expectations were vaguely conveyed that, by 2015, *concentrated* photovoltaic solar units would be installed in order to demonstrate the economic viability of the technology and it was projected that Portugal would have an installed capacity of 50 MW of this technology. As of 2020, however, there was only one such project – a 3.6 MW demonstration plant constructed in 2018 (Simoes & Amorim, 2020).

The marginalisation of “decentralized energy” as a policy object changed in 2014 with the publication of a law (*Decreto Lei n.º 153/2014*) which created the legal regime applicable to the production of electricity intended for *self-consumption*. “Production Units for Self-Consumption” (UPACs) were to allow individuals, condominiums and companies to produce and consume their own electricity while remaining connected to the grid and establish the technological possibility of bi-directional flows between consumer and grid. While the practice of individual self-consumption was possible prior to this law, it was not specifically regulated (Campos et al., 2020). The new law articulated a narrative of market-enabled technological optimism regarding decentralized self-

consumption. “Technological evolution,” it stated, “allows nowadays to develop projects using less investment, which, naturally, has justified the adequacy of the respective remuneration for energy from these units of production” (*Decreto Lei n.º 153/2014*, p.5288). This vision was proposed despite the fact that previous technological expectations regarding the decentralization of low-voltage electrical production had not materialized, something which was explicitly acknowledged in the text. The previous self-consumption production regime, it stated, “did not have the expected acceptance” because the “immaturity of the technology discouraged the making of large investments” (*ibid*). The focus on the immaturity rather than the lack of a supporting environment for technical innovation, suggests a legacy of the country’s successful deployment of wind energy in which they were a “fast follower,” letting other countries do the work of innovating, testing and creating supply chains (Bento & Fontes, 2015).

Decreto Lei n.º 153/2014 also marked a movement towards market mechanisms of competition in the regulation of micro and mini-production, practices that were previously remunerated by feed-in tariffs. Despite the new possibility of selling the energy not self-consumed on the market, the state still viewed the decentralization of electricity production as a practice primarily intended for domestic self-consumption. Thus, rather than encouraging the creation of new markets and new forms of energy distribution, the law continued to prioritise the traditional principles of efficiency and rationalization. Under pressure of the Troika, the aim was to phase out subsidies for solar PV and this was further justified by the falling start-up costs for the technology. The alternative solution was to compensate solar PV owners by giving them the opportunity to sell directly to the grid at the wholesale MIBEL price or half the price paid by consumers at that time. Again, this choice clearly favoured the incumbent utility companies in a centralized system, as did the choice to not introduce “net metering” – a practice which assumes that one is paid the same for their production as for their consumption.

It can therefore be said that the consumer was explicitly framed in the 2014 legislation not as an active agent or player in the energy transition (as it would be in later years), but still as the *subject* of efficiency measures. The adoption of self-consumption activity would, it was thought, promote greater consumer knowledge of their respective consumption profiles, thus inducing energy efficiency behaviours and also contributing to the optimization of endogenous resources and creating technical benefits for the public electrical network, namely through the reduction of losses (*Decreto Lei n.º 153/2014*). What can easily be termed a *governmentality*, whereby the

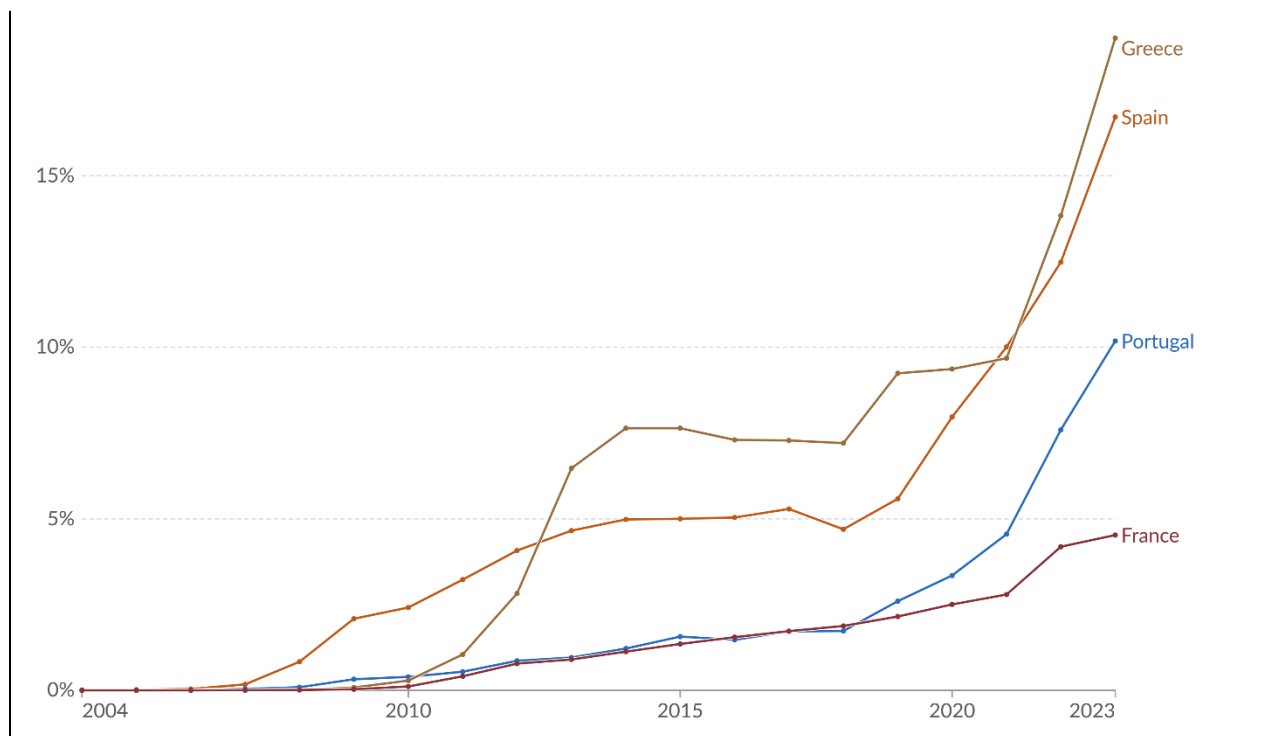
energy consumer becomes the subject of technical rationality (Miller & Rose, 1990), is also seen in the proposal of a plan to measure the electricity produced from self-consumption units, with or without grid connection, in order to monitor compliance with the objectives of increasing renewable energy production.

Despite it not being stated how this plan was expected to be fulfilled, the continued hegemony of *the regime of the plan* in 2014 is suggested by the fact that the law did not claim to be based on any public consultation. Instead, it was stated that “associations and sector agents were consulted on an optional basis” (*Decreto Lei n.º 153/2014*, p.5299). That subsequent legislation makes this claim suggests the eventual emergence of a new convention whereby public legitimacy and “acceptance” become seen as valuable and necessary for legitimization of energy policy.

4.6.3. Rise of solar and emerging tensions

In 2015, the new Socialist Party government resumed their efforts to realize a decarbonized and renewable energy future, with particular emphasis on solar energy policies (Silva & Sareen, 2021). At the 21st UN Climate Change Conference of the Parties (COP21), held in Paris at the end of that

Figure 5. Share of electricity production from solar in Greece, Spain, Portugal & France



Source: Brown & Jones 2024

year, Portugal committed to achieving carbon neutrality by 2050, an ambitious goal reflective of COP21's status as ushering in a new era of climate politics. In 2018, the country's energy consumption of renewables reached 30.3%, while the EU average stood at 18.9% (Eurostat, 2020, quoted by Guerreiro et al., 2022). The development of solar energy has lagged behind other European countries but has been catching up in recent years. In 2018, solar comprised 3.3% of renewable generation, up from 0.8% in 2010 (DGEG, 2019, quoted by Silva & Sareen, 2021). This growth, unanticipated by previous years' Energy Plans, was driven mainly by global cost declines (Silva & Sareen, 2021). While from 2010 to 2018, there had been no new tenders for solar energy, the first auction – a mechanism introduced by the Government – for connection rights of up to 1,400 MW split between 24 plots, was issued in July 2019. This led to 1.15 GW of capacity being successfully auctioned at highly competitive tariffs, notably one instance that went below €15 per MWh and set a new world record, which was subsequently broken 6 months later (Silva & Sareen, 2021). In addition, by the end of 2019, small-scale solar installations had reached 312.6 MW of installed capacity, a significant increase from the 35.3 MW in 2010 (Silva & Sareen, 2021; DGEG, 2019). As can be seen in Figure 5, the “solar turn” in Portugal has accelerated significantly in the years since. By 2024 the total installed capacity of photovoltaics would be 3.9 GW, making it the fastest growing energy technology in the country (DGEG, 2024).

This overall increase in solar PV has been accompanied by new demands for energy justice and energy citizenship. This has been driven mainly by controversies over the siting of large-scale installations in rural areas but also by unfulfilled promises for decentralized and citizen-centered forms of electricity generation that would, *inter alia*, mitigate energy poverty (Brás et al., 2024; Silva, 2023). Indeed, despite stated commitments to decentralized and citizen-centered renewable energy projects, the Portuguese government instead prioritized the pursuit of a centralized energy future by attempting to create a “green hydrogen” industry in the port of Sines, the former site of one of its main coal-fired plants and a historical centre of the Portuguese industrial imaginary (Beleza, 2022). The large-scale solar plants, referred to above, are integral to this project as they will provide the “green” energy to produce the so-called “renewable hydrogen”. Thus, as Campos et al. (2022) state, “the implementation of large-scale solar installations and distributed energy systems are developing at distinct rhythms, with recent literature pointing to specific stakeholder interests being privileged by mainstream policies” (Campos et al., 2022). For Nordholm & Sareen

(2021) this “scalar bias” of national energy policy is “containing” the redistributive justice effects attributed to small-scale, citizen-owned projects.

Viewing these developments in the context of the broader history of Portuguese renewable energy policy, it is also clear that this vision draws upon the dormant imaginary of *political* modernity based on independence and sovereignty, while at the same time maintaining the hegemonic imaginary of *economic* modernity by endorsing the integration of “green hydrogen” into the European Community. As Silva & Sareen (2021) have pointed out, these energy policy measures have thus far largely favoured companies, rather than community or individual operators, thus raising issues of equity which stand in tension with the stated aims of current energy and climate policy. In the next section, some of the key actors in the contemporary Portuguese energy sector will be introduced.

4.7. Key actors in the current energy sector in Portugal

In mediating new concepts such as Renewable Energy Communities (RECs) to the public, various actors in the Portuguese energy sector are expected to play distinct yet interconnected roles. These actors include key administrative entities and grid operators, energy agencies, companies and cooperatives, industry associations, legal and policy experts, academics and environmental NGOs. Each of these different types of actors occupies a distinct position and are likely to represent the energy future in different ways. Before proceeding with the four studies of this dissertation, it is therefore important to outline some of the main aspects of these actors and their expected role in the implementation of RECs.

Firstly, administrative entities such as the Direção-Geral de Energia e Geologia (DGEG) and the Entidade Reguladora dos Serviços Energéticos (ERSE) have significant roles in overseeing and regulating the sector. DGEG is responsible for overseeing, implementing and evaluating energy policies, including those related to renewable energy projects such as RECs. One of its critical functions is the licensing and registration of energy projects, including REC initiatives. DGEG is meant to ensure that these projects comply with national regulations and EU directives, facilitating their approval and operational processes. This role is essential for providing legal clarity and regulatory oversight, thereby promoting the development and implementation of RECs across Portugal. Additionally, DGEG is mandated to engage in scientific research within the energy sector. It supports and conducts research initiatives that contribute to the advancement of renewable

energy technologies, energy efficiency measures, and sustainable energy practices. By fostering scientific inquiry and innovation, DGEG will potentially play a pivotal role in promoting the adoption and integration of renewable energy solutions like RECs within Portugal's energy landscape.

ERSE also plays a crucial role in the regulation and oversight of the Portuguese energy sector, including its impact on initiatives like RECs. ERSE's primary role revolves around regulating the energy sector. Its main objective is to ensure that energy markets operate transparently, fairly, and efficiently. This includes establishing and overseeing pricing mechanisms, tariff structures, and ensuring market competition within the electricity sector. ERSE's regulatory framework is oriented towards guaranteeing that participants have fair access to the grid and that tariffs and incentives for renewable energy feed-in are properly structured to support REC development. Another key function of ERSE is consumer protection. ERSE safeguards the interests of energy consumers by monitoring service quality, ensuring the reliability of energy supply, and resolving disputes between consumers and energy providers. In the mediation of RECs to the public, ERSE is thus expected to play a key role in ensuring that consumers participating in REC schemes receive accurate information about their energy options and benefits. At the same time, ERSE has an important role in policy advocacy and development. It advises policymakers on regulatory changes and market reforms that support the integration of renewable energy sources, including RECs, into the national energy strategy. ERSE's recommendations ostensibly aim to help shape policies that promote sustainable energy practices and reduce carbon emissions. Furthermore, ERSE engages in market monitoring and analysis. It evaluates the performance of energy markets, assesses the impact of regulatory interventions, and identifies opportunities for improvement.

Distribution system operators (DSOs, also known as grid managers) are expected to be essential for the localized implementation and management of RECs. E-REDES (formerly EDP Distribution) is the main DSO in Portugal but, as previously seen, there are also a few smaller DSO cooperatives in the north of the country. DSOs manage the distribution networks and ensure the reliable delivery of locally generated renewable energy. They could facilitate the integration of RECs into existing infrastructure, providing technical expertise and operational support, but also are responsible for updating the existing network infrastructure. Cooperative DSOs' close ties to the community may enable them to effectively communicate the benefits and practicalities of RECs, fostering trust and participation.

Energy agencies like ADENE and Lisboa E-Nova conduct energy audits and develop efficiency programs, focusing on urban sustainability and innovation in energy systems. One of their main objectives is to disseminate information to the public, and they therefore should be key actors for promoting RECs. They may provide valuable resources and support to communities and developers in establishing and managing RECs. Actors such as the renewable energy cooperative Coopernico, new companies like Cleanwatts, and large energy utility companies like Galp might play crucial roles in bringing REC concepts to life. Cooperatives could engage communities and enable member investments in renewable energy projects, fostering local ownership and participation. New companies might drive innovation and deploy advanced technologies to optimize energy management within RECs. Large utility companies could leverage their extensive resources and infrastructure to scale up REC projects, ensuring broader reach and more significant impact. These developers may collectively help transition the public towards renewable energy by making RECs tangible, practical, and economically beneficial, but it is also possible that they might have different representations of RECs that align with their own interests and values.

Industry bodies such as the Portuguese Renewable Energy Association (APREN) play an advocacy and educational role in the energy sector. APREN represent renewable energy producers and work to influence policy, regulatory frameworks, and market conditions. By organizing conferences, seminars, and public outreach campaigns, APREN might disseminate knowledge about the benefits and operational aspects of RECs. Their efforts may help shape public perception and understanding, creating a more supportive environment for REC adoption. Likewise, legal and policy experts may be instrumental in shaping the regulatory landscape for RECs, but also the meanings of RECs that are subsequently communicated to the public. They also work on developing and interpreting legislation that facilitates the establishment and operation of RECs, ensuring compliance with national and EU directives. These experts could provide critical guidance to developers, policymakers, and community leaders, helping to navigate legal complexities and secure necessary approvals. Their role may ensure that RECs operate within a robust legal framework, providing stability and trust for public engagement.

Lastly, academics and environmental NGOs, such as Zero, have an important role as energy sector intermediaries insofar as they engage in research, advocacy, and public education. Academics provide empirical evidence and theoretical insights into the effectiveness and benefits of RECs, informing policy and practice. Environmental NGOs may raise awareness about the

environmental and social advantages of RECs, campaigning for sustainable energy transitions. They might also collaborate with communities to pilot REC projects, demonstrating real-world applications and impacts. These actors may bridge the gap between theory and practice, enhancing public understanding and support for RECs.

In summary, developers, industry associations, legal and policy experts, academics, environmental NGOs, small DSO cooperatives, larger grid managers, administrative entities, and energy agencies may each contribute uniquely to the promotion, implementation, and acceptance of RECs, creating a comprehensive ecosystem for the decentralization of the energy system and the implementation of RECs. At the same time, at both the institutionalisation and generalisation level of new laws, each of these actors also have a certain amount of power to shape the meaning, purpose and potentialities of RECs in line with their own interests.

4.8. Conclusions

This chapter has aimed to set the context for the empirical studies that follow by tracing the historical evolution of Portugal's energy system from the 1930s, a period characterized by heavy intervention by the state, to 2019, a period characterized by the need for an accelerated *and* acceptable/legitimate energy transition in the face of a worsening climate emergency.

Using the framework of *orders of worth*, the focus has been on discerning different ways that the state has justified and framed new energy laws and policies. Drawing on past studies and legal texts, this has led to a schematic reconstruction which shows the changes in the main orders of worth over time (see **Error! Reference source not found.****Error! Reference source not found.**). Examining these changes led to a consideration of the role that the notion of *modernity* played as a “horizon of expectation” in each of the periods identified and, indeed, in the power relations underpinning energy systems in general (Wagner, 2012). The account provided here thus shows the function of orders of worth in (de)stabilising institutional imaginaries in situations of crisis and critique. However, it also shows the tensions and interplay between different forms of economic, political and technological modernity and the sets of societal expectations, demands, hopes and fears that constitute them. Thus, there has been an enduring appeal and continuity in Portugal of the *industrial* order of worth for emphasizing the *economic progress* that new forms of energy can bring to the nation. Despite the prominence of these discourses of modernisation, the energy sector

<i>Period</i>	<i>Hegemonic orders of worth</i>	<i>Crises/Problems/Events</i>	<i>Critiques</i>
1926 - 1974	<i>Domestic-industrial</i> : energy system governed by corporatist state via public concessions; rural electrification will bring economic progress	Slow pace of change; lack of resources; urban-rural divide; fragmented energy sector; Carnation Revolution	<i>Civic</i> critique of elitist paternalism; demand for economic and political modernity
1974 - 1985	<i>Civic-industrial</i> : energy system governed by nationalised energy company; nuclear energy will bring progress	Increasing dependency on energy imports; oil shocks; need for public legitimacy	<i>Civic</i> : demand of autonomy for municipalities <i>Industrial-green</i> : risk of nuclear energy
1986 – 1999	<i>Civic-industrial</i> : government creates incentives for use of endogenous resources; renewable energy will bring progress. <i>Market-industrial</i> : energy system begins to be liberalized; creation of independent authorities to create efficiencies	Increasing costs; emerging environmental issues; state monopolies; EU integration	<i>Market</i> : inefficiency of state monopoly <i>Green</i> : economic growth causing environmental problems.
2000 – 2010	<i>Green-industrial</i> : Renewable energy will bring economic growth and international investment; meet decarbonization targets. <i>Industrial-domestic</i> : demand-side management; changing consumer behaviour	Rapid renewables growth; financial crisis; unsustainable consumer behaviour	<i>Market-civic</i> : subsidies for renewables raising electricity prices; not in public interest.
2011 – 2018	<i>Market-industrial</i> : government subsidies for renewables replaced with more competitive market mechanisms; increase of large-scale projects; easing of environmental protections. <i>Market-inspired</i> : new models for prosumers	Climate emergency; need for accelerated energy transition	<i>Civic</i> : energy transition not inclusive or fair. Energy poverty. <i>Green</i> : large-scale renewables not sustainable <i>Inspired</i> : need for paradigm change and decentralization

has contributed to the modernization of the economy far less in Portugal than it has in other European countries (see **Error! Reference source not found.**).

Table 4.2. Successive energy modernities in Portugal 1926 – 2018

The continuity of the *industrial* order of worth has been paralleled by a discontinuity of orders of worth used to represent the relations between the public and the state. In the fascist period the *domestic* order of worth played the defining role but was contested in the wake of the 1974 revolution for its elitist paternalism and economic inefficiencies. This gave way to the *civic* order of worth which was used to justify the nationalisation of the energy sector, while maintaining a strong divide between experts and the public. The 1990s saw the rise of *market* justifications for state energy policies, mainly as a result of Portugal’s integration with the EU and perceived dangers

of state monopoly. At the same time, however, the emerging environmental agenda allowed the state to maintain a strong presence through *green* justifications for a transition to renewable energy technology and for the need to change consumer behaviour. The subsequent rapid growth of renewable energy and the late 2000s economic crisis, however, caused a negative political reaction to the state, leading to a neoliberal austerity approach to the energy transition which largely replaced government subsidies with the deployment of market mechanisms designed to increase competition alongside technocratic measures of policy evaluation. At the same time, the need to accelerate the energy transition justified measures designed to make the institutional environment more appealing to international capital, namely the easing of environmental protections.

This has set the scene for the emergence of new tensions and conflicts, increasingly represented by the dichotomy of “centralized” versus “decentralized” forms of energy technology and governance. As a result of changes both from above (e.g. EU Directives and UN Sustainable Development Goals) and from below (e.g. resistance to large-scale renewable energy projects) the most recent period is seeing *civic* discourses of public participation and justice become increasingly associated with the energy transition in Portugal. The low involvement of citizens in renewable energy production in Portugal (Carvalho et al., 2019; Delicado et al., 2015) is a marked contrast with other European countries, such as Germany where already in 2013 almost half of the installed capacity of renewable energy was produced by citizens (Holstenkamp, 2014; Yildiz, 2014). Thus, in recent years a representation has been emerging of Portugal’s barriers to an “inclusive transition” (Campos et al., 2022). Metrics of “energy poverty” have been established and are becoming key indicators of both the need and difficulty of change, as well as being anchored in a context of “poor active citizenship” (Campos et al., 2022). On the horizon in 2018 were two important policy frameworks, the Roadmap to Carbon Neutrality 2050 and the National Energy and Climate Plan 2021–2030. In the following chapter these policy documents and associated new laws will be analyzed, illustrating the new conventions of civic participation and their tensions with the old.

Chapter 5

Study 1 – The institutionalization of Renewable Energy Communities

5.1. Introduction

In the previous chapter, it was seen how the way that the provision of energy in society has been represented in Portuguese political institutions has evolved since the 1930s in response to broader socio-political crises and events, including the emergence of new societal concerns such as climate change. The aim of this chapter is to examine how the energy future has been imagined in political institutions in more recent times, a period which has been decisively shaped by multiple political, economic, social and ecological crises caused principally by the Covid-19 pandemic, Russia's 2022 invasion of Ukraine, and the worsening effects of climate change, but also by the EU's Clean Energy for All Europeans policy package (European Commission, 2019). With the 2018 publication of the reformulated Renewables Directive (REDII), which heralded the coming of Renewable Energy Communities (RECs), the new EU Commissioner for Energy, Kadri Simson, gave a speech at COP25 in which she proclaimed:

“We are promoting a move to a more decentralised energy system where consumers and local communities play an active role. This means more democracy and more choice: people can decide for themselves which type of energy they want to use.”

The analysis of Portuguese energy laws contained in this chapter focuses on the period between 2018 and 2023, during which several laws and regulatory frameworks were published that transposed this new concept of Renewable Energy Community (REC) from REDII, and ostensibly aimed to promote the decentralization of Portugal's energy system. Taking up Castro's (2019) invitation for social psychology to attend to the institutional dimension of social change and stability, this study enquires into how RECs have or have not been envisioned as a feasible and desirable response to the challenges of energy transition and climate change, and how their conceptualisation has been shaped by different institutional practices and logics, types of expertise, and discourses.

5.2. Context

In order to establish how the energy future is currently being represented in Portuguese energy law and policy this study followed the transposition of the EU's Renewable Energy Directive (RED II) into Portuguese national law, as well as analysing key energy policy documents. Adopted in December 2018, REDII mandated that all 28 EU Member States, including Portugal, must implement its provisions by June 2021. At its core, REDII introduced the concept of Renewable Energy Communities (RECs), ostensibly aiming to democratize energy production and consumption by empowering local entities to participate actively in renewable energy projects. However, RECs were also framed as bringing other benefits to Member States, such as increasing energy efficiency and increasing public acceptance of renewables.

REDII defined RECs as associations of individuals, local authorities, and small to medium-sized enterprises that engage in renewable energy generation, distribution, or consumption within a defined geographical area. These entities were mandated to prioritize environmental, economic, and social benefits over financial profit, aiming to reduce energy bills, support local infrastructure, and combat energy poverty. Thus, REDII not only encouraged sustainable energy practices but also promoted community involvement and local autonomy in energy decision-making processes.

The transposition of REDII into national law presented Member States with several challenges that have been well documented in the academic literature (Fina & Fechner, 2021; Frieden et al., 2021; Hoicka et al., 2021; Palm, 2021). Firstly, defining the *eligibility criteria* for participants in RECs necessitates careful consideration. Unlike Citizen Energy Communities (CECs), which had more flexible membership rules, RECs limit participation to natural persons, local authorities, and small businesses. Secondly, ensuring *effective control* within RECs posed another challenge. RED II mandated that decision-making power in RECs must reside with members in close proximity to the projects, ensuring local governance and preventing domination by large commercial entities. This requirement called for clear definitions and operational guidelines within Portuguese legislative frameworks to prevent potential abuses and maintain democratic governance principles. Lastly, the concept of *autonomy* within RECs, as stipulated by RED II, emphasized the importance of democratic decision-making processes and independence from external influences. This principle aimed to protect the collective interests of REC members and prevent undue influence from individual stakeholders or commercial entities participating in the community.

REDII emerged at the same time as Portugal was drafting its Roadmap to Carbon Neutrality 2050 (RCN), its key policy instrument for the energy future. Four months later, however, the government published its strategy for the development of a national hydrogen industry, a move that was not foreseen in the RCN. In the year that followed, the country published its National Energy & Climate Plan for the 2030 horizon, as required by the European Commission, and published *Decreto Lei n.º 162* (2019), partially transposing REDII. This law was followed by a process of regulatory change, culminating in the publication of a new regulatory framework in 2021 and a new electricity system legal framework in 2022. Prior to the publication of each of these frameworks, there was a period of public consultation in which members of the public could submit their own responses to the draft versions.

This process of legal innovation unfolded amidst the multiple political, economic, social and ecological crises associated with the Covid-19 pandemic, Russia's 2022 invasion of Ukraine, and increasingly noticeable effects of climate change. Portugal's dependency on natural gas imports, high energy prices and high energy poverty meant that it was particularly vulnerable to the combined effect of these crises. In response to the pandemic and in order to access EU recovery funds, the government hastily published its Recovery and Resilience Plan, spearheaded by the Minister of Economy, António Costa e Silva, without any systematic public consultation. Further EU funds were made available as part of the REPowerEU Plan, a policy package oriented to increasing Europe's energy security and energy autonomy amidst over-dependency on Russian gas and heightened geo-political tensions more generally.

5.3. Methodology

Because REDII prescribes the figures of renewable and citizen energy communities, as well as reinforcing the value of individual self-consumption, it is crucial to examine how member states such as Portugal have explicitly responded to the mandatory requirement to incorporate these concepts into their own energy systems by analysing key publications such as the National Energy and Climate Plan (NECP) and the Roadmap to Carbon Neutrality 2050 (RCN), as well as the laws that actually transposed RECs into the national legal framework. In this context, this study aimed to answer the following set of questions:

What are the future representations promoted by Portuguese energy laws and policies? In particular: (a) what are the tensions involved in the meanings of the future presented in new laws for RECs and self-consumption and (b) how are these tensions negotiated by different experts and in the regulation process? How has this changed over time?

By answering these questions, it will be established if a coherent sociotechnical imaginary is coalescing around the concept of REC in Portuguese energy institutions. The analysis of key policy and legal documents associated with the energy transition and RECs from 2019 until 2023 specifically addressed RQ1a, while RQ1b was addressed through an analysis of two public consultations for updates to the electricity system regulatory frameworks in 2019 and 2021. The aim was to establish how future representations have shaped recent energy policy narratives. More specifically, it attempted to establish how social representations (of the future) have been used to construct and construe the novel object of RECs and how these are enabled and constrained by the discursive formats and self-other relations specific to certain institutional settings.

The analysis of key policy and legal texts focused on their introductions and executive summaries, but also the sections which corresponded to the representational objects of “the future,” “the public,” and “Energy Communities,” located with a keyword search. However, there are limitations to an approach that focuses only on these kinds of documents. First, because the energy system is dominated by a wide range of technical and economic issues associated with existing paradigms, the space dedicated to novel forms of public participation is often limited. Secondly, they tend to tell us little about the discursive processes that produced them – it is rare that they explicitly articulate moral valuations or arguments, and they tend to incorporate different visions of the future without addressing the tensions between them or acknowledging possibilities that have been excluded (Welch et al. 2017). Thus, while the NECP and RCN provide the best insight into the state’s official *plan* for the energy future, in order to attain a more nuanced picture it was necessary to expand the range of data sources, including documents which represent the regulatory process.

In addition, the organisation of energy systems is particularly complex, and highlights the tension between government and governance (Jordan et al., 2005). New laws necessitate detailed

Table 5.1. Documents analysed for Study 1

Document	Publication Date	Description
Legislation		
Decreto Lei n.º 162/2019	25/10/2019	Established the legal scheme applicable to self-consumption of renewable energy, individual, collective or by renewable energy communities.
Lei n.º 98/2021 (Basic Climate Law)	31/12/2021	Declared a climate emergency and creates a set of rules that legally frame the actions of the State; sets out common objectives that aim to integrate public climate policies; establishes a set of principles and climate rights and duties.
Decreto Lei n.º 15/2022	14/01/2022	Established the organization and functioning of the national electric system (SEN) and incorporates provisions regarding self-consumption of renewable energy.
Policy		
Roadmap to Carbon Neutrality 2050 (RCN)	06/06/2019	Identified and analyzed the implications associated with technically feasible, economically viable and socially accepted alternative trajectories which allow the Portuguese economy to reach the objective of carbon neutrality by 2050.
National Energy & Climate Plan 2030 (NECP)	01/12/2019 13/07/2023 (update)	Established goals and targets regarding greenhouse gas emissions, renewable energy, energy efficiency and electrical interconnections, following the strategic lines for the decade (2021-2030), as set out in the RCN.
Regulation		
Public consultation 82 (PC82) - Justification document - Responses (n = 37) - Consultation report (ERSE, 2020)	20/12/2019	Presented a regulatory proposal to make it possible to apply <i>Decreto Lei n.º 162/2019</i> from 2020. Defined rules related to the commercial relationship in the scope of self-consumption and of the actors of the new regime of collective self-consumption, the applicable tariffs and the measurement and availability of energy data. Interested parties were invited to participate in the discussion of the rules, submitting responses online until 04/02/2020.
Regulamento n.º 266/2020	20/04/2020	Approves the Electricity Self-Consumption Regulation.
Public consultation 93 (PC93) - Justification document - Responses (n = 33) - Consultation report (ERSE, 2021)	19/11/2020	A proposal to reformulate the Self-Consumption of Electric Energy Regulation no. 266/2020, making possible modalities of self-consumption previously foreseen and thus establishing a regulatory framework consistent with the legal regime in force. Interested parties were invited to participate in the discussion of the rules, submitting responses by email until 07/01/2021.
Regulamento n.º 373/2021	05/05/2021	Approves the Electricity Self-Consumption Regulation (revoking Regulation No. 266/2020)
Public consultation 104 (PC.104) - Justification document - Responses (n = 7) - Consultation report (ERSE, 2022)	27/10/2021	Presented a regulatory proposal for the general conditions of the contract for the use of networks for self-consumption through the Public Service Electrical Network (RESP). Interested parties were invited to participate in the discussion of the rules, submitting responses by email until December 13/12/2021.
Diretiva n.º 12/2022	19/05/2022	Approves the general conditions of network use contracts for self-consumption through RESP

policy and regulatory responses which in turn “feedback” into the legal framework and vice versa (Edmondson et al., 2019; Heldeweg, 2017a; 2017b). The regulations associated with self-consumption and RECs elaborated the details of how these new forms of public participation would be made a reality, both by describing the technical requirements of these systems as well as the rights and duties of their users (see Palm, 2021, for an analysis of this process in the Sweden). Again, these documents tell us little about underlying inter-group processes that constitute them. While a great deal of influence may be exercised “behind closed doors” by lobbyists and interest groups (Stokes, 2021), such processes would reveal little about the common good aspirations (or pretensions) that constitute energy futures or how sociotechnical imaginaries are “publicly performed” (Jasanoff, 2015). For this, the analysis turns to three public consultations held by the energy regulator, ERSE, which received a diverse range of responses from key stakeholders.

5.4. Analysis and discussion

5.4.1. A new orientation towards the future: multiplicity and contingency

In the political and technological context outlined above, Portugal’s new national industrial strategy, the Roadmap to Carbon Neutrality 2050 (RCN), was submitted to the UN in September 2019. In keeping with the conclusions of the *IPCC Special Report on 1.5°C*, the RCN represented 2020-2030 as the essential decade, “to align the national economy with a carbon neutral trajectory.” Towards this end, it focused largely on pathways for an accelerated transition to a renewable energy economy, aiming for a fair, economically competitive transition, emphasizing public benefits like job creation and improved air quality, but also opportunities for citizen participation. It was structured around eight premises covering various aspects from economic transition to societal engagement and governance. In addition to the typical principles of energy law seen in previous decades’ policy documents (e.g. efficiency, security, sustainability, independence, competition and innovation; see Chapter 4), the RCN’s eighth target was “to ensure [a] fair, democratic and cohesive transition” (RCN, p.14), suggesting the emergence of a new *civic* representation of the energy future.

Adopting the perspective of sociotechnical imaginaries, Carvalho et al. (2022) argue that the RCN can be thus seen as a “boundary object” (Star & Griesemer, 1989) because its multiplicity of discourses and imaginaries render it “both plastic enough to adapt to local needs and constraints of the several parties employing them, yet robust enough to maintain a common identity across sites”

(Carvalho et al., 2022). In order to more fully understand the discursive power of this “boundary object” or “coordination device” (Thévenot, 2001), however, it should be interpreted in its historical context and also specifically in the post-Paris Agreement context, in which there was growing uncertainty amongst policy makers and scholars about the epistemic legitimacy and political purpose of energy modelling and target-setting (Geels et al., 2016; Hajer et al., 2015; Turnheim et al., 2015).

While containing many of the same meanings that were seen in previous years, the RCN clearly attempted to re-orientate the Portuguese economy towards the future in a novel way by foregrounding the contingency of political decision-making – rather than displacing responsibility by representing climate change as a distant threat (Wagner, 2023), the consequences of different sets of actions in the present are explicitly linked to distinct possible outcomes.

The future is projected not only in a quantitative and linear way, as is seen in previous energy plans, but also by imagining three *qualitatively* different scenarios. The “off-track” scenario is a representation of *business-as-usual* that, “retains the essentials of the economic structure and current trends as well as the decarbonisation policies already adopted or in force” (RCN, p. 21). The “peloton” scenario imagines carbon neutrality based on the development and application of new technologies that do not significantly change production structures or the population’s lifestyles (RCN, p. 21). Lastly, the “yellow jersey” scenario is “characterised by a structural and transversal change in production chains, made possible by the combination of a series of technologies of the 4th Industrial Revolution. It foresees a more effective incorporation of circular economy models and greater growth of the importance of medium-sized cities.” (RCN, p. 21).

This reflexive and *qualitative* orientation towards the future can itself be seen as a new convention that coincides with new forms of knowledge and “techniques of futuring” gaining traction in the energy industry and policymaking at this time (Ellenbeck & Lilliestam, 2019; Hajer & Pelzer, 2018). By defining three different scenarios in a *moral* way (from best to worst), the Portuguese policy imaginary of energy transition undergoes a transformation which destabilizes the status quo of incremental change punctuated with occasional transformations by envisioning a future where this policy of “business-as-usual” change still leads to climate breakdown.

In addition to the inherent *industrial* worth of long-term planning, a key convention of this *reflexive modernisation* is the clear orientation towards the public as a *stakeholder* who must be directly addressed and engaged, rather than merely quantified:

Extract.1 The transition to a carbon neutral economy requires timely long-term planning that allows advantage to be taken of opportunities associated with the inherent transformation of the economy and to establish the basis of trust among all the citizens and economic agents that this change is possible, advantageous and timely. (RCN, p.12).

Thus, in RCN, the role of the citizen is referred to extensively. The changes proposed and foreseen by the plan will have consequences not only for the economy, but also for “citizens’ daily life and social organisation” (RCN, p.72). Moreover, the RCN is also reflexive about the historical technocratic and centralist tendencies in Portuguese energy policy, proposing the development of associated roadmaps at a regional and/or inter-municipal level to “enable a cohesive transition that is *closer to the citizen*, involving the active participation of regional actors and entities from different levels of territorial organisation.” (RCN, p.88; italics added). In a nod to the past, the RCN warns that public support for these policies “cannot be taken for granted, so it is important that interest in and acceptance of these policies be continually promoted” (RCN, p.89).

Furthermore, drawing from a Eurobarometer study of public perceptions of climate change which showed that the Portuguese expect the government to take responsibility, the RCN affirms the need to “reinforce the notion of the importance of the contribution of individual action, through changes in behaviour and lifestyle” (RCN2050, p.89). Thus, at the same time as the notion of “active participation” is valued, so is the *domestic-industrial* representation which maintains the governmental imperative of *shaping* individual behaviour. Taken together, while the public takes a front seat in the RCN, it is unclear whether the underlying convention is based on *civic* or *domestic* worth.

