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What do we want to achieve with Energy Transition? an insight into changing justice, narratives, imaginaries and the case of Sulcis

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Abstract

Purpose of this work is to examine people's narratives of place with a focus on Sense of Place and future imaginaries, based on the assumption that changing imaginaries and identities of place can foster a more effective energy transition. The challenge of a Just Transition relies on supporting a new vision of the future, which should no longer replicate the injustices of the past, but must instead take into account minority narratives to build a new understanding of the future. Involving not only a radical structural and economic change, but also a new paradigm in the way people and places relate, the transition must be inclusive, coordinated and explicit. In this respect, psychology can play its part. Starting with an overview of Environmental and Energy Justice, this thesis will present the theoretical foundations of the concepts of Sense of Place and Socio- technical Imaginaries. After that, this work will focus on an Italian case study, by examining 12 semi-structured interviews of regional stakeholders in the case of the carbon intensive region of Sulcis. Perception of Sense of Place, future imaginaries and Just Transition will be explored. Finally, after carrying out a discourse analysis, some reflections on the research findings and possible future paths will be made.

Abstract

Lo scopo di questo lavoro è esaminare le narrazioni del luogo da parte delle persone, con particolare attenzione al Senso del luogo e agli immaginari futuri, partendo dal presupposto che modificare gli immaginari e le identità del luogo può favorire una transizione energetica più efficace. La sfida di una transizione giusta si basa sul sostegno a una nuova visione del futuro, che non deve più replicare le ingiustizie del passato, ma deve invece tenere conto delle narrazioni delle minoranze per costruire una nuova comprensione del futuro. Dal momento che comports non solo un radicale cambiamento strutturale ed economico, ma anche un nuovo paradigma nel modo in cui le persone e i luoghi si relazionano, la transizione deve essere inclusiva, coordinata ed esplicita. In questo senso, la psicologia può fare la sua parte. Partendo da una panoramica sulla giustizia ambientale ed energetica, questa tesi presenterà i fondamenti teorici dei concetti di Senso del Luogo e di Immaginari sociotecnici. Successivamente, il lavoro si concentrerà su un caso di studio italiano, attraverso l'esplorazione di 12 interviste semi-strutturate di stakeholders della regione ad alta intensità di carbonio del Sulcis. Verranno esplorati la percezione del Senso del Luogo, degli immaginari futuri e della transizione giusta. Infine, dopo aver condotto un'analisi del discorso, verranno fatte alcune riflessioni sui risultati della ricerca e sui possibili percorsi futuri.

Introduction

Countries all over the world are affected by climate change, which is considered the greatest threat to Global Health and the most important challenge to face in our century (WHO, 2018). According to the Sixth Assessment Report on the physical science basis of climate change (IPCC, 2021), the major cause of global warming is the concentration of greenhouse gases (GHGs), substances released into the atmosphere when fossil fuels (coal, oil and gas) are burned to produce energy for people and industries. In other words, human activities such as power generation, transportation, and the industrial sector have been gradually increasing the proportion of GHGs that are causing climate change and killing every year "over seven million people due to exposure inside and outside their homes" (WHO, 2018). In addition to climate issues, the European Union is experiencing the progressive depletion of fossil resources and a strong uncertainty due to the growing precariousness of energy supplies due to the instability of the main supplier countries (Carrosio, 2014). Consequently, the European Union's political agenda in recent years has been focused on moving away from fossil fuels to invest in renewable energy (Carrosio, 2014). Indeed, this is a process that is likely to take decades, resulting in a medium-term future in which the traditional, fossil-fuel-based energy system will coexist with a new, zero-carbon energy system (Carley & Konisky, 2020). Hence, this "mid-transition" will inevitably involve the concomitant presence of two systems which will impose operational constraints and will have to adapt to each other (Grubert & Hasting-simon, 2022).

In light of this, it is worth noting that although in public opinion energy transition is often treated as a "problem of addiction" (Aronoff et al., 2020), the

transition cannot take place without a gradual phase-out of fossil fuel-based systems (Grubert & Hastings-Simon, 2022). However, in recent years, most academic research has focused on the creation and use of new industrial infrastructures, instead of understanding the effects of retiring the existing ones (Rosenbloom & Rinscheid, 2020). Clearly, decarbonizing the energy system involves moving from a centralized "one to many" to a decentralized "many to many" system (Groves et al., 2021) and could lead to the development of energy self-sufficient communities (Pellegrini-Masini et al., 2020), where the power is generated, stored and consumed. This could influence the way facilities are managed and shared and, thus, the way people interact in the community (Parra et al., 2017). To sum things up, the decarbonization process will inevitably have a profound social impact (Wang & Lo, 2021), entailing highly complex transformations in economic relations, regulatory systems, social practices and all those structures and human lifestyles associated with fossil fuels (Groves et al., 2021; Grubert & Hastings-Simon, 2022) that need to be addressed.

Based on the previous assumption, social sciences have moved into the field of energy transition and decarbonization research to analyse changes from the global scale to local communities and human beings (Carrosio, 2014; Biddau et al., 2022). The role of social sciences becomes crucial when considering that, in the absence of inclusive, coordinated, and explicit planning for the phasing out of fossil fuels and related emission-generating facilities, the social embeddedness and political dominance of existing fossil-fuel emitting systems may pose a major risk to some vulnerable communities and social groups (Wang & Lo, 2021). In fact, in absence of effective management of this "mid-transition" (Grubert & Hastings-Simon, 2022), the transformation could lead to serious social challenges to be addressed, such as local

economic busts, extremely unfair access to high-quality energy and infrastructure systems, and poor coordination of system-level characteristics such as reliability, accessibility and affordability (Grubert & Hastings-Simon, 2022). Therefore, despite being positive, the transition towards green energy appears to be a complex and conflicting process that, while requiring a drop in energy consumption to tackle climate change, also calls for an increase in energy use to meet the needs of those in energy poverty (Sovacool et al., 2016) as well as an immediate solution for those people and communities living off fossil fuels jobs who will be forced to make sacrifices like losing significant wages, along with making compromises in culture, community identity, and sense of place (Carley & Konisky, 2020).

This study aims to fit into research on decarbonization and how "phase-out" policies should preemptively redress the injustices suffered in the energy sector to support the construction of new identities and visions of the future of place. Specifically, the goal is to explore how narratives of the place (sense of place, collective memory) influence the understanding of change and the imagination of socio-technical futures. Moreover, this study is interested in exploring how stakeholders interpret and construct a Just energy transition in their discourse and inquiring about the consequences of their discourse in the decarbonization process.

For this purpose, chapter 1 of this dissertation is a theoretical review intended to provide a general understanding of the socio-psychological perspective applied in the field of energy transition research. In particular, this thesis will give a comprehensive theoretical description of the Justice Framework, hence different forms of Justice that underpin a “Just Transition”, before analyzing the energy-society and people-places relationships. After having considered all theoretical and experimental basis, in the next

chapters a case-study – placed in the Sulcis area under the Tipping+ project: “enabling Positive Tipping Points towards clean-energy transitions in Coal and Carbon Intensive Regions” – will be analyzed. In chapter 2, methods and procedures are explained. Following this, 12 interviews of regional stakeholders are examined in chapter 3, in order to respond to the research questions: What is the talk of stakeholders relating to the place and how this narrative influences the understanding of change (RQ1); What is the precise nature of STIs, and how they are constituted in talk and action (RQ2); How do stakeholders interpret a Just Energy Transition (RQ3). Finally, research findings, limitations and considerations for future research are discussed.

Chapter 1. The Psychosocial contribution to a Just Transition

Energy transition and climate issues are mainly analyzed from an economic, technological, and engineering perspective, nonetheless, energy systems also result in societal rooted patterns that become inert and persistent through long periods of time (Magnani & Carrosio, 2021). Energy systems form routines and habits that are important parts of social life difficult to change, are fundamental to the shaping of our reality and are profoundly influenced by it (Magnani & Carrosio, 2021). Moreover, the production of high carbon emissions is not only an integral part of people's lifestyle, but also the reason why contemporary society developed and dominated the world in the 20th century (Urry, 2011). According to the sociologist Urry (2011), the emergence of the "high-carbon society" has led to the consolidation of social practices that presuppose specific patterns of movement and consumption. Therefore, a profound shift such as the transition to sustainable energies requires a careful assessment of the relationship between human societies, energy, and local communities and a complex re-organization of territories as well as human thinking and behavior (Biddau et al., 2019; 2022). Despite this, while research on technical issues is wide-ranging and detailed, the social aspects of energy systems and their consequences remained until very recently ignored or undervalued, being mainly handled by economic and engineering experts (Henry et al., 2020; Magnani & Carrosio, 2021).

From a human perspective, the idea of transition implies a movement from a place of departure to one of arrival (Sarrica et al., 2016). Ithis regard, some scholars use the term "tipping point" to refer to "individual, social and cultural processes that favour or hinder the transition from one state of equilibrium to another" (Sarrica et al., 2020,

p.10). Positive tipping points are essential for moving to a low-carbon development trajectory, and a lack of understanding of the social and psychological dynamics within energy systems could lead politicians to fail in creating the social preconditions for decarbonization and transition to a sustainable society (Magnani & Carrosio, 2021). In this sense, scholars speak of lock-ins, that is, "factors constraining the structural changes required to put societies on more sustainable paths" (Marquardt & Nasiritousi, 2022, p.621).

This is the reason why, in recent years the interest of social sciences in energy has increased steadily (Magnani & Carrosio, 2021). In addition to numerous sociological studies, an important effort in addressing climate change and supporting the transition to sustainable societies comes from psychology, which contributes to both research and action by examining which processes can encourage or hinder people's adaptation and radical transformations (Biddau, 2019). In particular, social psychology aims to understand the complex interaction between people and socio-ecological, socio-technical, and socio-institutional changes, by investigating the people-environment relationship or the technology-society co-evolution (Biddau et al., 2022).