While the former is often the anchor of “decentralized” energy, especially in its collective forms, the RCN is vague about the role of the public in decentralised renewable energy production. At most, “progressively decentralising and democratising energy production and highlighting the role of the consumer as an active part of the energy system” (RCN, p.31) is posited as one of the key steps for ensuring an inclusive energy transition. Of course, this might be due to it preceding the transposition of REDII. Yet, the RCN already foresees that, “new regulatory models will allow new players to enter the electricity market, such as energy production cooperatives and energy communities.” (RCN, p.31).

The uncertainty of this projection is illustrated by its circular reasoning, typical of futures thinking when it involves an aversion to explicit value judgements (Bell, 2009). Hence, the *assertion* that the “installed capacity of decentralised solar will increase to 2.3 GW by 2030 and 12

to 13 GW by 2050” is not causally independent from the *reason* that “families and other small producers may account for more than 20% of total electricity production,” because the former is also seen as necessary to demonstrate the cost-effectiveness of the latter (see RCN2050, p. 31).

Ultimately, while the RCN defers the *test of worth* or the *realism* of its projections about decentralization to forthcoming laws, policies and regulatory frameworks, it conveys expectations of a *paradigm change* in the energy sector which will simultaneously maintain a trajectory of economic growth. Citizens are ostensibly at the centre of this future, but there is a reflexive awareness about the lack of trust of the public in the state, but also in progress more generally (Wagner, 2012). Moreover, as seen above in the description of the “yellow jersey” (i.e. the best) scenario, the RCN is fundamentally oriented to the new market and technological possibilities of the “Fourth Industrial Revolution.” Taken together, this suggests an imaginary of the “techno-epistemic network” (Rommetveit et al., 2021).

5.4.2. New possibilities for decentralized energy: communities and the active citizen

Oriented towards the best-case scenario defined by the RCN, the *National Energy and Climate Plan* (NECP) set out the steps that the country would take for the next decade. Accordingly, the new model for carbon neutrality was framed as representing “a unique opportunity for Portugal” (NECP, p. 19) and the aim was to “achieve sustainable development based on a democratic and fair model which promotes the advance of civilization and technology, the creation of jobs and prosperity, the creation of wealth and territorial cohesion while also preserving natural resources” (NECP, p. 19). Thus, it is clear from the outset that the NECP, more than any other energy plan before it, rhetorically justifies its proposals with the *civic* order of worth.

More substantively, under the NECP, Portugal envisaged the expansion of solar energy to 9 GW over the next decade, including both large and small-scale photovoltaic installations (Silva & Sareen, 2021). It was in this context that, in October 2019, the EU’s recast Renewable Energy Directive was partially transposed. After a smooth and largely consensual parliamentary debate, *Decreto Lei n.º 162/2019* marked the country's first legislative effort to address the concepts of RECs and collective self-consumption. Like previous legislation (see Chapter 4), this law positioned the decentralization of electricity production as a strategic means to bolster renewable energy generation and decrease national energy dependency, underscoring the idea of a “complementarity” between decentralized production and “centralized instruments”. What was

significant here, however, was that “decentralization” again assumed a new meaning: self-consumption was no longer an activity reserved to private individuals and a single production unit (UPAC), but *groups* of consumers would now be able to associate together to collectively produce, consume, share and sell renewable energy.

Article 19 of *Decreto Lei n.º 162/2019* defined the new concept, stating that RECs would, “contribute to the production and development of renewable energy consumption, in a logic of complementarity with the rest of the national electricity system, in order to ensure compliance with Portugal’s goals and objectives in terms of energy and climate.” It also defined various rights and responsibilities related to RECs. First, it was stated that “the final consumer, namely the domestic consumer, has the right to participate in a REC, maintaining his rights and obligations as a final consumer,” and that the exercise of this right, “cannot be subject to unjustified or discriminatory conditions or procedures that prevent participation.” On the other hand, the General Directorate for Energy and Geology (DGEG) was responsible for ensuring that “participation in RECs is accessible to all consumers, including low-income or vulnerable families;” that “rules are established to ensure equitable and non-discriminatory treatment of consumers participating;” “instruments are available that facilitate access to funding and information”; “the grid operator cooperates with the REC to facilitate energy transfers within it”; and that “regulatory and capacity-building support is provided to public authorities.” In addition, the government must allow RECs “to compete on an equal basis with other market participants for support.”

While the new law did not mention the key concepts of effective control, autonomy and ownership, it did briefly cover the concept of proximity, stating that “members or participants are located in the proximity of the renewable energy projects” and that whether or not a project fulfils this criteria “must be assessed, on a case-by-case basis, by DGEG, assuming the physical and geographical continuity of the project and respective self-consumers or REC participants, and may also take into account: the transformer stations to which the project is connected; the different stress levels associated with the project; and any other element of a technical or regulatory nature.” *Decreto Lei n.º 162/2019* thus signified an apparent alignment of Portugal’s energy transition with long established traditions of other European countries of communities-of-place and citizen participation. Key to this vision of the future at the policy level was the discursive opposition of society to technology. If the history of energy transitions has been primarily determined by

technological evolution, the future energy system and carbon neutral society will be ushered in by the active participation of consumers:

Extract.2 Energy transition and decarbonization are not limited to only technological evolution through the replacement or implementation of new technologies or the use of new forms of energy. Participation by consumers will also play a significant role, where they will be more active as consumers/producers of energy and as agents for changes in behavior which will have considerable impact. A more informed consumer represents better, more efficient and sustainable choices and a consumer at the center of decision making is a more active consumer in the transition to a carbon neutral society, who is available to participate in the structural changes required to meet this challenge. With the consumer as an informed and active agent in the market, and with instruments to protect more vulnerable consumers, a further strategic priority for 2030 will be addressed; that of fighting energy poverty and consumer vulnerability (NECP, 2019).

As can be seen from the above, however, the subject of this active participation was represented as the *informed* and, thus, rational consumer who makes *better* choices. This model of “homo economicus” (Foucault, 2008; Read, 2022), influenced by models of behavioural economics (McMahon, 2015), was promoted alongside the notion of the “vulnerable consumer” who must be *protected* by the welfare state via centralized instruments such as the social tariff (Longhurst & Chilvers, 2019), suggesting a fundamental tension at the heart of the institutional imaginary of the public.

In addition to the focus on empowering consumers, the new law also laid the groundwork for more futuristic models of electricity decentralisation, involving direct energy exchange among prosumers, facilitating the possibility of micro-grids and various collective self-consumption models, including digitalised and “smart” peer-to-peer arrangements:

Extract.3 The vision of an electricity production system which is highly decarbonized, decentralized and computerized, with focus on the consumer/energy producer as an active participant in the system which ensures suitable levels of quality of service and supply security, will not be possible to achieve without new design and strategic guidance which takes all these new variables into account. (NECP, p.14)

“Smart networks,” “management support systems,” “producer and/or consumer aggregators,” “bidirectional smart meters,” “storage systems,” “local production of energy,” “active consumers,” “flexibility in supply/demand,” and “electric vehicles” are all viewed as indispensable *objects* for “building the model for the network of the future” (NECP, p.14). While the rhetorical notion of energy communities signified relatively straight forward principles of citizen inclusion and

participation, the substantive re-orientation of energy policy towards the citizen and the collectivization of prosumerism resulted in a significant *complexification* of the discourse surrounding decentralized renewable energy. New and unfamiliar concepts such as “peer-to-peer” and “aggregators” were emerging and would eventually coalesce around the notion of new markets for flexibility services.

Alongside this envisioning of possibilities – a mode of future projectivity in line with the regime of justification (Mandich, 2019) – the NECP articulated a discourse of transformation using terms such as “paradigm shift”, “profound change” and “inevitability”. It predicted that the mainstreaming of self-consumption would come about in “a context of complementarity, by combining centralized instruments to promote clean energies with decentralized processes which, due to their nature, reinforce social and territorial cohesion while helping reduce inequality.” Again, we can see here the double meaning of “decentralization”: on the one hand, the previously assumed technological meaning associated with the concept of self-consumption; on the other, a new meaning which *essentializes* decentralization as naturally *just*. In addition, the refrain that these processes are *complementary* with centralized instruments, again suggests an implicit awareness of past failures of centralism and the legitimacy that the discourse of decentralization brings.

Likewise, the subsequent law for the national electricity system, *Decreto Lei n.º 15/2022*, represented the energy system as currently undergoing a profound transformation and paradigm change. However, an examination of specific articles in these laws reveals more concise, concrete and binding moral commitments. For instance, Articles 4 and 5 presented the fundamental importance of the principles of rationality and efficiency; free competition; economic and financial sustainability; universal access and equal treatment of consumers; energy transition; and the preservation and protection of the environment – all discourses which have been institutionalised in Portuguese energy law for decades, as seen in Chapter 4.

Thus, this law was much more extensive than *Decreto Lei n.º 162/2019*, as it aimed to establish a new regime for the organization and functioning of the entire National Electricity System (SEN), transposing in full both Directive (EU) 2019/944 and Directive (EU) 2018/2001. Its “fourth axis” was focused on consumers, “foreseeing that they can move from mere passive consumers to active agents that produce electricity for self-consumption or for selling surpluses, storing and offering flexible services and aggregating production.” Apparently building on the experience gained since

the initial law, *Decreto Lei n.º 15/2022* was thus oriented to enabling more *innovative* models of REC, for example, establishing provisions for “dynamic sharing” which allowed “the efficient optimization of electricity flows between self-consumers who act collectively.”

The law also established a new, more concrete, definition of “proximity”, which at that point had been one of the key uncertainties of the transposition of REDII and the realization of RECs, as will be seen below (5.4.3.2). Thus, an “objective concept of electrical proximity,” is established rather than solely “physical proximity,” giving “greater breadth and legal certainty to the expansion of self-consumption activity.” Though not explicitly related to RECs or self-consumption, *Decreto Lei n.º 15/2022* also claimed to have strengthened the *information rights* of consumers, including “the strengthening of duties of providing information by suppliers to their customers.” As will be seen below (5.4.3.3), this relationship between energy sector incumbents and their customers is at the centre of how the citizen-centred imaginary of the energy future is developing.

While remaining unchanged in much of its concrete proposals and principles, the 2023 draft of the updated NECP contained subtle shifts in the language used to represent citizens and RECs that suggest that the latter has been taken up by a more top-down logic and by market forces. One example of this is in relation to the notion of *participation* that RECs are supposed to facilitate. While in 2019 the NECP stated that RECs would put citizens “at the centre of decision-making,” the 2023 updated version, in contrast, stated that citizens should be “at the heart of the decision”, suggesting that citizens are now the *object* rather than the *subject* of decisions. Moreover, while the 2019 NECP framed energy communities as allowing “individuals, companies and other public and private entities to produce, consume, share, store and sell energy produced from renewable sources, thus actively participating in energy transition” (NECP, 2019, p. 13), the 2023 version rhetorically refined this notion of participation by emphasising that the informed citizen will be “an active *player* on the market” (NECP, 2023, p. 19) rather than an “active *agent*” or citizen (NECP, 2019), the term “player” more commonly used to refer to companies.

Despite these subtle shifts towards *market* worth in the representation of RECs, the 2023 version of the NECP also contained a much higher frequency of the vocabulary of *civic* worth. “Citizens,” for example, are mentioned 24 times more in the updated version than in the original. Likewise, the concept of a “just transition” is mentioned 39 times in 2023 but only 4 times in 2019. This marks a contrasts with past energy laws, but it also differs in a subtle way from the *Basic Climate Law*, published in 2021, which formally integrated energy transition policy into a more

progressive climate and environmental law. In this text, proposals for a decentralized energy future are anchored in discourses of “democratic production”. The incongruity of the *Basic Climate Law* and *Decreto Lei n.º 15/2022* is demonstrated perhaps most clearly, however, by the frequency of certain key terms belonging to different orders of worth. In the *Basic Climate Law*, citizens are mentioned 21 times, while in *Decreto Lei n.º 15/2022* they are mentioned only 5 times, despite being a much larger document. “Competition” or “competitiveness” are mentioned in the energy law 25 times but only twice in the Basic Climate Law. Moreover, the latter is explicitly anchored in the concept of “climate justice,” while the corresponding concept of “energy justice” is absent in *Decreto Lei n.º 15/2022*.

5.4.3. Regulating and re-signifying new laws through the regime of the plan

Between 2019 and 2021, the Portuguese energy regulator, ERSE, worked to regulate the possibilities allowed by the new regime for the production of electricity for self-consumption (*Decreto Lei n.º 162/2019*). On December 20, 2019, the first of two public consultations for the proposed regulation was launched. The subsequent regulatory framework, published in April 2020, focused on the new concept of “collective self-consumption”, while the revised version was published in November 2020 and focused on more innovative models of RECs. In May 2022 ERSE published, after a another period of public consultation, Directive n.º 12/2022, establishing the general conditions of the contracts for the use of networks for self-consumption, in other words, the rights and duties of self-consumers (including RECs).

These regulatory frameworks and their associated processes raised a wide range of technical issues anchored in socio-political choices. Old and new issues such as cross-subsidization, network investment and electricity sharing coefficients could each be analysed in detail in order to show the moral commitments bound up with them (for instance, the *imagined community* based on the value of *solidarity* which justifies cross-subsidization and standardization of network access tariffs to enable rural electrification – see Chapter 4; also Fonteneau, 2022; Poupeau, 2007). In this section, however, the focus shall be on the main representations and conventional forms that were used to *anchor* and *objectify* (Moscovici, 1961) the new possibilities afforded by the 2019 law and conveyed in the policy documents analysed above.

To do this, some of the main choices and justifications of the regulator will be presented, as will some of the main uncertainties, tensions and critiques that emerged during the consultation

phases. The analysis focuses on how *the regime of the plan*, or “*functional*” convention described by Leader (2000; Leader et al., 2006; see also Affichard et al. 2023), orientated and justified regulatory action, re-signifying newly established meanings and emergent legal norms. This type of engagement is characterised by a need to *manage change*, especially when the change in question is seen as potentially disruptive to the normal functioning of the organisation – in this case ERSE – in the pursuit of its mandated objectives to protect consumers and ensure the smooth running of energy markets. In the following, it will be shown how this functional orientation to the new laws led to several uncertainties and, consequently, to criticisms and competing interpretations from a range of stakeholders.

5.4.3.1. The regime of the plan meet demands for innovation and recognition

The *cautious* approach to the future characteristic of the *regime of the plan*, and in-keeping with the regulator’s mandate, entailed delaying the transposition of the new legal concept of RECs into an initial regulatory framework for self-consumption. While this “non-decision” (Bachrach & Baratz, 1963) was uncontested by energy system incumbents, several comments submitted to the regulator by newer or smaller stakeholders during the consultation phase for this framework challenged it on the grounds that the regulator was legally obligated to facilitate RECs and to remove any barriers to citizen participation and innovation. In addition, new stakeholders such as the renewable energy cooperative, Coopernico, questioned the seeming lack of possibility of new technological innovations such as peer-to-peer sharing of electricity.

In the first consultation these criticisms were expressed by recourse to the EU Directive and to national policy objectives. However, comments in the second consultation revealed how energy cooperatives were also motivated by representations of what RECs *should* be, based on an anchoring of the new law in representations of the self as *authentic* and/or *historical* energy communities oriented to the common good, as is seen below:

Extract.4 Community energy projects have been part of the European energy landscape since the beginning of the 20th century. In Portugal, these community projects from the beginning of the last century are remnants, the 10 small energy distributors who insist on resisting the adversities they have been facing (nationalization of the sector, regulatory non-compliance), over almost a century of life. [...] Based on the role that these pioneers played in rural electrification, the European Commission now recognizes that providing citizens with an active role in energy issues, through this type of community projects, is a fundamental resource to achieve the goals of decarbonizing the economy. We can thus affirm that

nothing is lost, everything is transformed, in this case, these initiatives are given a new name and it seems that it is a reality that never existed. [...] We believe that the formal recognition of the role of energy communities in the EU policy framework must make its existence and its local and exceptional character more prevalent in the national regulatory framework of the electricity sector. (Response #1, PC.93)

Extract.5 Concomitantly, the articles of said decree-law provide a set of rules aimed at simplification and dematerialization of processes associated with decentralized production and creates new ones figures, namely the Renewable Energy Communities (REC), which recall the strategy of the government, in the 30s, with the encouragement of the creation of Electric Cooperatives that gave a strong contribution to National Electrification and so threatened nowadays (only 80 years later). And we are certain that the process will develop strongly for the reasons we have indicated: The growing awareness of the citizen to take measures aimed at safeguarding the planet Earth; The strong growth in the cost of electricity and the appreciable share of the family budget and/or business; The sharp drop in production equipment (today, installation prices in the order of €500/kWp) with amortization periods of around 6 years, for an expected lifetime of 25 years old; The associativism very characteristic of the Portuguese people and reflected in the creation of the RECs; The assembly of smart meters and the creation of an information infrastructure by the Network Operators allowing the process to work. (Response #30, PC.93)

It is clear from the above that, as well as the demand for innovation, the regulatory authority faced a demand for *recognition* from already existing electricity distribution organisations operating with cooperative and community-oriented models. These representations can be seen as strategically employed to advocate for a distinct vision of future energy communities which puts citizen participation and community ownership and local benefits at the centre.

Yet the revised version of the initial framework included a definition of RECs that, instead of envisioning novel ways for citizens to participate, significantly *simplified* the concept by ascribing it with the same rules and functions *as* the previously defined model of collective self-consumption (itself based on individual self-consumption) and promoting a “centralized model” which “simplifies the individual role of each consumer associated with self-consumption, but requires greater responsibilities from EGAC, both in the management of information associated with self-consumption, and in the financial flows associated with contracts” (Consultation report, PC.8). In this context, ERSE predicted that, “the development of collective self-consumption projects will need entities trained to advise self-consumers and even to provide self-consumption management services” (ibid). Moreover, while it explicitly justified the need for the more familiar concept of individual self-consumption in terms of the increased efficiency and use of endogenous resources that it would bring, no additional justification was offered for the concept of collective self-

consumption. In addition to indicating the institutional imperative to simplify and maintain stability, this lack of justification points to uncertainty about the meaning and desirability of RECs.

In 2021, as the regulator faced increased demands to realize more sophisticated, innovative and complex technological possibilities, its decisions and measures became anchored in more progressive technological expectations – for instance, the expectation of the “market evolving towards a more fragmented structure of agents” (Justification document, PC.93). Moreover, the presence of the *industrial* order of worth and the *absence of the state* are implicit in the regulator’s appeal to the authority of external European experts, while *market* worth is present in their assertion that RECs will necessarily have to form relationships with traditional market actors. Together these justifications create an *expectation* of continuity and stability, but also of opportunity. However, as the practical demonstration of new concepts had not taken place, the regulatory complexification and certain socio-political choices (e.g. a preference for static and mobile battery storage rather than net-metering) led to further critiques.

What this *politics of definition* reveals about the way the energy future is psychosocially represented and materially shaped in the institutional process of socio-legal change is that *the regime of the plan* or “governance by objectives” is the dominant logic and the communicative format of *reification* is inscribed in the normal functioning of regulatory institutions: while ostensibly dialogical in that it allows the public to submit written responses, the institution was unwilling to promote a broad plurality of possible futures.

5.4.3.2. The regime of the plan meets the ambiguity of “proximity”

In addition to the above strategy of *simplification*, the regulator’s institutionalized objectives meant that it also had to *anticipate* potentially destabilizing situations that may arise with the set of practices enabled by the new law. The notion of “proximity” was also initially ignored by ERSE in its justification document. This gave rise to an uncertainty that was interpreted in different ways. Some stakeholders initially highlighted the need to clarify the meaning of proximity so that actors could know the dimension and area of coverage that a REC can reach.

The issue of proximity rested primarily upon the uncertainty about whether it should be defined as “electrical proximity” or “geographical proximity”. But another reason for uncertainty was that it was unclear which institutional body had the legal responsibility to define and implement it. While neither of ERSE’s regulatory frameworks addressed it, several industry stakeholders did.

- Extract.6 We believe that the concept of a close neighbourhood relationship provided for in Article 5 of the Decree-Law No. 162/2019, of 25 October, needs to be clearly defined. Watch out- if the fact that, in the future, installations for collective self-consumption or RECs may appear with great geographic dispersion and, consequently, with a negative contribution to losses in the networks. In this context, we propose that ERSE promote with the Legislator the clarification of the concept of neighbourhood enshrined in Decree-Law No. 162/2019, of October 25, in a perspective of development of the self-consumption regime, based on electrical proximity (Response #17, PC.93).
- Extract.7 This point is of particular importance for [our] members who hold several industrial facilities distant from each other without the possibility of installing UPAC in the enclosure delimited by the industrial installation and having to resort to the placement of means of production in an outdoor area or even away from the place of consumption. There will be advantages in terms of scale that the UPAC may come to feed more than one UI, using the Network Electric Public Service (RESP). The vague concept of proximity will make it difficult to study feasibility and investment decision-making in a self-consumption project. (Response #12, PC.93).

What is most interesting about this discussion of proximity is the types of stakeholders participating in it. Whereas the original underlying rationale of proximity at the European level was to mobilise the active participation of citizens in “communities-of-place,” the energy cooperatives were largely absent from the debate. Instead, and as seen above, it was incumbent energy suppliers (and the regulatory authority itself), that advocated for “local” RECs and highlighted the advantages of RECs with a clear definition of electrical proximity. This led to the regulator giving its opinion on the matter, in which it agreed with the stakeholder comments on the need for clarity, further pointing out that the electrical losses in the network as a result of geographic dispersal of RECs “will distort their initial goals of sustainability and efficiency” (Consultation report, PC.93), echoing comments made by the largest utility company in the previous consultation. It thus suggested that DGEG's assessment, should be guided, “as far as possible, by public and previously known criteria revealing the underlying principles of its actions” (Consultation report, PC.93). Rather than this rule-based approach to promoting proximity, a citizen response to the first consultation advocated for a financial incentive-based strategy (e.g. “toll fees”) to encourage the “good local use of the network” (Response #8, PC.82). What can already be discerned here is that a concept rooted in fundamental principles, i.e. of a moral nature, becomes subject to debate when it is anchored in a technical domain where there is competing interests and a hegemony of *functional* justification. However, when uncertainty arises, actors – including ERSE – are forced to resort to underlying principles of worth.

In addition, the vagueness of the notion of “proximity” also led to a clash of two competing visions of energy network decentralization which required the regulator to make a justified decision based on an assessment of probable future scenarios. On the one hand, the vision of decentralization based on the principle of “net-metering,” advocated by several new actors seeking to develop innovative business models based on digital technologies which can enable the “virtual sharing” of electricity via the use of the public electrical network. This net-metering model was encouraged by the renewable energy industry association who believed that it was precisely at this early stage that experimentation should be pursued. The oil and gas national incumbent expressed a similar view, arguing that, “ERSE should not limit from the outset the possibility of collective self-consumers to manage their production surpluses in the way they see fit.” Underpinning this was the view that “the allocation of surpluses is a virtual and completely free action” (Response #30, PC.82).

The same principle is at play in net-metering models based on the self-consumer receiving “cloud credits” from a utility company for surplus energy injected into the public grid. The accounting time-period was seen as decisive here, with some respondents to the first consultation – especially those representing themselves as citizens – arguing that the 15-minute model did not encourage the uptake of self-consumption:

Extract.8 There is no logic in the application of a quarterly hourly balance, as it does not allow advantage for those wishing to invest in energy self-production, given that domestically during the day the small producer would not be at home in his dwelling to be able to produce and consume instantly. Whoever wants to invest in something that makes a difference, will overproduce in the summer and in winter deficit. Therefore, if you will not be at home at the time of production, you will not have benefit and as such will not invest. Not allowing the development of this technology. It's in time to think more about the environment and climate change than about private interests... (Response #1, PC.82).

Extract.9 The amendment proposal at the level of net metering is not very appealing to a consumer who wants to install a self-consumption system [...] It should be possible to use the excess energy produced by these systems at night, which is injected into the grid during the day. [...] In this way, this option would be a real incentive for a consumer to install a system with more production capacity than the one that covers its consumption, thus helping national production during the day (when energy is most needed), being compensated during the night by the use of the surplus produced. This situation would be beneficial for everyone: the consumer would be compensated overnight for the injected energy (at a time when energy is much cheaper, note!), while the system would benefit from more (and renewable) energy at times when it is most necessary (and also more expensive!). This, in

my opinion, would be a much fairer system than what is being proposed. (Response #3, PC.82).

As seen in the above, the critique which perceives the regulation of law as conservative is – especially when made by “citizens” – anchored in broader discourses of environmental and socio-economic benefits, fairness and a suspicion of private energy companies.

In opposition to the concept of net-metering, the “user-pays” principle emphasizes fairness in cost distribution across all network users, advocating for costs to reflect individual network usage to prevent subsidizing the energy costs of more active participants at the expense of less active ones. This principle challenges the net-metering model by calling for a more equitable cost structure that ensures all users contribute fairly to the network’s upkeep. The regulatory authority, whose stated institutional objective is to ensure fairness and efficiency in network cost distribution, defends the latter principle.

5.4.3.3. The regime of the plan meets the ambiguity of “the public”

In its response to the above criticisms, ERSE set out the agenda for a full transposition of the concept, by representing RECs principally as *market participants*. Thus, RECs are represented as a “special context of affinity between electricity consumers.” Meaning that they can, in relation to “green” electricity products, become “drivers of this form of market participation and these consumption choices, especially in line with energy policy objectives” (Consultation report, PC.82). The invocation of energy policy objectives shows how, when faced with criticism, justifications can be found in “higher” levels of institutional authority. The statement continues,

Extract.10 It is therefore natural that the development of RECs with more ambition (in the sense of the range of services to be provided) should be done through partnerships with traditional agents in the electricity sector (sellers or aggregators), in order to ensure full compliance with the obligations towards the sector. The directives refer, for example, to the use of entities (third parties) responsible for the balance sheet. (Consultation report, PC.82).

The above statement set the scene for the revised regulation that would be published a year later. However, it also served to deflect responsibility for the development of RECs. It does this in three ways: firstly, by suggesting that their participation in energy markets is *already* legally possible; secondly, by stating that their *realization* will depend on the cooperation of *other* energy sector stakeholders; and, thirdly, by stating that RECs “cannot harm the rights and obligations of the consumers or producers who are part of them,” implicitly referring to its own institutional objective

to safeguard the consumer and, thus, justifying the cautious approach. The two regulatory frameworks that were to follow – the first which amended the 2020 framework and the second which set out the rights and responsibilities of network users, establishing the general conditions of the network use contract for self-consumption through the public network (RESP) – reveal how the regime of the plan is ill-equipped to respond to the increasing demands for innovation, on the one hand, and a recognition of “the public” on the other.

The functional convention was also confronted by the expectation of *other* types of convention, for instance the convention of individual rights. Indeed, there was considerable uncertainty during this process about how the rules for collective self-consumption and energy communities could at the same time maintain the *collective* character of the concept *and* the traditional rights of individual energy consumers. To address this, the regulator depended on the convention of free consent, objectified in purchase contracts, in order to overcome the demands of stakeholders and to justify some of its proposals. Indeed, considerable responsibility is delegated to the management entity of a REC to establish contracts. Thus, from 2021 onwards, RECs become represented as a *commercial contracting entity*, with members becoming represented as “customers.” An underlying assumption of this was that RECs would need to set up commercial agreements with already established market players.

The convention of the contract (Affichard et al., 2023) is used by ERSE to regulate the relationship between self-consumers (including RECs) and the distribution network operator (DNO). One of the contractual obligations of the DNO is to provide a certain quality of service to the self-consumer, however the contractual form does not foresee certain situations of non-compliance. This is one of the critiques levelled at the proposal during the consultation phase. More specifically, a European consumer rights organisation argued that because “the majority of the population is unaware of what is stipulated in the applied legislation [...] so legislative indications will not be sufficient” (Response #2, PC.104). In short, the current wording of the contract does not guarantee the fulfilment of the service provider’s responsibility in a situation where “the parties are not in balance in terms of knowledge of the agreed rules for the market” (Response #2, PC.104).

The underlying issue here is that the *imagined subject* of self-consumption (and of RECs) is stuck between the identities of “the public” and of “the supplier”. The institution is unable to deal with this double identity and opts to use the latter, the hegemonic representation of the energy

supplier, to represent the new concepts. Consumer rights organisations, in contrast, mobilise a representation of the public as vulnerable in its critique of the institutional representation. Thus,

Extract.11 In a context of energy transition, in which self-consumption has a fundamental role, it is important to clearly establish the rules and conditions applicable, as well as ensuring that all communication addressed to self-consumers, whether in the portal, in technical procedures and forms, among others, must be accessible, easy to understand, simplified and unbureaucratic so as not to create barriers that discourage consumers from adhering to renewable energy solutions (Response #1, PC.104).

Extract.12 I've been trying to read the proposal and the justification document and, even for me, I am civil engineer, I must say that it is not easy to interpret such a legislative document [...]. Too many acronyms, lack of intelligibility of the document, lack of fluidity following the articulated... I think not everyone in Portugal is a lawyer or expert in energy legislation. (Response #27, PC.93).

A similar critique is made regarding the billing procedures in situations of self-consumption surpluses. In addition to more concrete obligations and consequences, however, this situation also demands *simplification*. As it stands, the contract form proposed by ERSE results in a situation of complexity which “raises doubts for the consumer/producer and makes it difficult to understand the values that are being attributed to them” (Response #2, PC.104). This difficulty for “the public” to engage with energy law is illustrated by the second extract above, taken from an individual’s response to the second ERSE consultation.

These examples begin to introduce the paradox of “consumer empowerment” in the energy sector which will be examined in more detail in the following chapters. We can thus see how, in the case of regulating an inherently asymmetrical relationship, the *contract form* is subjected to demands from other conventions, namely those of the *functional* and *civic* conventions. It may be said that the root of the problem is not the *contract form* itself but its *generic formulation* which too easily allows for non-compliance. However, there is also an underlying issue with the contract form insofar as it presupposes two equally consenting parties.

This analysis of the regulatory domain shows that the new representation of the (energy) public as *active citizens* and, later, as *market players*, is legitimising conventions of free consent, objectified in the contract form, which treat citizens in the same way as companies, actors who typically possess much larger volumes of technical, juridical and bureaucratic capital (Bourdieu, 2018). The critique of this arrangement from the perspective of consumer rights states that its formal equality masks a real inequality which means that powerful incumbents such as the grid

manager and energy utilities can get away with regulatory non-compliance because it is the consumers who are expected to hold them to account.

It is possible that this state of affairs could be further justified by *functional* considerations, since placing stronger obligations on incumbents would be seen as impinging on their capacity to fulfil their broader objectives. Another solution is to accept the new representation of active consumers with the same rights and responsibilities as commercial actors, but at the same time establish ways to increase their energy literacy and facilitate their collective action. However, as will be seen in the following chapter, there is considerable uncertainty on the part of energy sector experts about how this can be achieved. This leads to models of energy communities which delegate power to a central authority and maintains citizens as “passive consumers”. Rather than justifying this solution by setting up a *reality test*, however, the Regulator’s report for Consultation 104 responded to the consumer rights organisations’ critique in the format of a *truth test* (Boltanski, 2011), a quasi-tautological rhetorical form which represents the future as the same as, or complementary with, the past and excludes alternatives:

Extract.13 Although ERSE recognizes that the EGAC [*Collective Self-consumption Managing Entity*] function can be performed by entities without any requirement for technical capacity and mastery of the sector's legal and regulatory model, it must emphasize that the assumption of EGAC qualification has been assumed and publicly discussed since the first version of the RAC [*Self-consumption regulation*]. (Consultation report, PC.104).

In other words, ERSE justifies *not* taking greater steps to improve the pedagogical and informational quality of the regulations by stating that it has *already been assumed* that the managing entity will be an actor with “sufficient technical, financial and legal resources” and, for this reason, also “assumes a link to the contractual terms applicable to suppliers” (Consultation report, PC.104). Rather than appealing to an *order of worth*, the exclusion of the public from actively participating is explicitly based on merely on a *confirmation* of a pre-established relationship.

5.5. Conclusions

The analysis of policy, law and regulation presented in this chapter has shown that, since 2018, a new imaginary of the energy future which recognizes the importance of *civic participation* for securing legitimacy, has been institutionalized in Portuguese energy policy. At the same time, the

future has increasingly been represented in official policy documents in terms of urgency, innovation and acceleration. Both developments tacitly problematize previous ways of representing the energy future.

Secondly, it has shown that the new self-consumption regime in Portugal aligns closely with the European initiative for an energy transition that emphasizes liberal principles, focusing on market development as a central regulatory tool (Jabko, 2009). This approach introduces a shift in roles, expanding beyond traditional “producer-consumer” (Debourdeau, 2011b) and “investor-producer-individual owner” models (Fontaine, 2018,) to include the “self-consumer” or “prosumer”. This transformation fits well with the neoliberal concept of self-management, as outlined by Foucault (Lemke, 2001), especially when applied to the electricity sector. Here, encouraging consumers to actively participate in the market is seen as a way to align their behaviour more closely with market ideals and, by extension, improve the electricity system (Levenda et al., 2015). The emergence of prosumers is promoted as a strategy for enhancing the electricity system's adaptability, facilitating a smoother incorporation of renewable energy sources (Lowitzsch, 2022). Transitioning towards self-consumption, thereby transforming consumers into investors who optimize their capital through their actions, is viewed as a means to create a more efficient consumer in support of the energy transition. While the new concept of RECs has allowed policy and legal discourse to mobilise additional *civic* justifications for the active participation of citizens in the energy system, they have ultimately been in compromise with *market-industrial* representations of the rational consumer.

Thirdly, the close analysis of the regulatory processes between 2019 and 2022 revealed the reifying effect of institutionalisation. While in policy plans and roadmaps RECs are explicitly justified by orders of worth and envisioned as the basis of an alternative future, in subsequent regulatory frameworks they were anchored to the dominant representations of energy sector agents and of the energy system, as technical experts and centralised respectively. These representations are objectified and realised in certain conventions such as the functional and contract forms, which together constitute the regime of the plan (Affichard et al., 2023). The dialectic of discursive simplification and complexification in this process means that the need for technical expertise for the implementation and operation of RECs has been enshrined in law.

Table 5.2. The regulation of RECs: four types of stakeholder response

Relation of institution and convention(s) is:	Functioning of institution is judged as:	
	“uncritical”	“critical”
Coherent	<p><i>Public as companies.</i> Formal equality of citizens and companies leads to RECs competing with traditional market agents.</p> <p><i>Clear proximity criterion</i> fulfils goals of sustainability and efficiency.</p>	<p><i>Public as vulnerable.</i> Formal equality of citizens and companies leads to hegemony of traditional market agents.</p> <p><i>Clear proximity criterion</i> does not fulfil goals of investment and participation.</p>
Incoherent	<p><i>Public as citizen.</i> Practical inequality of citizens and companies leads to measures to increase energy literacy.</p> <p><i>Vague proximity criterion</i> allows for experimentation with new models such as virtual sharing and net-metering.</p>	<p><i>Companies as public.</i> Practical inequality of citizens and companies leads to demands to ensure compliance of companies, e.g. by nationalisation.</p> <p><i>Vague proximity criterion</i> does not prevent abuse by vested interests; exceptions can be made in “national interest”.</p>

Fourthly, while alternative common goods and future possibilities are removed from the horizon of expectations in energy law, they are often brought back in by respondents to public consultations in a regime of critique. While the few citizen responses tended to anchor their critique in orders of worth, the non-public nature of these consultations meant that most respondents were themselves technical experts and, thus, functional justifications (based on self-interest) were the norm. From this analysis we can, therefore, see the difference between “how principles structuring basic rights in economic relations work at face value [and] what they can conceal in the process” (Leader et al., 2006).

Finally, the multidisciplinary approach to the study of imaginaries, discourse, legal norms, principles and rights used in this chapter suggests avenues for further research into the relationship between different types of justification in the institutional domain. In particular, with the generalisation of new norms of civic participation in the energy transition, there is a need to establish how these norms, and the new rights that they make a claim to, are stifled by less explicit justifications and institutional objectives. In addition, it is important that pre-existing forms of consumer rights are not surreptitiously substituted with new, weaker, forms. Combining the conventionalist approach to institutions with approaches to discourse and meaning-making such as

the theory of social representations can show how new representations can lead to uncertainties and transformations in the conventions that are used to regulate relations between diverse types of actors.

Chapter 6

Study 2 – Expert imaginaries of Renewable Energy Communities¹⁰

6.1. Introduction

This study continues the analysis of the institutionalization stage of legal innovations from a social-psychological perspective, but by examining how new laws are constructed and construed by certain “expert” intermediaries in the energy sector it also integrates the generalization stage. It pays particular attention to the way that expert actors represent the future and how they negotiate their understandings of RECs in relation to the future. In focusing on the future representations of these actors, this research foregrounds the contingency of the process of legal innovation, and how different ways of representing the future – e.g. as possible or probable, hoped or feared for – are related to different social representations, group interests/projects and type of knowledge/expertise (Bauer & Gaskell, 1999; 2008; Buhagiar & Sammut, 2020).