According to Biddau et al.'s (2022) systematic review of the psychosocial contribution to decarbonization studies, socio-psychological research on decarbonization can be distinguished according to three levels of analysis: intrapersonal, community and societal level. First, at individual level, social psychology studies how individuals experience and represent the external reality – physical, technological, economic, political, environmental, etc. – and how internal experience and emotions influence cognition by directing individual thought and action (Biddau et al., 2022). Secondly, at community level, social psychology investigates collective identification

processes, such as place identity and place attachment among others, sense of place and perception of justice, deprivation, or loss regarding the change in the energy system (Biddau et al., 2022). Lastly, at societal level, scholars explore the influence of local cultural frames of reference on decarbonization processes such as local values, beliefs, ideologies and memories or future imaginaries (Biddau et al., 2022).

Alongside the world of academic research, national and international political debate is also progressively addressing climate change and its economic and social consequences. At the end of 2019, after the European Parliament declared the climate emergency, the European Commission proposed and approved the European Green Deal, which aims to reach no net greenhouse gases emissions by 2050 and to decouple economic growth from the use of energy resources (European Commission, 2022a). Moreover, a major goal of the agreement is to ensure that the transition towards a climate-neutral economy happens in a fair way, making sure no person and no place is left behind. By providing important operational tools and economic funds to support people and communities most affected by the transition, the new Green Deal is the result of the concepts of environmental, climate and Energy Justice and Just Transition, which have emerged in recent years in social sciences as analytical-interpretive frames but have a much longer history, rooted in minorities and workers 'unions struggle for their own rights. These popular and local movements were born from the grassroots, working together to fight inequality, marginalization, and exploitation, and "as they sowed the seeds of a new discourse and paradigm about the relationship between justice and where we live, work, and play, they could not have known the inspiration that they would afford future generations of researchers, policy makers, and activists worldwide" (Agyeman et al., 2016, p.336).

Chapter 1.1. Environmental and Energy Justice: brief historical excursus and theories

The concept of environmental justice (EJ) was introduced in 1987 by the report "Toxic Wastes and Race in the United States" to highlight the status of low-income and black communities, which were much more likely to be exposed to toxic pollutants due to the presence of dangerous waste sites in their communities (Agyeman et al., 2016). This report was the spark for the birth and development of the early environmental justice movement (EJM) (Agyeman et al., 2016), enabling "the victims of this insidious form of racism not only to become more aware of the problem, but also to participate in the formation of viable strategies" (Chavis & Lee, 1987, p. X).

Emerging as an important facet of the environmental political discourse, EJM expanded far beyond the local distribution of pollution, risk, and race to include many other environmental concerns and multiple forms of social inequalities (Walker, 2009b). As both political discursive frame and object of academic study, EJM needed a theoretical framework within which to situate the discourse: According to Taylor (2000), from these environmental reflections a new paradigm was forming, the environmental justice paradigm (EJP), producing a major impact on the environmental movement. The EJP was focused on concepts such as autonomy, self-determination, access to resources, justice, civil and human rights (Taylor, 2000) all of them missing from the "mainstream (white, male, wealthy) environmental discourses" (Agyeman et al., 2016, p.326). From that moment, EJ became a civil right and, most of all, since collective identity formed in the civil rights movement, an integral part of the civil rights identity (Taylor, 2000).

The expansion and globalization of the EJ framework has led scholars to highly diversify both methodologies and issues to be addressed (Edwards et al., 2016; Agyeman et al., 2016) but, rather than viewing this differentiation as a weakness, EJ researchers have developed the theoretical underpinnings to consider justice as multivalent, "recognizing diversity without attempting to homogenize it" (Edwards et al., 2016, p.757). In this regard, David Schlosberg's contribution was fundamental to a more solid theorization of EJ Justice (Edwards et al., 2016), which began to be intended as multivalent and pluralistic. In fact, Schlosberg (2004, 2007) suggested that EJ should expand beyond the unequal distribution of risks and negative impacts to include processes of recognition and respect for differences of participants and affected communities, as well as inclusion and participation in procedures which establish and manage environmental policy. The author explained EJ as composed of three different "interlinking, overlapping circles of concern" (Schlosberg, 2004, p.521): distributive, procedural and recognition justice. To begin with, distributional justice refers to the unfair allocation of physical environmental benefits and risks, as well as associated responsibilities (Walker, 2009b). This conception of justice considers not only problems of production, but also those of consumption. For example, into the field of energy, distributional justice concerns the location of energy infrastructures, which affects communities and individuals differently, and access to energy services (Jenkins et al., 2016).

Secondly, recognition justice suggests that individuals must be fairly represented in the political discourse and that they must be offered the same political rights (Scholsberg, 2004). Moreover, non-recognition can be expressed in various forms of cultural and political domination (Biddau, 2019). Lack of recognition may occur not

only as non-recognition, but also as misrecognition, that is, a distortion of people's views that may be considered demeaning or despicable (Scholsberg, 2004). Therefore, it involves the recognition of divergent perspectives embedded in social, cultural, ethnic, racial and gender differences (Jenkins, 2016). Recognition and/or respect are inherent preconditions for distributive justice (Schlosberg, 2004). Finally, procedural justice addresses issues of access to decision-making processes that regulate distributions of physical environmental benefits and risks (Jenkins et al., 2016), which should include fair procedures involving all stakeholders in a non-discriminatory way (Walker, 2009b). According to Walker (2009b), fair processes should allow for "a fluidity of movement of people, ideas and perspectives across the boundaries of institutions and between differentiated elite and lay spaces, creating open rather than constrained networks of interaction and deliberation" (Walker, 2009b, p. 627).

Since then, several scholars moved beyond the theorization of the meaning of justice by emphasizing its non-distributive dimensions (Edwards et al., 2016), and a small but critical group of researchers began to adopt the "capability approach" as a conceptual framework within which to orient EJ (Holland, 2008). In fact, unlike the traditional Rawlsian conception of "justice as fairness", the capability approach considers well-being, rather than the distribution of "primary goods" (Rawls, 1999 as cited in Edwards et al., 2016), as the main measure of justice (Edwards et al., 2016), which is no longer viewed as absolute but comparative, depending on what is valuable and worthwhile to people (Edwards et al., 2016). Developed predominantly by Amartya Sen and Martha Nussbaum (Sen and Nussbaum, 1993; Nussbaum, 2006; Sen, 2009 cited in Edwards, 2016), the capability approach considers justice achieved when people are enabled to live a life, they consider to be worth living (Edwards et al., 2016). By

distinguishing between functioning - that is, what people achieve - and capabilities, this approach considers all potentially available abilities, both reached or not, and underlines the difference between well-being achievement and well-being freedom (Ballet et al., 2013). As a matter of fact, although it is not possible to achieve a certain level of well-being without being able to perform various vital functions such as having good health, a home, being socially recognized and respected, the following question is how this form of well-being can be achieved (Ballet et al., 2013). People may not be capable of reaching this level of functioning because of factors such as disability, discrimination, living in a dry region that block the capacity (capability) to turn endowments into achievements (Ballet et al., 2013). These elements may therefore represent a major cause of unfair inequality and inequity (Fakhri, 2011).

Schlosberg himself, in defining EJ (2007), suggested the capability approach as a central key component of EJ organization, especially at the collective or community level, as EJ is about re-establishing the abilities needed for a healthy, functioning community. Similarly, Walker (2009a) argued that the capability approach "captures the breadth of what is threatened, what is seen as fair and unfair, and what is valued in a richer and more satisfactory way" (p.205). According to the author, capabilities theory embodies multiple and different forms of justice, while retaining flexibility in how to ensure wellbeing (Walker, 2009a). Therefore, this approach is considered by several scholars a strong support to the "radical heart" (Edwards et al., 2016, p.758) of EJ and to the theory and practice of justice pluralism (Edwards et al., 2016).

With the conceptual expansion of the EJP, the EJM and its literature have been globalized (Agyeman et al., 2016). According to Schlosberg (2013), three expansions of EJ have occurred: "horizontally into a broader range of issues, vertically into

examinations of the global nature of environmental injustices, and conceptually to the human relationship with the non-human world" (Schlosberg, 2013, p.37). More recently, EJ research and practice has been focused on materials and activities of everyday life like food and energy, the community and the importance of attachment and the relationship between human practices and non-human nature, such as the energy and climate concerns (Agyeman et al., 2016). In addition, movements labeled with a justice appellation (e.g., climate justice, indigenous justice, food justice, energy justice) have significantly increased, uniting under the umbrella of social justice, and borrowing directly from the different conceptions of justice into the EJP (Agyeman et al., 2016). An important civil rights movement was the one focused on climate justice, which moves away from the discourse on pollution to highlight the right to share the benefits and burdens of global warming from a human rights perspective (Heffron & McCauley, 2018).

Originally born as a protest movement that threw light on the inequalities and injustices affecting minority communities, the EJ has been a "rallying cry, a motivator and a powerful idea" (Agyeman et al., 2016, p.336) that inspired scholars around the world on a wide range of issues. Nowadays, EJ is used to raise new social problems including food, climate, energy, city planning, gentrification, and displacement (Agyeman et al., 2016), turning attention to the close and complex relationship between environment and social justice.

1.1.1 Energy Justice and Just Transition

Although the concept of Energy Justice was first used in the early 2000s in the field, especially by NGO working to end fuel poverty (Heffron & McCauley, 2017), it wasn't mentioned in academic research until 2010, when it was essentially linked to

energy poverty (Guruswamy, 2010). Since then, the term has mainly been used in connection with other topics such as ethical consumption and climate change, without ever opening a debate on a common meaning and definition (Heffron & McCauley, 2017). Only recently, Energy Justice has emerged as an interdisciplinary object of research, which seeks to apply justice principles and human rights across the energy life cycle (Heffron & McCauley, 2018). From an extraction and production point of view, Energy Justice claims the right of all stakeholders to participate, modify and guide energy decision-making processes (Carley & Konisky, 2020). On the other hand, from a consumption perspective, Energy Justice also concerns energy poverty, which refers to the highly unequal distribution of access to energy, especially heating and electricity, due to unaffordable prices for energy services (Jenkins et al., 2016). In addition, it also points out that all individuals should have access to safe and sustainable energy, in order to ensure a dignified lifestyle (Carley & Konisky, 2020).