It therefore addresses the second set of research questions, presented in Chapter 3 as which are oriented towards establishing how the energy future is represented and communicated through mediating systems. Positioning expertise as a mediating system of communication, this study takes up the analysis of different types of energy sector actor (e.g. policymakers, engineers, social scientists, lawyers), enquiring into how they were imagining the energy future and the implementation of RECs. The question that guided this study was the following:

RQ2a. What are the representations of the energy future and of RECs that are being mediated to “the public”? In particular: (a) how are expert intermediaries representing the future of RECs and the role of “the public”?

Expertise has been a central focus in science and technology studies and has also been thoroughly examined by social psychologists, particularly through the lens of Social Representation Theory (SRT) (e.g., Morant, 2006; Batel & Castro, 2008). The classification systems used by experts have

¹⁰ A version of the study upon which this chapter is based has will be published in the upcoming book: Halonen, M., Albrecht, M. & Kuhmonen, I. (Eds.) (2024). *Rescaling Sustainability Transitions – Unfolding the Spatialities of Power Relations, Governance Arrangements, and Socio-Economic Systems*. Palgrave (in press).

significantly contributed to Pragmatic Sociology (PS) research as well (e.g., Boltanski, 1979; Desrosières, 1990). Qualitative interviews are the primary research method in these studies, which was also the approach here. Although this chapter focuses on expertise as a mediating system (RQ2a), it also addresses the initial research questions, given that many experts hold multiple roles across various contexts. It therefore provides a deeper analysis of the social representations and issues from Study 1. By designing interview questions to explore interviewees' views on the public's role, we interpret expertise as a mediating system. The study emphasizes future-oriented discursive strategies, though it became clear that the interview context sheds more light on broader expert imaginaries rather than on the communication of expert knowledge to the public, a topic better addressed in Study 3.

6.2. Methods

To examine imaginaries of RECs in the Portuguese energy sector, semi-structured interviews with 23 individuals from each of the categories outlined in section 4.7. were conducted between 2020 and 2022, with each lasting between 1 and 2 hours. Most of these interviews were individual, but some were also in a group context.

Table 6.1. Expert interviewees

	Type of actor	Type of organisation	Type of expertise
P1	Legal/policy	Law firm	Legal
P2	Administration	Energy Agency	Engineering
P3	Legal/policy	Law firm	Legal
P4	Cooperative	Energy Co-op	Engineering
P5	Administration	Regulator	Engineering
P6	Corporate	DSO	Engineering
P7	Corporate	DSO	Engineering
P8	Legal/policy	Independent	Economics
P9	Science	University	Social science
P10	Science	Energy Company	Engineering/ Social science
P11	Cooperative	DSO	Engineering
P12	Cooperative	Energy Co-op	Engineering
P13	Administration	General Directorate	Engineering
P14	Administration	General Directorate	Engineering
P15	Corporate	Energy Company	Engineering
P16	Administration	Energy Agency	Engineering
P17	Legal/policy	Environmental NGO	Engineering
P18	Corporate	Energy Company	Engineering
P19	Administration	General Directorate	Engineering/ Social science
P20	Legal/policy	Industry Association	Engineering
P21	Administration	Regulator	Engineering
P22	Science	Environmental NGO	Social science
P23	Corporate	Utility	Social science

The resulting data was then subjected to a pragmatic discourse analysis (Batel & Castro, 2018; see Chapter 3). This implied, as a first step, performing a thematic analysis to identify the main contents – imaginaries and orders of worth – in the interviewees’ discourse. A subsequent discourse analysis of the data (Billig, 2003) enabled a focus on the format and function of those contents. This established particularly if and how specific ways of representing the future were tied into the identified representations of RECs, as well as to explore associated psychosocial processes in representing the future.

6.3. Analysis

Analysis of the interviews revealed three overarching imaginaries about the role of RECs in Portugal’s energy future. First, an imaginary oriented to maintaining “business-as-usual” was predominantly articulated by energy system bureaucrats, legal experts and, to a lesser extent, representatives of energy companies. In discussions about the purpose of RECs, this imaginary was seen in frequent appeals to the *market* (business opportunities, increasing competition), *industrial* (efficiency gains, balancing the grid) and *fame* (public opinion; increasing reputation of companies; promoting acceptance of renewables) orders of worth, but also in appeals to energy *security* and further *liberation* of the market from the state – discourses which are not directly oriented to the common good.

The second imaginary was based on the idea that RECs are about “empowering citizens” and was mainly articulated by representatives of cooperatives and social science academics, but also occasionally by representatives of administrative authorities. This imaginary was characterized primarily by frequent appeals to the *civic* order of worth (social benefits, democratization), but also to the *domestic* (local communities) and *projective* (facilitating active citizen engagement, bringing together diverse actors) orders. Enthusiasm was stimulated not by the idea of market liberalization from the state, but the notion that RECs involve the *empowering* of consumers against the traditional corporate players.

Thirdly, an imaginary of RECs as agents of the “smart network” was strongly expressed by interviewees who held elite roles in the renewable energy industry or who were associated with companies operating with cutting edge technologies and business-models. This imaginary exploited tensions between orders of worth within each of the other imaginaries by using the resources from the *network* world (described in section 2.4.8.).

As they were dialogically related, these imaginaries were neither completely autonomous nor map distinctly onto certain types of expertise. Rather, interviewees were discursively “polyphasic” (Batel & Castro, 2018) – their social representations were not always consistent with each other, and sometimes were even contradictory. Nevertheless, rather than looking for a common denominator in the form of a single shared imaginary of RECs, the following analysis attempts to reconstruct the plurality of more or less coherent “semiotic orders” (Watkins, 2015) and examines the relations between them, as summarized in Table 6.2.

Table 6.2. Expert imaginaries of RECs in Portugal

<i>Imaginaries</i>	<i>Business-as-usual</i>	<i>Empowered citizen</i>	<i>Smart network</i>
<i>Main orders of worth</i>	Market, Industrial, Fame	Civic, Domestic, Projective	Projective, Inspired, Market, Industrial
<i>Representation of the public</i>	Self-interested entrepreneurs and passive consumers	Active citizens	Passive/active user
<i>Representation of the local</i>	Local as complementary to the national; site of efficiency and security	Local as place of community; site of citizen participation	Local as strategic point in the network; site of interconnection of everything
<i>Representation of the future</i>	Future as continuous, stable and complementary with the past; discourse of cautious planning	Future as contingent; multiplicity of potential futures; discourse of critique	Future as discontinuous with the past; discourses of transformation and inevitability

While each of these imaginaries is constituted by a wide range of issues, objects, practices and meanings, to establish how they mediate RECs to the public the following analysis will focus on two key issues. First, the legal concept of “proximity” will be unpacked, as will the different representations of “the local” that it facilitated. Secondly, how participation in RECs was conceived in the different imaginaries will be analysed and related to the distinct representations of “the public”. In the third part of the analysis, the different ways that these imaginaries are discursively used in order to open up or close down the future will be analyzed.

6.3.1. Proximity and representations of “the local”

As was seen in the previous chapter, when the concept of RECs entered the Portuguese legal and regulatory context in 2019, one of the main uncertainties was the meaning of the term “proximity”. As it was defined in REDII, the proximity criterion specified that the physical infrastructure owned and operated by a REC must be located within its geographic boundaries, as should its members.

Just as in the regulatory consultations, the concept of proximity was a key object of discussion in the interviews. However, in this context the interviews enabled for a more nuanced insight which revealed three different representations of “the local.”

6.3.1.1. The local as the site of technical efficiency and grid security

In the business-as-usual imaginary, regulatory authorities preferred a local approach to RECs for improved grid resilience and efficiency. They aimed to prevent unfair costs for everyday consumers and sought RECs that required minimal grid investments. This vision favoured continued economic growth and high energy use, limiting RECs to “self-sufficient” projects in small areas with pre-existing domestic or industrial ties.

Extract.14 We’re combining in the local all these chances for providing flexibility to the grid and reducing the use of the grid, promoting zero carbon energy communities and buildings so that they can be somehow self-sufficient (P5, Administration, Engineering).

Extract.15 When you produce locally, you are increasing the efficiency of the grid, because you don't need to... the energy doesn't need to travel a lot between the point of producing and the point of consumption. So that's good for the grid, of course (P4, Cooperative, Engineering).

Importantly, the 2022 legislation had a clause allowing exceptions for projects in the national interest, which was viewed with scepticism by stability-focused administrative authorities. They believed energy community members should be local residents, not large businesses, to ensure fair tax incentives. Likewise, the interviewed representatives of the main grid operator argued that the principle of proximity was right because a real community means “being near.” From this perspective, the idea of exceptions in the national interest was for the “smart guys” and “useful only for creating a mess” (P7).

However, these actors’ focus on stability through proximity was perceived by other actors as limiting innovative models like “virtual energy communities” which were at the centre of the “smart network” imaginary. For instance, one legal expert (P1) represented the regulator as having a “very conservative mindset” that was concerned only with the security of the grid. An important policy advisor (P8) was less critical, stating that the administrative authorities such as ERSE were “conceptually fond of the idea.” However, they were ultimately still represented as essentially conservative, seeing RECs as problematic in terms of balancing the grid and having an attitude that says, “yeah, nice idea but, you know, la la land, this is this will never scale up.”

What all of this shows is that, beyond the ostensible consensus about the desirability of RECs, alternative *representations* are constraining what actors believe is possible. In other words, circulating in mediating systems are sets of expectations about the way that *other* actors are thinking about the future, based on divergent interests and responsibilities.

6.3.1.2. The local as the site of traditions and social bonds

In the “empowered citizen” imaginary, RECs were anchored in lost cooperative traditions, implying that genuine RECs should resonate with this history. Instead of being completely novel, they are tied to a people-driven energy past. By anchoring them in history, the function was to validate and redefine RECs, setting them apart from both centralized systems and market decentralization. This was also seen in the responses of electricity distribution cooperative in the regulatory consultations. As one social scientist put it,

Extract.16 Community energy has been around for quite a while, and in some countries in Europe, I mean even in the US, a lot of regions in the US were electrified by local villagers and by rural associations. So, the history of energy is filled with moments where you have this community driving everything, you know? (P9, Science, social science)

Extract.17 But now there is this new thing that I believe is new, is very new in the context, in the Portuguese context, which is the possibility of having energy within a community context. I mean, the community or cooperatives are not new for the Portuguese because there are some traditions working in that way, mainly in agriculture and also in consumption cooperatives. (P14, Administration, Engineering)

As illustrated above, the *domestic* order of worth was used to represent RECs as small and locally bounded practices. Comparisons were made with practices in other domains, such as supermarket co-ops and traditional community practices for sharing natural resources, with an analogy made between river and electricity management. Whereas the civic order of worth values the rule of law, this perspective valorised the self-regulation of a community (*“what you would find was that the newcomers, who did not know the rules, sometimes felt the need to acknowledge them and discover how to implement them”* – P14). Thus, in the empowered citizen imaginary, representations were fundamentally pre-figured by questions of spatial scale.

While genuine RECs were envisioned as citizen-led, their portrayal as small, local groups aligned with the administrative goals of grid stability in the business-as-usual imaginary (see above). It was fitting, then, that this *domestic* representation was conveyed by both energy co-

operatives and administrative entities. Beyond notions of a locally bounded spatial scale, these actors also constructed a narrative that connected the emancipatory potential of RECs with lost cooperative practices. Unlike the positive way that this representation was conveyed in the media (see Chapter 7), however, this linking with the past was often done in a pessimistic orientation to the future, where genuine RECs were seen as unlikely in an energy sector dominated by corporate actors.

6.3.1.3. The local as the site of the “optimization of assets”

In contrast to typical smart network concepts like smart homes and grids, RECs focus *inter alia* on both producing and consuming energy. Discussions with engineers from new energy firms revealed that in the smart network context, “local” was not just about reducing losses or citizen participation, but also means technological interconnectedness and the emergence of new, more optimized markets. As one engineer from Coopernico put it:

Extract.18 I feel Renewable Energy Communities are more linked to, let’s say, in a more vague way, the optimization of local energy assets. But they could be also like the grids. But like in a more localized way. And I would say optimization of local energy assets because of course, like, it could be also involving electric vehicles, storage, whatever other types of, even, in theory, even heating infrastructure connected to, for example, solar collectors, or biomass, or boilers, whatever, just inventing and showing that, in theory, like, the scope it shouldn’t be just like, collective self-consumption, it should be wider. And that’s why I’m saying an optimization of local assets because it’s not only production. It should be also about, demand response and all these fancy new things (P12, Cooperative, Engineering).

This extract highlights the shift in the understanding of RECs, from traditional market and industrial viewpoints to a more complex “techno-epistemic network” (Ballo and Rommeveit, 2023). In this context, “local” signifies a strategic point in a network of energy assets rather than a tight-knit human group. This perspective broadens the legal and policy framework for RECs, going beyond the common notion of production, public involvement, and grid efficiency. Proponents of this view saw RECs as both catalysts for and reliant on modern innovations, encompassing new financial markets, efficiency technologies, and human roles. Importantly, this vision of the energy future never explicitly criticised the efficiency focused representations of administrative entities. Like the “techno-epistemic network,” it instead seeks to recuperate notions of efficiency and market competition, resolving their tensions through new business models and technological innovations.

6.3.2. Participation and representations of “the public”

As seen in the previous chapter, the issue of participation in RECs was a complicated one from the outset. Although REDII mandated that members should reside near the infrastructure, it did not exclude external entities or private firms from being involved in the setting up and running of RECs. Portugal’s new laws thus leaned towards including these parties. Subsequently, how interviewees represented participation was influenced by perceived public and private sector values and motivations.

6.3.2.1. *Self-interested companies and consumers in the marketplace*

In the *business-as-usual* imaginary, the key assumption was that the public are essentially “passive” – uninterested in becoming involved in energy production, let alone management or governance. This was expressed by a representative of one of the new companies specializing in decentralised energy technologies:

Extract.19 The consumer doesn’t want to be active. 99% of the consumers, they just don’t want to and that’s it [...] I get the idea, but the consumers don’t want to change and don’t want to get involved. They just want the problem solved, just in the same way that I don’t want to get involved, for example, in the accounting of... whatever. “OK, just solve it already and leave me alone.” It’s the same. Or the lawyer issue. “I don’t want to know. Please don’t explain it to me. Solve it and it’s OK.” (P15, energy company, engineering).

The depiction of a passive public regarding RECs contrasts with the emancipated representation of the empowered citizen or even of the individual self-consumer as a savvy entrepreneur (Lennon et al., 2020). If the official narrative, seen in the policy analysis of Chapter 5, is that the currently *passive* consumer should become *active*, the business-as-usual imaginary aims to resist this change. As seen in the above extract, it does this by constructing a *semantic barrier* through a discursive process whereby the alternative/emancipated representation (active consumer) is *separated* from the main/hegemonic representation (passive consumer). As Gillespie (2008) states, however, this strategy is only partially successful in blocking dialogical exchange. In this case, this is because in order to achieve separation the interviewee must speak on behalf of “the other” (e.g. via reported speech). Moreover, the alternative idea itself is not dismissed (it is the interviewee who actually first uses the term “active”), but is represented as undesirable from the perspective of “the other” and, therefore, not threatening to the hegemonic representation. This is seen in the interviewee’s

use of the “Yes (I get the idea), but...” discursive format in order to acknowledge the *emancipated representation* (empowered citizen) while also dismissing it. From the business-as-usual perspective, these active entrepreneurial traits are instead reserved for the private firms (the position of “self” in the above extract) who are expected to expand and upscale RECs nationwide. From this viewpoint, the passivity and self-interest of the public coexist, especially when market value takes precedence.

Likewise, a leading legal expert (P1) on REDII justified allowing profit-driven firms to participate by deeming the notion of people joining RECs purely for altruistic reasons as a “romantic idea”. But this idea was not accepted by all actors who otherwise viewed RECs as a continuation of business-as-usual. When asked what would then motivate companies to become involved in RECs, a representative of the national energy agency argued that there was an opportunity for companies to improve their reputation:

Extract.20 The idea is that the public knows that they have social interests. So, for companies to sell this to the public, they have social aspects, social interests, for them, this has value. And I think this is one of the things that companies are now investing in this area because they want to be part of the renewable energy communities and give something back to the community (P2, Administration, Engineering).

This representation of the public exemplifies the role of the *fame* order of worth in the representation of RECs. By emphasizing the influence of *public opinion*, it is different to the *passive* energy consumer imagined in the industrial world. Yet, this is as far as the agency of the public goes and it is still large companies who will invest in and lead the energy transition.

6.3.2.2. Active and knowledgeable citizens in the public sphere

In the “empowered citizen” imaginary, participation extended beyond mere membership or financial gains from energy projects. The underlying belief was that initiatives like RECs can transform people’s relation to energy and to the environment. They should encompass more than just energy production and consumption, a sentiment echoed in an interview with an energy co-op representative:

Extract.21 Even me, I heard in some conferences, that well, “We think in this collective self-consumption for industry and parks with companies of services. Not for people, because this is too complicated for people.” No, it’s not supposed to be. That is not the spirit of the directive. Even now that we have the European Commission in our side, helping, they really

want that the citizens participate in this energy transition, then we have the national government saying this is too complicated. No, it's not. We are not dumb. We can do. We know how to do it. Well, we are European citizens. We have knowledge, we know how to make questions. Come on, don't look at us as dumb, because it's like that: the national government and the other entities that have obligations in this sector look to the citizens like that. For example, in Portugal you cannot discuss the issue about a cooperative starting to manage the grid. It's really complicated. Nobody believes in that. (P4, Cooperative, Engineering).

This discourse pivoted on defining citizenship based on knowledge rather than on the capacity or willingness to invest. Contrary to the business-as-usual view, the public is oriented towards the common good and possesses the knowledge and eagerness to participate. Still, they require state support in terms of financial and bureaucratic means. What's missing from these discussions, though, are specific suggestions on facilitating this, as well as the common arguments for collective ownership and autonomy. Interestingly, even among expert advocates for citizen empowerment, some disputed the notion that citizens should actively engage in decision-making and project initiation.

6.3.2.3. Prosumers in the digital network

The representation of RECs in the smart network imaginary attempted to transcend the active versus passive narrative found in both the business-as-usual and empowered citizen imaginaries, while ignoring the moral question of self-interest vs. common good. The representation was twofold: people are both active and passive, but viewed through the lens of digital network users or “agents” rather than marketplace consumers or public sphere citizens, as is seen in the following extracts from interviews with two representatives of the same REC developer:

Extract.22 But the future: it's the interconnection of everything. It's the creation of local energy markets. It's exploiting local assets in a more comprehensive manner, in a more optimized manner, and just learning and understanding how it should monetize things at the user level. So basically, it's transforming very passive energy consumers into very, very active agents in energy markets, with the support of the technology that we have been developing. (P10, Science, Engineering/Social Science).

Extract.23 Well, the way I see it is that they don't, they can't need to change behaviour...because if we are counting on people to change behaviour, we are on a wrong way, on the wrong track. People are not going to change that easily. What I'm counting on is that we have enough technology to manage flexible loads and do the management with us in the software base (P15, Corporate, Engineering).

Thus, in this imaginary, the rhetoric of both the business-as-usual (markets, monetization) and empowered citizen (active, rather than passive, consumers) imaginaries are integrated to form the representation of the active agent in local energy markets – the prosumer. Unlike the business-as-usual imaginary, which appeals to the self-interest of investors, or the empowered citizen imaginary, which relies on citizen knowledge and public finance, the smart network imaginary places primary emphasis on digital technology as a facilitator of REC support and integration. Rather than active *citizens*, the public are represented as active *agents* of decentralised and digitalised networks.

Developers embracing this smart network imaginary of the public described a highly strategic approach for engaging users within a project. Using marketing techniques to construct different consumer “segments,” the aim was to first identify “early adopters” who were viewed as intrinsically motivated to participate without needing extensive encouragement. They are ideal because they have a higher level of consciousness and education, but mostly because they “just go with the flow” which makes it easy “to implement things with them” (P10). The way that these actors represent the public is thus more nuanced than others because they demonstrate an awareness of difference, even if it is still framed by the same opposition between active and passive. Thus, in opposition to the early adopters, P10 notes the challenge in communicating the “cumbersome concept” of REC to the general public, who may not be familiar with energy sector terminology or concepts. They suggest that simplifying the messaging to make it easily understandable, akin to explaining complex topics to a young child, is crucial for broader engagement. This approach aims to overcome barriers to participation by making the concept accessible and understandable to everyone, not just those already knowledgeable about energy issues.

6.3.3. Representing the future as mediation between institutions and everyday life

The business-as-usual imaginary presented RECs, on the one hand, as a *business opportunity* in order to attract external investment and, on the other, as a means of ensuring energy security by reducing use of the grid. The key insight was that each of these dimensions of the business-as-usual imaginary – which constitutes the hegemonic representation of energy and energy transition (Batel & Rudolph, 2021) – not only enabled the future of RECs to be represented along particular lines; it also constrained it – so much so that tensions between different ideas and actors threatened the stability of its hegemony. Thus, while the business-as-usual imaginary represented RECs as a

“point of continuity” (Krishnan & Butt, 2022) between the past and the future in order to maintain stability, the other imaginaries were oriented to the future as *discontinuity* and *multiplicity*. In this section, how representations of the local and the public were used together in order to re-imagine the future in the smart network and empowered citizen imaginaries will be examined in more depth.

6.3.3.1. Future as continuity

Two recurring themes from the interviews was the representation of Portuguese non-participatory culture and lack of socio-economic development as barriers to the development of RECs. What these themes had in common was that they were both seen as symptoms of the country’s backwardness and a legacy of its past. From this perspective, the lingering impact of the dictatorship has resulted in a lack of energy literacy and citizenship practices. The majority of interviewees emphasized that the development of RECs requires citizens with knowledge, social skills, and access to information. Thus, due to the legacy of dictatorship and perceived socio-economic backwardness, there was a belief that RECs are unlikely to develop as desired.

This pessimism contrasted with the policy discourse discussed in the previous chapter, which promoted a “techno-epistemic optimism” (Davison, 2001, p22) and envisioned Portugal as a pioneer in technological innovation and socio-economic recovery (Batel & Küpers, 2022). Interviewees expressed scepticism about the present and future, viewing the legacy of centralized energy systems as a barrier to RECs. This critique highlights a perceived lack of integrative, innovative, and participatory policymaking (Medeiros & Zwet, 2020), and the need for government support and gradual introduction of RECs. The current focus on large-scale renewables in Portugal is seen as a hindrance to the desired implementation of RECs. Essential to this pessimistic representation of future energy communities was a communicative format which connected the past and future with a logic of continuity.

On the other hand, some interviewees, especially those involved in policymaking, constructed a similar narrative of continuity but in a more optimistic evaluative register. This view was anchored in the *market* order of worth and was key to the stability of the business-as-usual imaginary. It emphasised the gradual and ongoing liberalization of Portugal's energy sector in recent decades. They described the historical context of centralized systems and the recent push towards liberalization, which was seen as synonymous with liberalization. Several extracts from interviews illustrate these perspectives.

- Extract.24 No, they are all in one direction. I believe in the liberalization of the energy market and on a liberalization process, and we have several stakeholders: so, we have the centralized producer energy stakeholders, but we also have the communities stakeholders. They are all members of the same ecosystems. But please, keep on with the liberalization (P3, Legal/policy, Legal).
- Extract.25 One of the problems that we have in Portugal regarding with energy, is because-. Well, we have a centralized system. So, we have one regulator and basically, we have one operator of the distribution grid. Because, Portugal, we have an open market since 2006. But before that we have like a monopoly. So, only one company that runs the system, the supplier, makes everything [...] And things now are changing. So more than 70% of the consumers, residential consumers are on one supplier, it's EDP. One year ago, it was 85%. And two or three years ago was like 90% with the same company. So now we are trying to decentralize this system with more entities coming (P2, Administration, Engineering).

A logic of continuity was also at the heart of the future representations of those who represented RECs with the industrial order of worth. While these actors foresaw change, it was a change that was managed and planned, communicated with a cautious and *probabilistic* style of anticipation.

6.3.3.2. *Future as discontinuity*

As should already be clear, RECs in the smart network imaginary were represented as something entirely new and discontinuous from the past. When asked about how they saw the future unfolding, interviewees espousing this imaginary would typically talk at length about *what was going to happen*. That is, they did not allow for any uncertainty and were overtly *descriptive* rather than *prescriptive*. This *prophetic* “discourse of inevitability” (Leonardi, 2008) only recognized a single possibility: the supplanting of the business-as-usual imaginary by the smart network imaginary. However, this transformation was represented without being explicitly critical and instead deployed the *inspired* order of worth to create enthusiasm and build excitement but as is seen in the following accounts, about a range of different objects:

- Extract.26 And so, this is going to bring a huge paradigm shift. It's going to probably bring you less emissions of course, as it is expected and mitigation of debt. And you are going to have a lot more participation of the citizens and the families and the corporates on the energy transition. Basically, this is what I see. I see continuous increase of the renewables share in the electrical power. [...]. And so, I think this is going to be completely different, this is going to generate new markets, new companies, some of them probably will not survive the energy industrial revolution. And the participation of people, I think people are going to be more demanding on what they purchase in terms of environmental impact. I think they are going to be more demanding and understanding the traceability of where their energy

consumption is coming from. I think even if you buy a shirt or a pair of trousers or some sneakers, you'll still want to know if this is being done sustainably from the source of the raw materials, but also in terms of how you do all the value chain, the supply chain and what type of energy you use to generate this. So, I think this is a social revolution as well as an industrial revolution (P20, Legal/policy, Engineering).

Extract.27 Well, I'm a positive person and I should say that the transformation has already begun. If you notice, some years ago the rule was big projects centralized with distribution, transportation, a trade company and consumers. Now we are talking about prosumers, we are talking about decentralization. [...] We are talking about proximity. We are talking about proximity between the productions and between the consumers. We have also some experience, like in Germany, like in Spain and like in, I suppose Brooklyn in the United States, of the use of blockchain, and peer to peer energy contracts. So, the change is going on. And I believe that we will have a mix between gas and renewable energy, in my opinion, without nuclear, and we will have more and more prosumers (P3, Legal/policy, Legal).

As can be seen, the representation of RECs in the smart network imaginary transcended both the passivity of *market* consumers and the *industrial* scale of centralized projects. But rather than active participation in REC operations or governance, the public's *activeness* was primarily attributed to their demand for information. Similarly, the emphasis on local proximity primarily pertained to the use of advanced digital technologies like blockchain.

Beyond these semantic aspects, the prophetic discourse of inevitability can be characterized by three main features: first, metaphorical language was employed to paint a vivid picture of the future and create enthusiasm. While aiming to show the future's distinction from the past and present, these metaphors often repurposed and echoed past utopian technological ideals, as noted by Strengers (2013). Secondly, the sense of impending, inevitable change was reinforced through repetitive phrases (e.g. "we are talking about") and future-focused verb forms (e.g. "you are going to have"). Thirdly, the way that the discourse interchanged between using "you," "they," and occasionally "we," establishing a relationship between the speaker and the audience, not only prevented any conflicting viewpoints but also created a sense of detachment (Moscovici, 2008). This detachment, combined with the portrayal of predictions as inevitable outcomes, lent them an authoritative, factual air. In essence, the smart network narrative reframed the roles and expectations of the public in the evolving landscape of RECs, emphasizing inevitability and the transformative nature of the future.

In sum, the types of future-oriented discourse analysed here play a crucial role in constructing and maintaining a self-identity of a knowledgeable and forward-thinking expert in the field. In

these explicitly future-oriented forms, subjects portray themselves as epistemic authorities through the confident use of specific terminology and jargon, as well as knowledge of social and technological trends. Importantly, rather than reflexively drawing on a stock of common-sense knowledge of the past, their future representations are instead expressed in reference to their expert knowledge, expectations and beliefs, but also by unconsciously depending on templates of past social, political and technological change.

These modes of future projectivity correlate with different imaginaries of the future. The prophetic mode mainly projected elements of the smart network imaginary and positioned the inspired worth of the new as a common good in itself. By contrast, the planning mode primarily maintained the business-as-usual imaginary and refrained from sweeping statements or valorisations of novelty. Both modes sought to integrate opposing ideas and orders of worth, but only the prophetic form was able to do this at a semantic level, while the plan subordinated contradictions and dichotomies to the “form of the probable” (Thévenot, 2001), objectified in targets and dates (e.g. 2050).

In the prophetic style, integrating multiple ideas can be seen as a way of discreetly hedging one’s bets and not committing to a single order of worth whilst still conspicuously predicting, and implicitly promoting, change. This was clearly the case when a representative of the renewable energy industry association doubted the likelihood of more radical visions of a smart energy future that take full advantage of new information communication technologies becoming a reality, but still in a way that avoided uncertainty or hesitation:

Extract.28 What I think is, you are going to move into a condition, or a space, or features of the electrical sector where it’s going to be completely different from what it is today. I’m not sure it’s going to be as close to telecommunications as everyone is mentioning, but I think it’s going to bring you a new reality (P20, Legal/policy, Engineering).

While the business-as-usual imaginary’s probabilistic style of anticipation was a strategy for maintaining neutrality and exercising caution, this prophetic style aimed to generate enthusiasm and create expectations of change. The two styles thus differ in their orientations to change and the gap between them is also expressed in different levels of certainty and confidence which coincide with the contrasting scale of their projections and their representation of the object. Personal non-involvement was seen in cases of both prophesising and planning. However, this should be understood as a function of belonging to an institution rather than as an inherent feature of either

style. Those who occupied more independent positions in the field expressed personal commitment to their represented future, while those who belonged to administrative authorities refrained from evaluative statements.

6.3.3.3. *Future as multiplicity*

When asked how they imagined the energy future, interviewees espousing the business-as-usual and smart network imaginaries typically represented a single likely future. By contrast, in the empowered citizen imaginary interviewees would typically reply with a question of their own: “*what I think the future should be or what I think the future will be?*” The bifurcation of the future between *prescriptive* and *descriptive* orientations established the discursive context for representations in which the *present future* was contested because it was excluding beings considered important in an alternative order of worth. These so-called “radical critiques” (Boltanski and Chiapello, 2018) were those in which the key uncertainties which constituted RECs were re-evaluated and a *multiplicity* of possibilities were recognized. These radical critiques were primarily aimed at the industrial order of worth – the format of the current trajectory of the energy transition based on “large-scale renewable power plants” – but from different perspectives:

Extract.29 Well, I’m not very proud of energy policies in this moment, about the energy transition. I think, what I see is that we are replacing fossil fuels by large, large scale renewable power plants, wind, and now photovoltaic. But we are not-. We should take this opportunity to make the energy sector fairer and with more justice, and just to the citizens. So, for me and for the cooperative, the renewable cooperative perspective, this transition should not be only a question of technology: You take the fossil fuel power plants and just put PV and wind power plants. It’s not only about that. It’s about the engagement of the citizens. The empowerment of the citizens to consume and produce their own energy and be an active citizen or active participant in the energy sector. And I don’t see that in Portugal in this moment (P4, Cooperative, Engineering).

Extract.30 What I would like to see is kind of the opposite. I would like to see Energy communities popping up everywhere and creating synergies, local municipalities also supporting a lot of these activities and projects. And also medium sized systems, because medium sized systems can be really interesting. I like this kind of synergies between agriculture and mining regions. Mining regions are mines that could have local energy being produced for the energy being used for the mining process, kind of. So I, I think medium size or even in degraded lands, lands that you know cannot be used for agriculture for a few decades because the land is so degraded. Then you could try and put solar panels there and at the same time work the land so that it’s rested, it gains strength again and nutrients again. So I don’t know, there’s a lot of things you could do. This is what I would love to see, but I don’t

think it's going to happen. I think the trend is going to be what's going on in Cercal, unfortunately (P9, Science, Social Science).

These two extracts reveal several relevant aspects. First, that different orders of worth are used, depending on the situation being discussed – for instance, the first leans on the civic order of worth, emphasizing empowerment and citizen participation, while the second adopts a more versatile approach, combining the projective order (favouring medium-sized projects) with the green order (reviving deteriorated lands), and to a lesser extent, the civic order. This multifaceted approach mirrors Thévenot et al.'s (2000) idea of “pragmatic versatility”, suggesting the adoption of varied values depending on the situation.

However, something transversal to these discourses, was that they represented the present moment as a critical juncture, an “opportunity” to diverge from the dominant market-industrial value systems. This framing paved the way for envisioning alternative futures and critiques. The first extract's traditional social critique posits large-scale industry against empowered active citizens, emphasizing values like fairness and justice. In contrast, the second extract's pragmatic critique compares large-scale renewables to medium-sized systems, emphasizing their potential for synergy across industries and values. This divergence illustrates the shift in perspective from localized, citizen-led projects to broader, integrative systems that can bridge various sectors. Thus, while these experts advocated for a departure from large-scale, centralized renewable projects, they differed in their envisioned alternatives and the values they foregrounded. The first championed local, citizen-led initiatives, while the second emphasized pragmatic, medium-sized solutions which involve citizens but in collaboration with a range of other “stakeholders.”

6.4. Concluding remarks

The three imaginaries of RECs that have been identified in this study were constituted by a wide range of issues, meanings, and material objects. This chapter has focused on the issue of the imagined *spatial scale* of RECs, and how this was represented in relation to *future expectations*. In particular, the representation of the possible scale of RECs within each of the imaginaries centered on uncertainties regarding the role of “the public” and other actors and the meaning of “proximity” or “the local” – both key aspects of the original definition of RECs in the EU's Directive. These imaginaries were not completely autonomous from each other but were, rather, relational. In this concluding section some of these relations will be summarized.

Table 6.3. Expert mediation of new laws: four types of response

Relation of institution and convention(s) is:	Functioning of institution is judged as:	
	“uncritical”	“critical”
Coherent	Law promotes small scale projects to complement large-scale projects; incremental change (<i>business-as-usual</i>)	Law is not being implemented because of bureaucracy and vested interests; hegemony and inertia (<i>all</i>)
Incoherent	Law does not promote new types of business model and forms of technology but does not exclude them; inevitability of transformation (<i>smart network</i>)	Law excludes the public; injustice and crisis (<i>empowered citizen</i>)

Firstly, in the business-as-usual imaginary, it was seen how RECs were primarily viewed within a discourse of complementarity (Trencher and van der Heijden, 2019) and as a “point of continuity” (Krishnan & Butt, 2022) – they were expected to be important as technological substitutes for fossil fuel imports and old hydroelectric installations, but their role would be limited in comparison to large-scale solar projects that would be the backbone of the new “green hydrogen” economy (Carvalho et al., 2022). Thus, RECs were not seen to be in conflict with incumbents or a threat to their market share. Instead, they were seen as just another stakeholder of the energy market “ecosystem.” In this way, RECs “jump scale” – they are *local* activities represented as supporting *national* energy strategies (Levidow and Raman, 2020; Devine-Wright, 2022). Tensions were palpable in this imaginary, however, not least in relation to the re-signification of “the local” via the legal definition of proximity, thus highlighting the importance of meaning-making in attempts to rescale community. Furthermore, a representation of the public as passive and uninterested – hegemonic in energy governance (Chilvers and Longhurst, 2016) – was maintained and this justified the re-signification and rescaling of RECs as private initiatives which could pursue profit.

It was this prospect that led to the concern – explicit in the *empowered citizen* imaginary – that the concept of RECs was in danger of becoming diluted or even co-opted by large commercial energy companies (Roberts, 2022). This imaginary was based on both recollections of lost traditions of collective action and civic ideals of empowerment and active citizen participation. However, while these representations were effective launchpads for critiques of the status quo, their adherents were often uncertain about how this citizenship would work in practice or how it would link to broader issues such as energy poverty. This raises the separate question of their broader role in society: which vision of the collective future are RECs anchored in? Which larger

political imaginaries do they awaken? As was seen, this was another area where the empowered citizen imaginary fell short, instead depending on worn out and empty signifiers of “empowerment” without really identifying “the enemy” or elaborating alternatives to the continuation of “business-as-usual.”

This perspective reveals an affinity between the discourses of empowerment and liberalized self-consumption at the center of the business-as-usual and empowered citizen imaginaries of RECs respectively (Lennon et al., 2020; Laes & Bombaerts, 2022; Anfinson, 2023). The issue is that adherents of the latter were unable to adequately differentiate their vision of RECs from practices of individual investment decisions. Furthermore, radical environmentalist discourses were notably marginal in the *empowered citizen* imaginary. While academics and environmental NGO representatives did refer to the “principle of sufficiency” and ecological issues associated with large-scale projects, there was no coherent anchoring of the concept of RECs into emerging political rationalities such as “degrowth” (Demaria et al., 2019). Instead, the environment was imagined as just another element to be integrated into the smart network.

By contrast, techno-economic elites were able to imagine a coherent future about the role of RECs in society. As such, the “smart network” imaginary can be seen as a direct response to the limitations and internal tensions of the other two imaginaries. At a semantic level, it did this through a re-signification of the local and of the public which had the effect of re-scaling RECs in line with the spatial metaphor of the *network* as well as with a future imagined as a discontinuous and *inspired* rupture, that is, as a (technical) *revolution*. These metaphors show that while prophetic actors clearly emphasise that the future will not be the same as the past or the present, their visions also “resonate and repackage technological utopian ideas from the past” (Strengers, 2013, p.2).

In sum, this analysis of expert imaginaries highlights the importance of “the local” and “the public” as objects of social representation. However, in contrast to other contexts where “the local” is given a specific meaning based on the socially constructed characteristics of a particular place (Walker et al., 2021), expert imaginaries of renewable energy innovation are operating at a more abstract level of representation, where experts are able to discursively “jump scale” (Smith, 2004) by deploying different orders of worth.

Chapter 7

Study 3 – Imaginaries of Renewable Energy Communities in the press

7.1. Introduction

In the previous chapter, it was seen how new laws for Renewable Energy Communities (RECs) are being construed and constructed by various types of expert intermediary. This analysis revealed three distinct imaginaries of community energy futures composed of different combinations of orders of worth. While most interviewees downplayed conflict and uncertainty, discursive tensions were found between imaginaries that were broadly in keeping with those identified in the literature. In addition to these expert imaginaries, one of the main ways that that energy-related institutional and technological innovations tend to be communicated to the public is via the mainstream press. As a *mediating system*, the press has been shown to play a key role in shaping social representations (Valqueresma et al., 2024; Castro & Gomes, 2005). While research tends to emphasise its role in the reproduction of hegemonic representations and established power relations (Boager & Castro, 2021), the press can also be a space where conflict and critique takes place (Ylä-Anttila et al., 2022). It is therefore important to see if the press privileges a single view of RECs and the energy future or if there is space given to a plurality of orders of worth. Moreover, while expert mediating systems presuppose the primacy of expert voices, the mainstream press is ideally designed to express a plurality of voices. Moreover, focusing on the press allows for an analysis of the dynamics of representations and how the object of energy communities and their associated laws have changed over time.

7.2. Context and goals

The mainstream press in Portugal comprises a diverse array of newspapers, magazines, and online platforms that play a pivotal role in shaping public opinion and disseminating information nationwide. Key outlets such as *Público* and *Correio da Manhã* cater to various audiences with distinct editorial stances ranging from center-left to center-right. These media outlets cover a wide spectrum of topics including politics, economy, culture, and sports, while also addressing local news and community issues through regional publications. In recent years, Portuguese mainstream

media have undergone a digital transformation, embracing online editions and social media to engage a broader audience. Despite facing challenges like declining print readership and financial sustainability, they remain essential in fostering public debate, holding authorities accountable, and informing citizens on crucial matters affecting society. In this context, the main question that this research aims to address is RQ2b:

How are RECs being represented and communicated in the mainstream press and by whom? How has this changed over time?

By answering this research question this study is oriented towards three aims. Firstly, it aims to explore the role of the media in representing the future. It examines how the future is “opened up” for debate or “closed down” and how the future itself is represented and *used* (for instance, to create a sense of stability and security, or urgency and fear). A second aim is to shed light on the representation of energy communities in Portugal, as a key object of energy future representations, by examining how its meaning may have changed over time and identifying whose voices have been represented so far. Finally, at a practical level, this study aims to identify opportunities and strategies for enhancing public communication on energy futures and energy communities, particularly for those who aim to more firmly anchor the latter in social critiques of capitalist cultural logics of accumulation (Boltanski & Chiapello, 2017).

7.3. Methodology

In order to fulfil these goals, the methodological approach adopted here combined a focus on the *content* of social representations and the *form* of communication with an analysis of the *structure* of the articles – e.g. their length and authorship. Thus, in addition to the approach, applied in the previous chapters, of pragmatic discourse analysis, the analysis of structure necessitated also a *content analysis*. Before describing these approaches and their interrelation in more detail, the following section will describe the choices that were made in the construction of the corpus of press articles.

7.3.1. Sample

Articles published from 2017 to 2023 that included the term “Energy Community/ies” (“comunidades de energia”) were collected from online versions of four Portuguese newspapers. Despite 2019 being the year that Energy Communities entered the policy scene, 2017 was chosen as the start date in order to establish if the idea was present in the public sphere prior to this institutionalization. While there has been a vast number of articles dedicated to this subject in business, economics and energy industry focused media outlets, the decision was made to focus on: *Correio da Manhã*, the most-read daily tabloid; *Público*, the daily quality press with the largest online readership and traditionally more left-leaning; *Expresso*, a quality weekly; and *Observador*, right-leaning online newspaper with a large readership. Unlike the specialist journals, where updates on energy transitions are typically more regular and extensive, all of these publications are widely read national newspapers oriented towards the general public, but with divergent audiences (APCT, 2018). Articles were gathered from these publications by searching their websites and translated from Portuguese to English using Google Translate. This resulted in a total number of 116 articles.

7.3.2. Structural and content analysis: analytical procedure

The first stage of the analysis was a content analysis of the entire corpus, which sought to identify patterns of change over time (2017-2023). Following the methodological procedures used by Boager & Castro (2021) and Castro et al., (2018), structural categories were developed: *length of the article*; *type of article*; *author type*; *voices mentioned and cited*. An additional structural category – the *centrality of “energy communities”* in an article – was developed by differentiating the number of times “energy communities” were mentioned relative to the length of the article.

7.3.3. Pragmatic discourse analysis: analytical procedure

The second stage of the analysis explored the construction of discourses and meaning making about energy communities. To do this, “pragmatic discourse analysis” was employed (Batel and Castro, 2018). This method of analysis follows a two-step process. In the initial phase, a thematic analysis was conducted (Braun & Clarke, 2006), both inductively, by cataloguing the main claims and issues that were raised, and deductively by using the “orders of worth” framework as a template. This enabled the construction of 8 MAXQDA dictionaries based on the key words for each order

of worth (see **Error! Reference source not found.**). This allowed us some insight into how the representation of energy communities changed over time. This stage was instrumental in discerning the principal orders of worth that were repeatedly used by journalists and other types of actors to talk about energy communities.

Subsequently, a more nuanced discursive rhetorical analysis was undertaken (see Billig, 1991; Batel et al., 2015). This approach, rooted in a socio-constructionist and discursive methodology, treats language not merely as a passive vessel for meanings or “frames” but as a dynamic tool in the construction of reality (see Batel and Castro, 2018). The different types of communicative forms that the articles assumed were analysed, comparing how each order of worth was expressed across diffusion, propagation and propaganda articles (Moscovici, 2008), paying attention to how articles constructed, demarcated and deployed orders of worth; how they dealt with tensions between them; the functions they were performing in each case, and the discursive strategies that were used as supports (namely, reification and consensualisation – Batel & Castro, 2009). In addition to looking at how energy communities were represented and communicated, this stage of analysis also examined the representations of the future occupying these discourses and *how* they were communicated to the public, which is crucial for the efficacy of discourses in creating legitimacy and enrolling support for certain proposals (Groves, 2017; Koselleck, 2004).

7.4. Results

7.4.1. Structural analysis

The content analysis revealed that references to energy communities and community energy were relatively uncommon prior to the 2019 transposition of the Renewables Directive. The publication of articles mentioning energy communities increased significantly in 2021 and 2022, coinciding with the publication of new laws and regulatory frameworks. The biggest increase was in longer form articles, which coincided with a substantial increase of articles in which energy communities were mentioned but were not the focus, indicating a process of generalization whereby the novel object of energy communities is increasingly associated and anchored into other discourses and representations, shaped by several broader issues (such as the pandemic and Russia’s invasion of Ukraine) but also issues with more immediate relevance, such as the ongoing electricity price crisis and the implementation of large-scale solar installations in rural areas.

Table 7.1. Representation of energy communities in the press: change in structure over time

Structure Categories		2017	2018	2019	2020	2021	2022	2023*	Total
Centrality of “Energy Communities”	Primary	0	0	2	0	5	10	6	23
	Secondary	0	0	1	2	2	4	8	17
	Incidental	1	4	3	6	16	24	20	74
Length	Short (<301))	0	0	1	0	0	2	0	3
	Medium (301-800)	1	2	3	3	14	23	13	59
	Long (>800)	0	2	2	5	9	13	21	52
Article Type	Feature	0	1	1	1	5	7	3	18
	Report	0	1	3	5	12	24	23	68
	Opinion	1	2	2	2	6	6	9	28
Publication	CM	0	0	0	0	3	2	0	5
	Expresso	0	1	0	2	5	16	20	44
	Observador	1	0	2	2	7	11	6	29
	Público	0	3	4	4	8	9	8	36
Author Type	Journalist	0	1	4	6	18	28	21	78
	Science	0	3	1	1	3	1	3	12
	Commerce & Industry	0	0	0	1	2	1	4	9
	Government/Politics	0	0	0	0	0	2	1	3
	Cooperative	1	0	1	0	0	2	0	4
Voice (Mentioned/Cited) - document	Cooperatives	1/0	0/0	1/0	0/0	2/0	3/1	1/3	8/4
	Administrative entities	0/0	1/0	1/0	2/2	1/1	1/2	10/3	16/8
	Science/expertise	0/0	2/2	0/0	0/0	3/4	4/0	4/4	13/10
	Public	1/0	1/0	3/0	3/0	6/0	12/0	11/3	37/3
	Government	0/0	1/0	2/3	2/5	5/8	12/13	10/13	32/42
	Industry & Finance	0/0	1/0	0/0	1/0	4/4	5/7	4/6	15/17
	Energy companies	0/0	1/3	0/1	0/0	3/4	2/10	7/9	13/30
	Politics & Civil Society	1/0	0/1	2/2	2/3	5/3	4/7	8/5	22/21

Indeed, the position and significance of the term “energy communities” in the articles became one of the main ways that the corpus was differentiated. In short, the concept was variable in its centrality and importance in a given article. There were 23 articles in which the formalized concept of “Energy Communities” was the main topic. These articles were mainly oriented to explaining this new concept and the possibilities it created or to commenting on the progress of their implementation.

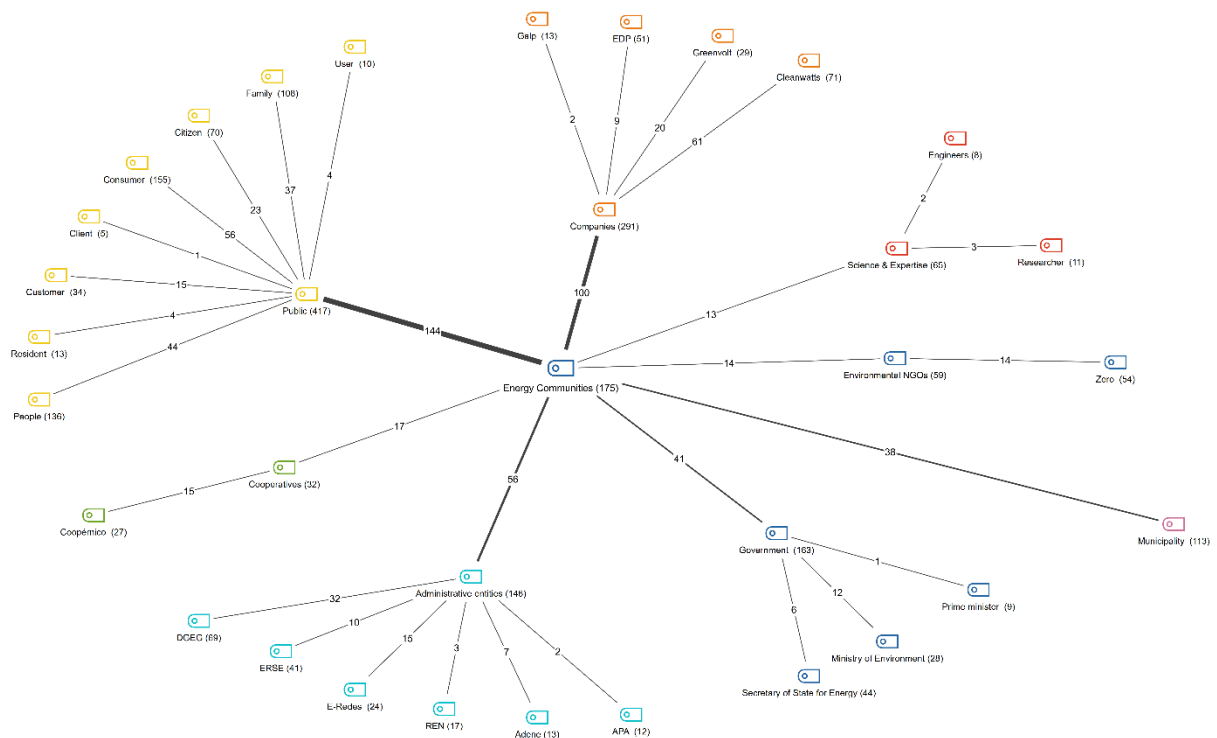
There were 17 articles in which the concept of “Energy Communities” was a complement to a more general theme. That is, they were used as an important example in a broader argument or were reported as an activity within a broader context. These articles were usually written by journalists and columnists who were not energy specialists, and they often appeared in columns dedicated to political or sustainability issues. They were more likely to represent energy communities as at least partial solutions to certain issues (e.g. to war, price crisis, consumption

behaviour) and in relation to different forms of knowledge (e.g. scientific reports and political philosophy).

Lastly, there were 74 articles in which Energy Communities were only mentioned in passing, usually in the context of a much broader discussion or agenda. Rather than discarding these (as do Lyytimäki et al., 2018), it was deemed important to scrutinize the discursive contexts in which these references were made. At most, energy communities in these articles were implicitly framed as *evidence* of an alternative future or form of behaviour, rather than as an explicit solution to a particular issue. No effort was made to define and explain energy communities and their meaning was simply taken for granted, suggesting that it was assumed to be as familiar to the reader as it was to the author. These articles can thus be said to *use* the idea of energy communities as a “*mode of understanding*” (Moscovici, 2008, p.204). The term was used as “a source of explanatory models in very different domains” (ibid).

Figure 6. Structural analysis of actor groups mentioned in press articles.

RECs & Actor Groups (Code Intersection)



This *process of generalization*, whereby energy communities go from something *to be explained* to something that *explains*, was also visible in the change over time in the types of authorship and types of actors that are represented. While the former shows an increase in the number of journalist-authored articles, it was also seen that the range of voices which were mentioned and cited increases. In addition, the relative weighting of both different author types and different voices indicates a change in the *meaning* of energy communities from being associated with public participation and cooperative principles in 2017 to also being open to the participation of private actors as a business opportunity in 2023 – a year in which cooperatives were the least mentioned actor.

Furthermore, the public is the most mentioned category of actor overall, but they are also the least cited. The most cited is the government, followed by energy companies. The latter were the first actors to be cited (in articles authored by technoscientific experts), whereas government sources were the most cited after 2019, when energy communities were integrated into the policy and regulatory frameworks. Figure 6 provides a more nuanced picture of the different actors that are represented not only in the articles as a whole, but in sections of the articles which make reference to energy communities. Again, this shows that “the public” (144) is the actor represented most in paragraphs that mention energy communities (mainly as “consumers” – 56), but that it is an energy company (Cleanwatts – 61) that is the single most represented actor.

Table 7.2. Representation of energy communities in the press: orders of worth over time

	2017	2018	2019	2020	2021	2022	2023	TOTAL
GREEN	0	2	3	1	8	8	12	34
INDUSTRIAL	0	4	6	4	11	17	19	61
CIVIC	0	3	4	4	20	17	16	64
INSPIRED	0	2	0	2	8	8	20	40
FAME	0	0	0	0	4	9	1	14
DOMESTIC	0	3	9	1	25	15	35	88
PROJECTIVE	1	4	1	4	21	13	25	69
MARKET	0	3	3	6	27	18	30	87
SUM	1	21	26	22	124	105	158	457
N = ARTICLES	1	4	6	8	23	37	35	114

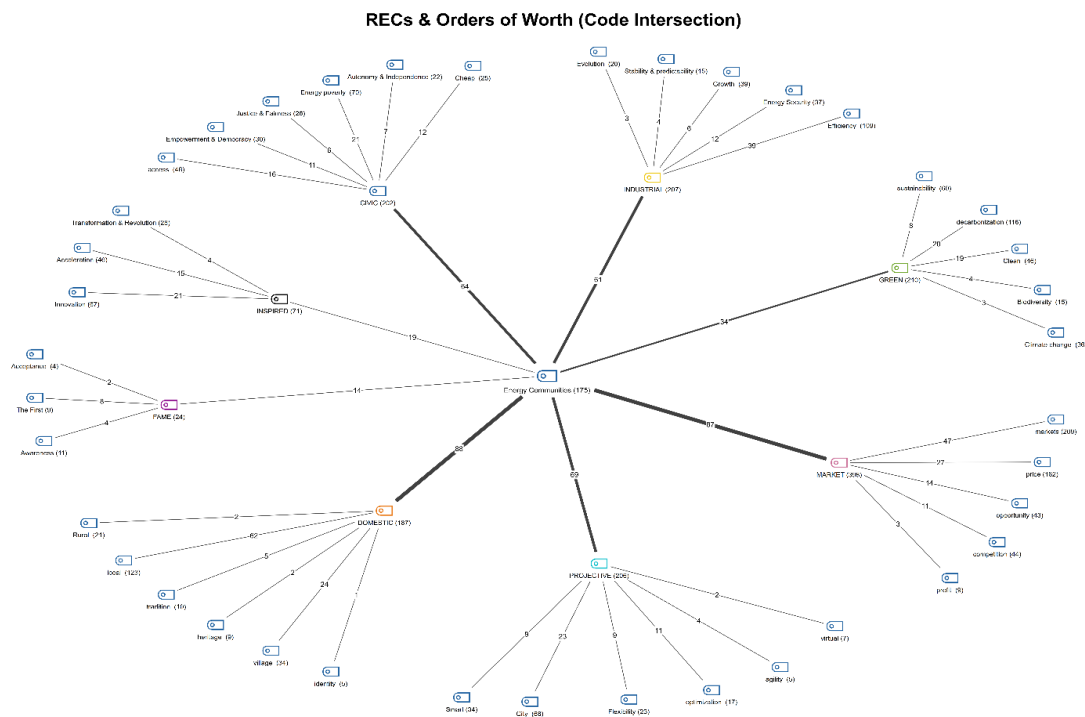
That the initial mediation of energy communities in the press was by expert actors suggests that the generalization of energy communities in Portugal has followed the model proposed by Moscovici where an “emancipated” representation gradually becomes “hegemonic”. This is also evidenced by the fact that, from 2020 onwards we see that non-energy industry and finance actors

enter the scene, indicating that energy communities have become a potential object of investment in this domain. Continuing in this direction, in 2022 the number of energy companies being cited in the press increases dramatically, to a large extent due to the emergence of new business models and the initiation of projects led by the likes of Cleanwatts and Greenvolt. Also in 2022, administrative entities such as DGEG, begin to be mentioned much more, as does the government in 2023, reflecting the growing discontent about the speed of implementation of energy communities and perceived bureaucratic barriers to the licensing of RECs.

7.4.2. Pragmatic discourse analysis

Overall, the civic, domestic, industrial and market orders of worth were the most important orders of worth for representing energy communities in the media (see Figure 7). In general, civic and domestic justifications were more prominent “from below”, that is, when they were referring to the

Figure 7. Structural analysis of orders of worth in press articles



benefits that energy communities confer on “the public” – even if these were often compromised with (and by) market logics. Broader level justifications of energy communities, on the other hand,

more often deployed market and industrial representations, such as the opportunities for increased competition and efficiency respectively.

The inspired and green orders of worth were important in the media coverage, but played a largely supporting role – the latter mainly in relation to the broader decarbonization *objectives* of the energy transition (i.e. not directly in relation to energy communities themselves) and the former mainly in relation to the *urgency* for “transformative” change. These two orders of worth are thus particularly important when it comes to considering the *futurity* of media discourses, especially in response to societal events which emphasize the precarity of the energy supply. The fame order of worth was less common, though its use points to an interesting objectification of “public opinion” and the social status that can be accrued by successful projects. These arguments were based on the representation of Portugal as a *pioneer* in the energy transition (see also Valqueresma et al., 2024; Carvalho et al., 2019) and to future visions of replicating energy projects based on *good examples*.

Lastly, the projective order of worth was predominantly used to describe the internal dynamics of energy communities and their relations with other actors. Metaphors from the network world were also used to “recuperate” (Boltanski & Chiapello, 2017) other orders of worth in light of the uncertainties, tensions and clashes that arise in and between them during the processes of institutionalization and development, as was seen in Chapter 6. It was therefore possible to determine an emerging “projective” representation which was similar to the “techno-epistemic network” theorized by Rommetveit et al., (2021). It was based on the value of collaboration and flexibility, and generated by a cybernetic imaginary of the network society and the prosumer (Toffler, 1981; Boltanski & Chiapello, 2017), but it also envisioned using modern digital technologies such as block-chain to efficiently organize communities and transform them into “energy assets”.

In sum, the main contents and meanings of how each order of worth was used to discuss energy communities in the press was very similar to how they were used by other actors as analyzed and described in the previous chapters. What is of particular interest in the current analysis then is not only the prevalence of one or more of those orders of worth, but the discursive strategies and forms of communication that were used to negotiate *between* different orders of worth.

7.4.2.1. Using diffusion to create expectations of stability and change

Diffusion was by far the most common type of communication in the corpus. Initially, it was mainly used to report on new projects and companies promoting and testing novel energy community business models, as well as to publicize new legislation and policy. In more recent years, diffusion was increasingly used by economic actors to comment upon the progress of energy communities, often in a critical way. These articles were typically characterized by the non-involvement of the author and the quotation of divergent voices. While energy communities were made concrete insofar as specific project proposals were explained in detail, their overarching image usually remained abstract. Unlike in propagation and propaganda, there was no elaboration of how energy communities related to broader political representations, ideologies or visions.

This form of communication generally has two functions (Moscovici, 2008). On the one hand, it can “get people talking”, attracting general interest about new ideas. On the other hand, by informing people on a certain social issue or object (Buschini & Guillou, 2022) it can seek to “influence certain particular behaviours”. In the reporting on energy communities, these functions corresponded to two different kinds of representation: in the former, there were representations of energy communities in the context of the energy transition, society and economy more broadly. On the other hand, there were representations of energy communities in the context of the personal plans and projects of an imagined readership. In the following, these two functions of the diffusion of energy communities shall be analysed in detail, and we shall examine the ways that they are used in relation to different orders of worth.

In the period immediately following the transposition of energy communities into Portuguese law, diffusion was mainly used to report on new projects and companies promoting and testing novel energy community business models, as well as new policies and laws. In order to attract interest from as wide an audience as possible, these articles would deploy a range of different orders of worth, but their key principles and social representations would always remain implicit. Rather, they were conveyed through the use of slogans and jargon imported directly from policy documents and press releases. Such expressions were often indicated by the use of quotation marks (e.g. “*inclusive and fair*” and “*active citizenship*”) signifying the non-involvement of the author and embodying them in an expert, as is seen below:

Extract.31 The executive president (CEO) of Energia Unida, José Almeida, explained, at the same press conference, that “it is possible for everyone to have access to clean and cheap energy”,

which is the objective of developing energy communities, that is, projects in which a certain group of citizens or entities collectively invest in a photovoltaic installation, which will supply part of their consumption. José Almeida explained that the company will 100% finance the installation of solar panels and manage the energy communities it raises. (#38, *Expresso*)

Extract.32 The second research axis is based on the definition of “new models of governance and strategies for active citizenship” that allow responding to the political and technical challenges associated with the “inclusive and fair” energy transition. [...] “It is important to ensure that policies are aligned with citizens' expectations, so that they are encouraged to be active actors rather than passive actors in the carbon neutrality process”, underlined David Rua, adding that the project will result in “recommendations”. [...] DECARBONIZE will also develop solutions for “digitization and automation”, aiming to make available to citizens tools that allow “finding optimal ways of allocating resources” according to their preferences. (#33, *Correio da Manhã*)

This strategy is also seen in many of the articles to blend together different orders of worth, e.g. “the 4 Ds of the energy transition: decarbonisation, decentralisation, democratisation and digitalisation.” In such instances, tensions between different orders of worth would often remain unresolved. Thus, diffusion more readily allows such differing justifications as “putting an end to energy poverty and increasing the competitiveness of companies” to sit together unproblematically. In Extract 31, there is not only the quoted civic-market slogan of *access to cheap energy*, but also a definition of energy communities as projects where *citizens collectively invest* (whereas for others, the key aspect is sharing or simplification). However, in the very next sentence it is stated that the company will fully finance the project. This shows the disarticulation between old and new civic justifications, and how the latter seem to be used to maintain a hegemonic representation of the passive energy consumer.

While the slogans primarily served as means for objectification of the civic, green and market orders of worth, the industrial order of worth was diffused in objectives, targets, numbers and dates.

Extract.33 After the promise to bring forward the target of 80% incorporation of renewable generation in the electricity system to 2026, the preliminary version of the review of the National Energy and Plan (PNEC) 2021-2030, announced this Friday by the Ministry of Environment and Climate Action, officially outlines the long-term proposal: “We intend to reach 85% by 2030, ensuring green, reliable electricity at competitive costs for companies and families.” As for the incorporation of renewables in gross final energy consumption (which was 34% in 2021), the commitment for 2030 increases from 47% to 49%. (#93, *Público*)

Extract.34 There are a series of new targets for the production of renewables, with emphasis on photovoltaic solar energy, but also wind (onshore and offshore). Within the scope of decentralized production, improvements are expected in terms of Collective Self-Consumption and Renewable Energy Communities, with “new tools, new incentives and new dissemination models”. As for centralized solar production, the PNEC review foresees that this does not exceed 0.4% of territory occupation, being accompanied by “compensation measures for territories and energy sharing with communities”. (#106, *Público*).

These extracts demonstrate the broader theme of the long-term future orientation of the industrial order of worth. More specifically, they each illustrate the representation of energy transition as technically efficient and planned pursuit of economic growth and progress. While diffusion makes it easy to avoid explaining the relations between different representations or, as in this case, between cause and effect, the industrial order of worth is oriented to creating a logically ordered situation. Thus, the underlying rationale of the plans is presented as to ensure “green, reliable electricity at competitive costs for companies and families” and the means by which the state will fulfil this plan are vaguely outlined (“new tools, new incentives, and new dissemination models”), with the emphasis on “the new” hinting also at the presence of *inspired* worth of innovation and modernity. The specific naming of “companies and families” demonstrates how such discourses address themselves to readers in order to capture their attention and get them talking, while the various tools and measures serve as objectifications of the implicit representation of a stable, predictable and secure energy future (Berling et al., 2022; Levenda et al., 2019). Numerical figures are key for this type of communication, with the anchoring of percentages in distinct dates providing the reader with objectivity and an expectation of what is to come. Altogether, these features of *the diffusion of plans* conveys the sense that things are happening, of a gradual and guaranteed movement towards the future.

The specificity of *industrial* diffusion, then, is that it fulfils its function not by appealing to a sense of justice in the reader, as does *civic* diffusion, but primarily by the desire for security. Justice is something that is subjective and up for debate, whereas what a planned and secure future requires above all is objectivity and expertise. And so, this representation is particularly suited to the diffusion form because certain of its features – the non-involvement of the author, the reference to experts – imbues the message with an air of objectivity. There is a similar pattern of communication in the reporting on specific energy community projects. For example, a municipality is represented as putting into action a “global strategy” which will allow it to “become a territory with a zero

energy balance before 2050”, an aim which is valuable because it is in line with the national government’s “strong commitment” to expanding renewable energy (#8, *Observador*). These various plans and projects, objectives and tools provide the reader with a discursive context in which energy communities can be positioned as technologically necessary and inevitable, just as the various social causes and slogans are used in the civic order of worth to position them as desirable and empowering.

Table 7.3. Representation of energy communities in the press: main claims and orders of worth

Order of worth	Main claims & keywords	Examples
Civic	<p>Energy communities are inclusive: they will provide access to more affordable energy by empowering citizens to become collective producers.</p> <p><i>Keywords:</i> Access, inclusivity, empowerment, democracy, justice, fairness, citizens</p>	<p>“This decentralized production will democratize access to solar energy.” (#16, <i>Expresso</i>)</p> <p>“Energy communities are also a way to guarantee citizens active participation in the electrical system. In other words, they are inclusive and can bring anyone together to share benefits” (#67, <i>Observador</i>).</p>
Domestic	<p>Energy communities will strengthen local communities and help “needy” families by building on traditional community spirit and local ties.</p> <p><i>Keywords:</i> Identity, heritage, tradition, local, rural, self-sufficiency, villages, families</p>	<p>“What these villages did was build a community photovoltaic plant in each of the villages, with the aim of sharing this self-production of green energy among neighbours.” (#95, <i>Público</i>)</p> <p>“We know that here and there small producers [...] mobilize in defence of themselves, their past, their food, their references and traditions.” (#21, <i>Público</i>)</p>
Market	<p>Energy communities constitute an opportunity for business and will increase the competitiveness of the energy sector.</p> <p><i>Keywords:</i> Markets, competition, price, opportunity, profit, businesses</p>	<p>“If we want to have more renewables and faster, we have to make the spaces that are already humanized profitable from an energy point of view.” (#38, <i>Expresso</i>)</p> <p>“Companies have a historic opportunity to actively participate in the energy transition, ceasing to be what the overwhelming majority are today: passive consumers of electricity.” (#78, <i>Observador</i>)</p>
Industrial	<p>Energy communities will help meet objectives and increase the efficiency of the energy system, contributing to the security and stability of the grid.</p> <p><i>Keywords:</i> Efficiency, stability, predictability, planning, growth, energy security.</p>	<p>“The small scale is a model with multiple advantages, including technical ones. The production closer to the place of consumption avoids losses in the network.” (#11, <i>Público</i>)</p> <p>“To achieve this goal, the Government's plans include [...] a significant increase in solar power, not only through large parks but also by encouraging, through legislation, self-consumption and/or energy communities.” (#2, <i>Expresso</i>)</p>
Green	<p>Energy communities will provide clean energy and help achieve</p>	<p>“We are a parish that, although small, has great environmental concerns. São Luís wants to be at</p>

	<p>decarbonization. They are more sustainable than large-scale projects.</p> <p><i>Keywords:</i> Sustainability, decarbonization, clean, biodiversity, climate change</p>	<p>the forefront of local communities to create a more sustainable society” (#96, <i>Público</i>).</p> <p>“The CIM of Alto Minho points out “three general objectives”, such as [...] increasing local production of renewable energy and, therefore, increasing low-carbon energy sources [...] to achieve the status of territory with zero energy balance.” (#8, <i>Observador</i>).</p>
Inspired	<p>Energy communities are the future: a revolution that will transform the way we think of energy and the economy.</p> <p><i>Keywords:</i> Transformation, revolution, innovation, novelty, excitement, urgency, changing mindsets.</p>	<p>“This unprecedented context [...] promises to change the way we look at the economy and energy.” (#72, <i>Observador</i>)</p> <p>“The electrical system of the future will be very different from what it is today.” (#52, <i>Expresso</i>)</p>
Fame	<p>Energy communities will increase public acceptance of renewables and maintain Portugal’s status as an energy transition pioneer.</p> <p><i>Keywords:</i> Awareness, public acceptance, public opinion, example, reputation, pioneer</p>	<p>“[Energy communities] have another important long-term benefit: increasing acceptance of the measures necessary for the energy transition [...] there is a contagion effect associated with the spread of these communities.” (#103, <i>Público</i>)</p> <p>“In Miranda do Douro, a municipality in the northeast of mainland Portugal, there is a living and pioneering example that is now one year old. This is the first energy community implemented in our country, under the legal regime applicable to self-consumption of renewable energy.” (#67, <i>Observador</i>)</p>
Projective	<p>Energy communities will bring together diverse actors to optimize production and consumption by digitizing and automating relations between different types of prosumers.</p> <p><i>Keywords:</i> Flexibility, agility, collaboration, city, optimization, automation</p>	<p>“Distributed production should be synonymous with flexibility, innovation, democracy, standardization, digitalization, interactivity and agility, but it still means slowness and entropy associated with high costs and disproportionate criteria.” (#11, <i>Público</i>)</p> <p>“The municipality thus takes on the role of a facilitator, enabler, connector and promoter. In this way, and by partnering with local energy cooperatives and communities, they are able to build a joint sustainability narrative for the city.” (#116, <i>Instalador</i>)¹¹</p>

As we will see, while other forms of communication can explicitly *re-signify* a social object by anchoring it in a different representation, the tendency of diffusion is to use a variety of

¹¹ This article was published in a specialist magazine and was thus not included in the mainstream press corpus. This extract is included here as an example of the *projective* order of worth being used to represent the form of organization that RECs can assume, something which was less common in the mainstream press.

incommensurable representations to appeal to the widest possible audience. This creates an illusion of objectivity *and* inclusion, allowing a reader the agency to make their own interpretations. While this may be the case, diffusion can also undervalue certain representations because they require more elaborate explanation. For example, by condensing the civic worth of energy communities into the slogan of *active participation* and by situating it next to statements of the market worth of energy communities, an article would omit a whole host of meanings, such as effective autonomy, collective ownership, control and decision making that are usually implied by that slogan. Again, rather than explaining why and how exactly citizens would receive “clean and cheap energy”, diffusion can, at best, only make this representation concrete through the explanation that consumers were *expected* to receive discounts on their electricity bill. Thus, while a plurality of orders of worth are used in diffusion, they were neither tested by, nor anchored in, a distinct vision of the future.

Similarly, the lack of uncertainty and conflict characteristic of diffusion, also allows for any gap between representation and reality to go unquestioned (Boltanski, 2011), with representations being left to “float” (Moscovici, 1994). This was particularly evident in articles which extensively quoted one type of actor. Thus, an interview with a project promotor reports that the company is, “already thinking of ‘going ahead with another 100 [energy communities]” (#105, *Público*). This matter of fact reporting, easily overlooks the reality that, at the time of reporting, there was no actual energy communities licenced. Indeed, other studies have shown how a large quantity of articles which only quote one type of actor serves to legitimise a single viewpoint (Boager & Castro, 2021; Carvalho, 2010). In this case, it was the specific industrial and commercial oriented approach to energy communities held by private energy companies that was unproblematically presented (“We go to industrial areas and large customers, where there is more evident profitability, because the project is larger and has a scale,” #105, *Público*).

While diffusion tends not to explicitly question the representations it conveys, reports on situations of uncertainty, controversy and dispute inevitably lead to the reporting of divergent and conflictual voices. That these situations rarely arise in the media reporting on energy communities is a testament to their ostensibly consensual meaning. Nevertheless, as was shown in section 7.4.1., the discourse on energy communities clearly changed over time and in response to “critical discourse moments” – certain issues and events, such as the Covid pandemic, Russia’s invasion of

Ukraine and the bureaucratic inertia for the licencing of energy community projects, that have a decisive role in shaping the discourse (Carvalho, 2010), as the following extracts show:

Extract.35 Although energy communities are “an emerging area”, they are a business in which “there is a lot of market to grow in Portugal”. Bearing in mind the uncertain times, will the 60 energy community projects get off the ground in the two foreseen years? Francisco Gonçalves believes so, because “there is a political commitment to renewable energies that makes perfect sense”. “Covid has changed many things taken for granted, but here we believe that the current legislative framework will be maintained and that the evolution of the sector will continue to be favourable”, he says. (#91, *Público*)

Extract.36 For Pedro Ernesto Ferreira, from the FEL Portugal platform, “the first 6 months of war demonstrate the importance of Europe building a diversified, equitable and reliable energy portfolio”. [...] In the electricity sector, he argues, “European countries need to ensure that the energy transition addresses cybersecurity concerns and that the electrical grid is resilient, guaranteeing the supply of electricity to populations when faced with abnormal and unexpected situations, such as extreme weather events”. [...] And he adds that “energy communities constitute the right vehicle to bring production closer to consumption” and guarantee “energy self-sufficiency using technologies such as solar panels and batteries to accumulate surpluses from solar production”. (#41, *Expresso*)

Despite their critical agenda, the tone of these articles was predominantly positive, reflecting the agenda of industry actors to maintain enthusiasm or “hype” for energy communities and to represent Portugal as having an institutional environment attractive to international investment. It thus became apparent how the press was used by industry to put pressure on government by highlighting energy transition inertia. As it became apparent that energy communities were not fulfilling their potential as quickly as expected, actors in the media began to critique civic-industrial policy plans, representing official targets as a sort of false promise. Initially, these concerns about the implementation of energy communities and the inefficiency of administrative procedures were confined mainly to diffusion articles.

After the initial period of generalization of energy communities, articles begin to appear which attempted to explain in more detail the concept of energy communities. These articles had many of the same features as other diffusion articles, except that they more directly addressed the reader.