It was in early 2013 that Energy Justice was defined within the world of academic research for the first time (McCauley et al., 2013), becoming a new core research agenda in both scholarship and practice. These authors filled an important gap into the set of literature about Environmental and Climate Justice, shedding light on justice concerns in energy policy, in a time of fuel poverty and resource depletion (McCauley et al., 2013). Firstly, McCauley et al. (2013) defined Energy Justice as having three core themes or tenets, known as the "triumvirate of tenets": distributional, procedural, and recognition justice. On the other hand, Sovacool et al. (2016) described Energy Justice as based on eight core principles which include: availability, affordability, due process, transparency and accountability, sustainability, intra-generational equity, inter-generational equity, and responsibility. Finally, other authors

emphasize the importance of adopting the Energy Justice concept at every stage of the energy life cycle (Jenkins et al., 2014), from extraction to production to consumption to waste. This is truly important, especially in recent years, considering the urgent call to move away from fossil fuels in favor of more sustainable energy resources, which is a shift that may lead to “new injustices and vulnerabilities, while also failing to address pre-existing structural drivers of injustice in energy markets and the wider socio economy" (Sovacool et al., 2019, p.581). As a matter of fact, as well as coal and carbon-based infrastructures, low-carbon energy facilities have also negative consequences that will mainly affect those communities in the proximity of the plants (Carley & Konisky, 2020), producing localized “sacrifice zones” where locals are even denied the benefits of accumulation, production, and consumption (Brock et al., 2021). In addition to the loss of jobs for those people working in carbon-intensive industries, who often face difficulties in getting a new job due to a skills gap (Wang & Lo, 2021), energy transition may lead to other problems, such as increased energy insecurity since, at least in the short term, the cost of energy is likely to rise, and this in turn will mainly affect poor communities that already struggle to pay for their energy (Carley & Konisky, 2020). Moreover, although it is widely demonstrated that renewable energy industries offer more job opportunities than fossil fuel industries *(*Cameron & van der Zwaan, 2015), this new sector shares the same inequalities as fossil fuel industries, as there is evidence that jobs in the energy sector are rarely filled by women and people of color (Carley & Konisky, 2020). Consequently, considering all the possible negative social consequences of such a shift, without considering the low-carbon transition as a “magic elixir for a more just world” (Wang & Lo, 2021, p.2), is truly important to not replicate all the injustices perpetrated in the past fossil fuel-based world.

However, taking into account the negative consequences of the energy transition is far from straightforward and simple. For example, while leaving fossil fuels is important to protect the environment, on the other hand this development will lead to the loss of high-paying jobs for fossil fuel workers (Kalt, 2021). For this reason, it was argued by some scholars that a more global and human right-centred perspective was needed (Agyeman, 2014; Heffron and McCauley, 2017), rather than one focused on civil rights and at the local level. Furthermore, other researchers have pointed out that transition has different meanings due to different conceptualizations and have suggested that, in order to sustain such a process, it is necessary to have a unified concept, the concept of "Just Transition" (Heffron and McCauley, 2018).

The Just Transition Framework

The idea of a "Just Transition" finds its origins in the 1970s, in the US labor movement (Henry et al., 2020), and has become part of the political discourse and policy discussion from the late 1990s, thanks to organizations like the International Labor Organization (ILO), which advocated the need to support a Just Transition (Henry et al., 2020). In 1997, labor unions and EJ organizations jointly founded the Just Transition Alliance (JTA), which aims to protect and inform people of color, indigenous peoples and low-income communities living under the threat of polluting industries, as well as workers in the energy service sectors (JTA, 2022). JTA's main goal is to shift toward a sustainable economy without compromising people or the environment (JTA, 2022), making possible the coexistence between a healthy environment and a strong economy (Henry et al., 2020). Since the early 2000s, Just Transition concept has become part of the research agenda of energy and justice scholars, who have engaged in addressing the question of energy transition and the intersection between Energy Justice

studies and transition research (Carley & Konisky, 2020), focusing on the conceptual development of a “Just Transition”. Finally, in 2012, the Climate Justice Alliance (CJA) formed, focusing more on social justice and the importance to fight structural inequalities (CJA, 2022). The CJA states that transition must be just and equitable and defines transition as “a vision-led, unifying and place-based set of principles, processes, and practices that build economic and political power to shift from an extractive economy to a regenerative economy”, with the further aim of “readdressing past harms and creating new relationships of power for the future through reparations” (CJA, 2022).

Generally speaking, the notion of a Just Transition aims to highlight the importance of building an equitable energy system, which implies the need of redistributing wealth and providing sufficient and safe energy services to all people with special attention to marginalized and disadvantaged minority groups (Healy & Barry, 2017). Nevertheless, even today, after more than 20 years of study, there is still no universal and shared definition of a Just Transition. This is precisely because of the different interpretations by numerous scholars from various disciplines, which have led to multiple and often unclear definitions (Henry et al., 2020), making communication and debate about the concept really difficult (Wang & Lo, 2021). According to Wang & Lu's (2021) comprehensive conceptual review of the literature on Just Transition, the term has become multifaceted and problematically polysemic, generating confusion and different understandings as well as different interpretations on who should be considered vulnerable. The authors identified at least five themes in which Just Transition term has been adopted in academic discourse: First, based on the historical origins of the concept, some scholars intended Just Transition as labor-oriented, which

theorization has been criticized as the focus was mainly on male-dominated fossil fuel employees, without considering other vulnerable groups. Secondly, it is suggested by some that Just Transition could be a framework for applying justice principles into socio-technical transition studies. Then, some researchers studied how Just Transition takes place according to the type of governance, while others explored people's perceptions regarding justice and energetic transition (Wang & Lu, 2021). Finally, by linking Just Transition to other concepts of justice, other scholars conceive Just Transition as an integrated framework of justice. It was the case of Heffron and McCauley (2018), who have recently suggested the need for a more unified "Just Transition" concept, which should include not only Energy Justice, but also EJ and climate justice. According to the authors, while the latter are mainly focused on adaptation, since the damage has already occurred, Energy Justice aims to tackle injustice in advance, thus before the harm is caused (Heffron and McCauley, 2018). Therefore, the "Just Transition" concept may represent a joint conceptual space in which organize a just and equal transition, analyzing all the possible effects at different levels and perspectives (McCauley & Heffron, 2018).

Simultaneously, Just Transition principles have been increasingly become part of the national and international political agenda. At the European level, they have been integrated into political discourse since at least the early 2000s, probably reflecting the delayed attention to environmental justice issues at the political level compared to the United States (Henry et al., 2020). Back in 2012, when The United Nations Conference on Sustainable Development (Rio + 20) was held to renew the political commitment to sustainable development, the final report "The Future We Want" included Just Transition language (UN, 2012). After that, a major step was taken with the Paris

Agreement in 2015, which is the first universal legally binding global climate deal with the long-term goal to limit global warming and global GHG emissions (European Parliament, 2022). With the Paris Agreement, developed countries were required to "take into account the imperatives of a Just Transition" and climate justice, by providing financial, technical, and capacity building support to the most vulnerable countries (UN, 2015). Then, in 2017, the organization for Economic Co-operation and Development (OECD) published a major report on Just Transitions written by the Just Transitions Centre (Just Transition Centre, 2017). Finally, the European Union's commitment to a Just Transition is reflected in the key tool "Just Transition Mechanism" (JTM), which was part of the 2019 European Green Deal and was created to provide support to the regions most affected by the socio-economic impact of the transition, hence the regions that are most carbon-intensive or with the most fossil fuel-workers (European Commission, 2022b). The Just Transition Mechanism aims to protect vulnerable people by providing new employment placements and re-skilling opportunities, improving energy-efficient housing, investing to tackle energy poverty, and facilitating access to secure, clean, and affordable energy.

1.1.2 From theory to practice: Restorative Justice and Coal-Intensive Regions

Although the idea of justice as an intrinsic and essential part of energy transition policies is widely accepted (Banerjee & Schuitema, 2022), the fact that there is no universally agreed-upon definition presents significant challenges (Henry et al., 2020). As Heffron & McCauley (2017; 2018) suggest, too often in climate, energy and environmental justice research, it is unclear what type of justice is needed as well as how this justice should be implemented and translated into practice. According to the authors, the Just Transition framework can create the conditions for a return to the

"clarity of thought" of the original EJ movements, when Justice was considered applied if the protesting group were successful and they forced a legal and/or political change to a project, producing a concrete and visible result. On the other hand, others suggest that greater clarity on the concept of Just transition could foster its practical implementation (Banerjee & Schuitema, 2022).

Although there are many theorists of justice in all its forms, few of them address its application and those who do make the attempt face great difficulties. In this regard, Heffron & McCauley (2017) suggest that the application of Restorative Justice (RJ) at each stage in the energy cycle will guarantee justice as assumed in practice. Although for many years justice research was based on three core tenets (i.e., distributional, procedural and recognition justice), RJ is recently emerging as a popular term, especially in energy research (Heffron & McCauley, 2017; 2018; Hazrati & Heffron, 2021). This is because of the potential impact RJ can have in the implementation of a Just Transition Plan. Explored primarily within the world of decision-making, policy-making and criminal law, RJ goes beyond the mere punishment of offenders for committing an injustice and is aimed to repair the damage done to individuals or communities (Heffron & McCauley, 2017). In other words, with reference to the energy transition area, according to RJ principles "any injustice caused by the energy sector should be rectified and be part of preventive and forward-looking action" (Hazrati & Heffron, 2021, p.103). As Heffron & McCauley (2017; 2018) suggest, the application of RJ in Energy Justice and Just Transition decision-making constraints decision-makers to address and repair any potential harm caused by an energy activity, returning the victim to its original position. On a practical level, this means that all parties involved are aware from the very beginning of the process that any kind of damage must be repaired,

preventing all risks to stakeholders that could be negatively affected by the ongoing transition (Hazrati & Heffron, 2021). Therefore, while on the one hand RJ provides a unifying purpose of the Energy Justice concept that all scholars can pursue, on the other hand it also sheds light on how to respond to the harm caused and how to identify the injustices that primarily need attention (Heffron & McCauley, 2017), bringing justice concept from theory to practice (Hazrati & Heffron, 2021).

Not only this, but RJ can also go beyond job replacement and economic rehabilitation to include concepts such as human dignity, the capability to lead a meaningful life and the mental health of workers and communities (Banerjee & Schuitema, 2022). According to the results of a case study conducted by Banerjee & Schuitema (2022) concerning a Just Transition process in the Irish Midlands, many workers said they were emotionally affected by the closure of the peat industry and the loss of their jobs. Interviewees reported they missed the sense of community built up in this job and in this company, which was "part and parcel of life" and a safe place to discuss professional and personal problems, to the extent that "if you arrived with a problem in the morning, you came home at night with the problem solved".

There are plenty of examples showing that people living in regional systems heavily dependent on coal mining activities – namely Coal and Carbon Intensive Regions (CCIRs)– often resist energy and Just transitions (e.g., see Cha, 2020) in different ways and in different geographical contexts. For instance, during a decarbonization process in the coal-dependent region of Silesia, in Poland, some interviewed stakeholders stated that the process would bring uncertainty and negative changes to the region (Stoll-Kleemann & O'Riordan, 2020). Regarding Energy Justice, some authors have also studied the relevance of different competing narratives of justice

issues (Leciejewski & Perkins, 2015). Indeed, every relationship with the environment is mediated by culture, and socio- phenomenological reality is inseparable from local knowledge, institutional cultures and the creation and use of artefacts as a way of preserving, transmitting, or transforming meaningful place practices (Sarrica et al., 2020). From this point of view, tipping points enabling transitions can be considered as transformations in shared narratives and meanings associated with practices. In other words, tipping points can be understood as reinterpretations of the past or visions through which individuals and communities project themselves into possible or alternative places and times. However, there are still few studies on the perceptions and narratives of affected people and communities of the Just Transition process (Banerjee & Schuitema, 2022).

To conclude, energy transition is a transformation that involves a deconstruction of identities and future visions, which are rooted in the memory and history of the community and are difficult to change, especially in communities where subsist large inequality between people and low trust in institutions (Magnani & Carrosio, 2021). For this reason, psychology needs to address the following question: "how and under what conditions can the transition take place without depriving people of their identity and self-determination?".

Chapter 1.2 Where we live, work and play: the bond between energy, people, and place

Although EJ activists started to fight for minority rights about 35 years ago, guided by the symbolic phrase "where we live, work and play", even today scholars and activists pay little attention to what that "where" means (Agyeman et al., 2016). According to human geography scholars, space cannot be considered as a "neutral

receptacle passively awaiting to be filled by human activity" (Chateau et al., 2021), but rather it is intrinsically linked to the social life that populates it. If on the one hand, the space is produced and shaped by social and power relations with others, on the other hand it is an active and dynamic force that influences social processes (Chateau et al., 2021). Indeed, according to Agyeman et al., (2016), the "others" with whom we relate need not necessarily to be understood as human beings but can also belong to the nonhuman world. In this direction, many scholars consider technologies not only as material things, but also as components embedded in a social system that includes infrastructures, users, consumers, regulators and other intermediaries (Bijker & Law, 1992 cited in Magnani & Carrosio, 2022). According to this perspective, technological and societal are mutually co-constituted and researchers that have the capacity to grasp these mutual interconnections between technology, society, and the environment are adopting a distinctive "socio-technical lens" (Hess & Sovacool, 2020, p.2).

In energy social science, a growing body of research emphasizes the importance of understanding the mutually constitutive relationship between energy, society and space (Chateau et al., 2021), especially regarding the energy system transformation, as it is a socio-spatial process involving changes at the technological, relational and spatial levels, that shapes and is shaped by relationships, practices, identities and imaginaries (Bridge et al., 2013 among others). From this perspective, scholars are increasingly underlining the important role that psychological factors play in maintaining system stability, reinforcing carbon lock-in and path dependency (Biddau et al., 2022) or, conversely, in facilitating transformation. For instance, a recent systematic review from Sarrica et al. (2020) outlined how the mediation of others influences perceptions of decarbonization, just as the community's projection into the past and future influence

the evaluation of change. In addition, among societal and intergroup determinants that may act as facilitators or barriers to change, the authors highlight the role of social representations (such as collective memory, meaning-making processes, and community imaginaries), social identity and sense of community and, finally, place attachment and/or the perception that a particular land use fits with places (Sarrica et al., 2020).

On a practical level, this attention to the social and cultural dimension of technologies implies moving away from a top-down perspective to acknowledge the differentiated and dynamic spatiality of energy systems (Chateau et al., 2021), adopting a planning perspective that is not limited to ensure the acceptance of a technology by the population, but rather aims to adapt that technology to the place and the collective sense of belonging (Magnani & Carrosio, 2021).

1.2.1 Energy and Society: the sociotechnical lens

The sociotechnical approach originates in the emerging interdisciplinary research field named "Science, technology and society" (STS), which examines how technological artefacts are developed, maintained, and modified and how changes in the material world (science and technology) and in society result from their mutual formation and co-production (Hess & Sovacool, 2020). In other words, STS scholars aim to understand the functioning of "heterogeneous ensembles of people, artifacts, infrastructures, research, cultural categories, norms and laws, and natural resources*"* (Hess & Sovacool, 2020, p.3), also called sociotechnical systems.

The application of theoretical frameworks associated with STS in social science energy research is becoming increasingly prominent, especially as sociotechnical lenses are needed to capture what scholars from other disciplines may leave in the "black box

of uninspected exogenous factors" (Hess & Sovacool, 2020, p.2). According to Hess & Sovacool (2020), STS is not a single perspective, but rather a sensibility through which looking at processes of mutual definition, maintenance, and co-construction between epistemic, social and technological entities and symbolic and environmental systems. Moreover, the sociotechnical approach provides the adequate rationale for technological stasis and change by adopting social and cultural perspectives that include social movements, social structure (such as race, class, gender, sexuality etc.) values and cognitive categories among others (Hess & Sovacool, 2020). Indeed, In the case of the energy transition, the STS point of view implies that energy systems represent more than production, distribution and consumption of energy, but they form and are formed by social, cultural, political, and economic processes (Chateau et al., 2021).

Of particular importance for energy research is the work on sociotechnical imaginaries. Drawing on the concept of imagination, which help people visualize possible futures, Jasanoff & Kim (2009) introduced the concept of sociotechnical imaginaries (STIs), intended as "collectively imagined forms of social life and social order reflected in the design and fulfilment of nation-specific scientific and/or technological projects" (p.120). In other words, this concept describes the visions and expectations that individuals may project towards material objects and technologies, which become vehicles of new and different social meanings (Magnani & Cittati, 2022). These representations of socio-technical futures are not individually held but rather they are built in society (Marquardt & Nasiritousi, 2022) and shared collectively among individuals, shaping narratives and collective identities (Jasanoff & Kim, 2009).

Since these collective imaginaries create shared expected futures, they play an important role in the transformation or stabilization of an existing sociotechnical regime

(Hess & Sovacool, 2020). Indeed, potentially highly distressing STIs resulting from the disappearance of carbon-based infrastructure may create conditions for resistance to transition (Jasanoff & Kim, 2009; Grubert & Hastings-Simon, 2022). As an example, Yang et al. (2018) showed that in Taiwan the narratives of the nationalist imaginary, which involved short-term electricity shortages, contributed to maintain the electricity regime, preventing the adoption of renewable alternatives. To describe this not uncommon phenomenon, Marquardt & Nasiritousi (2022) have developed the concept of imaginary lock-ins, intended as "the result of complex societal mechanisms that limit our ability to reimagine society and develop a desirable alternative future that differs from the status quo of a fossil-dependent society" (p.622). Obviously, since the state is always divided into different groups (such as different parties or different spatial levels), there are multiple imaginaries that may be in conflict with each other, just as there are different imaginaries produced by civil society organizations, social movements, communities or industries (Hess & Sovacool, 2020). These imaginaries in turn influence the decisions taken by states, companies, social movements and professional societies to realize the expected futures they wish to implement (Longhurst & Chilvers, 2019; Magnani & Cittati, 2022). On this assumption, Marquardt & Nasiritousi (2022) suggested an analytical framework that identifies four different and competing decarbonization imaginaries (See Tab 1).

Tab 1. Four idealized decarbonization imaginaries (Marquardt & Nasiritousi, 2022, p.626)

		Scope *(What needs to be changed to mitigate climate change?)*	
		Individual/sector-wide	System-wide
Approach *(How to mitigate climate change?)*	**Reformist**	(1) Techno-optimism Market-driven innovations and new technologies foster incremental progress in terms of efficiency gains and reduced emissions. E.g. *Electric vehicles, biofuel-powered air travel, climate-smart consumption*	(2) Ecological modernization Increased environmental consciousness, market incentives, and sustainable lifestyles lead to a gradual greening of society. E.g. *Green growth, sustainable development*
	Radical	(3) Disruptive innovations Radical technological and societal innovations disrupt traditional business models and behavior. Incumbents fail to adapt to or incorporate new models. E.g. *Car-sharing, repair cafés, sustainable product cycles*	(4) System change Radical democratic alternatives to the capitalist system address issues of justice, equality, and power related to climate action. E.g. *Climate justice, radical democracy, degrowth*

According to the table, while techno-optimism and ecological modernization on the one hand reflect a strong lock-in imaginary in which the future is built on the basis of a gradual technological progress, although the existing social order and consumption patterns are not questioned, on the other hand radical imaginaries contemplate systemic change and a fundamental rethinking of society (Marquardt & Nasiritousi, 2022). While the latter view is in line with the thinking of academic scholars and green movements, who advocate the need for deeper socio-political innovations, most pathways towards green energy dominated by business and political leaders do not reflect this idea (Marquardt & Nasiritousi, 2022), and are often limited to timeframes and emission reduction targets that rely on technological innovations (Wyborn et al., 2020). However, this "political expediency" risks excluding other voices (Marquardt & Nasiritousi, 2022, p.637). In Hulme's opinion (2020), the lack of progress towards an effective response to the climate issue is due to the failure to deal with conflicting decarbonization imaginaries. Consequently, the question that now arises is "whether the state can open up spaces to explore deep transformations and alternative futures or whether it is

hindered by dominant actors, vested interests, and established narratives" (Marquardt & Nasiritousi, 2022, p.637).