Extract.37 In the same vein, Pedro Almeida, from the Fraunhofer research centre, adds how individuals can adopt sustainable behavior: “If you haven't yet bought your hybrid or electric car, you are about to do so and you will realize that people in their city are grouping themselves into Renewable Energy Communities, to be able to buy electricity at lower prices, or to obtain interesting returns from investments in solar panels.” (#87, *Observador*)

Extract.38 We asked Manuel Nina if, taking into account that the cost of these investments is not small, this might not be a vision that is perhaps too utopian. Here's how he responded: “In the old days, people saw the first cars and thought: 'Maybe, one day we'll all be able to stop riding in wagons.' I think we're at a similar stage now: 'Maybe, one day we'll all have the money to have solar panels and produce energy.’” (#110, *Público*).

The inspired order of worth was also used to attract interest in energy communities in a mode of diffusion. These articles would combine inspiring language with expert testimonies in order to build excitement for the future. However, a key feature of this form of communication was that, in allowing the author to maintain detachment from the message, the plausibility of these futures was held in check. These discourses of stimulation were not only oriented to industry and market actors, but also specifically tailored to the public, albeit a public that was distinctly middle-class, technologically savvy and male (see Scharnigg & Martin, 2024). One of the main functions of these representations was to limit the possibilities associated with the new concept of energy communities. This was seen in an article which propagated the value of individual self-consumption. When the new possibilities of collective self-consumption were brought in and represented according to the inspired order of worth, it was only to subsequently position them as relatively “utopian”.

7.4.2.2. Using propagation to orient action towards the future (or the past)

Propagation was the second most prevalent form of communication in our corpus. It was mainly used in opinion articles, but also by some journalists with a specialty in the energy sector. The domestic, inspired, market and civic orders of worth were relatively more likely than other orders of worth to adopt this form. Past studies have shown how, in propagation, representations are explicitly goal-orientated and typically aim to orient a certain group, typically by “establishing an equivalence between behaviours and norms” and/or by “integrating a social object into an existing representation” (Moscovici, 2008, p.259; Boager & Castro, 2021). However, the role of temporality in these future-oriented representations has not been examined, i.e. the way that propagation orients groups towards the future. The comparative analysis of how different orders of worth were propagated revealed that, not only did specific orders of worth have a more integrative and normative function, but that their temporal orientation played an important structuring role.

In the civic order of worth, communication was clearly and explicitly goal oriented, but this goal was also overtly *prescriptive* and represented as *a call to action*.

- Extract.39 In addition to the inherent sustainability, renewable energies are also relevant for the democratic way in which they can be harnessed and used. The sun when it rises is for everyone and it must be a goal of Portugal to bet on the democratization of access to it. The promotion of self-consumption, at an individual and collective level (for example, in condominiums, neighborhoods and communities) is a fundamental step that Portugal is slow to take, contrary to what other countries are already doing. (#65, *Observador*)
- Extract.40 The recent surge in wholesale energy prices reminds us that a crisis can always be just around the corner. And the saying goes that “prevention is better than cure”. To anticipate potential problems, collective self-consumption may be the most viable answer, but investment is needed more than exemptions [...] Because energy communities presuppose a transversal involvement of society, citizenship will be a key factor for the energy empowerment of populations, not least because everyone can benefit from the reduction of the bill and carbon footprint. (#22, *Público*).

In the civic order of worth, propagation articles had a positive tone and spirit of inclusivity, especially when promoting energy communities and specific projects. Furthermore, the contextualisation of the message with several concrete examples of projects establishes an equivalence between behaviours and norms. What really defined these instances as propagation, however, was that they sought to anchor energy communities in clear and established ideas. Whereas these ideas were implicit in diffusion and objectified by slogans, in propagation civic representations of energy communities were objectified by popular sayings, e.g. “when the sun rises, it rises for everyone,” to anchor energy communities into an existing representation of equality and democracy. Similarly, in Extract 40, it can be seen that, in the civic order of worth, energy communities are envisaged as an anticipatory solution to the crisis that “can always be just around the corner.” As in Extract 39, the orientation to the future is more explicitly prescriptive (“investment is needed”; “citizenship will be a key factor”) and again, the representation, this time of the future, is anchored in a popular saying.

In the market order of worth, the representation of energy communities was oriented by a short-term future based around the idea of “opportunity”.

- Extract.41 Companies have a historic opportunity to actively participate in the energy transition, ceasing to be what the overwhelming majority are today: passive consumers of electricity. And they can become active agents of the energy transition, so in a certain sense the counterpart we give is: we end up with a subsidy, but we give them the opportunity, if they invest, that this does not represent a cost. Therefore, we have an opportunity to benefit electricity consumers, the country's energy policy and companies. (#78, *Observador*)

Extract.42 Streamlining licensing processes will bring multiple advantages, as it will allow Portugal to reposition itself vis-à-vis market agents, in the following vectors: [...] Promotion of competitive activity in the sector, allowing multiple agents, of different sizes, to contribute to the economic and decarbonized development of the country in an equitable way. However, with slow licensing processes and high uncertainty, only large companies are able, thanks to the resilience of their structures, to wait several years (sometimes more than five years) for a decision. Thus, the common business community is often forced to abandon this sector as it needs activities that ensure faster commercial exploitation, and this encourages monopolization in the energy sector. (#51, *Expresso*)

Taken from a statement by the then Secretary of State for Energy, extract 41 integrates the language of the civic justification for energy communities (“active participation”) into a market argument for providing an incentive for private companies to invest. While he distinguishes himself, as a representative of politics, from the interests of commercial actors, this is only to represent their mutual interests as being for the common good. This is a typical feature of the propagation: rather than the antagonism conveyed in propagandistic communication (see below), a range of legitimate interests are integrated, made equivalent and objectified by the term “opportunity”, one which also indicates the short-term future-orientations of the market order of worth (Boltanski & Thévenot, 2006).

This propensity for the market order of worth to integrate with other orders of worth can also be seen in Extract 42, in which a compromise between the market discourse of *competition* and the industrial discourse of *efficiency* – the core of most definitions of neoliberalism (Davies, 2012) – was used to tacitly make a critique of the state, in particular of its *inefficient* bureaucracy for granting licenses to energy community projects. As was shown above, this critique was common and shared by a wide cross-section of actors, but it was voiced particularly forcefully by the new energy companies pursuing decentralized business models. Akin to how the civic order of worth anticipates crisis, the market order of worth is wary of the threat of “monopolization.” As we will see in the analysis of the same discourse in the propaganda form, this threat is particularly pertinent in the Portuguese imaginary (see also, Santos, 2011).

In the domestic order of worth, propagation assumes a past-oriented temporality and, rather than being explicitly oriented to a goal, is instead conveyed in a narrative form:

Extract.43 The granite and beautiful Trás-os-Montes villages had almost forgotten their community essence. Just a few decades ago these villages had community herds, community ovens, community gardens, and a vast array of community infrastructures. Work was organized as a community. Saturday was the day reserved for maintenance of the vast network of

agricultural roads. The energy source was firewood. Broom, today a pest and fire hazard, was previously planted and was a basic energy crop, being practically the only source of energy for cooking and heating. Saturday was also typically energy day, when the community organized itself to collect, transport and package broom firewood. So community energy is nothing new in these ancient villages. (#95, *Público*).

Extract.44 Contrary to what one might sometimes think, energy communities are not a group of “pirates” who trick the system to get free energy, nor a group of “geeks” who use blockchain to share cheaper electricity. In fact, energy communities already existed long before there were computers, as is the case of cooperatives created in Portugal at the beginning of the century (as well as in several other parts of the world) to electrify areas of the territory that the State had not yet reached. [...] They are, in practice, citizens and small organizations that come together to carry out a certain activity in the energy sector, and do so in accordance with the rules that the system imposes on them. They can be neighbours in the same neighbourhood or condominium, a group of friends or even initiatives with a broad geographic scope, as is the case with Coopérnico. (#17, *Observador*)

In stark contrast to the kinds of temporal-orientations we have already seen, the distinctly domestic representations of the above extracts aim to orient its readers’ understanding of energy communities by anchoring them in an image of the past. Like other instances of propagation, there is a cohesion and structure to the communication but rather than being explicitly orientated to a goal, such as decarbonization, domestic representations are articulated in a historical *narrative* in which the main character and source of universal good is the essentialized (energy) community.

Moreover, while in the civic order of worth community energy initiatives are seen as something modern and new for Portugal that can be learned by emulating other countries, domestic arguments on the other hand represent energy communities as the continuation of lost traditions from Portugal’s past. While there is reference to beings from the civic world in these accounts, the past-oriented form of the account clearly anchors the text in the domestic world. Indeed, in propagation there is a concerted attempt to anchor the object in more general representations, rather than defining it only in relation to itself. The domestic order of worth can, therefore, be said to offer the media more available, socially acceptable and legitimate resources for storytelling about energy communities, narratives that can create excitement and mobilize action without creating the risk of conflict or controversy arising, as does propaganda.

Perhaps due to the hegemony and rigidity of, especially government plans, the industrial order of worth is rarely explicitly propagated. Nevertheless, the occasions where it is are useful to analyse in order to illustrate both the way that its linear temporality structures its representation, and how propagation involves a higher degree of reflexivity (upon the plan):

- Extract.45 Basically, it is about, in ten years, increasing the renewable production of electricity enough to eliminate the installed non-renewable power. The three technologies that are currently readily available, wind, photovoltaic and biomass, can be used using the centralized production model, which has been followed since the forties of the last century, or the distributed production model, which, although timidly, it has been making its way. Onshore wind has seen a remarkable expansion in the last decade and it is due to the progress made in the decarbonization of electricity production, which we can be proud of. (#28, *Público*).
- Extract.46 Portugal has ambitious goals to expand electricity production in the coming years and a large part of this new renewable energy will come from photovoltaic plants. Large-scale projects have raised concern among some communities and civil society movements, but the most recent statistics show that much of the new capacity that is emerging in the country is distributed, in the form of production units for self-consumption (UPAC), according to the latest figures from DGEG – Directorate-General for Energy and Geology, analyzed by Expresso. (#63, *Expresso*).

Here we see how the industrial order of worth values a steady continuity from past to the future. Goals are no longer simply a matter of fact (as they are in diffusion) but are explicitly valorised as “ambitious”, the progress already made is something “we can be proud of”, and their realisation will placate any civic concerns about corporate mega-projects. Importantly, scientific tools such as statistics are used in support of these claims. In propagation articles, plans are not just referenced and publicized. Rather, they are made concrete by connecting their ends with the means. The various tools, procedures, forms of evidence and tests of the industrial world all facilitate the representation of a predictable and efficient energy transition. In these extracts we can see how, in propagation, the industrial order of worth is largely untainted by other orders of worth. As in the diffusion articles, goals are well-defined but here they are more systematically connected to the kinds of technology which will realise them, rather than to other benefits which energy communities and renewables more broadly will bring.

The inspired order of worth is also predominantly in relation to technology, but with a very different future-orientation to the industrial order of worth. It uses metaphors such as “revolution”, “transformation” and “radical paradigm shift” to prophesize (and prescribe) a discontinuous break from the past.

- Extract.47 The electrical system of the future will be very different from what it is today. Exponential change has arrived in our sector. In the last decade the electricity sector has changed more than in the previous 50 years and, in the coming years, the change will be even more significant. We live in an era of “energy transition” where the revolution will essentially take place in three dimensions: decarbonization, decentralization and digitalization. And all

this with the customer increasingly at the center. EDP knew how to anticipate and has led the way. (#52, *Expresso*).

Extract.48 This unprecedented context, where there are platforms that lie somewhere between a stock exchange and modern cooperatives and where citizens choose the projects they want to make happen, is so powerful that it promises to change the way we look at the economy and energy. [...] If we add to this the development and application of energy sharing technologies that can be as transparent and decentralized as blockchain allows or the creation of virtual energy communities, we realize that there is a whole world of energy sharing and economic benefits to discover, to develop and to benefit from. (#72, *Observador*)

Rather than the dry language of plans and steady progress, characteristic of the industrial order of worth, the inspired order of worth is propagated via stimulating and affective language. It is more directly oriented to the Other, and this is explained by the fact that it is an order of worth that values the power of ideas (Boltanski & Thévenot, 2006). This orientation generates a “politics of urgency” (Schmid & Taylor Aiken, 2023; Newell et al, 2022): while making predictions about the future, it routinely urges its readers to act in the present. Thus, another article states: “If you haven't already started replacing fossil fuels with green energy, now is the time” (#46, *Expresso*). With this friendly urgency, quiet prescriptiveness and its decisively future-oriented usages of “revolution”, it was not surprising that the inspired order of worth was most associated with propagation and least associated with propaganda.

7.4.2.3. Using propaganda to open and close the future

The use of the propaganda was infrequent in the corpus. However, the cases identified are worth analysing because they were an emerging trend and because of their tendency to represent the civic, industrial, domestic and market orders of worth – the four most important discourses in the mediation of energy community. Unsurprisingly, propaganda articles had a more critical tone, and the direct *involvement* of the author was clear, as was their identification with the reader in order to incite action (e.g. “let’s hope...”, “we all need...”). Moreover, it was evident that the propaganda form allowed for an even more general representation than does propagation. In the following analysis, these aspects will be analyzed, but also foreground will be how propaganda was used specifically in relation to the future.

One of the key features of articles which employed the propaganda form was a clear and sustained dichotomization of groups, orders of worth and/or future possibilities.

- Extract.49 Let's hope that the country does not fall into the temptation to look only at the big projects, as they are the quickest to contribute to the achievement of the goals, but they will be less efficient in promoting the much desired and necessary democratization and decentralization of the energy sector. (#17, *Observador*).
- Extract.50 So, basically we are in the presence of a model based on public affairs, synonymous with expected Portuguese inefficiency and reminiscent of “proudly alone” [“orgulhosamente sós”]. Do not condemn me for my distrust in national organizations, as these lines were written keeping in mind what is happening regarding the licensing of various renewable energy community projects. Being dependent on a single organization is limiting freedom of choice, action and, in my perspective, the existence of the market itself. (#89, *Observador*).

The critique articulated in the first extract is from an article which is not focused on energy communities and, perhaps for this reason, is more radical and ideological. Here, energy communities are used as examples of the inefficiency of big government to critique another government policy (carbon trading schemes) and, more broadly, the idea that government should interfere in markets. Comparing these extracts to the previously identified instances of propagation, it can also be seen how the dichotomising logic is used not only to represent an opposition between groups but also to represent different possible futures. When critiques and justifications were conveyed in the propaganda form, the future-orientations of the relevant orders of worth were more explicit. Thus, in both extracts we see how two future scenarios are contrasted: in the first, there is an energy transition which prioritizes decarbonization objectives and one which pursues justice. In the second, there is a desirable future that is open, free and embraces change which is contrasted with a return to the past, the time of immobility and authoritarianism (Santos, 2011).

Both of these viewpoints can be viewed as *discourses of liberation* (Boltanski & Chiapello, 2017). Their dichotomizing logic both depends on and facilitates stereotypical representations. The market orientation to the future rests on a stereotypical representation of Portugal as not only inefficient but as closed in on itself and rigidly resistant to modernity. This sentiment is objectified in “proudly alone” (“*orgulhosamente sós*”) – a reference to an infamous expression made by Salazar in a 1965 speech about the colonial war and Portugal’s lack of international support in which he sought to justify the country’s isolation from the rest of Europe and glorify its history and character (Santos, 2011; Frois, 2012). While in propagation the market order of worth’s antagonism with the past is implicit, by using this phrase the author not only brings it into the open but

reinforces the dichotomy by anchoring it in the opposition of authoritarianism and freedom more commonly associated with representations of modern Portuguese history (Santos, 2011).

From the civic perspective, any successful future for energy communities will have to contend with “the resistance of vested interests” which will have to be overcome by “a strong mobilization of citizens, in particular young people.” This is seen more explicitly below:

Extract.51 This all seems inevitable, but it is not. No one is condemned to blunder and we all need the solar energy that the country has too much to resign ourselves to always having to find a dysfunction even when everything is most favorable to us, including the fact that citizens are getting together and moving up to create communities of energy. The sun when it rises is for everyone; The heat is more for some than others... (#61, *Expresso*).

Extract.52 There is, of course, to count on the resistance of the vested interests. In order to overcome it, a strong mobilization of citizens is necessary, in particular young people, demanding from the State the measures that allow it to be put into practice. It is said that the future of energy goes through the three “Ds” of Decarbonization, Decentralization and Digitalization. That's right, but a fourth “D” must be added, that of the Democratization of production, so that the consumer, until now passive, can also be a producer and, soon, a storer of electricity, by connecting to a smart grid. This evolution will translate into a substantial improvement in the quality of life and in the budget of families, especially those living in depressed areas in the interior of the country. (#28, *Público*).

These extracts also demonstrate how the future can be more concrete in the mode of propaganda and how the civic order of worth is used to contest discourses of monological inevitability. The representation of a *contingent* future is supported not through reference to proverbs, slogans and goals, but through the problematization and creative re-appropriation of these devices which anchors them in a distinct context of contestation, controversy or alternative practice. Importantly, whereas in diffusion and propagation there is an apparent gap between the present and the future, when the civic order of worth is deployed in propaganda alternative futures are already in motion: it is not that citizens *should, can* or *will* get together so much as they *already are getting together*. As such, energy communities are primarily used as evidence and objectified representations in these articles rather than being their subject. Rather than being simply reifying closures of public debate, then, propagandistic forms of communication can also be used to arrive at a coherent and detailed new representation of an object and should therefore be seen as important for contesting hegemonic representations and re-imagining the future.

Nevertheless, these more rhetorical and reifying usages of propaganda were also identified. In addition to the typical features of propaganda (analysed below), another feature of these articles,

heretofore under acknowledged in the analysis of propaganda, is the sustained and systematic way of building an argument.

Extract.53 The tragedy of the war in Ukraine has exposed some of the weaknesses in which the European project has become bogged down. This is the case of energy dependence.

It is understandable that, in the moment we live in and in the state of energy hostages in which we find ourselves, emergency solutions focus on supply and not on planning. With the house on fire the priority is not to save water...

However, in this energy crisis, in addition to emergency solutions, we must plan and implement policies that guarantee not only security but, above all, a future.[...]

The energy transition is not under discussion and there is a vast consensus around it, in generation, transport or consumption efficiency. Portugal has enough sun and wind. The important clean energy sector, including the planned green hydrogen and offshore wind, could see its happy condition undermined by chronic errors, such as the lack of planning, which has led, for example, to the installation of solar mega-power plants at the whim of individual initiatives, instead of complying with a territorial distribution that makes sense for the current needs and connections in the places where they should be projected.

Consumption also suffers from chronic deficiencies. [...] However, combating this condition remains a charade that makes it impossible to achieve the goals we set ourselves and the use of the resources we have for the benefit of society as a whole. An example of this is the obstacles to 'energy communities' — which imply the autonomy of neighborhoods, condominiums or villages — and which, two years after the law allows it and with several applications already made, are not moving forward due to administrative blockage or, worse, due to bad faith. (#6, *Expresso*)

Extract.54 We, the European People's Party parliamentary group, propose increasing this target to 45%. We must become independent from Russian gas and oil, but we need to pave the way with practical solutions and remain open to technological potential, in accordance with the principle of technological neutrality.

Consequently, when investing more in renewable energy, we must look beyond borders and ensure greater cooperation between EU countries. To build new solar or wind farms and further secure energy supply, we need faster approval procedures. The conditions for transporting energy obtained from renewable sources within the European Union's Internal Market must also be streamlined. [...]

We must ensure that even small, self-sufficient producers of renewable energy like local energy communities have easy access to the grid and are not prevented from participating by unnecessary bureaucracy. All efforts towards climate neutrality are valuable and reinforce the green transition.

In times of crisis, we, as the European Union, make progress. This is what the past has shown us many times. And the window of opportunity is open, more than ever. We have the opportunity to be the first region on the planet to reindustrialize in a sustainable way. And we believe that this is worth fighting for. (#40, *Expresso*)

In both extracts, the representation of an inevitable and desirable energy transition is organized in a programmatic way with the use of short, sharp sentences and paragraphs, akin to a political pamphlet or manifesto. Statements are explicitly prescriptive (“We must...”) and openly state their first principles (“technological neutrality”) in order to *reify* the future (“The energy transition is not under discussion...”). At the same time, the use of repetition and emotive language seems to aim at creating a sense of urgency in the reader. This involves an assertion of identity (e.g. Portuguese vs European; European vs. Russian) and the elimination of a conflict object (e.g. Russian gas) (Moscovici, 2008). The argument in Extract.54 explicitly conforms to an in-group project (e.g. “We, the European People's Party”), while in Extract.53, a dichotomization of groups is more implicit, with the ‘other’ (the government) never being named but its deficiencies made unambiguous (e.g. “chronic errors”, “lack of planning”, “bad faith”). Again, energy communities are used as examples here, objectifications of bad planning and a lack of commitment.

While upholding the industrial future horizon of planning and progress, as *discourses of security* articulated in response to threatening future, these texts rely heavily on a representation of energy communities that emphasize a traditional understanding of “community” as autonomous and self-sufficient, and thus use *domestic* worth to construct scalar links between the local and the national. Both Portugal (Extract.53) and Europe (Extract.54) are represented as energy transition pioneers with abundant resources. While it does not deploy the image, seen in market propaganda, of a closed and authoritarian past in comparison to a desirable and open future, Extract.53 maintains the critique of Portuguese inefficiency.

7.5. Discussion and conclusions

The above analysis shows that the new socio-legal concept of energy communities has not exactly been at the center of the Portuguese media’s attention since it emerged on the energy policy scene in 2019, but that it has played an increasingly prominent role in mediating representations of the energy future to the general public. This role was bound up in two parallel processes. The first can be described using the concepts of *transcendent* and *immanent* representations (Harré, 1998; Castro & Batel, 2008) to describe the process of *generalization* whereby the term “energy communities”

has evolved from a specific, immanent and potentially niche concept into a broader, transcendent, mode of understanding, offering explanatory models across diverse domains.

The second process of mediation is emblematic of Moscovici's theory of change whereby an “emancipated” representation evolves into a “hegemonic” one, signifying the concept's integration into mainstream discourse. While these concepts are often used to describe the first process, combining them with the orders of worth perspective inclines us to see instead a process of akin to what Laclau & Mouffe (2014) describe as “*hegemonization*”. Thus, in the four years since the publication of REDII, it is clear that the original civic and domestic worth of energy communities have given way to a “*general equivalent*” whereby they are positioned primarily as an opportunity for new business models and sources of value and represented as part of the status quo which could be easily *diffused*. This mode of communication served to mitigate uncertainties surrounding the energy future amid looming challenges, including climate change and energy security, while sporadically addressing desires for radical transformations in the dominant energy paradigm and the functioning of the state. Ultimately, the representation of energy communities presented to the public tended to align with neoliberal values, prioritizing market-oriented approaches and voices while downplaying radical shifts in energy provision.

At a theoretical level, the analysis presented in this chapter has found strong evidence of the continued significance of Moscovici’s three forms of communication – diffusion, propagation and propaganda. The principle theoretical contribution of this chapter, however, is the nuances within these forms that emerge when they are used to convey certain orders of worth.

Table 7.4. Communicating the future across four main orders of worth

	<i>Civic</i>	<i>Domestic</i>	<i>Industrial</i>	<i>Market</i>
<i>Diffusion</i> Creating expectations	Slogans	Proverbs	Numbers	Slogans
<i>Propagation</i> Orienting action towards the future	Prescriptive call to action	Narrating the past	Planning the future	Prescribing opportunities
<i>Propaganda</i> Opening and closing the future	Contesting inevitability	Asserting identity	Asserting inevitability	Contesting identity

Another way of saying this is that the *form* of communication is shaped by the specific representational *content* that is conveyed. For instance, while many of the typical features of *diffusion* (e.g. unaddressed tensions and contradictions, divergent voices, use of an implicit

representation) and its discursive strategies (non-involvement of author, non-structuration of content) are visible across all instances, in the civic order of worth diffusion deployed *slogans* while in the *inspired* order of worth it deployed *buzzwords*. In the industrial order of worth, by contrast, diffusion communication deployed numbers and other quantitative forms.

In contrast to diffusion, the propagation form was used to prescribe a more distinct vision of energy communities. Important for this is an orientation towards the future that is more prescriptive than the implicit future characteristic of diffusion. Thus, whereas the domestic order of worth uses propagation to integrate energy communities into a *narrative* which connects past and future in a logic of continuity, the market order of worth uses propagation to *co-opt* resources from other orders of worth, reformatting and integrating them into a goal – conceived as an opportunity – aimed at a future represented as discontinuous from the past.

More generally, it has been seen in this study how the future has been *used* in two main ways by the mainstream media in relation to energy communities, with subtle variations depending on the order of worth at play. First, representations of energy communities in the press tend to be anchored in the regime of the plan. That is, they are communicated not as propagandistic calls to action or as the propagation of an alternative future, but by a diffusion of business-as-usual signified by quantitative targets and distant objectives (Batel & Rudolph, 2021). This way of communicating has the function of shoring up uncertainty about the energy future in the midst of threats, not only in relation to climate change and security of supply, but also to revolutionary desires to overhaul the hegemonic regime of energy provision, though these threats were rarely explicitly represented. This form of future-oriented diffusion thus follows Moscovici's insights insofar as it depends on an *implicit* representation of stability and progress. Representing the future in this way is also reminiscent of Koselleck's (2004) analysis of modernist discourses in which "the state enforced a monopoly on the control of the future by suppressing apocalyptic and astrological readings of the future" (Koselleck, 2004, p.42). It has also been seen that the future and energy communities were represented together in a discourse of *acceleration* that, in its most critical form, takes issue with proliferation of *plans without action* and calls for a discontinuous break from the past. This way of representing resembles Koselleck's (2004, p.38) characterisation of millenarian discourses of "the imminent-but-future End of the World". In other words, it explicitly draws upon future threats in order to augment its calls for institutional change.

Chapter 8

Study 4 – Citizen imaginaries of community energy futures

8.1. Introduction

The previous two chapters have examined how energy communities have been represented in mediating systems. This chapter will move the analysis into the domain of everyday life by inquiring into the representations of energy communities that are constructed by citizens in their engagements with the energy future. As was seen in Chapter 2, community energy practices have been investigated from a wide range of social science perspectives. Many of these studies have examined the values, beliefs and goals of various types of community energy project (Parkhill et al., 2015; Becker & Kunze, 2014). The same can be said for social scientific studies of controversies and disputes surrounding the deployment of renewable energy technologies (Ellis et al., 2007; Batel & Devine-Wright, 2015). These two research domains can be seen as two sides of the same coin: on the one side, there is an attempt to understand why and how the public actively pursue alternative energy projects to large-scale centralized ones and, on the other, the aim has been to understand how and why the public oppose large-scale energy projects. The subjects of these types of research can, therefore, be broadly defined as “energy publics” (Chilvers & Longhurst, 2019), with a key question being how these publics value or represent objects such as place, scale and infrastructure.

8.2. Context, objectives and research questions

Previous chapters in this thesis have shown the role that various “imagined publics” are playing in the representation of the energy future and of future energy communities in Portugal. On the one hand, we have seen the importance of the opposition between “active” and “passive” citizens or consumers. This has been the main theme underpinning the representation of the public of energy communities, with the notion of being “active” represented variously in terms of having knowledge, awareness, interest or willingness to invest. On the other hand, the interviews with experts revealed how RECs are often represented in relation to the large-scale solar projects which are creating “sacrifice zones” in rural areas of Portugal. This representation of a disenfranchised public was also prevalent in the mainstream media (see also Valqueresma et al., 2024).

Locating these publics entailed a nuanced and iterative research strategy. For the “active citizens,” seven different “energy community” projects were identified. The cases illustrate various community-driven renewable energy initiatives across Portugal, each uniquely tailored to its setting. In rural Alentejo, a municipality-led project, initiated through participatory budgeting, aims to install PV panels to benefit local public buildings, with savings reinvested in energy projects. In suburban Lisbon, a REC pilot involves a number of residential buildings and is progressively increasing PV capacity, though currently registered as a “collective self-consumption” entity. Another Lisbon condominium project, supported by Coopernico, engages six families in sustainable local electricity generation. A small town in the north established a REC as a Public Interest Cooperative, focusing on democratic energy management benefiting public buildings and local associations. Another suburban Lisbon REC, developed by volunteers and the support of Coopernico and a University, emphasizes information dissemination, support for vulnerable families, and shared solar energy. In another urban area, a municipality has partnered with a new REC dedicated company and a local charity to provide support to vulnerable families. Finally, an Alentejo ecovillage aims for 100% energy autonomy with a decentralized solar system, focusing on sustainable living without formal REC engagement. Common themes include community leadership, renewable energy adoption, and cost reduction, while differences lie in organizational structures, scales, legal statuses, and public versus private benefits.

For the “sacrificed citizens,” the case under study involves a contentious large-scale solar power park and an associated high-voltage power line being developed near the village of Cercal in the Alentejo region of southern Portugal. This region, characterized by its plains, hills, and cork oak forests, has a history rooted in agrarian traditions and socio-economic inequality due to latifundium land ownership patterns. The area is ecologically sensitive, home to various endangered species, and contains protected ecological reserves and cultural landscapes. The plans to construct the solar park began in 2021 with the goal to contribute to the diversification of energy sources in the country, thereby ensuring supply security and energy autonomy, and to fulfil the Portuguese government’s commitments regarding the production of electricity from renewable resources and the reduction of greenhouse gas emissions (see the EIA, Matos, Fonseca &

Associados, 2021).¹² The developer of the project, Cercal Power, a subsidiary of the Hamburg-based investment company Aquila Capital, aggregated five separate licenses into a single project. The solar panels will physically cover 125 hectares of land, with a 394 hectare area fenced off, and produce up to 596 MWh, making it one of the largest solar parks in Portugal.¹³ Furthermore, the project entails the construction of a power line connecting the photovoltaic plant to the National Energy Transmission Network, whose point of delivery is the Sines Substation (REN). It will have sixty-nine supports (six are existing supports and sixty-three are to be built) distributed over a length of about 25.6 km. Local residents were surprised by the project's announcement and expressed strong opposition due to the perceived inadequate public consultation and potential negative impacts on the local economy and environment, forming a protest group, “Juntos Pelo Cercal” (Together For Cercal). The group has repeatedly highlighted the detrimental effects that the project will have and the lack of proper public engagement. Despite some local support for the project, the group has expanded its activities to include broader social and environmental concerns, linking with other movements to address extractive energy infrastructure projects. Legal action was taken against the project due to perceived flaws in the environmental impact assessment process and concerns about cumulative environmental impacts.

This chapter therefore attempts to compare these “publics” and explore not only the way they themselves imagine the energy future, but also how they do this in relation to imagined institutions or what Castro & Santos (2020) call the “institutional Other”. As the previous studies have shown, the novel ideas and proposals that emanate from “centres of calculation” (Latour, 1988) are communicated to publics by different “mediating systems,” such as expert intermediaries and the mainstream press, and are strongly shaped by institutional actors. How people envisage their futures in relation to energy generation and consumption is then heavily shaped by these multiple self-other relations and by the resources – e.g. cultural, political, epistemic, material – they can mobilize. From the perspective of the pragmatic sociology of law, this chapter therefore can be seen as an analysis of the “realization of law” (Affichard et al., 2023) and it aims to address RQ3:

¹² The following information about the Cercal project was collated mainly from the Environmental Impact Assessment report conducted by Matos Fonseca & Associados (2021).

¹³ The project has a total area of impact of 816 hectare, with 632 hectares under direct contract (for 29 years and 11 month). Under Portuguese law, the project can increase still by 20%.

How is the energy future and RECs being represented by “citizens” in different situations? How does the legal definition, institutional practices, mediating systems and expert expectations of RECs enable and constrain their realization?

In the following section, the methods used to address this question will be outlined. Two tables will be presented which contain key information about the interviewees, including summaries of the local energy projects which the “active citizens” were involved in.

8.3. Methodology

To answer the above question, this study draws upon in-depth interviews with the two different types of “energy public” in order to explore if and how RECs are being represented, for what purpose and in relation to what kind of future. The aim was not to analyse the nuances of each case, but to focus on the way that the different publics represented the energy future. Interviews with “active citizens” from the identified energy community projects were conducted in 2021 and 2022. Information about each of these cases was also gathered from news articles and contact with various stakeholders, and the final summaries of each case in Table 8.1. was confirmed by the interviewees. For the Cercal case study, in-depth interviews with twenty residents were conducted in July 2022. Participants were recruited mainly through the communication channels of the local protest group, access to which was facilitated by the second author, but also by approaching people in the village of Cercal. Two interviews were also conducted with members of the local protest group. All of these interviews were guided by the same set of questions about the project, the place, and the wider community. While some interviews were conducted with a single participant, others were in a group setting with a maximum of three participants. Most of the interviews were conducted face to face in the village of Cercal, but four were conducted online and three were carried out at the project site. A map of the area, illustrated with the project boundaries, was shown to participants in the face-to-face interviews. The interviews lasted between 30 minutes and 2 hours and were conducted in either English or Portuguese. They were transcribed in full and, when necessary, translated from Portuguese into English. See Chapter 3 for details about how these transcripts were analysed.

Table 8.1. Interviews with energy community participants and project details

	DATE	GENDER	AGE	PROJECT TYPE	LOCATION	SIZE KILOWATTS/PEAK
P1	26/08/2021	Male	70	Citizen-led, municipality owned	Rural	120 kWp (planned)
P2	13/04/2021	Male	43	Citizen-led	Urban	27.3 kWp (74.3 kWp planned)
P3	21/02/2022	Female	44	Citizen-led and owned	Urban	2.7 kWp
P4	15/02/2022	Male	38	Parish council-led cooperative	Rural	17kWp
P5	04/11/2022	Male	42	Public- private partnership	Urban	73 kWp
P6	06/06/2022	Male	30	Citizen-led and owned	Urban	8 kWp
P7	04/09/2022	Female	67	Intentional eco- community	Rural	200 people with PV panels covering 50% of needs.

Table 8.2. Interviews with Cercal residents

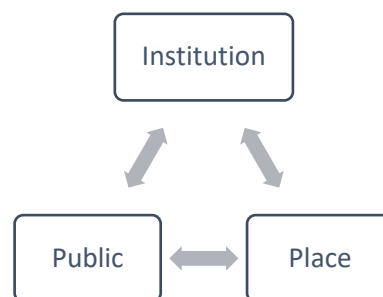
	DATE	METHOD	GENDER	AGE
C1	15/07/2022	Individual, semi-structured, in-person	Male	67
C2	14/07/2022	Individual, semi-structured, in-person	Female	52
C3	19/02/2022	Individual, semi-structured, online	Female	19
C4	22/07/2022	Individual, semi-structured, online	Male	32
C5	15/07/2022	Group (n=2), semi-structured, in-person	Female	60
C6	15/07/2022	Group (n=2), semi-structured, in-person	Male	64
C7	14/07/2022	Group (n=2), semi-structured, in-person	Female	54
C8	14/07/2022	Group (n=2), semi-structured, in-person	Male	56
C9	15/07/2022	Group (n=3), semi-structured, in-person	Female	47
C10	15/07/2022	Group (n=3), semi-structured, in-person	Female	49
C11	15/07/2022	Group (n=3), semi-structured, in-person	Female	55
C12	19/02/2022	Individual, semi-structured, online	Female	51
C13	22/07/2022	Individual, semi-structured, online	Male	33
C14	14/07/2022	Individual, semi-structured, in-person, walking	Male	70

8.4. Analysis

The analysis of the “energy publics” revealed the importance of a range of different imaginaries which were composed of distinct social representations and self-other relations and expressed through different regimes of engagement and orders of worth. These imaginaries thus pre-figured the way that both the “institutional Other” and the future were represented. In this section, these findings will be presented in detail. The main imaginaries at play in each public will first be presented and this will be followed by an analysis of the self-other relations and discursive strategies that interviewees constructed and deployed in order to represent the future, providing illustrative extracts from the interviews.

This will begin with the residents of Cercal, demonstrating how four different “place imaginaries” (socio-economic, pastoral, ecological and risk) were key to understanding the ways that the future was imagined. In this context, the relation between self and other was mainly constructed *spatially* as a relation between place and the public (see Figure 8). As such the opposition between locals and outsiders was central to this, and the key object of future-representation was the *scale* of the project, which was deemed as having a direct and tangible impact on place. Scale was represented in different ways depending on each resident’s regime of engagement – as an embodied threat in the regime of familiarity and as the industrialization of the land in the regime of justification. Thus, residents represented and critiqued the “institutional Other” as physically absent, but also as morally absent: that is, the state was represented as not

Figure 8. The social representation of the energy future by “sacrificed citizens”



acting in the name of the common good, as expected, but in the service of objectives which entailed that the Cercal community must be “sacrificed”.

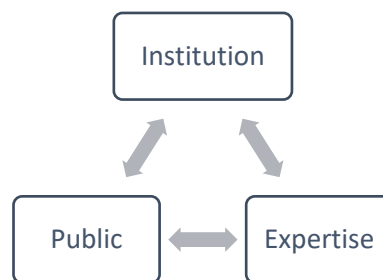
“Alternative representations” (Gillespie, 2008) – representations of out-group representations – or “metaknowledge” (Elcherath et al., 2012) played an important role here, and residents would

go as far as to fatalistically represent the future that they believed had been decided for them in advance. In opposition to this hegemonic future and drawing upon the different place imaginaries, residents also attempted to promote alternative energy futures where renewable energy technologies existed in harmony with their spatial surroundings and at a sustainable scale. To convey this alternative future, residents adopted the communicative format of “consensualization” which enabled them to secure a moral high ground by foregrounding the legitimacy of a range of possible scales of renewable energy, rather than adopting a “NIMBY” discourse of outright rejection.