According to Marquardt & Nasiritousi (2022), national imaginaries are based on national identities, are rooted in cultural, social, political and ecological contexts and have emerged from the nation's history. In this sense, the environmental context is crucial, and cities and communities might play a fundamental role in advancing alternative and context-specific decarbonization imaginaries (Bulkeley and Kern, 2006 cited in Marquardt & Nasiritousi, 2022). In line with this, Marquardt and Nasiritousi (2022) suggested that the analysis of the relationship between dominant societal groups and minorities is an area where imaginary lock-ins can help identify major obstacles towards a fossil-free future and that further research should examine citizens' views on how they imagine a decarbonized society.

Based on these assumptions, this final dissertation will investigate the intersection between stakeholders' socio-technical imaginaries and place, also in line with Chateau et al. (2021), according to whom few works have yet attempted to address the relationships between socio-technical imaginaries and the dimensions of space. On a practical level, considering these factors means recognizing the differentiated and dynamic spatiality of energy systems (Chateau et al., 2021), going beyond the acceptance of a technology by the population, but rather aiming to adapt that technology to the place and the collective sense of belonging (Magnani & Carrosio, 2021). In this way, through technologies that become vehicles of meaning, individuals can imagine new forms of society to meet their needs and realize their capabilities and aspirations (Magnani & Cittati, 2022) and this is truly important especially considering that, as Day

et al. (2016) argue, the focus needs to be on what we want to achieve with energy rather than on energy itself.

1.2.2 People and places in transition

According to the geography of “sustainability transitions” (GOST) – which is a new field of study aimed to understand “how and why transitions are similar or different across location” (Köhler et al., 2019, p.14) – transition studies need to be more sensitive about scales, spatialities and context-specific factors that shape transitions (Binz et al., 2020). As a matter of fact, transitions do not occur in a vacuum but are rather “embedded in a specific spatial context or place” (Mohr & Smits, 2022), which, however, scholars often understand as a static, preordained and discrete site or location, examining transition processes within formal categories such as "cities," "regions," and "nations" (Binz et al., 2020). In reality, as already mentioned, places do not only refer to physical or natural elements but are actively shaped by the mutual relationships between actors, materials, infrastructures, cultures, meanings and histories (Binz et al., 2020; Mohr & Smits, 2022), which collectively form shared understandings of “what a place is, means, and might become” (Binz et al., 2020). Therefore, since all those norms and practices associated with sociotechnical regimes are embedded in a place, changes in the socially constructed place meanings and characteristics can affect the sociotechnical regime and, hence, can affect energy transformations (Mohr & Smits, 2022).

Psychology has been studying the concept of place for many years and, although the literature on place has been reported as very contradictory, all agree that place differs from concepts such as space or environment in describing the physical aspects as well as the meanings and emotions associated with a specific location (Devine-Wright, 2009). In particular, into the energy social science scholarship, a distinctive body of

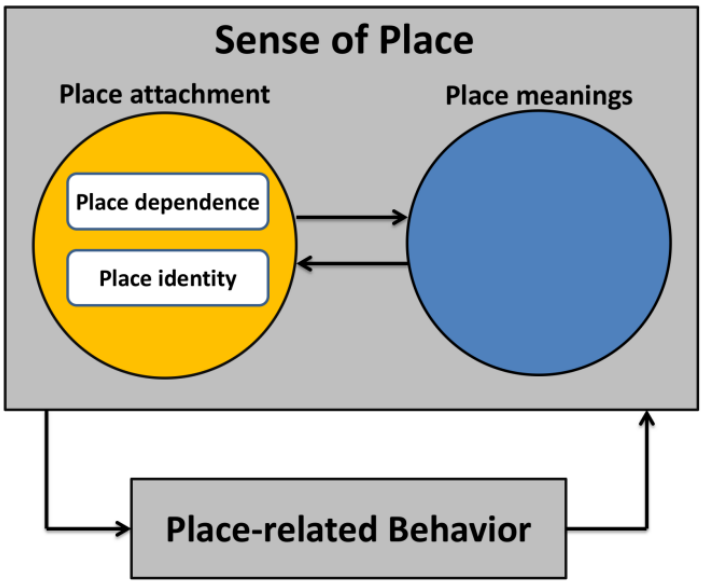
psychological research has highlighted the important role of socially constructed place meanings, identities, values and attachments in influencing public understanding of energy infrastructure (Devine-Wright et al., 2010, 2013, 2017; Bugden et al., 2017). Moreover, based on the research of the psychologist Devine-Wright, scholars have focused on the Social Representations Theory (SRT), to show how symbolic meanings and place attachment shape responses to transition proposals (Devine-Wright & Howes, 2010; Bailey et al., 2016; Bergquist et al., 2020).

According to this "psychology of place", the resistance to change arises from the disruption to place attachment and the perceived threat to place meanings and identity (Devine-Wright, 2009). This is because change brings to light the strong ties between person and place that are normally latent, provoking anxiety, loss and a sense of displacement that can eventually lead to psychiatric trauma (Devine-Wright, 2009). As Osti (2013) argues, when the local community sees the original image of its territory being changed by renewable energy installations, these become a threat to local development and embody the predatory colonization by external forces. By contrast, when installations are incorporated into a local image of space, they are more likely to be accepted (Osti, 2013). This approach provides an alternative explanation of the widely criticized concept of "NIMBYism" (Not In My Backyard), reconceiving oppositional actions toward new energy infrastructure as place-protecting actions that occur when the installation of large-scale energy technologies disrupts pre-existing emotional ties (i.e., place attachment) and threatens place identities (Devine-Wright, 2009; 2012).

Although there is still no consensus among scholars on the exact relationship between the different constructs of the theory of place, this final thesis will adopt the

framework presented in Masterson et al.'s review (2017), according to which place identity is a sub-component that, together with place dependence, gives rise to place attachment. Moreover, place attachment is itself a sub-construct of a broader concept, the Sense of Place (SoP), which consists of place attachment and place meanings (Masterson et al., 2017).

Fig. 1. The relationships between the different constructs of Sense of Place (Masterson et al., 2017, p.3)



Sense of Place and Spatial Imaginaries

Sense of place (SoP) is a multifaceted construct that describes the relationship between people and places, and in particular refers to meanings and attachment to an environment by an individual or group (Tuan, 1977 cited in Masterson et al., 2017). Since SoP is a concept that encompasses other constructs such as place attachment and place meaning, there is much confusion among scholars on how SoP should be defined, and, according to some authors, the literature is often ambiguous and contradictory (Masterson et al., 2017).

To begin with, SoP includes place meaning, which refers to a series of emotions (Devine-Wright, 2010) and cognitions, i.e., descriptive statements about what a place is, what it looks like, and the types of images it conveys (Stedman, 2002). Moreover, place meanings can be symbolic and thus expressed in terms of material attributes (Bergquist et al., 2020). Since all settings can contain multiple meanings, individuals and groups can clearly associate different symbolic meanings with the same place (Bergquist et al., 2020). These place meanings form the substantial basis for place attachment because people "become attached to places through attributing meaning to them" (Bergquist et al., 2020). Place attachment, that is the second subconstruct of SoP, represents an emotional bond, usually positive, between individuals or groups and the familiar place they inhabit or visit (Altman and Low, 1992). The main difference between place meanings and place attachment is that, while the former indicates what a place means to someone, the latter measures how much it means to the person (Stedman, 2002). In addition, place attachment has two core subdomains: place dependence – which refers to the fact that a given place facilitates the achievement of goals and the satisfaction of important needs, establishing a connection between people and place – and place identity, that consists of self-dimensions of personal identity shaped by the relationship with elements of the place (Masterson et al., 2017).

According to Masterson et al. (2017), SoP has both an individual and social nature: while the contact with place forms highly personal associated meanings, on the other hand experiences differ in a systematic and predictable way based on the roles that are socially produced, creating meanings that are at least partially based on the social expectations associated with each role. Moreover, power dynamics (e.g., cultural norms, regulations or what is important in a place) also establish rules that shape the

configuration of the environment promoting activities and meanings over others and, thus, relations of power guide our experiences and our interpretation and creation of meanings (Masterson et al., 2017).

In order to explain how SoP shapes residents' interpretations, evaluations and behavioral responses towards transformations in their community, many scholars, building on the work of Devine-Wright (2009), have drawn on social psychology, by linking the psychological theory on place with social representations theory (SRT) (Bergquist et al., 2020; Devine-Wright, 2009). SRT aims to explain how communities incorporate the unfamiliar into the familiar and examines how individuals and groups interpret, evaluate (as threat or opportunity) and contest the proposed change, taking into account the unequal power relations between different actors (Devine-Wright, 2009). According to this theory, people interpret the expected effects of a proposed project by linking them with familiar knowledge (anchoring), and then make the abstract object concrete (i.e., they objectify the change), using specific definitions (objectifications) of values and principles to assess the consequences of the expected effects (Bergquist et al., 2020).