In 8.4.2, findings from the interviews with the “energy citizens” will be presented. It will be shown how this group represented the future by drawing primarily from two competing imaginaries of energy transition. On the one hand, there was an imaginary of the energy transition as the inevitable product of top-down innovation and market processes, while on the other hand there was an imaginary which emphasized the importance of bottom-up innovation and democratic processes. A third, more peripheral, imaginary was based on notions of autonomy and self-sufficiency.

In both of the main imaginaries, the relation between self and other was constructed primarily in an *epistemic* way as the relation between those with expertise and those without, and the key object of the future was *participation*. Interviewees thus positioned themselves in relation to the opposite poles of the public and the expert, and this had consequences for how interviewees engaged with the “institutional Other” (see Figure 9). From the position of the non-expert, dialogue with and critique of institutions was deferred to and mediated by expert intermediaries, whereas

Figure 9. The social representation of the energy future by “active citizens”



those who positioned themselves as experts represented institutions directly and with ease.

Differences in the representation of this future were determined by the different subject positionings within each imaginary, but also by *modes of projectivity*. From the position of the non-

expert, the future was typically represented in the mode of familiar anticipation as a *feeling*, rather than something that was known or that could be attained through their own agency. In the top-down imaginary this feeling was positive and welcoming, while in the bottom-up imaginary it was negative, with interviewees pessimistically expressing doubt about the realism of their desired future which was regarded as depending on public awareness. From the position of expertise, the future was represented in the modes of possibility and probability. As seen in the expert imaginaries of Study 2, the bottom-up and top-down imaginaries corresponded to future-oriented discursive strategies of multiplicity and discontinuity respectively. The latter were confident about the inevitability of change while the former were uncertain and represented different possible outcomes.

8.4.1. The imagined futures of “sacrificed” citizens

The dominant imaginary in Cercal centered on social and economic life, with concerns such as depopulation and unemployment, particularly for the youth. Residents generally saw Cercal as declining, with little hope for improvement. This outlook framed their views on the project, with accounts reflecting a balance between the civic and domestic orders of worth against perceived industrialization. Employment was crucial in linking the project to community aspirations, yet there was scepticism about the developer’s job promises, seen as temporary and not benefiting locals. The project’s impact on the community’s long-term socioeconomic health was a common concern, with suspicions of unchecked capitalism. Below these *public* justifications, residents also worried about the consequences for their *personal* plans, such as housing and land prices, leading some to consider moving away.

Secondly, and in direct opposition to the governmental and developer claims that the project is oriented towards achieving environmental objectives, many of our interviewees believed that the installation would cause more environmental harm than good, particularly in the felling of several hundred cork (protected by national law) and eucalyptus trees. This justification depended on an imaginary of the broader Alentejan region as an ecology and a home to biodiverse flora and fauna, including protected species, which would be adversely affected by the project. At its most sophisticated, however, the ecological critique of the project was combined with the socioeconomic imaginary’s civic critique. Activists advanced arguments that not only identified a lack of democratic transparency and participation, but that also positioned the private investment as an

exercise in greenwashing, in the sense that anonymous investors would be rewarded with carbon credits that would effectively give them the right to pollute while leaving the community of Cercal dispossessed.

The future in Cercal was often envisioned through an imaginary emphasizing heritage and a pastoral connection to the land, appreciated for its natural beauty and fertility. This vision was rooted in the community's bond with their environment and historical traditions like small-scale sustainable agriculture, resisting the trend of large-scale monoculture. The project, developed by a German company, also brought to light issues of unequal land ownership and the region's history of exploitation by latifundia owners. In the regime of justification, the pastoral imaginary was primarily expressed through the domestic order of worth. Residents' opposition to the project focused on its visual impact on the landscape and its effect on elderly residents, whose well-being was tied to memories of the place. Local knowledge and the lifestyle of farmers and small holders, especially those with ancestral ties to the region, were highly valued as embodiments of this pastoral ideal. This imaginary was opposed to the industrial order of worth, viewing industrialization as a threat to the pastoral relationship with nature and community. Despite some resignation to the land's inevitable transformation into an "ocean of panels," there remained a commitment to a patrimonial future, emphasizing responsibility to both ancestors and future generations.

Lastly, a more fragmented imaginary, characterized by feelings of precarity, risk, and threats to well-being, was identified among residents living in close proximity to the proposed site. Unlike the others, this imaginary was expressed in the regime of familiarity, reflecting an affective relationship with their living environment and the project. The challenge in justifying these concerns was that they were personal and therefore difficult to generalize (Blok & Meilvang, 2015; Thévenot, 2014). Interviewees thus took advantage of material objects and used metaphors to express this risk imaginary, especially when interviewees were conducted near the project site. This imaginary differed from the pastoral one, which was rooted in place memory and *common-place* attachments. In contrast, the risk imaginary was fragmented, existing in a perpetual present rather than being anchored in the past or future. The key aspect of this risk imaginary was the residents' feeling of being threatened by imminent changes to their personal and familiar environments.

Table 8.3. Four imaginaries of place, project and impact in Cercal do Alentejo

	Socioeconomic	Ecological	Pastoral	Risk
Of place and community	Unemployment and decline; lack of opportunity for young people; depopulation; tourism economy aspirations.	Alentejo as a diverse ecology: habitat for endemic, biodiverse, wildlife and wilderness	Place identity and memory, traditions, the elderly, farmers, fertile arable land, <i>montado</i> system.	Residents living in close proximity to site, on the edge of community.
In the regime of public justification and critique	<i>Civic</i> : scale of project will hinder local economy and life chances; contribute to further decline and social and economic desertification; <i>Market</i> : leading to property devaluation; <i>Civic</i> : project will provide employment and development (marginally perceived).	<i>Green</i> : Felling of trees will destroy ecosystems; scale of installation will increase local temperatures; exacerbating climate; soil & water degradation and contamination.	<i>Domestic</i> : The project will change the landscape resulting in a loss of collective memory, values, and culture.	<i>Civic</i> : Residents have been excluded, manipulated and not sufficiently consulted.
In regimes “below the public”	<i>Plan</i> : Inability to plan the future – e.g. because of devaluation of property; Moving away.	<i>Familiar anticipation</i> : uncertainty about liveability and cumulative consequences in the long run.	<i>Familiar anticipation</i> : Inability to pass on traditions and local knowledge of place, fear of loss of personal identity, attachments & human-nature symbiosis.	<i>Familiar anticipation</i> : Affective; sense of danger; anger, confusion, and hopelessness; threats to well-being; inability to imagine future, scale or to generalize experience.
Political strategies and alternative visions: moving between regimes of engagement	Mobilizing civic anger and disappointment at procedural injustice; re-signifying discourse of job opportunities as “livelihoods”. Discourses of “sacrifice zone”, degrowth and energy sufficiency; engaging locals and organizing events (e.g., information and discussion events, demonstrations); dissemination in local and national media; creating local and regional alliances and partnerships; use of legal system. Demanding alternative to large scale solar projects- e.g., decentralized energy production for community consumption as a collective right. Evidencing the need for policies for democratic energy system and more sound methods of conducting environmental impact assessments.	Making links to the pastoral and agricultural imaginary (traditional land-use practices, future generations); proposing use of derelict land; conducting scientific studies.	Using maps and tours of site to represent scale; planning smaller scale projects such as energy communities and fitting decentralized technologies to common places.	Engagement with affected residents; discourse of social contract and inclusion; generalizing well-being, participation and security as a common good.

The discourse analysis revealed that at the basis of these imaginaries was a self-other relation that was consistently constructed in a spatial way. That is, “the other” – either the project developer or the State – was represented as an *outsider* to the place-based community. This is seen in the following:

Extract.55 Maybe because they aren’t so much connected with the region to the village, or to the people here. Like, if you see it from outside, you tend to not be so affected... Yeah, still, as I said, I do not have this relation, or I do not know why people are in favour... (C3)

Extract.56 At the outset it is not even for the enjoyment of this region, not even of the community... it is for a company that is foreign. And in terms of employment? Let’s see, maybe in the assembly and then? Four people, right? Then there is the abandonment, because we have already seen other examples of parks that later become abandoned. (C2)

In opposition to the outsider or “foreign” company, the residents in Cercal consistently represented themselves as a community of place. It was a connection with the community that was seen as the only way to understand their concerns and it was difficult for interviewees to imagine anybody who lived in Cercal as being in favour of the project.

From this point of view, the self-other relation of local-outsider corresponded to a distinction between the particular and the universal which facilitated critiques of the project developer’s general claims of environmental sustainability and employment opportunities. Similar critiques were expressed in a more elaborated and forceful way when they were aimed at the Portuguese State. “Alternative representations” played a key role here, as interviewees often represented themselves as being seen as “peripheral” or “sacrificed” from the perspective of the “institutional Other”:

Extract.57 Ok, I think that we have to put this in a sort of a logic’s context. Portugal is the periphery of Europe. You know, it’s the “finisterra.” And Alentejo, the southern area, is the periphery of Portugal. So here there is a sort of a, there is sort of a vision that we are away from everything and well, from the centre, let’s say, there is this image that there is nothing there, there is a sort of an empty territory. It’s something on their minds you know? They come here and they, they come to the planes and they see open space and they say “Well, it’s all unused, it’s all, you know, valuable land that we could do something else.” So, there is this aspect of being at the end of the continent and look, and always looking towards some sort of a centre for instructions or for, yes- anything from instructions to subsidies, you know, it’s this sort of attitude (C14).

Extract.58 Well, we are a very small country with very little sight, and we tend to follow whatever outsiders tell us to do. Because we like to be good pupils. And somewhere in Europe,

probably in Brussels, they told us that maybe we should do a hydrogen project in Sines to be tested in Europe. And we decided, why not? Let's do it. So, we are doing something that no one else wants to do, but we are going to try to do it, and we need a lot of energy to it. So, we have to sacrifice some population, to drive the energy there. And we were not lucky, but the sacrifice area was all this area in Cercal, Morgavel, it was also the cheapest way to do it. So, we are just going, we were not lucky. We are, we were just in the wrong place at the wrong time. (C5, p.39-41)

The physical *absence* of the Other was *felt* by the interviewees and contributed to the sense of procedural and distributive injustice, but the way that this self-other relation was constructed and expressed suggested a perceived lack of *recognition*. The sense of being *sacrificed* was, then, generated by the representation – possibly influenced by the legacy of the Estado Novo and belated European integration – that the state was in pursuit of national economic progress instead of the well-being of communities. This representation was informed primarily by the *socio-economic* and *pastoral* imaginaries which were based around experiences and collective memories of decline and loss. From this perspective, residents claimed that the authorities were not acting with regard to the common good or that they were excluding rural communities from the common good and state's decarbonization targets are criticized for being a “justification for almost everything” (C14).

These self-other relations and the perceived absence of the institutional Other often led residents to a fatalistic resignation to further decline and loss. While this sentiment can be detected in the above critiques, it was mostly seen when interviewees were oriented to the future “below the public”, i.e. in regimes of engagement that sought out *personal* goods in familiarity or plans. Indeed, it was mainly these types of engagement which constituted the *risk imaginary*, concerned as it was with the embodied, (un)familiar and affective relation that people were having, or were expecting to have, with their place of residence and with the project. As pragmatic sociologists have shown, translating personal concerns into public issues can be difficult and risky when the concern in question is experienced as deeply *personal* (Thévenot, 2014). Nevertheless, interviewees would often resort to material objects (e.g. maps) and creative uses of metaphors in order to convey the risk imaginary, and this was particularly the case with interviews that took place on or near to the site, as is seen in the following:

Extract.59 It's going to be... I imagine this [the land] is going to be all black. And what I'm most afraid of, and that scares me, is that they're building a high wall here because of the reflection [of the panels]. I'd rather see the panels than a wall, so... we will stay here as if we were in a prison. They can't face the panels towards the side of the road, right? Because of the road,

the cars, right? So they have to be turned this way... and this way... it's like that to protect themselves from the heat, just a wall... that's what they say, I don't know... (C11)

Extract.60 They said they were going to build a fence 50 meters from here [the houses]... this would take a 3m high fence right here.. That is, the electrified fence 50 meters from my house.... I have small children, my neighbour has small children... [...] so if this is to happen here, it's a danger... because they won't be aware that it's not meant to be played with, especially the little one. It's just that they're forgetting that this is about the population... before they invested, we already lived there. (C12)

In addition to this affective anticipation of the future in the risk imaginary, residents often struggled to represent the future in the terms of a plan. This was mainly due to the expected devaluation of their property and the difficulty in imagining the future desirability of their homes, but also because of the lack of direct benefits they expected to receive from the project.

This fatalistic resignation and inability to imagine the future in the regime of the plan was also seen in those who were involved in the protest movement, for example:

Extract.61 But they are not planning to do anything. The only, what we have been doing, I mean, I think from the beginning, at least me, when I realized that no party was going to support us in the parliament or, no, we tried to speak with the prime minister. Some of us did speak with the prime minister and the president of republic. And they say, "Oh yes, we are going to see, let's talk to the Environment Minister." So, the only thing I think we can do, is to make it last so long that maybe [the company] gives up. That's the only sense we have. But unfortunately, the court is not helping. Because, if they don't reply, they can just start building and then we put the action, and then the laws, the court will take twenty years to decide. So, it was our chance, was just to make legal procedures to avoid, to delay, and in the end they go away. (C5 – p.239)

Extract.62 Unfortunately, I think that it's going to go ahead because, from what I know, it's been set for many years already. This project, this idea. Like, behind the scenes everything has been settled for a long time. And honestly, I don't have enough knowledge like in legal terms or so, to know what else could be done in order to stop it. Like, even if the Portuguese Environment Agency gives a green light to the whole project, I don't really know, officially, what else could be done? Of course, one could do like a huge citizen movement, but like...in a legal sort of way, what else could be done? I don't have enough knowledge about that. So when I see how things are moving, unfortunately... (C3)

The above extracts also demonstrate the difficulty of maintaining a *dialogue with the institutional Other*, particularly when there is a perceived need to have this dialogue in the legalistic language of institutions. The resident of extract 7, an active member of JPC, had more direct experience with the institutional Other and used reported or, better, *imagined* speech to demonstrate this by giving

the institution a voice. In extract 8, on the other hand, a much younger resident who had not been involved in JPC's activities expressed both the uncertainty and resignation to the future which was characteristic of the broader group and a clear consequence of the lack of dialogue with institutions. Moreover, while she represented this difficulty as stemming from a lack of legal knowledge, the notion that "everything has been settled for a long time" is emblematic of the broader theme of being *excluded* from institutional spaces. The legal system was, thus, regarded as unreceptive to public voices and meanings, with the only official strategy imaginable to the residents being to commit to the endless process of legal appeal, in the hope that the developer would eventually give up.

Despite this prevalence of fatalistic resignation, personal plans and desires also facilitated connections with alternative collective futures. This was seen, for example, in the steadfastness of a farmer's patrimonial orientation to the future which prioritized responsibility and duty towards ancestors as much as future generations – an orientation which was clearly oriented to the common good, even if the pastoral imaginary in particular is often seen by outsiders as a typical expression of "NIMBYism" (Batel et al., 2015). More commonly, however, the representation of alternative futures was preceded by the critiques analyzed above and expressed in different orders of worth. While interviewees occasionally explored links with their own personal aspirations, these representations of the future were largely expressed in the regime of justification:

Extract.63 Because at some point it might make it hard to stay here because you're constantly confronted with that pain of seeing things change in a bad way. And... of course running away would not be an option, but I don't know... so what my vision is more like is- what I like about the Alentejo at the moment... there's a lot of this idea of creating communities and living together. I very much like the idea of what's happening in São Luis – the whole Transition [Town] movement, and all the things that pop up around, and all the ideas and so... what I like about it, and what motivates me to stay here is to see all those little villages, also Cercal, to see how many little things could be done in order to make a whole... like this village more, I don't know, self-sufficient or... more like in a transition kind of way, in a positive way. [...] Then seeing that these things are actually already happening is what motivates me to stay here and, like, rise to this motivation (C3)

Extract.64 This is how the discourse is now changing. We are changing the discourse and saying we are not against photovoltaics, it's about the location, the way that this thing is done, the scale and etcetera, etcetera. You know, look for urban solar first, then if you need centralized, look at the proper locations. Look at the surface of the dams. Look at the areas near Sines, and there are thousands of hectares there, owned by the state or under the control of the state, which are, you know, less apt soil, they are all sandy soils. There are less, less

harmful solutions basically for these types of things, even for centralized. And this is how we are framing the discourse right now. “We are part of the solutions for your problem, okay?”. I don’t know where this is going, but-. It started from an opposition, and now we are saying, “Okay, we are opposed. Completely opposed. We are not going to compromise on that. But we can provide you with some advice.” (C14).

The above extracts illustrate how the controversy in Cercal, in combination with different place imaginaries and self-other relations, is pre-figuring alternative visions of the future. Despite the use of different rhetorical devices, both extracts narrate the movement from the personal to the common, or from being an affected to an empowered community. In extract 9, the interviewee’s alteration between the generic *you* and the first person “I” serves as a prelude to a vision of a future community. The exploratory quality of this discourse is represented by an elliptical discursive format, while the *rise in generality* (Boltanski & Thévenot, 2006) characteristic of the regime of justification is encapsulated by the stated need to “*rise to this motivation.*”

Similarly, extract 10 demonstrates the more reflexive and strategic discourse characteristic of residents involved in the resistance movement, JPC. As is seen in the repeated claim that “we are not against photovoltaics, but...”, a discursive format of consensualization is key to residents’ aim to open up the future to alternatives. Again, the willingness to dialogue with the institutional Other is signified by the use of reported speech, but this time the quoted actor is the collective voice of the Cercal residents who are addressing the institutional Other. “Alternative representation” (Gillespie, 2008) clearly plays an important role here, as some residents clearly did not want to be viewed as expressing a “Not-In-My-Backyard” (NIMBY) discourse. That the residents were careful not to position themselves as such indicates engagement in a regime of justification which has, as its basis, a dialogue with the “generalized other” (Batel & Devine-Wright, 2021). As Mandich has argued, this regime of engagement has an orientation towards the future that is open to multiple possibilities.

Moreover, the above extracts illustrate the different orders of worth that were used to propose alternatives to the project. They show how these orders of worth were associated with small-scale and decentralized forms of renewable energy such as energy communities and self-consumption. Some interviewees were familiar with these concepts without knowing much about them, but like their self-other relations, these representations of alternative models of the energy future were constructed in a *spatial* way. Integrating dimensions from different imaginaries, activists imagined

alternative energy futures based on decentralization, participation and a harmonious place-technology fit, but above all on an openness to plurality and a commitment to social justice.

Alternatives could take the form of small self-sufficient farms and communes, of which Alentejo has a rich tradition (Baum, 1997), but they could also be the more modern energy communities which are organized and managed by municipal authorities in order to help energy poor citizens (Bode, 2022; Hanke et al., 2021). From this perspective, one of the main alternative proposals was to adopt decentralized forms of energy production and new legal models such as renewable energy communities, which promised to create a “small revolution”. These new possibilities were not in themselves accepted as a “silver bullet”, but rather as general models that must be carefully tailored to each particular community, “always respecting the scale and the surroundings.” Residents were, thus, reflexively aware that the possibility of a future energy community, while promising as an alternative to the unacceptable scale of the current project, raised questions about how to integrate it “into a landscape, into livelihoods and into communities,” a process that was not expected to be easy.

8.4.2. The imagined futures of “active” citizens

The “active” citizens unanimously believed that the future energy system should be based on renewable energy and that the country should start taking advantage of its “abundant” sunlight. While some emphasized that Portugal should be a “pioneer” in renewable energy innovation, others stressed the need to follow the lead of other European countries. Either way, all agreed that renewable energy should be the “backbone” of the energy system (rather than alternatives such as coal-fired plants, natural gas, hydrogen or nuclear fission), with a combination of centralized and decentralized infrastructure seen as the *realistic* end-state. Similar to the socio-economic imaginary in Cercal, RECs were imagined as an *opportunity* for *local development* and as a means for addressing energy poverty. While all interviewees shared this commitment to sustainability, innovation and local development, they differed in their emphasis on community engagement, market dynamics, and the degree of technological integration and adaptation. Thus, the overarching vision of a renewable energy-based future was refracted mainly through two distinct imaginaries.

Firstly, a top-down innovation-oriented imaginary expressed optimism about the future and confidence in market processes. Interviewees representing the energy future with this imaginary believed in the potential of decentralized energy solutions but supported by market dynamics and

technological innovation. They predicted a gradual but inevitable shift towards more sustainable and locally driven energy systems and tended to be more critical of bureaucratic issues and regulatory barriers, while believing that these issues would inevitably be overcome. This imaginary was more oriented to investors than to the public, but this did not mean that there was an absence of social representations of “energy citizenship.” Rather, the role of citizens was viewed less in terms of democratic decision-making and collective ownership, and more in terms of digital engagement, for instance by providing consumers with a smartphone app so that they could “easily understand how much energy [they are] using and consuming” (P5).

Secondly, a more radical bottom-up community-oriented imaginary emphasised the need for community ownership and decision-making. In this imaginary, interviewees advocated for significant changes in the energy system towards citizen empowerment. However, they also expressed scepticism or concern about the feasibility of these changes, recognizing obstacles like public awareness, technological limitations, and the influence of existing power structures. They were more concerned about centralization and large-scale corporate involvement than were those in the top-down imaginary. From this perspective, interviewees emphasised and welcomed the original spirit of the law but were wary of co-optation by corporate interests. While those in the innovation imaginary emphasized the complementarity of centralized and decentralized forms of renewable energy, in this imaginary the relation between them was problematized.

A third imaginary, less often promoted than it was *alternatively represented* from the perspective of other imaginaries, was that of the autonomous and self-sufficient community. In this imaginary, communities were empowered not by institutions but by their shared vision and values, ingenuity and community spirit. From the one interviewee who represented the future in this way, it was evident that the further away the subject was positioned from institutional power, the more their representation of the future deviated from the kind of representations that were seen in studies 1 and 2. As was suggested by Sareen et al (2018), this kind of eco-community often see themselves as operating outside of the scope of the state, thus contradicting the assumptions of strategic niche management which states that innovation niches tend towards upscaling and learning via interaction with institutional actors (Seyfang et al., 2014). This self-sufficiency imaginary was alternatively represented by those in the bottom-up imaginary. In other words, the notion of an authentic community which embodied the “spirit” of the Renewables Directive was actively

distinguished from those living in off-grid “hippie communities” – even if the notion of self-sufficiency was not discredited completely.

Table 8.4. "Active citizen" imaginaries of Renewable Energy Communities

Representation	Top-down	Bottom-up	Autonomous
Of self, public and experts	<i>Self</i> as knowledgeable <i>Public</i> as clients & investors <i>Experts</i> as project managers	<i>Self</i> as knowledgeable <i>Public</i> as citizens <i>Experts</i> as resources	<i>Self</i> as passionate <i>Public</i> as communities <i>Experts</i> as visionaries
In the regime of public justification and critique	<i>Market-Industrial</i> : RECs supported by market dynamics and digital innovation	<i>Civic</i> : RECs supported by democratic participation and collective ownership	<i>Inspired-Domestic-Green</i> : RECs supported by autonomous, self-sufficient and experimental communities living in harmony with nature
In regimes “below the public”	<i>Familiar anticipation</i> : Optimistic <i>Personal projects</i>	<i>Familiar anticipation</i> : Pessimistic <i>Collective projects</i>	<i>Familiar anticipation</i> : Optimistic <i>Collective projects</i>
Discursive strategies	<i>Future as discontinuity</i> : confidence in the inevitability of change <i>Consensualisation</i> when talking about experts (“I’m not an expert, but...”) <i>Reification</i> when talking about the public (“The public don’t care...”) <i>Reported speech</i> as a form of evidence and to take the position of the Other	<i>Future as multiplicity</i> : awareness of contingencies and barriers	<i>Future as multiplicity</i> : anchoring energy future in broader political issues; affective engagement as coping mechanism

While interviews with Cercal residents tended to begin with an account of how and when they first became aware of the project, the responses of the “energy citizens” usually began with a self-reflection about what led to their involvement in their own particular projects. In these instances, interviewees were often quick to define themselves epistemically as “non-experts”, a discursive *positioning* (Davies & Harré, 1990) that tended to be expressed in the form, “I’m not an expert, but...”. This discursive strategy can be seen as an epistemic form of “consensualization” (Batel & Castro, 2009). By framing their discourse in this way, interviewees simultaneously valued the role or position of the expert and the non-expert rather than affirming one or the other, as is often seen in studies of scientific controversies (e.g. Wynne, 1996).

Extract.65 About myself. So, I am mainly I got involved into this whole question of technology and energy supply system via the idea of creating, uh, autonomous settlements. So, I’m not... I don’t have any of this technological background (P7).

Extract.66 I’m not in the field of energy so to speak. But you know, I’m sort of a curious guy, like, I’m kind of interested in many topics, from economics, to history, to technology, you know. I

kind of, I tend to follow, I'm a generalist so to speak.... And well, this is kind of the background of my amateur interest in energy. I'm not an energy specialist, but I know, you know, I'm an engineer, a curious engineer, so I know a bit about it (P2).

While valuing two different subject positions of expert and non-expert, these interviewees would, however, tacitly differentiate themselves from a third subject position, that of the general public. The latter tended to be characterized, from the perspective of both of the main imaginaries, as having some kind of *lack*. This was typically framed in an epistemic way, for example as a lack of knowledge, awareness or “energy literacy”, but often would cross into a moralistic framing of the public as having a lack of care or interest in environmental issues. Thus, while the energy citizens tended to adopt *consensualization* when referring to experts and expertise, they tended towards *reification* as a communicative format when talking about the public:

Extract.67 I think she's a professor in the Faculty of Science and she's quite involved in Coopérnico. And so, she was there, and we had a chat, and we were discussing things like: “Yeah, you know, people are very eco-friendly, but if it costs money, then nobody's willing to do anything and bla, bla, bla”. So, you know, these kinds of general considerations. (P2)

Extract.68 It's very difficult because you always look at yourself and ask-. You, you want to understand what *you* profit but not what *we* profit. “I want to understand it. I'm not stupid. I want to understand it. I don't want to pay for, you know?” I want to be happy to pay for all and be all in. Maybe I'm wrong, maybe I'm wrong about it, but this is how I feel it. (P3,)

Reification is operative in both of the above extracts because there is both a prescription of one correct course of action as well as an implicit moral hierarchy, with experts being of superior worth and the general public of deficient worth. In addition, this is combined with *reported speech* as a form of evidence: in the first case, it is an expert's voice which is reported, while in the second the interviewee assumes the voice of an imagined other – the self-interested citizen.

While most of the “energy citizens” identified as curious and technically minded but explicitly not as experts, there were also initiators of community projects who tacitly constructed themselves as experts. However, what differentiated these interviewees from the official experts of Study 2 was that they also represented themselves as *citizens* who were actively engaging with their local communities. As such, they were able to weave together cohesive discourses which represented self, other, and the future in a balanced way, translating between industrial, civic and domestic orders of worth. Stylistically, their self-representation tended to emphasize their epistemic authority and oscillated between the “I” and the “we”. Indeed, when the *object* of representation

shifted from the collective future of the country to the specific future of their project, these expert-leaders would speak on behalf of their community, but in different ways depending on the imaginary at play:

Extract.69 I think the energy community concept opens the possibility to mitigate energy poverty at local scale beyond the social energy tariff and all those other instruments. But I think it's a bit tricky, especially when we are starting to talk about energy communities and to try and do it right away with a focus on energy poverty. Because I think the participation in the energy community, most of the time, as you said, it's volunteer, it's paid for. So, you need to buy your way in, let's say, you need to have a certain level of knowledge and be interested in certain topics to enter into this risky new concept. Right? And what we see is that we want to do an energy community that involves everyone, even people that maybe do not have the financial capacity or the knowledge of the topic. But it's still maybe a bit early to put too much focus on that. So first we need to get the energy communities running and – at least speaking here in Telheiras, we need to get the energy community running – and, at the same time, think okay, “how can we include more people, how can we contribute to energy poverty mitigation?” (P6)

Extract.70 We've already talked about this and of course people were extremely pleased. We explained to them how this works. We explained to them. We gave them some revenue examples. We gave them the worst-case scenario in terms of return of investments and what happened is that they were still interested, and they said, “I don't care. I just want to have access to solar power, a healthy environment and save a bit of money and because we save a bit of money, we get it back.” And that's something that they were keen to know. It's, “that's it, let's do that.” (P5).

While the above extracts exemplify the way that the public was represented by its expert representatives in the form of an epistemic distance, the speaker in the first extract is representing their project from the point of view of the grass-roots imaginary while the second is from the perspective of the innovation imaginary. As can be seen, the division between the self and other is stronger in the innovation imaginary, with the public represented as a client or investor who is “explained to” – that is, they are provided with technical and market information – and *reported speech* is again used as a discursive strategy in order to convey the *presence* of this active public. The representation of the public as “client” fits the identified “personal goal” of this interviewee's vision which is to produce a “highly replicable model” which can then be made available online for other actors. This is in keeping with the *projective* order of worth's insistence on collaboration, networking and the future horizon constituted by the next project.

By contrast, in the grass-roots imaginary it is clear that the speaker has a different type of energy community in mind, one in which the ideal public is represented as active and knowledgeable. However, it is acknowledged that this clashes with one of the larger aims of energy communities (to mitigate energy poverty) because the relevant public of this project is represented as vulnerable and lacking in resources. *Reported speech* is also used by this interviewee but not to represent the public as Other, but to represent them as Self. That is, the interviewee subtly shifts perspective so as not to be seen as speaking *for* the group. Instead, the goals are framed as questions posed by a “we”. Thus, while this speaker is relatively cautious in their expectations for the future, their longer-term perspective is represented as a joint project based on an ideal of *collective* autonomy.

Finally, it is worth noting that the one interviewee who strongly espoused the *self-sufficiency* imaginary also constructed self-other relations in an epistemic way, but rather than representing themselves as a non-expert in relation to a technical expert, they instead spoke of their admiration of a particular “visionary.” Importantly, this visionary was someone who shared not only the same value-orientation (a predilection for autonomy and experimentation), but also the same oppositional relation with the “institutional Other” which can be described as a refusal. In this case, the epistemic Other was less a source of direct and relevant *expertise* and more a source of *inspiration* about what might be possible. This positioning coincided with the *inspired* order of worth, but also with the *alternative representation* of this position.

If the notion of “the visionary” belongs to the inspired order of worth, then the notion of “the expert”, generally belongs to the industrial order of worth (Boltanski & Thévenot, 2006). This linking of the self-other relations to distinct orders of worth is not only important for understanding the broader imaginaries at play; it is also key to understanding how citizens represented, critiqued and dialogued with the “institutional Other”. Thus, it was clear that the two main imaginaries and their associated orders of worth (civic and market) were open to dialogue with the institutional Other. It was also clear, however, that at the heart of the ongoing emergence of REC projects, there is a valorisation of technical expertise as essential to their functioning, without their being a precise formulation of who or what actually constitutes an expert.

The majority of the “active” citizens can therefore be described as constructing themselves as holders of “interactional expertise” (Collins & Evans, 2002) – they possessed sufficient linguistic competence to talk about technical matters without being able to actually explain them. An

important characteristic of this was that there was no *direct* dialogue with the “institutional Other”. Instead, their representations of the energy future were mediated, at first by specialist magazines and books and then later refined through contact with expert intermediaries. When the interviewer raised questions about the law or other “technical” matters, interviewees were quick to defer to these intermediaries or to change the subject. On the other hand, the “active” citizens who positioned themselves as experts did not defer to expert authorities but could refer easily and directly to laws, regulations and policy documents:

Extract.71 And on the energy communities, I think in most places it will be very hard to implement an energy community that goes with the spirit of the European law. If maybe we get those other energy communities that some energy company manages it and gives some of the benefits to the people, but they keep the other benefits for the company. (P6)

Extract.72 They do. They can co-exist and even the access of energy could be part of a community, I mean, this is contemplated in this new legislation. You could have, you could go from self-consumption to a network of UPACS – of units of self-consumption. Yes, you can do that, you can expand. The law in terms of its framework is quite flexible, the details are somewhat, you know, restrictive, but in terms of the framework, it’s quite flexible. You could play around like Legos; I think it’s quite... I think it’s- I’m quite fond of it. Quite frankly. (P1)

As seen above, when energy citizens made reference to the new laws for RECs, it was mostly in a positive way. Indeed, those conveying the grass-roots imaginary went as far as to explicitly identify with the “spirit” of the law, especially at the European level. From this perspective, the law was seen as generated by the community energy movement and any “co-option” would come from the exploitation of the *letter* of the law as it now exists in Portugal. Thus, this identification was not with the legal system as a whole. Even though the law was viewed as a step in the right direction, the more “expert” interviewees articulated the discourse, also seen in REScoop.eu’s (2022, December) “transposition tracker”, that the national legislation was done in a “copy-paste” way and “not adapted to the Portuguese reality.”

Unsurprisingly, those energy citizens who positioned themselves in the “non-expert” position talked about the law in a verbose and non-technical way, attempting to use analogies and metaphors in order to convey the significance of legal change:

Extract.73 Because this January 2020 legislation that Coopérnico was, you know, talking about with the regulators as somebody, like, that the regulators saw that had something relevant to say, about how this should be organized, how the law should be designed etc. Before that, you

could only do what is called a self-consumption. So, if we you have like a free-standing house that is yours, behind your meter basically you can do anything, like installing solar panels is just like installing a fridge. You don't have to say anything. If it's too much power, then you have to you know, communicate and pay some small fee, but it's like, it's one production, one set of panels producing energy, and that energy is like kind of automatically already not consumed from the grid. So, the grid, the only thing that your electrical utility knows is that you are suddenly consuming less power. It's as simple as that. In this case, we basically have to kind of use the, the periphery of the electrical grid, a bit like you use the rope system, you know, so you basically, you are sending you electrons from the production to some part, and then it goes to the street and then flows back, and then well, this is a bit of a stupid, stupid analogy, but in essence they kind of, you are not producing and consuming behind you meter, but you are somehow already using a bit the distribution infrastructure that connects the whole grid together, in low voltage, yes. So, before this thing which hadn't happened yet, which is this idea that we are now going to you know, get together as a community and produce energy and share the spoils between ourselves, these, these legal issues didn't exist. (P2)

Extract.74 As I understood – again, I'm not a specialist – but as I understood from [Coopérnico representative], things have been evolving positively in terms of the legislation, but there's always some kind of details that need to be worked out, or could be clarified, and somehow, we always stand in the middle of all that. [...] And now we're faced, in light of current regulation – and this is relevant for the process – we've kind of accepted a solution from Coopérnico concerning the structure of the legal entity that will manage the energy community. So basically, all the involved entities will have an equal share in an NGO created for the purpose of managing the community energies, revenues and expenses. And so, we will be a third party that will benefit from crowdfunding from the Coopérnico community. (P4)

Again, the importance of expert intermediaries is clear from both of the above extracts. The national renewable energy cooperative, Coopérnico, was represented as being key to the interviewees' negotiation of the relevant legal and regulatory issues. However, we can also see how, in this process, these actors implicitly construct the expert status of Coopérnico, first, by representing them as an actor that the institutional Other values as important and, second, by representing them as a community.

Similarly, when asked directly about the future, those interviewees who explicitly defined themselves as non-experts in energy, tended to initially respond in quite a vague and fragmented way, especially when they were asked to think about the likelihood of their envisioned future becoming a reality. However, when they were indirectly encouraged to think about the future in relation to specific issues or projects, their discourse tended to become more elaborate and often passionate. Yet, in comparison to those with more specific energy-related expertise (or who at least

identified as such), their statements about the future were more conjecture than concrete and were expressed as *felt* rather than as *known*. In pragmatic sociological terms, they were expressed in a regime of familiarity rather than in a regime of the plan (Thévenot, 2000; 2019). Whereas the former is oriented to the future in a logic of practical anticipation, the latter follows a logic of probability:

Extract.75 Yeah, actually, I think that is the direction [of the energy transition]. Because I'm not a scholar and do not have deep knowledge, I don't have deep knowledge about it, but what I'm feeling for the projects that I'm working with is that transversally, there's a concern about trying to get as much energy out of solar and wind in businesses. (P4).