Importantly, the symbolic meanings that compose SoP constitute the familiar resource from which we draw to anchor disruptions and objectify the principles used to evaluate the change (Bergquist et al., 2020). In other words, people interpret a disruption through anchoring and objectification and then evaluate the potential effects of the change as place-enhancing, if they are coherent with place meanings, or alternatively as place-threatening (Bergquist et al., 2020; Bergquist et al., 2020). After that, people cope with change and act supportively or oppositely according to the evaluation of the change (as an opportunity or as a threat) (Bergquist et al., 2020). With

respect to the energy issue, many studies have shown that SoP influences how to deal with place transformation in the case of infrastructure location (Biddau et al., 2022), to the extent that if locals feel that a project negatively affects the relational continuity, identity or individual and collective efficacy, they may take oppositional action to protect SoP (Magnani & Carrosio, 2021).

Into the SoP research, some scholars have also shed light on the role of time and history in energy transitions (Batel, 2020), particularly with regards to the construct of collective memory (Kim et al., 2019; Biddau et al., 2022), which refers to the assumption that social groups cultivate the memory of their past and need it to preserve their identity (Schwarzinger et al., 2018). Although most studies that have examined socially constructed and culturally shared beliefs, norms and identities have implicitly addressed memory, collective memory as a primary object of investigation is relegated to a marginal role (Biddau et al., 2022). However, taking this element into account offers new ways to understand the success or failure of transformations, as these do not take place in a vacuum but are rather embedded in power relations and in territorial, cultural and historical practices (Biddau et al., 2022). For example, Kim et al.'s (2019) study in the community of Jeju, Korea, which presents a shared past among locals of socio-economic and natural resource deprivation, showed that the implementation of a socio-historically contextualized transition process enabled community involvement and increased social acceptance of energetic infrastructures, by framing the transition as a way to regain control of the local natural environment (Kim et al., 2019). Thus, examining the role of collective memory can provide a better understanding of how groups and individuals “come to share the same renderings of the past, interpret the present, and envision the future” (Biddau et al., 2022, p.20). Another example comes

from Alexandra's case-study (2017), located in the mining region of “Latrobe Valley” in Australia, where coal had politically and culturally influenced the historical development of the valley. This study showed that both coal collective memory and identity shape region's future transformation paths, coinciding with a cultural understanding that contributes to path dependence (Alexandra, 2017). As well as demonstrating how collective memory influences the socio-cultural understanding of the change, this study highlights the delicacy of phase-out processes, which are highly susceptible to path dependency and lock-in mechanisms (Biddau et al., 2022). Therefore, interpretation and action with respect to change always depends on how pre-existent historical processes and tensions relate to and continue to exist in current local imaginaries and narratives of energy, place and injustice (Biddau et al., 2022; Paul, 2018).

In this regard, some authors have introduced the concept of Spatial Imaginaries, which are “deeply held, collective understandings of socio-spatial relations that are performed by, give sense to, make possible and change collective socio-spatial practices” (Davoudi et al., 2018, p. 101). In other words, they are ways of representing the place, a perspective on what the place should be (Watkins, 2015), and they shape, reproduce and are embodied in material and socio-spatial practices (Chateau et al., 2021). Spatial imaginaries are locally produced by communities through struggles over understandings and experiences of place, and they build on narratives of the past to promote comprehension of how the future should be (Davoudi et al., 2018; Watkins, 2015). Obviously, imaginaries are not equally powerful, but they are different, more or less hegemonic according to their materialization and concreteness (Chateau et al., 2021; Davoudi et al., 2018; Watkins, 2015).

Recently, Chateau et al. (2021), with the aim of recalling the inevitable spatial constitution of socio-technological changes, suggested that spatial imaginaries and STIs are co-produced, mutually constructing, feeding and reinforcing each other. This reflection on socio-spatial futures intertwined with energy futures is truly important, especially considering the urgent need to transform energy systems, as it draws attention to the ways in which the negotiation of energy futures is fraught with power, raising the question about who can imagine and talk about the futures of places and, consequently, how just and acceptable energy transitions are (Chateau et al., 2021). This approach emphasizes that "national or global STIs are no more spatially neutral than imaginaries emerging from local contexts" (Chateau et al., 2021, p.6) and on the contrary, the spatialization of STIs is crucial for understanding how they impact the local. The movement of STIs across different scales is shaped by existing power relations (e.g., between multinational energy corporations, international energy organizations, central governments, regions, cities and local communities) and by socio-spatial inequalities (Chateau et al., 2021). Conflict in energy transformations often arise from different competing spatial imaginaries (Aiken, 2018) and the introduction of spatial and scalar dimensions can help throw light on those imaginaries that are marginalized, limited by national STIs or delimited at the local level (Chateau et al., 2021). In doing so, imbalances are highlighted between predominant voices and those voices that are silenced, helping to address important issues of energy and environmental justice (Chateau et al., 2021).

Chapter 1.3 Model Proposal

In decarbonization and renewable energies research and practice, communities, local actors or grassroots innovations are increasingly discussed as effective vehicles to

successfully drive low-carbon transformations (Aiken, 2018). However, within community transitions, strong tensions and multiple meanings exist and they result from different narratives and imaginaries that inform the “common sense” understanding of local people (Aiken, 2018). These conflicts do not have to be negative but require further research (Aiken, 2018) to ensure that the transition to the new future will create a more inclusive and sustainable world. From these assumptions, this final dissertation aims to fit into research on decarbonization and how "phase-out" policies should take into consideration the community’s past and preemptively redress the injustices suffered in the energy sector in order to support the construction of new identities and visions of the future of place. In addition, this study is intended to join the few attempts that have tried to answer the question: “if space is constitutive of social reality, and energy transitions are to be understood as socio-spatial processes, what becomes of STIs?” (Chateau et al., 2021, p.2).

Specifically, the goal is to explore how narratives of the place (sense of place, collective memory) influence the understanding of change and the imagination of socio-technical futures. Moreover, this study is interested in exploring how stakeholders interpret and construct a Just energy transition in their discourse and inquiring about the consequences of their discourse in the decarbonization process. The research questions for this research are as follows: What is the talk of stakeholders relating to the place and how this narrative influences the understanding of change (RQ1); What is the precise nature of STIs, and how they are constituted in talk and action (RQ2); How do stakeholders interpret a Just Energy Transition (RQ3). According to Chateau et al., examining how STIs are intertwined with views about space provides a better insight into the different ways in which infrastructural projects reproduce and transform socio-

spatial relations, practices and imaginaries (Chateau et al., 2021). This study argues that understanding how imaginaries are influenced is crucial as they play an important role in supporting (or resisting) change.

Chapter 2. An Italian case study: The region of Sulcis, Sardinia

The case-study explored in this dissertation was carried out as part of the EU-funded "TIPPING.plus" project, whose overall purpose is to support successful transitions by understanding why and under which conditions a given Coal and Carbon Intensive Region (CCIR) can follow a low-carbon development path or, by contrast, it can fall into an opposite trajectory (Tipping+). Tipping.plus is part of Horizon 2020, which is the biggest European funding program for research and innovation, that from 2014 to 2020 invested energies and funding on research to enable smart, sustainable and inclusive growth. Tipping.plus project is based on the theoretical concept of "tipping points", intended as individual, social and cultural processes that enable or stop the transformation from one situation to another (Sarrica et al., 2020). By examining twenty case studies of European CCIRs, the project explores the fundamental changes in regional socio-cultural structures and how these transformations result in both positive and negative socio-ecological tipping points (SETPs) towards a clean energy path.

Regarding the Italian case study, the research is part of the Tipping+ project's Work Package 2 (WP2), which aims to break path dependence and carbon lock-in by examining the socio-psychological factors, ideologies and dynamics that contribute to sustaining carbon lock-in and currently influence the effectiveness of policy interventions for systemic change (Tipping+). By reviewing studies that analyze systemic transformations related to psychosocial processes and cultural factors (i.e., responses to decarbonization processes, public opinion and values) and their effects on CCIRs, the project aims to understand tipping points in regional social-ecological systems (SETPs) and identify trends and key indicators (qualitative and/or quantitative)

from an environmental and social psychology perspective (Tipping+). The ultimate goal is to understand how these psychosocial factors such as identity, perceptions of justice and ideologies can be deliberately destabilized in order to foster radical change (Tipping+).

Chapter 2.1 Discourse Analysis

To examine narratives and answer research questions, this thesis adopted the qualitative method of semi-structured interviews with key regional stakeholders (N=12). In particular, building on studies that have stressed how stakeholders' beliefs regarding risks and opportunities of decarbonization represent important constraints to the process (Stoll-Kleemann & O'Riordan, 2020), the narratives of prominent individuals from the environmental, industrial, trade union, political and journalistic sectors were investigated.

For the analyses, a Discourse Analysis approach was used. Discourse analysis is framed in discursive psychology theory (Edwards and Potter, 1992), which is a psychological paradigm according to which researchers cannot accurately assess people's thoughts and cognitions because people are always involved in a social interaction when they speak. By involving more than one person within the interaction, speech depends on the cooperation of others, who are not only "receivers" of information, but also co-authors of the meaning the speech takes on (Mantovani, 2008). Consequently, it is not always the case that the speaker of the discourse is also its major proponent (Mantovani, 2008). In this sense, discursive psychology conceives cognition as "somebody doing something in that interaction" (Goodman, 2017, p.143). According to Mantovani (2008), this mediated realism conceives problems as being constructed by

the researcher and reality as being accessible only through the mediation of language, knowledge and social practices, which are called artefacts. This is a major transformation from traditional psychological approaches, which aim to access accurate cognitions and, for this reason, use methods and scales that systematically do not capture the normal variation in people's attitudes. On the contrary, discursive psychology is concerned with the study of everyday life (Mantovani, 2008) and takes into account changes in people's attitudes according to the social situation, shifting the focus from cognition to action, from thoughts and perceptions to people's speech (Goodman, 2017). In fact, according to Wetherell and Potter (1988), discourse is variable in the sense that the speaker constructs events and persons in different ways depending on the function of the discourse (e.g., explain, justify, etc.). Therefore, discourse analysis consists of developing hypotheses about the purpose and consequences of language (Wetherell and Potter, 1988).

Following this social constructionist view, Discourse Analysis deals with what is achieved in communication and can be applied when the focus of the research is the discourse itself and his action orientation (Goodman, 2017). This type of analysis presupposes that the concepts we use and the way we use language are "tools for constructing knowledge" (Norberg & Strand, 2022, p.223). Construction implies that discourse is performative, in the sense that it has an action orientation and practical consequences. Therefore, according to Norberg and Strand (2022), a Discourse Analysis is "a product of the researcher's own discourse, as much as their interpretation of data" (p.223). In this sense, Potter and Wetherell (1987, cited in Goodman, 2017) said that conducting a Discourse Analysis is "like riding a bicycle" (p.168), thus, a really difficult task to explain (Goodman, 2017).

Chapter 2.2 The context of Sulcis, Sardinia

The study is situated in Sulcis, which is a mining area of South-Western Sardinia and the most significant coal and carbon-intensive region in Italy (Tipping+). Sulcis Iglesiente is one of the largest Sardinian mining areas and in this territory, there are various mines, almost all disused, located in the current municipalities of Arbus, Buggerru, Carbonia, Carloforte, Domus De Maria, Domusnovas, Fluminimaggiore, Gonnesa, Gonnesfanadiga, Guspini, Iglesias, Narcao, Nuxis, Perdaxius, Santadi, Sarroch, Siliqua, Teulada, Villacidro and Villamassargia. All these places were born and developed territorially, infrastructurally and socio-economically around coal mining (Tipping+).

Extractive activities in Sardinia can be traced from the 6th millennium B.C., when the product of the obsidian deposits of Monte Arci, a mountain located in central-western Sardinia, was exported all over Europe and Sardinia occupied third position among the provinces of the Roman Empire for metal production (Ferracuti & Mongili, 2018). Since the Middle Ages, mining was an important source of employment and prestige for the local populations and, between the 18th and 19th centuries, mining was gradually replaced by the mining industry, which dominated the entire island and employed up to 10,000 miners (Ferracuti & Mongili, 2018), to the extent that in the 20th century Sulcis area became “synonymous with mining” (p. 12). The island's mining history was characterized by a strong colonial influence, as international capital and investors were strongly involved, while local leaders enriched themselves by mediating different colonial interests, sacrifing Sardinia's development to meet the needs of the north (Lelli, 1975 cited in Ferracuti & Mongili, 2018). While the majority of Sardinians did mainly manual jobs, leadership positions were predominantly held by

“continentals”,and in the early 1900s, the conditions of poverty, exploitation and degradation led sardinian workers to participate in labor' revolts and establish the League of Sardinian Miners, which coordinated the revolutionary socialist movement united under the slogan “At sea the continentals” (Ferracuti & Mongili, 2018).

Being a miner became a privileged position among Sardinians, to the extent that many said “a si cojai unu minadori est comenti a di cojai unu dotori”, i.e. marrying a miner is like marrying a doctor (Ferracuti & Mongili, 2018). Local techniques were preferred by workers over those recommended by external actors, and the knowledge, expert eye and intellectuality of mining work was informally passed from generation to generation, from experts to young workers who aspired to 'become men' (p. 14). But there was a place for women in mining too. The female presence in Sardinian mining work was also a local characteristic that differed from other mining sites, where women 'grivellantis' represented 0% or 2% compared to the Sardinian 5-8%. (Ferracuti & Mongili, 2018). In this sense, mining work was an opportunity for women to transfer other skills and challenge themselves, competing with men for supremacy in manual labor and sensitive skills (Atzeni, 2007 cited in Ferracuti & Mongili, 2018). Thanks to the work of anthropologist Paola Atzeni (2007, cited in Ferracuti & Mongili, 2018), Sardinian working-class poetry has also been highlighted as a great means of mass communication that contributed to both political consciousness and artistic expression (Ferracuti & Mongili, 2018). In particular, “poesia a bolu” was widespread in the Sardinian mines, which consisted of reciting poems in public in the form of a competition between poets, on a social or political theme related to the working-class condition and Sardinian awareness (Ferracuti & Mongili, 2018).

Despite both economic and social wealth, the mining industry has brought to Sardinia, since the 2000s this sector has been hit by several crises that have also led to the closure of many extractive industries and the consequent loss of jobs for many miners (Tipping+). As an example, in the sardinian location of Furtei, between 1997 and 2008 a group of Australian tycoons founded 'Sardinia Gold Mining' together with Sardinians, opened a gold mine and after the closure left the local population with a devastated and highly toxic territory (Ferracuti & Mongili, 2018; Repubblica, 2021). At the beginning of the project, in 1997, mayor Ignazio Congiu prophetically declared: “I would not like Gold Mining Sardinia closing at the end of the extraction, leaving the landscape devastated by the excavations without a project and funding for environmental recovery” (Repubblica, 2021). Indeed, the colonial influence in the development of Sardinia has been truly important and still affects the territory. According to Antonio Muscas, environmentalist of the Sardinian committees coordination, “there are companies that arrive, promise paradises, with the connivance of local politicians, and produce devastation, which then become opportunities to do business without solving the problem” (Repubblica, 2021). In particular, Sulcis Iglesiente was extremely affected by this decadence, to the extent that in the second half of the 1990s 28,900 inhabitants emigrated out of a total of 145,731 (Ferracuti & Mongili, 2018).

Today, the region is still largely dependent on coal-fired energy production (Tipping +), as there are still two coal-fired power plants - located in Sulcis and Porto Torres - that have a modest impact on Sardinia's power generation system, but a high cost from an environmental perspective (Bullegas et al., 2020). However, what remains of past glory are just “old engine rooms, subsidies, clientelistic party and union

structures, ministers on field trips, empty promises of a restart, a sense of defeat that can be felt everywhere in Sulcis Iglesiente, and the idea, in the younger generations, of taking back their destiny as women, as men, as Sardinians, projected to create an economy that is no longer dependent" (Ferracuti & Mongili, 2018, p. 16). With the closure in 2018 of the last coal mine still active in Italy and located in Sulcis, called the Nuraxi Figus and owned by the regional company Carbosulcis, the last miners have lost what was not just a profession, but a real way of life that bound several generations together for decades. According to Ferracuti and Mongili (2018) "living in the darkness, right into the bowels of the earth, in adventurous but risk-filled places, meant creating a very strong social bond, one of the rockiest and strongest working classes in Europe" (Ferracuti & Mongili, 2018).

Although there have been numerous and substantial political and financial interventions for relaunching the economy and facing the socio-economic crisis such as the Sulcis Plan in 2012 or the Just Transition Mechanism, "the region is experiencing difficulties in envisioning and planning an alternative sustainable development, suffering the contrast between a collective memory and identity that rely upon an industrial myth and well-being, and the current difficulties of collocating itself in a different development path" (Tipping+). Moreover, coal-fired power plants are expected to phase out by 2025 and the future of the island remains uncertain. While some argue that the mechanization of the island explicitly contradicts the contents of international climate protocols, others claim the right to have an unspoiled environment and oppose the persistent logic of profit and speculation, which is often associated with the production of energy from renewable sources (Bullegas et al., 2020). In this climate of

instability and uncertainty, decarbonization could negatively affect the island or produce positive consequences.

Chapter 2.3 Procedures

Data has been collected through 12 narrative-episodic interviews with key regional stakeholders and relevant informants from different interest groups. In particular, these included environmentalists and activists, journalists, politicians at local and regional level, trade unionists, representatives of energetic and environmental companies, and experts in a variety of domains, such as mining, energy, environment, health and social research (see Table 2). The sample was collected through a non-probably sampling method, namely snowball sampling, according to which currently enrolled participants help the researcher to recruit new subjects for the study. This sampling method is usually used in research in the case of hidden and difficult to access populations. The interviews were collected over a one-year period, from December 2020 to November 2021. Interviewed stakeholders have been contacted by email. After giving a brief description of the project and asking them if they would like to take part in the research, they were asked to sign an Informed Consent to allow personal data to be collected and processed. The interviews lasted approximately one hour and thirty minutes and were conducted remotely, through the use of webinars platforms. For the analysis of this dissertation, 12 interviews were selected, according to the interest group and the relevance in relation to the object of analysis. In addition, the selected sample is intended to be representative of the different stakeholder groups, therefore two interviews were selected from each group (environmentalists, local and regional politicians, experts and journalists).

Tab 2. Table of stakeholders involved in the research

ID	gender	stakeholder group	professional role	Time
1	M	Environmentalism	Sardinian committees coordinator	1:38:52
2	M	Environmentalism	Sardinian environmental movement	1:49:00
3	M	Local Politics	Municipal politician (CI)	1:31:44
4	M	Local Politics	Municipal politician (CI)	1:11:44
5	M	Regional Politics	Regional politician	1:07:45
6	M	Regional Politics	Regional politician	2:02:15
7	F	Experts	Doctor for the environment	1:18:21
8	M	Experts	Santa Barbara Mining Trail Foun-Dation	1:13:25
9	F	Journalism	reporter for a major regional newspaper	0:54:28
10	M	Journalism	journalist for a major radio station	1:10:56
11	M	labor, enterprise, unions	director of a Sardinian Sustainable Energy Research Centre	1:15:42
12	M	labor, enterprise, unions	manager in a Sardinian Sustainable Energy Research Centre	1:00:00

Qualitative data were collected with the support of a semi-structured narrative-episodic interview. The first part of the interview focused on the interviewee's background, including questions on his professional and subjective experiences. After this, the questions moved on Sulcis area, its past and present history, with a strong reference to the environmental issue and area's energy development. The interview was also designed to allow interviewees to project themselves into the future and express their imaginations regarding the future of place. All interviews were tape recorded and fully transcribed. After that, collected materials have been analyzed.