Extract.76 I think that any kind of uh, anarchic utopia vision of everybody will have their own solar panel and you know, there will be no utilities producing and selling energy to people, I don't think that's viable. Because you have, you know, large industries, large-. So, I think that the actual grid is here to stay. It will become much more like the internet, for sure. Like much more peer to peer where most, everybody, not the broadcasting system where you have a small number of broadcasters and a lot of consumers, but many people will be able to produce and sell to their neighbours, I think that's definitely going to be the case. And I think that as time goes by, I mean, it's just like the internet basically, really, because, twenty-five years ago when I went to university and you were just, you know, checking your email on a, on a text terminal and you had to know some Linux to do things. Now everybody has a smartphone and is on internet. So, I think it will definitely become common place (P2)

Both above extracts are from interviewees who mainly represented the future from the perspective of the innovation imaginary and as previously stated, these interviewees tended to be more confident in their imagined future, exemplified by the ease with which they talk about the future. In other words, despite their speculative style, these representations of the future are both anchored in the past, although in diverse ways. While, in the first extract, P4 expresses confidence in terms of the *feeling* that they have from working in various projects, in the second extract P2's confidence in the future is more reflexively represented with anecdotal evidence and analogies. Thus, P2 is able to dismiss the idea of the "anarchistic" *self-sufficiency* imaginary as "utopian" because this is also what was promised of the internet when it first emerged, but ultimately there were commercial interests which prevented this from happening and the same will be true of energy decentralization. Thus, the future of decentralized energy is anchored in a prior knowledge of the internet's development and its current role in society. It is notable in this extract that the interviewee refrains from elaborating on this idea of resistance from "large industries", instead breaking off elliptically. This shows that it is viewed as *self-evident* that energy communities cannot dislodge the hegemony

of energy utilities, but also that the interviewee *does not engage dialogically* with the alternative representation of the self-sufficiency imaginary of the energy future. Thus, it is clear that there is a *sematic barrier* between the innovation and self-sufficiency imaginaries generated by the *separation* of the alternative from the main representation (Gillespie, 2008). The self-sufficient imaginary is brought into the discourse only because it is not threatening to the hegemony of the innovation imaginary (Another example: “*So, actually self-sustainable or independent or off grid, as you call it, it's a myth. It doesn't happen, it will never*” – P5). This is precisely the type of discursive strategy, hypothesized in chapter 1, in which *reification* is combined with a *truth test* in order to maintain a *hegemonic* representation of the future.

In contrast, the responses of those expressing the other imaginaries, tended to remain more fragmented and were far less confident, though they were also often conveyed in an affective or emotional register:

Extract.77 Interviewer: In terms of the energy transition in Portugal and the future, how do you see it? What does it look like to you? Do you think everybody will be living in energy communities?

P3: No, I have a negative point of view from all of that. I think we'll pay the bill to not have done the homework.

Interviewer: Do you think Portugal and will reach the targets they have set?

P3: No. I don't think so. I don't think so.

Interviewer: Why is that?

P3: If I now go out of home and start talking with everyone that I meet, they will know nothing about it. (P3)

Extract.78 I hope so? I cannot say that I... I'm sometimes astonished how positive my inner feeling is about it. And uh, but it's really only a feeling. It is sort of um... And I trust a lot also into the healing forces of nature. Sometimes I watch videos about how the area of Chernobyl looks like now, and I see how, for instance, there are groups of cows that were left behind that they organized now in herds. So, um, and now to apply the same thing also to the human scale, maybe I, I would, I would think that the more difficult things become the more it will be clear, uh, who is going to cooperate and who is trying to go into the last trial to save it on the capitalistic level or on another... Yeah. So, and the more the networks that want to cooperate will start to get to know each other. And this is what I mean with self-healing powers of nature, you know, they are also active in us. Yeah, let's say I'm optimistic, but,

uh, without saying, because this and this and this and this, I don't, I cannot pull in facts. It's only my feeling. (P7)

The main feature of these extracts is their discontinuous and fragmented syntax, which signifies a lack of willingness or competence to represent or test the future. Thus, instead of objective and monological predictions, the non-expert representations of the grassroots and self-sufficiency imaginaries are generated by a dialectic of pessimism and optimism, as well as a dialectic between the personal and the collective. In other words, the future is, again, *felt* in the regime of familiarity and is expressed through figures of speech and analogies. The pessimistic position (P6) is anchored in a representation of the institutional Other as absent (“*we will pay the bill to not have done the homework*”) and the correlate representation of the public as ignorant (“*they will know nothing about it*”). The optimistic position (P7), however, is more reflexive because it, again, uses analogies to explicitly anchor the future in a principle of worth (“*the healing powers of nature*”), though they are admittedly unable to substantiate this vision with what might be deemed as *legitimate* proof (i.e. “*facts*” rather than “*feeling*”).

Lastly, like the official experts interviewed in study 2, the “active” citizens who positioned themselves as experts were able to articulate their views in a coherent narrative form, which connected the past with the future:

Extract.79 Well, we have a lot of challenges to surpass that I would say are mostly regulatory. And market driven. That means that whatever line we choose to follow, whatever path, we must make sure that the regulation allows for citizens to engage with the prosumer position, and we can individually decide to produce energy on our own homes or contribute in our own infrastructure. That's the future of things and of course in a country where we have over 300 days of sunlight per year, obviously, decentralized solar production is crucial for everybody, including the need for energy efficiency. So, what I believe is that we're going to meet halfway between energy efficiency policies and decentralized renewable energy production, and that would be the core of our – I don't want to say energy – but let's say energy policy. [...] And families in need now have a bit more engagement when it comes to new solutions that are more efficient in terms of cost of energy. So you can have for example, an energy community that is providing energy for social housing and for that, you know you have a limited, let's say, 100 kilowatts per family that you can access easily and so people don't abuse the access to cheaper energy, but they can access better and energy on those terms. So that's wonderful, I think. And there are plenty of models that could easily work, because nowadays everything is made digital. So, it's easy for us to explore, and to have a bit more of an understanding of the opportunities that this will bring, so like with an app, I can easily manage how much or understand how much energy I am am using and consuming it. What exactly can I do to save energy? You know, the short-term future. So that's basically it. (P5)

Extract.80 So, I think we are seeing a big push in Portugal, but also in other countries to the renewable side of things. So, to change coal, gas for renewables, I think that's an ongoing trend, that will happen for sure [...] So then, on the other side, we have a big debate on the centralised versus decentralised energy production. So, I think that's an important debate where we probably need both aspects. Centralised production is good for a few things and it's important, especially for example, for industrial customers to have some grid stability or something like that. [...] So, if you have your own house and you almost only self-consume, that's fine, but in the middle of those two scales, there's a big gap so far. So, we are not seeing like small projects, we are not seeing energy communities. So, I think there's a lack of political focus on one hand, also financial focus, lack of knowledge of the people. It's also very unclear what it's possible to do and not possible. [...] And then there's also, I think, an important debate besides the centralised versus decentralised, also the question of ownership. So, who owns the energy systems, even at the local scale and more small-scale systems and even in the energy community concept, we are starting to see like some for-profit companies, even the big utilities, like the large energy players in Portugal, they are starting to try to grab the concept, let's say. And you have energy communities that maybe should not be called energy communities if you go by the European legislation. (P6)

The narrative form of these extracts is seen in the frequent use of conjunctions like “*and then*” or “*so*” which shape representations of the future into an ordered and reasoned account with premises and conclusions. This form allows the speaker to easily identify problems, propose solutions and predict outcomes. The first-person plural (*we*) is more common than it is in other interviewees’ talk about the future, revealing how these actors are oriented towards the common good and engaging with the future in the regime of justification (“*decentralized solar production is crucial for everybody*”). The generic “*you*” is also frequent in these interviewees’ discourse and is used in a similar way as was seen in the expert interviews in Chapter 5, that is, in the same collective sense of the “*we*” but with a heightened *prophetic* force because the absence of the “*we*” renders the judgement more objective. Moreover, the “*we*” is typically used to refer to what has happened – i.e. the past – and the “*you*” is used to refer to what will happen.

This expert style prohibits any strong polemicizing statement of critique or a setting out of rigid or stereotypical oppositions. Rather, both interviewees, though promoting different imaginaries of the future, dialogically engage with multiple possibilities in order to set out realistic predictions. Thus, P5 negotiates between the prosumerism and energy efficiency agendas (“*we're going to meet halfway*”), identifying a possible tension (*people abusing the access to cheaper energy*) and positing that smart technologies and digitalized user engagement via apps will rationalize energy consumption. In line with the primacy of market worth in this imaginary, the orientation here is towards “opportunities” and the “short term future”. Thus, the public is

represented here as it is in the NECP (as seen in Chapter 5): on the one hand, they are lacking capability and in need of protection; on the other, they are self-interested and looking for opportunities. The easy resolution of this tension is in line with the critique-averse future-orientation of discontinuity seen in Chapter 2.

P6, on the other hand, while dissolving the rigid opposition between the centralized and decentralized renewable energy agendas (“*we probably need both aspects*”) and dialogically engaging with the market-industrial Other (“*for industrial customers to have some grid stability*”), offers a more critical account of the energy future that does not bring *everyone* under the signifier of “we”. Thus, the dissolution of one binary opposition is, in this situation, part of a strategy of critique which aims to *unveil* that the real issue is ownership in order to promote a representation of *authentic* energy communities against the co-option of the concept by “large energy players”. Again, it is significant here that the European legislation is cited because it shows how institutions are used in practice but also, insofar as they serve as a legitimization of this critique, that they *make possible* the public justification of alternative futures.

8.5. Discussion and conclusions

This chapter has explored and compared how the future is represented in two very different contexts of Portugal’s energy transition. On the one hand, interviews were conducted with “active citizens” – those members of the general public who are frequently represented in official policy documents and promoted as central figures to Portugal’s energy future. This group was itself a diverse mix. It included representatives of local councils, residential buildings, and community organizations. What each had in common was a commitment to decentralized renewable energy projects in their locality. However, there were two distinct imaginaries of the future of energy communities: one in which market-led, top-down, governance and technological innovation plays the key role, and another where bottom-up community spirit was seen as the main driver.

On the other hand, interviews were conducted with the self-ascribed “victims” of the “dark side of energy transition” (Blythe et al., 2018; Pel et al., 2023) – citizens of rural Portugal whose livelihoods and traditions were confronted with the threatening future of renewable energy industrialization. These citizens are absent in institutional representations of the energy future (see Study 1). This group of interviewees varied in terms of the degree of involvement with the resistance movement against the project. The mobilization of such groups has multiplied in

Portugal in recent years as a response to the “acceleration of the energy transition” (see Study 3) which has involved proposals for large-scale solar PV projects as well as lithium mining projects (Canelas & Carvalho, 2023). In this context, it was seen how the representation of the proposed project was influenced by four different imaginaries which centered around people’s relationship with the place and the community. Importantly, these imaginaries were articulated in narratives that connected past and future at both collective and personal levels.

The comparison of the social representations and expectations circulating in these groups has highlighted the importance of the social construction both of space and expertise for processes of energy transition and the social acceptance of renewable energy innovation. The issue of alternative energy futures and the projective practices of energy publics thus feeds into old debates in the sociology of scientific knowledge about the distinction between “expert” and “lay” knowledge, and the public legitimacy of science (Collins & Evans, 2002; Jasanoff, 2003; Wynne, 2003). From one perspective, legitimacy is only possible when “the public” are given access to participate in deliberations about “propositional” questions (e.g. “are large-scale solar installations environmentally sustainable?”). From a more critical perspective, the issue is about “the institutional neglect of issues of public meaning, and the presumptive imposition of such meanings (and identities) on those publics and the public domain” (Wynne, 2003, p. 402). While this study has not attempted to extensively analyse the relations of practice between “experts” and “citizens” or between “outsiders” and “locals”, it has shown the importance of these self-other relations in the imaginary of energy futures.

The *dialogical structure* of representation was key to understanding the social relations involved in each context. In Cercal, the main self-other relation was constructed in a *spatial* way between the local and the outsider, with the latter taking different forms but usually as an *institutional other*, such as the Portuguese state, which was viewed as being in a conspiratorial web of international interests. This representation can be characterized as place-based because the way it was conveyed often utilized spatial metaphors such as “energy colonialism” and an opposition between center and periphery (see also Valqueresma et al., 2024). By contrast, in the interviewees with “energy citizens”, the self-other relation was constructed in an *epistemic* way as the opposition between lay-person and technical-expert, or between “public” and “expert.” On numerous occasions interviewees represented themselves explicitly as “not experts” but as “curious”, “passionate” or “technically minded” citizens. These interviewees were all highly educated, with

most being male, working in professions such as architecture, engineering or commerce. Importantly, each was either self-employed, retired or had some other arrangement that endowed them a significant amount of free time to devote to their project.

While official expertise was valued and consecrated in the context of nascent energy community projects, it was local knowledge and broader public meanings that were playing a constitutive role in representations of the energy future in Cercal. As Jasanoff (2003, p.392) states, the latter represents radically “other” ways of understanding the world. It was shown how the Cercal residents sought to deploy place-based knowledge in order to contest the reified energy futures that were imposed by the “institutional Other”. Indeed, it was clear that representations of the future in Cercal were refracted through nuanced expectations, critiques and demands of the state. In terms of convention theory, it could be said that residents’ critical representations were partially constituted, and their actions coordinated by, conventions of the state as both *external* and *absent* (Salais, 2023). On the one hand, the state was critiqued for its external position from which its *policy choices* entailed the *sacrificing* of places like Cercal. On the other, the state was critiqued for being absent in the actual implementation of the project, merely creating the conditions for the private developer to implement their project. Developing these critiques, the activist group consistently reiterated their demand for a *situated state* that would recognize their dignity and knowledge by providing them with the opportunity to decide their own fate (Salais, 2023). These activists – of a similar profile as the “active” citizens (i.e. educated and available) – strived to articulate their technical knowledge together with their place knowledge to enrol the community, contest the project and propose alternatives.

In the interviews with “active” citizens, a discursive boundary between lay and expert was repeatedly constructed and often blurred, particularly by interviewees who occupied positions in both worlds, that is as an “active citizen” and as an “energy expert”, and were able to “translate” between the vocabularies of each. Though this group of interviewees did not contain any *official* experts who worked professionally in the energy sector, they were nonetheless holders of a specific form of *technical* capital that can be seen as a new form of *cultural* capital insofar as it functions as a marker of distinction (Bourdieu, 2005; Brock et al., 2010; Zhang, 2010). These interviewees possessed a level of technical competence that went beyond the so-called “interactional expertise” of the others (Collins, 2004). Not only did they demonstrate linguistic competence in talking about energy matters, but they also performed more advanced, formal and objectified “propositional

knowledge” (Collins, 2004) about how energy systems work, about legislative and policy issues, funding sources and public engagement. A third type of expertise, “embodied skill” (Collins, 2004), though not directly demonstrated in the interviews, was evident in the actions that these interviewees recounted, such as holding public information sessions and recruiting participants.

Each of these types of knowledge enabled the imagining of a future that was in line with the possibilities set out in the new laws, but it was also essential for knowing *how* to find the necessary resources for actualizing this future. This ability to imagine the future and locate resources, led to the forming of relationships with intermediaries who were essential, not only for securing project funding and providing technical support, but for refining (or objectifying) visions of the future and managing expectations. However, the reverse could also be said: without the new laws and the new experts the future-oriented practices and imaginaries of energy citizens would likely not have been enacted. This non-linearity of social change is what Jasanoff (2004) refers to as the “co-production” of science, law and social representations.

It is this type of engagement that is expected by the convention of the *situated state*. In other words, it is not enough for residents to have a critical capacity to accept/contest a project, or to enter into a contract with a utility company; they are also expected, and expect, to have the *capability to deliberate* (Bohman, 1999) or at least the *capability to voice* (Bonvin & Moachon, 2012). Thus, as Salais (2023) explains, in the situated state convention:

“What everybody expects from the state is not to intervene in the situation for concretizing itself a common good in the name of abstract or potentially universal rights. Its intervention is more modest, though essential. It is to maintain open the possibility of the common good, *but* of a common good defined and realized by the demos only, and a demos whose members start from the premise of equal dignity” (Salais, 2023, p.15).

That the *situated state* convention was implicitly assumed as *normal* in the interviews with so-called “active citizens” points to how it was *technical* knowledge rather than *place-specific* knowledge which was valorised in this context. Moreover, it reveals how public participation is viewed as legitimate in relation to energy communities and prosumerism, but less so in relation to large-scale energy projects. At the same time, however, the reality of the situated state is not taken as a given and some “active” citizens occasionally criticized the state for not providing the necessary political, epistemic and economic resources that realize the environment necessary for

capabilities. In other words, there was at this stage still uncertainty about whether the state was *absent* (i.e. neoliberal) or *situated*.

What is most significant in this study, then, is not the different types of expertise or knowledge that these actors possessed, but the way that they were socially constructed as valuable and the implicit consequences of this. Despite the high level of knowledge that these actors possessed, their vision of the future was still partially constructed upon the *expectation* of the involvement of a higher level of expertise. In other words, energy communities tended to be represented less as a moral or political issue than as a technical one, and thus the authority of technical expertise was socially constructed and maintained as hegemonic.

Who and what, exactly, constituted this represented expertise? The interviewees referred mainly to Coopérnico – a renewable energy cooperative with national scope – but also occasionally to new renewable energy companies, most of whom have certified knowledge in electrical engineering (see Study 2). These actors are therefore emerging as “new experts” (Rip, 2003) in the institutional space created by new laws. As was seen in the previous studies, their involvement in both the institutionalization (Study 1) and generalization (Study 3) stages of legal innovation has seen them attempt to define themselves as expert authorities in the field of decentralized energy. The legitimacy of their claims, however, depends on their ability to articulate an associated socio-technical imaginary of the future of energy communities (Study 2). This also aligns with Miller and Rose’s (1990) Foucauldian approach to expertise and power relations, which shows how the state depends on “action at a distance mechanism” constituted by systems of expertise which ascribe particular agents and forms of judgement with social authority because of their claims to possess specialized truths.

Significantly, in the interviews with “energy citizens”, relevant “expertise” is not attributed to state actors, even though several of these are active in promoting and regulating the concept (see Study 1). This perhaps reflects culturally specific expectations about reliable and trustworthy knowledge, with the Portuguese state mainly being associated with incompetent bureaucracy (see Study 3) and corruption (Sousa, 2008), especially with the recent resignation of Prime Minister António Costa in connection with alleged corruption and malfeasance in handling lithium mining and hydrogen projects in the country (Hernández-Morales, 2023). For similar reasons, however, the energy citizens construct an epistemic relation of superiority to the general public. The

hegemony of “expertise” and the *industrial* order of worth meant that only rarely was the tacit meaning of public participation in RECs reflexively problematized (e.g. by P6).

The hegemony of the *industrial* order of worth when it comes to energy governance in Portugal also explains the lengths that Cercal residents go to open up the context to alternative meanings and to explicitly question the underlying framing of the project, the place and the community. Indeed, as was shown by the plurality of place imaginaries, *local knowledge* played a key role in constituting the community’s response to the proposed project and to their representations of the future more generally. In both cases, then, it was clear that there was a significant epistemic requirement for engaging with renewable energy in Portugal, whether in the form of opposition to a megaproject or the promotion of community projects.

In sum, the analysis has shown that despite significant differences between the discursive situations, the “active” citizens and the “sacrificed” citizens share a number of social representations and orders of worth. In both groups, negative representations of large-scale, centralized energy projects were complementary to positive representations of small-scale, decentralized energy projects. Moreover, there was a strong demand by interviewees in both cases for what PS has conceptualized as the *situated state*, an institutionalized relation between power and demos that refuses totalization and that takes seriously the capabilities of people, valuing and mobilizing *local knowledge* for the definition of situated common goods.

This imagined future is thwarted in the case of Cercal by market-industrial institutional imperatives of an accelerated energy transition, and it is by no means assured in pursuit of energy communities. Because the latter are predominantly represented as requiring a capability in *technical* knowledge rather than common sense or other types of knowledge there is a strong likelihood that many citizens will be excluded. Moreover, in the absence of impartial intermediaries or provision of resources, there is a risk that differences in capability between participants will not be sufficiently addressed or, worse, that private sector-led market-oriented RECs will reduce capabilities to the mere capacity to say yes or no, characteristic of contractual transactions. Both scenarios, as well the case of the “sacrificed” citizens, show the nuanced ways that the institutionalization and generalization of new laws can not only fail to remedy past inequalities of power but can also generate new ones.

SECTION III. GENERAL DISCUSSION

9.1. Introduction

This thesis departed from the assumption that current efforts to transition to renewable energy systems are based on a contingent process of socio-legal innovation, and the way that different actors imagine and talk about the future is essential to this process and its outcomes. Representations of the future are especially necessary in situations of uncertainty, such as when the *existence* of a community is threatened, or the *reality* of a proposed socio-technical arrangement must be proven. Focusing on the recent proposals for Renewable Energy Communities (RECs), this perspective was shown to be fruitful for elucidating the implicit and explicit tensions that exist between those actors who aim to minimize disruption to existing socio-technical systems and those who seek to encourage it. Moreover, it was able to show the different ways that these tensions were, or were not, *made explicit* by different actors and makes observations about how energy transitions are or are not continuing to serve as an important object of broader social critiques in light of the hegemonization of the decarbonization agenda.

Concerning the representation of RECs in the interaction of legal institutions and everyday life, this thesis identified a tension between *market* and *industrial* orders of worth, on the one hand, and *civic* and *domestic* orders of worth on the other. While the former were largely uncritical, the latter were framed as radical social critiques of the existing system of energy provision, though lacked concrete models or tests of worth, for example to show how RECs would address the issue of energy poverty. By contrast, a third vision of the future based on smart technologies and new business models aimed to overcome these difficulties by establishing a compromise between different actors in the figures of the project and the network in a representation of an exciting and emancipatory future.

In order to strengthen critiques of energy transitions' entanglement with capitalism, and to point out how critique itself can serve to perpetuate systems of exclusion, it is also important observe what these visions of the future are not. In particular, it was clear that future energy communities were imagined in a way that prioritised technical expertise in socio-economically privileged urban settings. More research is therefore needed on how the spatial and symbolic power structures of social class, gender and race are shaping the realization of RECs.

In the following sections the main contributions of this dissertation will be presented. First, the main empirical findings of each chapter will be summarised; second, some practical contributions

of these findings will be proposed; third, the thesis will be situated within the broader theoretical context; lastly, the limitations of this work and suggestions for further research will be highlighted.

9.2. Summary and main findings: plurality of meanings and a depoliticization of the future

Chapter 1 of this dissertation introduced the conceptual frameworks of the theory of social representations and the pragmatic sociology of conventions, bringing them together by focusing on how they conceptualize, first, people's orientations towards the future and, second, the relationship between institutions and everyday life. Chapter 2 used this perspective to structure a review of the social science literature on various dimensions of energy transitions, highlighting the importance of future-orientations in the mediation of institutions to everyday life. The new legal concept of "Renewable Energy Community" (REC) was introduced and positioned as an emerging institutional imaginary of the energy future undergoing a process of generalization imbued with discursive tensions.

It was shown how the energy future is being imagined in a range of different ways, both by institutions and citizens, but also by the systems of communication that mediate between them. The utility of the concept of *orders of worth* for analysing the commonality of representations of the energy future between institutions and everyday life was demonstrated, and hypotheses formed about a possible plurality of imaginaries of RECs. This discussion showed that renewable energy transitions, whether at the policy making level or at the level of everyday life, exhibit tensions between a single future conceived of as inevitable and subject to human mastery, and a plurality of contingent futures based on the diversity of lived experiences of energy provision. This set the scene for the subsequent analysis of the institutionalization and generalization of energy communities in the Portuguese context, with the design of four studies described Chapter 3.

Drawing from a wide range of studies of the Portuguese energy system, as well as key legal and policy documents, Chapter 4 introduced the empirical context by constructing a historical narrative of the evolution of Portuguese energy policy and law, and their relations with broader socio-political changes. It distinguished five periods from 1926 to 2018 by locating changes in the main orders of worth and representations of the future circulating in Portuguese society and institutionalized in laws. The importance and specificity of representations of "modernity" for Portuguese energy policy and law was highlighted, as was the legacy of Portugal's authoritarian

past. Both of these vectors have decisively shaped how the energy future has been successively represented in the present, suggesting that a suspicion of the state and an asymmetry between experts and the public may continue to play a role in the subsequent institutionalization and mediation of Renewable Energy Communities.

In this context, Study 1 (Chapter 5) explored the conceptualization of the energy future within Portuguese political and legal fields from 2019 to 2023. During this period, there was a notable influx of new legislation and regulatory frameworks aligning with the European Union's Renewable Energy Directive, particularly focusing on the introduction of the Renewable Energy Community (REC) concept. This study highlighted the shift in the representation of the future from a singular narrative to one characterized by multiple possibilities, with a new emphasis on public participation. Notably, RECs were implicitly extended to include participation from private enterprises. Two contrasting visions of the energy future emerged: one promoting a neoliberal model centered around the rational and entrepreneurial consumer driving decentralized and “smart” energy solutions, and the other advocating for a more traditional approach where the vulnerable consumer is safeguarded by state intervention within a centralized framework aimed at ensuring stability.

RECs were positioned as instrumental in realizing both of these visions. Their evolution was influenced by subsequent electricity system regulations and associated public consultations, leading to a reconfiguration of their role and significance within the regulatory framework. The regulatory body faced challenges in defining the concept of REC in response to demands for innovation and recognition, grappling with the ambiguity surrounding the notion of “proximity” and the role of “the public.” Ultimately, the study revealed a tension between the cautious portrayal of the future as incremental progress within energy regulation institutions and the transformative discourses prevalent in the public sphere. Furthermore, it underscored how the representation of energy communities as market entities placed citizens on equal footing with corporations, despite the latter's typically greater resources for engaging in energy initiatives.

Study 2 (Chapter 6) explored the construction and interpretation of the new Portuguese legislation regarding RECs through the lens of different types of energy experts. The analysis revealed three primary expert imaginaries of future energy communities which were defined as “business-as-usual”, “empowered citizen”; and “smart network”. Despite the presence of tensions and similarities within and between these imaginaries, they revolved around distinct interpretations

of “locality” and the involvement of “the public,” shaped by perceptions of both past experiences and future projections. Consequently, different rhetorical approaches were employed to convey and envision these perspectives for the future, ranging from narratives of continuity and disruption to those advocating for diversity in futures. The former two orientations are predominantly associated with socio-psychological processes of hegemony, while the depiction of the future in terms of multiplicity was essential for fostering critical discourse and the exploration of alternative trajectories. Nonetheless, a limitation of this critical discourse was its inability to resolve uncertainties and ambiguities surrounding the role of the public in shaping the future energy landscape.

Study 3 (Chapter 7) analyzed the representation of Energy Communities in the mainstream Portuguese media spanning from 2017 to 2023. The analysis unveiled that while the emergence of the new legal framework for energy communities in 2019 did not exactly seize the spotlight of the Portuguese media, it progressively gained traction, assuming a pivotal role in shaping public perceptions of the energy future. Over time, the term “energy communities” evolved from a narrowly defined concept into an objectified social representation which was used as *proof* in arguments across various domains. Furthermore, the chapter highlighted the significance of how future scenarios are communicated in legitimizing discourses and garnering support for specific initiatives. Energy communities were predominantly depicted not as provocative calls to action in a mode of propaganda or as the propagation of an alternative future, but rather as part of the status quo which could be easily *diffused*. This mode of communication served to mitigate uncertainties surrounding the energy future amid looming challenges, including climate change and energy security, while sporadically addressing desires for radical transformations in the dominant energy paradigm and the functioning of the state. Ultimately, the representation of energy communities presented to the public tended to align with neoliberal values, prioritizing market-oriented approaches and voices while downplaying radical shifts in energy provision.

Study 4 (Chapter 8) examined how citizens negotiate representations of the energy future in two very different type of energy transition context. Interviews were conducted with two distinct groups: “energy citizens,” actively engaged members of the general public often highlighted in official policy documents as pivotal to Portugal's energy trajectory; and the self-identified “victims” of energy transition – residents of rural Portugal whose livelihoods face disruption due to the encroaching industrialization of renewable energy. The futures envisioned by the “sacrificed

citizens” were thus shaped by diverse imaginaries of place, while the “active citizens” imagined the future through more generalized representations, predominantly focusing on discourses of innovation and empowerment.

Examining the construction of self-other relations by each group, the “sacrificed citizens” portrayed the institutional other in *spatial* terms, negatively framing it as both an external *and* absent state. In contrast, the “active citizens,” closely associated with expert intermediaries, framed self-other relations in an *epistemic* way, positioning themselves between the general public and experts. This latter situation aligns with the convention of the situated state, where the ideal “active citizen” engages in dialogue with the institutional other through expert mediation and personal involvement. In contrast to the marginalized status of the “sacrificed citizens,” this positioning implies a more empowered role within the discourse of energy governance.

In sum, one of the key empirical findings of this thesis was that the desire for RECs has been largely consensual, despite the very different interpretations about what and who RECs are for. In other words, despite their origins in social movements, RECs have mostly been pursued in a *depoliticised* way. At the same time, in recent years there has undoubtedly been a change in the main representations and orders of worth institutionalised in energy laws and policies. The mainstreaming of the renewable energy transition as a societal issue has led to a plurality of meanings entering into conversation with institutions. Demarcating and mapping these representations has been one of the main tasks of this research. One of the strengths of the theoretical framework adopted for the analysis of these representations is its orientation also to examining the durability of discourses, i.e. the extent to which they are materially equipped or tested. In the following section, the three main imaginaries identified in this dissertation will be compared along these criteria and proposals will be made for formulating new tests from the perspective of the civic and projective orders of worth.

9.3. Practical contributions: towards new civic/projective tests and discursive strategies

If the role of law in contemporary liberal societies is “to limit the use which the strongest make of their strength” (Boltanski & Chiapello, 2018), and if laws are only “complete” in their anchoring and objectification by social representations and conventions (Diaz-Bone, 2012), then the findings

of this dissertation can be framed in such a way as to make contributions towards a just energy future. In the following section, some of these practical proposals will be summarised.

Following from the previous section, it should be clear that the representation of RECs in Portugal has evolved in nuanced ways since its emergence in 2019. It was seen how the new laws and policy agenda, with its double representation of the public as active/vulnerable, led to the formation of three more or less distinct “expert imaginaries” which largely overlooked the vulnerability of consumers, instead developing different understandings of their active or passive *potential* as agents of change or sources of profit. By tracing the tensions and complementarities between these imaginaries and how they were made durable through the institutionalisation of tests, this dissertation has shown that the so-called “business-as-usual” imaginary of RECs has been institutionalised and mediated in such a way that it has been rendered as a more *realistic future*, while the “empowered citizen” and “smart network” imaginaries are lacking in realism, remaining at the level of rhetorical fantasy (Sovacool & Brossman, 2013).

As stated in Chapter 1, it is the ability of claims for the common good to be articulated in a *test of worth* that defines their *realism* and acceptability. While the same can be said for imagined futures, the latter are also important for prefiguring new types of tests which come to be institutionalized, for instance, in laws and regulations. Thus, if the business-as-usual imaginary of RECs is the most *realistic future*, then, it is primarily because the market and industrial orders of worth are already hegemonic in the Portuguese energy sector (see Chapter 4). Anchoring the new concept of RECs in these representations and associated institutional logics has been the path of least resistance because tests are already established and “locked-in,” with energy regarded primarily as a *strategic material* subject to *technical* knowledge. Actively involving the public in policy decision-making or relying on the public to manage energy grids is unimaginable for the institutional actors whose role it is to implement RECs. Even when RECs were represented in the media and the fuzzy boundaries between the three imaginaries largely dissolved amongst a cacophony of interpretations and situations, it was still clear that *market* and *industrial* justifications were the main vehicles for the RECs. This is also because this mediating system, despite being situated more towards everyday life, is dominated by the perspective of industry actors.

Within this hegemony, however, energy is also regarded as a *commodity* which must be traded in a *liberalized* market. As shown in Chapter 4, the liberalisation of the energy sector has been an

ongoing project in Portugal since the late 1980s. In addition to the influence of EU institutions, it is also generated by a representation of an authoritarian past in which the *external* state over-extends into everyday life. The various independent authorities that were created in the 1990s as part of the liberalization contribute to the durability of the business-as-usual imaginary. Even if one of their principal objectives is to ensure fairness and access to affordable energy for consumers, they are founded upon neoliberal assumptions about the societal benefits of market competition. Entirely in keeping with these assumptions, RECs are seen as a way to continue this liberalization process.

As was shown in the analysis of Chapter 4, if citizens are to realistically participate in the market in this way, energy law must also address the *practical inequality* between citizens and companies that is masked by the formal equality that results from treating RECs as companies. At the very least, acknowledging this inequality of *capability* should lead to the design and implementation of programs, initiatives and new public intermediaries, associated with the convention of the *situated state*, to increase the capability or “energy literacy” of the public. A more effective and just response, however, would be to also design new *civic* tests to ensure that private companies (whether utilities, grid operators or startups) are enforced to fulfil their quality-of-service obligations and to provide citizens with opportunities for genuine deliberative participation and collective ownership.

Correlatedly, the “empowered citizen” imaginary, based on a critique of “business-as-usual” was seen to be *lacking in realism*. The various claims that are made from the perspective of the *civic* and *domestic* orders of worth about how RECs will combat energy poverty, increase public participation in the energy transition and lead to energy democracy, have not been realised. Instead of being put to the test, or even of adequate tests being imagined, these values have largely had a performative and rhetorical role as *slogans* that a wide range of actors can endorse. Moreover, this unrealism of the *empowered citizen* imaginary was seen in the pessimism of several of its proponents, but also in the tendency to make discursive crossings into other imaginaries and orders of worth.

The perspectives of “sacrificed citizens” are typically overlooked in institutional representations of the energy future (as observed in Chapters 5 and 6), which have not (yet) been oriented by the issues associated with the “dark side” of energy transitions. These issues are increasingly appearing in the mainstream press (Valqueresma et al., 2024), even if the voices of

the public themselves are not usually given space for expression, as was observed in Chapter 7. In the latter, it was also seen how RECs were occasionally discussed in relation to these issues but, considering that driving public acceptance of renewables was one of the main drivers of RECs at the EU level, this argument was relatively marginal, as was the *fame* order of worth in which it is typically anchored (see Chapter 2).

In their influential work, *Hegemony and Socialist Strategy*, Laclau & Mouffe (2014, p.182) argue that “the strengthening of specific democratic struggles requires [...] the expansion of chains of equivalence which extend to other struggles.” This thesis thus suggests at least two avenues for the strengthening of the empowered citizen imaginary. First, it should forge closer links with the emerging *social critique* of an energy-industrial complex which is perpetuating the “colonisation of attachments” (Groves, 2015) while claiming to uphold ecological and civic values of a “just transition” and “energy citizenship”. Advocates for community energy projects anchored in the civic order of worth should construct relationships with *affected communities*. Likewise, activists involved in conflicts like the one examined in Chapter 8, should continue to experiment with alternative visions of renewable energy future and models of collective ownership of energy infrastructure.

Similarly, history can also be a source of alternative models of the energy future. This anchoring of the new concept of energy communities in the past was a peripheral but recurring theme in this research, predominantly by actors representing the future in the *empowered citizen* imaginary. In one interview, the assertion was made that electricity distribution cooperatives are, by definition, “pure” energy communities and that, therefore, RECs should be cooperatives (see also Gismondi and Hanson, 2021). Departing from this, other interviewees were able to make sense of this tradition as a “historical quirk” that “didn't get integrated many decades ago into the national monopoly on distribution.” Such alternative practices are situated, then, in a broader history to the one that is totalized by the legacy of the *Estado Novo* and are, therefore, represented as a potential model for an alternative energy future, even if they are limited initially by a lack of resources and technological innovation.

Constructing a chain of equivalence between struggles for genuinely *civic* energy communities and demands for alternatives to industrial scale privatised renewable energy projects should not be difficult. Moreover, it stands to reason that institutions cannot continue to avoid dealing with the tensions, at the heart of current energy policy, between an accelerated, privatized and centralized

energy future, on the one hand, and the need for public legitimacy and acceptance on the other. One of the main practical contributions of this thesis should be seen in the capability for discerning between claims and identifying opportunities for resistance that is afforded by the pragmatic sociological framework. Thus, while the *fame* order of worth and associated discourse of RECs *for increasing public acceptance* was largely absent in this research, more recently the investment management company that is behind the solar megaproject in Cercal do Alentejo has made a promise in the media to create an REC for the Cercal residents in a bid to secure public acceptance.¹⁴ Similarly, while the *green* order of worth was absent in arguments for RECs (beyond consensual calls for more renewable energy), there is currently an emerging *green politicization* of the concept by renewable energy companies pursuing decentralized business models and who perceive that the state is unfairly prioritising large-scale projects that they criticise for being ecologically unsustainable.¹⁵

While the “smart network” imaginary may also seem *unrealistic*, its adoption by elite actors, its objectification in the proliferation of emerging technologies and – the main point here – its ability to “absorb” or “recuperate” the values and representations of the other imaginaries means that it is continuing to gain momentum with its promise of a technological revolution. Thus, while the radical critique of the *empowered citizen* imaginary is struggling to have any purchase on reality, the *smart network* imaginary’s discursive strategy of hype is affecting displacements from within the business-as-usual imaginary, by offering solutions to problematic tensions between technocratic demands for *efficiency* and capitalist demands for new sources of *profit*.

It remains to be seen how desires for a digital and cybernetic utopia are able to find fulfilment in an institutional context that is prioritising the stability of small scale and locally bounded RECs. What is more likely, however, is that this imaginary will serve to at least to normalise the “projective” order of worth at its centre as a mode of engaging with and for the public. *Civic* dreams of public participation in technoscientific policymaking via formats such as “citizen assemblies” are seemingly giving way to *network projects* of partnership and collaboration between diverse actors in pursuit of innovation and the common good. These representations were not only steadily

¹⁴ Aquila Group creates energy community behind its largest solar plant in Portugal (Prado, 2023, May 224)

¹⁵ Greenvolt asks the Government for “courage” in investing in energy communities. “It’s all a matter of will” (Sousa, 2024, January 16).

increasing in the media over time but were also supported by actors espousing the *empowered citizen* imaginary. Moreover, their effect on the representations of “active citizens” are already apparent. As was shown in Chapter 8, the image of a distant “smart” techno-epistemic network future is orienting actions in the present, motivating curious citizens to seek out new forms of expertise and opportunities for fulfilment. If these representations continue down the road of hegemonization it will be important for social critique to take advantage of the concept of justice that is endogenous to the *projective* order of worth so that the forms of power and control unique to the network world do not create new forms of exploitation.¹⁶ Institutionalising new *projective* tests that guarantee the fundamental rights of citizens in the context of RECs is especially vital in the *network world* because its foundational commitments to openness and contingency mean that it will be difficult to have consistent expectations of what any given REC will look like. The types of values promoted by REDII provide a starting point for the formulation of new types of *projective* tests, but they should not forget the need to *protect vulnerable citizens* by reifying an image of the *active citizen* onto the public.

9.4. Theoretical contributions

One of the main aims of the first chapter of this dissertation was to systematize and advance the discussion on the different roles that anchoring and objectification can play as key processes in the theory of social representations. Based on and expanding Bauer & Gaskell’s “wind-rose model” of SRT, it was proposed that anchoring takes place in social representations of the future in ways that go beyond only familiarisation (de-Graft Aikins, 2012), with different elements of the “wind-rose” becoming more or less prominent in different situations: when proposing, criticising and justifying new ideas and practices based on existent orders of worth, within the regime of justification, the “other” is primary for anchoring; in the regime of the plan, it is the “project” or goal which plays the pivotal role in determining how the subject anchors the unfamiliar object (Buhagiar & Sammut, 2020; Bauer & Gaskell, 2008); and in the regime of exploration, the “object” is primary – the process of anchoring is deferred and the object’s strangeness embraced.

¹⁶ “Nothing exists resembling a territory where displacements could be subject to control. The circulation of information is very difficult to control. No one can totalize the network, which is more or less opaque to everyone as soon as they deviate from paths that have already been opened up” (B&C).

It was also proposed that SRT can also be useful for pragmatic sociology in the further analysis of the macro-level processes whereby a new order of worth comes about and providing tools to better understand the micro-level dynamics of representation in interaction. In particular, the analysis of the press has revealed the utility of combining focus on discourse and communication with pragmatic sociology's focus on regimes of engagement and conventions. SRT's emphasis on discursive strategies has also been essential to elucidating the relations between different imaginaries of the energy future and the processes of confirmation and critique that underpin socio-legal change.

In summary, this dissertation has shown how a combined approach of PS and SRT can be used in the study of social change, showing its relevance to the growing research on collective futures. As proposed, this inter-disciplinary and theoretically driven research has enabled a deeper understanding of the relations, clashes, and evolutions between distinct modes of representing the future in the everyday situations of social life and how those then relate with and create socio-political and cultural change. More specifically, the proposals made in Chapter 1 have been used throughout this dissertation to critically identify and decode which representations of the future are being put forward by different voices regarding given social issues and objects, for what and with what consequences, namely, in terms of justice, inclusion and wellbeing, and potential for radical change.

Lastly, in this dissertation the aim has been to complement the concept of sociotechnical imaginaries with the pragmatic sociological framework of orders of worth and the social-psychological theory of social representations to enrich and nuance the analysis of how sustainability transitions are currently being institutionalized, generalized and (de)stabilized. This theoretical synthesis has been useful for two principal reasons. Firstly, it has provided a template of the plurality of orders of worth and this has aided with identifying tensions, compromises and changes in discourse. Secondly, because each of these orders of worth is an assemblage of different representations – including of space, time and the common good – the framework has been useful for identifying the objects of representation that matter and their discursive interrelations. Our use of this framework, however, has undoubtedly focused on the representational rather than the material. As such, there are ample opportunities to continue this research in other empirical contexts, using the full gamut of pragmatic sociological concepts such as “tests” and “regimes of

engagement” (Thévenot, 2005) to explore how imaginaries of the energy future are being rescaled and transformed as they are disseminated in society and accepted or contested by different actors.

This research has also highlighted the importance of the discursive context for how people make meaning and, moreover, for their capacity to imagine and engage with the future. From a social psychological perspective it has demonstrated that the content and form of future representations are shaped by the situation in which people find themselves, and in which they constantly negotiate between self and other, and between past and future, to represent the novel or strange objects with which they are faced.

9.5. Limitations and future research

This research has attempted to construct a comprehensive picture of how a new socio-technical object – Renewable Energy Communities – is progressively shaped through the future-orientated meaning-making practices of several different actors in diverse settings. It is innovative insofar as it was conducted from an interdisciplinary perspective, mobilising concepts from science and technology studies, social psychology, sociology, and human geography. While this breadth of scope hopefully makes this work appealing to different audiences, it will also no doubt lead to the observation of the shortcomings of such an approach. In this final section, some of these limitations will be addressed. They are mainly of a methodological nature, but also pertain to the nature of the empirical object under investigation. Rather than devaluing the results of this thesis, however, it is the contention here that they point towards potential avenues for further inquiry.

Firstly, this research has focussed primarily on the psycho-social meaning-making processes and less on the technological arrangements and material practices of RECs and energy futures. It therefore mainly used one-on-one qualitative interviews to explore these processes. While documental and media analysis were also employed, none of the four studies systematically *combined* these methods. Study 1’s analysis of documents shed light on the main representational contents circulating the institutional sphere, and while it did examine the regulatory processes and the plurality of perspectives that were articulated there, other methods could have been used to explore in more detail the material practices that constitute energy futures. To a certain extent, the interviews with experts (including important contributors to the RCN and the REC legislation) did reveal several insights into the institutionalisation process, but another window on the socio-technical construction of the energy future could have been opened by examining the processes

which constituted scenarios and policy objectives and how they influenced the subsequent institutionalisation of RECs (see Groves, 2017).

Secondly, the interviews with key actors of local energy projects could have been augmented by building broader case studies of each of these projects, using a range of different methods or simply having multiple interviews for each case. However, the methodological choices of Study 4 were informed, on the one hand, by the aim to explore how the future was being represented by citizens and, on the other hand, by the fact that there were no actually existing RECs in Portugal during the time period of the empirical fieldwork. Future research could therefore apply the theoretical perspective developed in this thesis to the practices involved in making and sustaining an energy community.

Thirdly, semi-structured interviews, the main method of primary data collection in this research, was well suited to the aim of establishing how the different stakeholders were perceiving the object of RECs and the energy future and provided insights into how they were engaged in the regime of justification. However, this method also had two important limitations. First, it focuses more on what people say in a relatively artificial situation rather than how they act in everyday life. This was the reason that the main insights of Study 2 were about the *imaginaries* of the energy future that different experts had, rather than their strategies of *communication*. Future research could complement these insights by following and observing experts in their day-to-day activities, or analysing situations when they are engaging with others, for example at public events or stakeholder workshops, but it could also follow methods that have been developed in science and technology studies to encourage people to imagine and explore different possible futures (Felt et al., 2018). Again, to a certain extent this kind of research is only possible, or at least made easier, after identifying the different imaginaries that are beginning to form, as this research has done.

Relatedly, the interview method inevitably privileges a certain type of situation where a single interviewee makes meaning in relation to several *virtual* (e.g. the state) and *actual* (i.e. the interviewer) others. However, if the situation is taken as the unit of analysis within SRT's self-other-object ontology, it would be interesting to examine how the same people make meaning in other situations, such as in assemblies where establishing a REC is being discussed with other types of actors. Again, this could be done through ethnographic methods, but future research could also explore dialogical meaning-making and communication processes of both experts and citizens with future-oriented focus groups (Macnaghten, 2017). Such methods would also have the benefit of

raising issues and concerns that may have not arisen in a situation that is more strongly influenced by the researcher. To a certain degree, this limitation was addressed through the inclusion of several group interviews, however the latter were more opportunistic than part of the research design, and thus were not fully utilised.

Each of these limitations point to how the analytical focus of this research was on subjective meaning-making and communication rather than material practices. This suggests that the theoretical framework developed in Chapter 1 was not fully taken advantage of. However, as attempts to implement RECs in everyday life become more common, researchers will be presented with ample opportunities to examine how energy futures, such as those identified in this thesis, are becoming domesticated by different pragmatic regimes of engagement. This thesis has attempted to establish and survey the plurality of possible worlds that the object of RECs can belong to, but now there is a need to focus in more detail on the realisation of specific possibilities. In particular – and as argued above – there is a need to focus more on how socio-technical arrangements such as RECs are co-constructing and institutionalising new conventions of *civic* worth and social critique, such as those which aim to eliminate energy poverty and to increase public ownership of energy infrastructure. Such conventions may be departing from traditional civic discourses and values, such as solidarity and collective action, and pursuing *projective* connections with diverse actors at different scales and with often contradictory interests or using forms of evaluation that belong to the *market* and *industrial* worlds to determine who gets to participate. They may therefore be leading to new forms of exclusion and exploitation, control and commodification. As innovation and change occur, new accountability relations and tests are needed, along with novel forms of critique to effectively address the numerous injustices linked to energy transitions. This thesis has aimed to illuminate potential pathways forward.

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ANNEXES

Annex A. Legal, regulatory and policy sources for Study 1

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Annex B. Interview consent form and debrief



INFORMED CONSENT

The present study arises in the context of a doctoral thesis and the MISTRAL research project underway at **Iscte - Instituto Universitário de Lisboa**, funded by the European Commission through Horizon 2020 program with grant agreement number 813837. This study concerns how the future of renewable energy is being imagined in Portugal – by different stakeholders and in relation to Renewable Energy Communities – and aims to understand the socio-psychological processes and lay-expert relations through which these projects are imagined and accepted or contested.

The study is carried out by Ross Wallace (email: rjwes@iscte-iul.pt), who can be contacted if you have any questions or comments.

Your participation in the study, which will be highly valued, as it will contribute to the advancement of knowledge in this field of science, consists of a one-on-one interview and lasting for 1 – 1.5 hours with guiding questions or a focus group with another 4 people lasting for 2 hours and guided by discussion moderator in Portuguese. There are no significant expected risks associated with participation in the study.

Participation in the study is strictly **voluntary**: you can freely choose to participate or not to participate. If you choose to participate, you can stop your participation at any time without having to provide any justification. In addition to being voluntary, participation is also **anonymous** and **confidential**.

The interview or focus group will be recorded and made openly accessed by the MISTRAL research project and respect the anonymity and confidentiality of participants.

I declare that I have understood the objectives of what was proposed and explained to me by the researcher, that I have been given the opportunity to ask questions about the present study and, for all of them, have received adequate answers, and **I accept** participate in it.

_____ (location), ____ / ____ / _____ (date)

Name: _____

Signature: _____

DEBRIEFING/EXPLANATION OF THE RESEARCH

Thank you for having participated in this study. As indicated at the onset of your participation, the study is about how the future of renewable energy is being imagined in Portugal – by different stakeholders and in relation to Renewable Energy Communities – and aims to understand the socio-psychological processes and lay-expert relations through which these projects are imagined.

We remind you that the following contact details can be used for any questions that you may have, comments that you wish to share, or to indicate your interest in receiving information about the main outcomes and conclusions of the study: Ross Wallace (email: rjwes@iscte-iul.pt)

If you wish to access further information about the study topic, the following sources can also be consulted: <https://mistral-itn.eu/>

Once again, thank you for your participation.

Annex C. Interview guides

Study 2. Interviews with energy sector experts

Aims of interview

My research is exploring the transposition of the EU's Renewable Energy Directive and the institutionalisation of Renewable Energy Communities in Portugal. The aim of this interview is learn more about these processes and what you think, as an expert in the energy sector, the future will look like.

Participant introduction and consent for recording

If you could just give me a brief introduction of yourself. Your name, age and occupation, and state that you consent to the recording of the interview.

Questions

1. When you think about the future in relation to energy and the energy system, what does it look like to you?
 - a. Is that similar to what it should be? What should it be?
 - b. How to achieve it/what has to be done towards that? What are the main challenges?
 - c. Is this view shared? What is expected to happen?
 - d. Role of the public?
2. What are the benefits and main activities of RECs?
 - a. What are they expected to do and how?
 - b. Who will be involved and how?
 - c. What are the factors that limit the decision to participate?
3. What are the main barriers to the development of RECs and what measures should be taken to overcome them?
4. What has been your experience so far with the concept of REC? What are your plans to engage with the concept?
5. Which legal mechanisms of DL 15/2022 are adequate or inadequate and in what sense?
6. Do you believe that the geographic criterion provided for in article 83 DL 15/2022 is fundamental to guarantee the principle of satisfying consumption needs through local production?
7. What is the profile of the key actors for the development of a REC project?
8. In your view, what will be the role of Renewable Energy Communities (RECs) in Portugal's future energy system?

Study 4. Interviews with initiators of REC projects

Aims of interview

I am interested in how actors at the local and regional level are engaging in the new types of energy practices such as Renewable Energy Communities. The aim is to understand the process you have gone through so far; what inspired the project, what difficulties have you faced and how you see the future.

Participant introduction and consent for recording

If you could just give me a brief introduction of yourself. Your name, age and occupation, and state that you consent to the recording of the interview.

Questions

1. When you think about the future in relation to energy and the energy system, what does it look like to you?
 - a. Is that similar to what it should be? What should it be?
 - b. How to achieve it/what has to be done towards that? What are the main challenges?
 - c. Is this view shared? What is expected to happen?
 - d. Role of the public and energy communities?
 - e. How would you characterise the energy transition so far?
 - f. Global/national/local
 - g. What have been the main challenges, critical points and trends?
 - h. Why lack of public participation and community energy?
 - i. Implementation of energy communities in Portugal so far?
2. The Project – can you tell me about the Renewable Energy Community project: How did it begin and what is the aim?
 - a. What is the purpose of your Energy Community; what activities will it perform? Who will be involved?
 - b. What challenges or difficulties has the project faced?
 - c. How could these be overcome? How can energy communities be better facilitated?
 - d. Who will be the key actors for making your Energy Community successful?
 - e. Role of new law and policy? More to be done?
3. What do you think the role of citizens, communities and local government in the future energy system?
 - a. How does that differ from the past and present?
 - b. Local issues and energy
 - c. Cooperative culture

Study 4. Interviews with Cercal residents

Aims of interview

This research is about the proposed solar photovoltaic installation in Cercal do Alentejo. We are gathering the experiences and expectations of people living in the area with the aim of understanding their perspectives and the reasons that there has been widespread opposition to the project in the community.

Participant introduction and consent for recording

If you could just give me a brief introduction of yourself. Your name, age and occupation, and state that you consent to the recording of the interview.

Questions

1. Project – What can you tell me about the project? When was the first time you heard about it and what were your first impressions?

- a. Was it before or after the meeting which took place there at the Cercal Parish Council?
- b. What was your experience during this time? Was it easy to keep up with the developments? What happened next in this story of the project?
- c. Why is this scale of project happening in Cercal? What do you think the reasons are for this? Why here and not somewhere else? What do you know about the developer of the project?
- d. What's the current status, as far you know? Is there still a chance that it can change or even stop?

2. Community – What do other people in the community think of the project?

- a. When did you first become aware of the community opposition to the project?
- b. What reasons did people have for being against the project?
- c. What about people who are in favour of the project, what's their main justification?
- d. Is there a consensus in the community? Are people still talking about it?
- e. What do you think about the group who are opposing the project? Would you like to be more involved?

3. Future – What impact do you think this will have on the region and the community in general?

What do you think it's going look like in the future if the project goes ahead?

- a. How do you see the future of Cercal?
- b. What should Cercal look like for you in the future?
- c. Do you see yourself living here in the future? What about other people?
- d. If there was going to be more projects like this in the future, would this change your plans?
- e. Have you thought about what the alternatives to this project could be?
- f. Have you given much thought about other ways that renewable energy could be done?
- g. Have you heard of the term Renewable Energy Communities?

h. How likely do you think these alternatives are? And on a broader scale?

4. When you think about the future in relation to energy and the energy system, what does it look like to you?

a. Is that similar to what it should be? What should it be?

b. How to achieve it/what has to be done towards that? What are the main challenges?

Annex D. Corpus of press articles for Study 3

#	Source	Date	Retrieved from (all accessed on 25/06/2024)
1	Expresso	26/08/2022	https://expresso.pt/economia/2022-08-25-Temos-de-consumir-menos-energia-0b2e7847
2	Expresso	21/07/2023	https://expresso.pt/iniciativaseprodutos/acelerador-de-sustentabilidade/2023-07-21-As-vezes-o-ceu-esta-nublado-na-transicao-energetica-8736e5a3
3	Expresso	05/06/2020	https://expresso.pt/sociedade/2020-06-05-O-ambiente-tem-de-estar-no-centro-da-recuperacao-economica-diz-Matos-Fernandes
4	Expresso	16/06/2022	https://expresso.pt/economia/2022-06-16-Fundo-Ambiental-disponibiliza-30-milhoes-de-euros-para-apoiar-comunidades-de-energia-6ccb1b91
5	Público	23/09/2019	https://www.publico.pt/2019/09/23/sociedade/opiniao/novo-valor-microproducao-renovavel-1887397
6	Expresso	01/04/2022	https://expresso.pt/opiniao/2022-04-01-Transicao-acelerada-f82fde0c
7	Público	18/10/2019	https://www.publico.pt/2019/10/18/local/noticia/algarve-vai-incentivar-opcao-energia-solar-comecando-edificios-municipais-1890589
8	Observador	31/10/2022	https://observador.pt/2022/10/31/alto-minho-compromete-se-a-atingir-neutralidade-carbonica-ate-2050/
9	Expresso	24/05/2023	https://expresso.pt/economia/economia_energia/2023-05-24-Aquila-Group-cria-comunidade-de-energia-a-boleia-da-sua-maior-central-solar-em-Portugal-3916d17a
10	Correio de Manhã	04/10/2022	https://observador.pt/2022/10/04/arquidiocese-de-braga-vai-reduzir-em-50-os-gastos-com-energia/
11	Público	20/11/2020	https://www.publico.pt/2020/11/20/opiniao/noticia/barreiras-producao-descentralizada-eletricidade-1939736
12	Expresso	07/04/2023	https://expresso.pt/newsletters/expresso-energia/2023-04-06-Baterias-uma-visao-do-futuro-ou-uma-necessidade-imediata--99c42739
13	Público	31/08/2021	https://www.publico.pt/2021/08/31/economia/noticia/beneficiarios-tarifa-social-ja-podem-descontar-cheque-eficiencia-1300-euros-1975812
14	Expresso	08/07/2020	https://expresso.pt/economia/2020-07-08-Bruxelas-lanca-uma-nova-estrategia-para-a-energia-o-que-significa-para-os-consumidores-
15	Público	22/08/2018	https://www.publico.pt/2018/08/22/politica/noticia/a-luta-pelo-ambiente-e-a-luta-pela-cidadania-1841660
16	Expresso	24/05/2021	https://expresso.pt/economia/2021-05-24-Cem-Aldeias-os-desafios-de-um-projeto-para-democratizar-a-energia-solar-comecando-pelo-interior-88395a49
17	Observador	30/01/2019	https://observador.pt/opiniao/os-cidadaos-no-plano-nacional-de-energia-e-clima/
18	Expresso	29/05/2023	https://expresso.pt/opiniao/2023-05-29-Energia-limpa-a-velocidade-da-luz-e906c399
19	Expresso	31/01/2023	https://expresso.pt/economia/economia_energia/2023-01-31-Cleanwatts-tem-comunidades-de-energia-ha-mais-de-um-ano-a-espera-de-licenca-b3790474
20	Expresso	26/07/2023	https://expresso.pt/economia/economia_energia/2023-07-26-Cleanwatts-vai-criar-comunidade-de-energia-renovavel-com-central-solar-no-resort-Verdelago-no-Algarve-fe778922
21	Público	21/11/2021	https://www.publico.pt/2021/11/21/opiniao/opiniao/colapso-colapso-colapso-1985560
22	Público	27/10/2021	https://www.publico.pt/2021/10/27/opiniao/opiniao/autoconsumo-coletivo-oportunidade-perdida-oe22-1982507
23	Observador	18/04/2022	https://observador.pt/2022/04/18/consorcio-com-projeto-de-1-000-milhoes-de-euros-em-sines-para-produzir-hidrogenio-e-amonia-verdes/
24	Observador	15/05/2023	https://observador.pt/2023/05/15/costa-afirma-que-lancou-na-islandia-anzol-ao-mar-para-projetos-de-energia-e-oceanos/
25	Público	05/10/2021	https://www.publico.pt/2021/10/05/economia/entrevista/criar-ilusao-energia-barata-erro-colossal-1979842
27	Público	11/07/2018	https://www.publico.pt/2018/07/11/economia/noticia/entrega-das-concessoes-de-electricidade-as-autarquias-tera-prejuizo-incomensuravel-para-os-consumidores-1837713
28	Público	17/01/2020	https://www.publico.pt/2020/01/17/economia/opiniao/democratizar-energia-eletrica-conter-alteracoes-climaticas-1900504
29	Público	14/01/2022	https://www.publico.pt/2022/01/14/economia/noticia/dgeg-prolonga-suspensao-novos-pedidos-licencas-producao-electrica-1991938
31	Observador	25/05/2021	https://observador.pt/2021/05/25/oito-organizacoes-defendem-criacao-do-observatorio-portugues-de-pobreza-energetica/
32	Correio de Manhã	20/12/2021	https://www.cmjornal.pt/comunicados-de-imprensa/detalhe/taguspark-e-procme-anunciam-a-primeira-comunidade-de-energia-solar-de-maior-dimensao
33	Correio de Manhã	18/05/2021	https://www.cmjornal.pt/sociedade/clima/detalhe/investigadores-querem-contribuir-para-neutralidade-carbonica-das-cidades-a-norte
34	Expresso	10/09/2021	https://expresso.pt/economia/2021-10-10-Carlos-Pimenta-O-pais-esta-roto-na-forma-como-usa-a-energia-bec0a216

35	Expresso	12/11/2021	https://expresso.pt/iniciativaseprodutos/pub/2021-11-12-Da-casa-ao-automovel-o-sol-quando-nasce-e-para-todos-8f4e5fbc
36	Expresso	01/12/2021	https://expresso.pt/economia/2021-12-01-Na-liga-milionaria-do-PRR-a-energia-entra-em-campo-com-artilharia-pesada-56fa03f3
37	Expresso	04/12/2021	https://expresso.pt/economia/2021-12-04-Joao-Galamba-Nao-se-pode-diabolizar-o-litio-e-fechar-os-olhos-a-outras-coisas-2157aea1
38	Expresso	05/04/2022	https://expresso.pt/economia/2022-04-05-Greenvolt-lanca-nova-area-de-negocio-dedicada-as-comunidades-de-energia-1fa40bd8
39	Expresso	07/07/2022	https://expresso.pt/economia/2022-07-07-Portuguesa-Cleanwatts-recebe-investimento-de-ate-25-milhoes-para-desenvolver-comunidades-de-energia-ae05fd5e
40	Expresso	15/07/2022	https://expresso.pt/opiniao/2022-07-14-Reforcar-as-energias-renovaveis-ja-28513357
41	Expresso	23/08/2022	https://expresso.pt/guerra-na-ucrania/seis-meses-de-guerra/2022-08-23-Como-a-guerra-na-Ucrania-estilhou-os-mercados-de-energia-da-Europa-a12caa0f
42	Expresso	29/08/2022	https://expresso.pt/economia/2022-08-29-Do-interior-ao-litoral-de-norte-a-sul-como-as-comunidades-de-energia-estao-a-ganhar-o-seu-lugar-ao-sol-05aff504
43	Expresso	29/08/2022	https://expresso.pt/economia/2022-08-29-Smartenergy-compra-a-Rewatt-empresa-portuguesa-de-solucoes-de-autoconsumo-energetico-ddb42936
44	Expresso	08/09/2022	https://expresso.pt/sociedade/2022-09-08-Lisboa-e-Porto-tem-os-seus-proprios-planos-de-poupanca-de-energia-Reducao-do-ar-condicionado-e-da-iluminacao-publica-sao-duas-das-medidas-1fee5525
45	Expresso	22/09/2022	https://expresso.pt/politica/2022-09-22-Moedas-apresenta-22-medidas-para-Lisboa-e-destina-12-milhoes-a-empresas-com-divida-covid-19-2d54f554
46	Expresso	23/09/2022	https://expresso.pt/iniciativaseprodutos/acelerador-de-sustentabilidade/2022-09-23-Como-aderir-e-poupar-com-as-energias-renovaveis-f2cdac33
47	Expresso	03/10/2022	https://expresso.pt/iniciativaseprodutos/acelerador-de-sustentabilidade/2022-10-03-Energias-renovaveis-Como-podem-elas-contribuir-para-a-sustentabilidade-das-empresas--ffa7dc51
48	Expresso	16/10/2022	https://expresso.pt/sociedade/2022-10-16-Obrigatorio-de-instalacao-de-paineis-solares-em-edificios-deve-ser-uma-realidade-ate-2023-e13af513
49	Expresso	25/10/2022	https://expresso.pt/orcamento-do-estado/2022-10-25-Manso-Neto-E-um-orcamento-relativamente-tranquilo-que-podia-ser-subscrito-por-qualquer-partido-do-bloco-central-51357be9
50	Expresso	20/12/2022	https://expresso.pt/politica/2022-12-20-IL-Candidatos-a-lideranca-reconhecem-emergencia-climatica-e-agitam-bandeira-ambiental-6ce2dc7a
51	Expresso	10/01/2023	https://expresso.pt/opiniao/2023-01-10-Licenciamentos-energeticos-paradigma-atual-e-o-impacto-na-transicao-energetica-caef7d8d
52	Expresso	20/08/2018	https://expresso.pt/iniciativaseprodutos/edp-open-innovation/2018-08-20-O-que-significa-energia-em-2028
53	Expresso	13/02/2023	https://expresso.pt/economia/economia_energia/2023-02-13-Alemanha-Dinamarca-e-Holanda-defendem-intervencao-minimalista-no-mercado-de-eletricidade-europeu-fb0f6a1b
54	Expresso	23/02/2023	https://expresso.pt/internacional/guerra-na-ucrania/um-ano-de-guerra-na-ucrania/2023-02-23-Como-a-guerra-mexeu-com-a-nossa-fatura-energetica-0b156319
55	Expresso	22/03/2023	https://expresso.pt/economia/economia_energia/2023-03-22-EDP-apoiara-com-2-milhoes-projetos-que-promovam-transicao-energetica-justa-f3d24f54
56	Expresso	28/03/2023	https://expresso.pt/50anos/2023-03-28-PRR-Distrito-da-Guarda-recebeu-sete-dos-51-milhoes-de-euros-ja-aprovados-829d985e
57	Expresso	01/04/2023	https://expresso.pt/economia/economia_energia/2023-04-01-Energia-solar-ja-produz-o-equivalente-ao-consumo-eletrico-de-mais-de-um-milhao-de-familias-1cfd2f28
58	Expresso	15/05/2023	https://expresso.pt/economia/economia_energia/2023-05-15-Portugal-quer-seguir-Islandia-na-geotermia-e-explorar-oportunidades-de-cooperacao-nas-eolicas-34d086b5
59	Expresso	21/07/2023	https://expresso.pt/opiniao/2023-07-20-Mercado-da-Eletricidade-Europeu--A-energia-para-as- pessoas-6efc696c
60	Expresso	22/06/2023	https://expresso.pt/economia/economia_energia/2023-06-22-A-procura-de-um-lugar-ao-sol-comunidades-de-energia-dao-os-primeiros-passos-no-pais-com-varias-pedras-no-caminho-71368216
61	Expresso	07/07/2023	https://expresso.pt/opiniao/2023-07-06-Escaldao-solar-54f675e4
62	Expresso	24/07/2023	https://expresso.pt/iniciativaseprodutos/acelerador-de-sustentabilidade/2023-07-24-A-urgencia-da-transicao-energetica-por-parte-das-empresas-8ea9c57f
63	Expresso	01/08/2023	https://expresso.pt/economia/economia_energia/2023-08-01-Mais-de-80-dos-paineis-solares-instalados-em-Portugal-ate-junho-foram-para-autoconsumo-1bc01af3
64	Expresso	06/09/2023	https://expresso.pt/opiniao/2023-09-06-O-veiculo-eletrico-enquanto-ativo-estrategico-da-Transicao-Energetica-411048c8
65	Expresso	14/04/2023	https://expresso.pt/sociedade/2023-04-16-Construcao-de-mega-centrais-de-energia-solar-em-meio-rural-leva-ao-abate-de-milhares-de-arvores-fc09adcd
66	Observador	08/02/2022	https://observador.pt/opiniao/o-fantasma-do-carvao-no-esvaziamento-das-barragens/
67	Observador	08/11/2022	https://observador.pt/opiniao/energia-para-valorizar-o-interior/
68	Observador	01/03/2021	https://observador.pt/opiniao/flexibilidade-sera-a-palavra-de-ordem-nos-mercados-de-eletricidade-renovavel/

69	Observador	26/05/2023	https://observador.pt/opinio/vamos-falar-sobre-comunidades-energeticas/
70	Observador	25/08/2021	https://observador.pt/2021/08/25/comunidades-de-autoconsumo-solar-sao-da-maior-importancia-para-setor-energetico/
71	Observador	13/02/2023	https://observador.pt/opinio/a-reconfiguracao-de-mercado-de-energia-nao-e-remedio-para-todos-os-males/
72	Observador	29/05/2017	https://observador.pt/opinio/a-revolucao-da-energia-solar-vai-acontecer-nos-telhados-dos-outros/
73	Observador	16/09/2022	https://observador.pt/2022/09/16/camara-do-porto-investe-6-milhoes-de-euros-para-produzir-energia-limpa-nos-bairros-municipais/
74	Observador	29/05/2022	https://observador.pt/2023/05/29/associacao-zero-exige-estrategia-de-combate-a-pobreza-energetica/
75	Observador	10/11/2021	https://observador.pt/2021/11/10/nova-legislacao-sobre-sistema-eletrico-nacional-entra-esta-quarta-feira-em-consulta-publica/
76	Observador	10/04/2021	https://observador.pt/opinio/rurbanizacao-neorurais-e-2a-ruralidade/
77	Observador	15/06/2020	https://observador.pt/2020/06/15/producao-de-energia-para-autoconsumo-da-isencoes-nos-cieg-diz-joao-galamba/
78	Observador	17/02/2020	https://observador.pt/especiais/joao-galamba-o-pais-nao-tem-de-se-auto-mutilar-economicamente-para-garantir-a-sustentabilidade/
79	Observador	03/05/2023	https://observador.pt/2023/05/03/lisboa-deve-afirmar-se-na-economia-azul-e-com-oeste-e-vale-do-tejo-promover-estrategia-alimentar/
80	Observador	04/06/2019	https://observador.pt/2019/06/04/pan-quer-travar-colheita-mecanizada-de-azeitonas-a-noite-para-protger-aves-migratorias/
81	Observador	20/06/2021	https://www.publico.pt/2021/06/20/politica/noticia/js-quer-servicos-psicologia-transportes-publicos-gratuitos-jovens-1967237
82	Observador	20/09/2022	https://observador.pt/2022/09/20/contas-do-governo-sobre-pensoes-sao-transparentes-garante-ana-mendes-godinho/
83	Observador	08/04/2021	https://observador.pt/2021/04/08/portugal-ventures-investiu-66-milhoes-de-euros-em-43-novas-startups/
84	Observador	02/05/2022	https://observador.pt/2022/05/02/empresa-norueguesa-otovo-contrata-diretor-geral-da-uber-para-desenvolver-solar-residencial-em-portugal/
85	Observador	17/03/2023	https://observador.pt/2022/04/05/greenvolt-lanca-empresa-para-juntar-produtores-e-consumidores-e-baixar-fatura-eletrica/
86	Observador	22/09/2022	https://observador.pt/2022/09/22/moedas-tem-21-medidas-para-ajudar-a-combater-a-inflacao-inclui-kit-para-bebes-e-alteracoes-ao-fundo-de-emergencia-social/
87	Observador	21/12/2021	https://observador.pt/2020/12/21/as-5-grandes-tendencias-tecnologicas-para-2021-segundo-os-especialistas-ouvidos-pela-bright-pixel/
88	Observador	17/11/2022	https://observador.pt/2022/11/13/oe2023-zero-quer-parte-da-receita-do-isp-destinada-a-melhoria-da-circulacao-pedonal/
89	Observador	17/03/2023	https://observador.pt/opinio/mercados-voluntarios-de-carbono-nacionais-havia-ou-nao-necessidade/
90	Público	24/08/2022	https://www.publico.pt/2022/08/24/azul/opinio/cooperativas-energia-ricas-norte-pobres-sul-2017941
91	Público	06/03/2021	http://jornal.publico.pt/magoo/noticia.aspx?a=2024&m=03&d=26&uid=&id=34045396&sid=124034
92	Público	01/04/2022	https://www.publico.pt/2022/04/01/economia/noticia/programa-governo-passa-lado-crise-energetica-2001021
93	Público	30/06/2023	https://www.publico.pt/2023/06/30/azul/noticia/governo-sobe-85-meta-electricidade-renovavel-revisao-plano-energia-clima-2055238
94	Público	05/04/2022	https://www.publico.pt/2022/04/05/economia/noticia/greenvolt-entra-negocio-autoconsumo-comunidades-energia-2001451
95	Público	01/04/2023	https://www.publico.pt/2023/04/01/azul/opinio/inovador-comunitarismo-renovavel-2043661
96	Público	22/11/2019	https://www.publico.pt/2019/11/22/local/noticia/aldeia-alentejo-testase- hoje-energia-amanha-1894637
97	Público	16/09/2022	https://www.publico.pt/2020/07/16/local/noticia/porto-quer-criar-centro-transicao-energetica-envolver-cidadaos-mudanca-1924721
98	Público	05/02/2023	https://www.publico.pt/2023/02/05/azul/noticia/portugal-nao-chegou-maocheia-comunidades-energia-renovavel-2036970
99	Público	26/11/2022	https://www.publico.pt/2022/11/26/economia/noticia/portugal-so-tres-comunidades-energia-170-esperam-autorizacao-2029266
100	Público	06/04/2021	https://www.publico.pt/2021/04/06/opinio/noticia/reinvencao-movimento-associativo-base-local-1957323
101	Público	24/03/2021	https://www.publico.pt/2021/03/24/local/noticia/primeira-comunidade-energetica-porto-vai-nascer-asprela-1955796
102	Público	25/01/2023	https://www.publico.pt/2023/01/25/economia/noticia/ha-menos-660-mil-pessoas-pobreza-energetica-severa-2036247
103	Público	06/03/2023	https://www.publico.pt/2023/03/06/azul/noticia/ha-2-milhoes-europeus-comunidades-renovaveis-portugal-ha-45-mil-2040758

104	Público	11/08/2022	https://www.publico.pt/2022/08/11/sociedade/noticia/poupar-energia-abrantes-reduz-horarios-iluminacao-aposta-led-2016794
105	Público	27/06/2022	https://www.publico.pt/2022/06/27/p3/noticia/procuramse-pessoas-queiram-produzir-energia-partir-paineis-fotovoltaicos-gratis-2011496
106	Público	06/07/2023	https://www.publico.pt/2023/07/06/azul/noticia/pnec-importante-transicao-climatica-2055663
107	Público	16/12/2019	https://www.publico.pt/2019/12/16/economia/noticia/autoconsumo-tera-cheque-1000-euros-irs-1897564
108	Observador	16/07/2020	https://observador.pt/2020/07/16/investimento-em-energias-renovaveis-melhora-vidas-e-gera-empregos/
109	Público	13/08/2020	https://www.publico.pt/2020/08/13/economia/noticia/erse-preocupada-isencoes-governo-autoconsumo-renovavel-1927912
110	Público	05/02/2023	https://www.publico.pt/2023/02/05/azul/reportagem/romulo-manuel-baixam-factura-luz-produzindo-casa-energia-precisam-2036937
111	Público	29/05/2018	https://www.publico.pt/2018/05/29/economia/opinio/energia-2030-bases-para-uma-agenda-energetica-de-futuro-1832415
112	Público	15/04/2021	https://www.publico.pt/2021/04/15/sociedade/noticia/cem-mil-familias-carenciadas-irao-receber-vales-1300-euros-tornarem-casas-eficientes-1958637
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