For the analysis, we have largely followed recommendations by Goodman (2017) and Wetherell and Potter (1988). Firstly, we have done a preliminary reading of the data to become familiar with it. With the research question at hand, we focused on portions of the test that were relevant to the research. By repeated reading of the materials, we searched for patterns and recurring themes in order to organize data. During this early stage of analysis, we noted any relevant and interesting aspect of data, and we chose appropriate extracts. In particular, drawing on the Wetherell and Potter's method (1988), a number of different interpretative repertoires were identified. The interpretative repertoires can be seen as "the building blocks speakers use for constructing versions of actions, cognitive processes and other phenomena" (Wetherell and Potter, 1988, p.172). Therefore, after organizing data into interpretative repertoires, we analyzed the selected portions of the text to capture the underlying meanings and action orientations occurring in the data. We looked for rhetorical devices, metaphors and the "subject positions" (Goodman, 2017), i.e., how respondents construct themselves and others in the speech, understanding both individual and group identities as dynamic and constructed in conversation. Meanwhile, we compare interpretative repertoires with the main theoretical contribution, in order to find out whether collected data were in agreement with the most important research on the topic.

Chapter 3. Discussion and Conclusions

In this chapter, by analyzing 12 interviews of stakeholders, we shall respond to the research questions: What is the talk of stakeholders relating to the place and how this narrative influences the understanding of change (RQ1, Chapter 3.1); What is the precise nature of STIs, and how they are constituted in talk and action (RQ2, Chapter 3.2); How do stakeholders interpret a Just Energy Transition (RQ3, Chapter 3.3). According to Wetherell and Potter (1988), discourse analysis involves developing hypothesis about the aim and the consequences of language. In other words, the finding of analysis should be identified in the function of the language (Wetherell and Potter, 1988). Therefore, by proceeding with the analysis we shall ask ourselves: "what function in the broader sense might the discursive repertoires achieve for those who use it?". Finally, we shall discuss our research findings, limitations and contributions to the literature.

Chapter 3.1 Stakeholders' narratives of Sulcis

This chapter explores the range of discursive devices and strategies that participants used talking about place. My analysis revealed that respondents seem to draw on two different interpretative repertoires to portray their representations of Sulcis. These repertoires include: "Sulcis as dispossessed" and "Sulcis as undervalued".

The "Sulcis as dispossessed" repertoire presents arguments for cultural domination and could be seen to allow participants to argue against foreign investors

and explain Sardinian subalternity[1]. This repertoire presents two major facets. On the one hand, it presents the view that Sulcis has been economically oppressed. In particular, this repertoire allows participants to shift the narrative from Sulcis as a poor region to Sulcis as impoverished. An example of this can be seen in the extract below:

1) "Sulcis has always been considered poor and we must always distinguish the concept of poverty from impoverishment. Sulcis was not a poor area…As neither was the Sarrabus-Gerrei, where they later organized the Quirra polygon. There was a talk of flourishing vineyards, there was a talk of fruit plantations, there was a talk of the resources of the sea, and none of this matters? I mean, those were great riches. There was also a talk of paradises, for tourist use as well, which would have brought other wealth. Therefore, Sulcis-Iglesiente had absolutely no need for the imposition of development models that were unfamiliar to us... and then, history reports and proves that today Sulcis is considered one of the poorest geographical areas in Italy and we wonder what happened? Does it mean that forced industrialization did not bring wealth".

[1] In postcolonial studies, the term "subaltern" identifies those subordinate social groups as they are constructed by the dominant subject (Mongili, 2015). Subalterns are socially, politically, economically and geographically excluded. Their historical activity is neglected, misinterpreted or oppressed by hegemonic discourses in order to deny their agency and voices.

"Il Sulcis è stato sempre considerato povero e bisogna sempre distinguere il concetto di povertà da quello dell'impoverimento. Il Sulcis non era un'area povera…Come non lo era il Sarrabus-Gerrei, dove poi hanno organizzato il poligono di Quirra[2]. Si parlava di vigneti floridi, si parlava di piantagioni di frutta, si parlava delle risorse del mare e tutto questo non conta? Cioè, quelle erano delle grandi ricchezze. Si parlava anche di paradisi, diciamo per uso anche turistico, che avrebbe portato tutt'altre ricchezze. Quindi il territorio del Sulcis-Iglesiente non aveva assolutamente necessità di imposizione di modelli di sviluppo che erano a noi estranei…e che poi la storia racconta e dimostra che il Sulcis ad oggi è considerato tra le zone geografiche più povere d' Italia e ci chiediamo che cosa sia successo? Vuol dire che l'industrializzazione forzata non ha portato ricchezza" (ID 7).

As we can see in extract 1, the speaker (ID 7) shifts the focus from poverty as a state of being ("poor", "poverty") to poverty as a result of actions involving a subject ("impoverishment"). In this case, discourse could perform the action of re-appropriation, as it allows the respondent to re-appropriate the narrative of Sulcis, which has been misinterpreted and distorted by a hegemonic narrative of poverty. This can also be seen in the following lines (148-150), where the speaker recalls all local riches of Sulcis, repeating several times "there was a talk". Then, she poses a rhetorical

[2] The Salto di Quirra experimental inter-force training range is an Italian Armed Forces polygon established in 1956 in the Quirra region of south-eastern Sardinia.

question (“none of this matters?”) to emphasize the fact that the narrative she reports was disregarded and neglected. In this sense, the discursive repertoire “dispossessed” could refer not only to the real land of Sulcis, but also to the narrative, felt as colonized and oppressed by the hegemonic narrative. Then, the speaker talks about “imposition of development models” or “imposed industrialization”, emphasizing the underlying meaning of being forced by someone who was “unfamiliar”.

On the other hand, “Sulcis as dispossessed” repertoire presents the view that cultural domination has led to cultural subordination and social disintegration. In other words, this repertoire advocates that colonization has led to a total disappearance of the place's very identity and to a deterioration of social unity – the speakers used words such as envy and division – due to the incompletion of material and spiritual cultural elements in a society. Thus, not only the territory, but also people consciences are considered to have been polluted by this imposed development model. Interestingly, many narratives contain words such as compromise, corruption or even extortion, used to describe the relationship between locals and foreign investors. I think an illustrative example is the extract below, where the environmentalist (ID 1) describes a sort of “benefit trap”:

2) “Many saw the bargain in this exchange without realizing that it was actually corruption. I give you something because you stand still, you convince yourself that this thing suits you, and in reality, I am cutting off all your prospects because in the meantime you lose the territory, you lose professionalism above all because you no longer practice a profession, you also lose knowledge, and you find yourself

119 with entire communities that are completely dependent on these
120 dynamics”.

“Molti ci hanno visto l’affare in questa cosa senza rendersi conto che invece si trattava appunto di un fenomeno di corruzione. Io ti do qualcosa perché tu stai fermo, ti convinci che questa cosa ti conviene e in realtà ti sto tagliando tutte le prospettive perché tu nel frattempo perdi il territorio, perdi soprattutto la professionalità perché non pratichi più una professione, perdi anche la conoscenza e ti ritrovi ad avere delle comunità intere che sono completamente dipendenti da queste dinamiche” (ID 1).

This extract 2 can be seen to be organized around a particular rhetorical device, namely active voicing. In fact, the speaker implies the intentions of the external investor and uses a direct quote (e.g., “I give you”) to increase the credibility of the argument. In line 114, the politician uses the figurative term “standing still” to describe the condition of a population that is subjugated by external industrial forces. Moreover, in line 116 the respondent uses the metaphor “lose the territory”, which implies a sense of property and ownership of the place. The speaker repeats the verb “to lose” 3 times (In line 116, 117, 118) in order to emphasize the cost that the community had to pay. Moreover, the Sulcis community is narrated as “dependent”, indicating an underlying meaning of passivity.

I believe a second example could be seen in the following extract, where a participant talks about the compromise Sardinians have to make in order to live:

126 3) “Because in this territory… it looks hungry on purpose. If you want
127 to work, you have to dig coal. If you want to work, you have to make

126 weapons for war. If you want to work, you have to be among the
127 rubbish. I mean, here in Sardinia they treat us as they once treated,
128 or perhaps still treat, certain centers in Africa with the traffic of
129 rubbish…".

"Perché praticamente in questo territorio… sembra affamato apposta. Se vuoi lavorare devi scavare carbone. Se vuoi lavorare devi fabbricare armi per la guerra. Se vuoi lavorare devi stare in mezzo ai rifiuti. Cioè, qui in Sardegna ci trattano come una volta trattavano, o forse trattano ancora oggi, certi centri dell'Africa col traffico di rifiuti…" (ID 2).

In extract 3, the respondent uses figurative language ("hungry territory") to arouse strong feelings in the interviewer. Similarly, the speaker organizes his discourse around the expressive form "if you want…you have to", repeating this formulation three times. This might be seen to perform the action of evoking emotion in the interviewer. Finally, a perpetrator emerges in the discourse ("on purpose"; "they treat us") but remains unexplained who they are.

The second repertoire, the "undervalued" one, advocates that Sulcis has been sold off and undervalued throughout history. It suggests that local resources have been wasted and the territory's potential unexploited. I believe an example of the "undervalued" repertoire can be seen in the extract below:

435 4) "Let's say that Sulcis is a potentially ideal land for tourism to
436 produce good food, it has wonderful places, almost unique
437 environments…because we have areas of sea, coves, there is the entire

coast of Sulcis Iglesiente from Iglesias, Nebida until Porto Pino Teulada…they are places that could provide work without exploiting the territory, hence enhancing it by working in a sustainable way, I mean, Sulcis…unfortunately it has the negative aspect, the negativity of Sulcis is that we are between military slavery and industrial slavery".

"Diciamo che il Sulcis è una terra potenzialmente ideale per fare turismo per produrre un buon cibo, ha dei posti meravigliosi, sono degli ambienti quasi unici…perché abbiamo delle zone di mare, delle Cale, c'è tutta la costa del Sulcis Iglesiente da Iglesias, Nebida sino al Porto Pino Teulada…sono dei posti che potrebbero dare lavoro senza sfruttare sicuramente il territorio, valorizzandolo quindi lavorando in maniera sostenibile, cioè il Sulcis… e purtroppo ha invece la pecca, la negatività del Sulcis sta nel fatto che siamo tra la servitù militare la servitù industriale" (ID 2).

As we can see from extract 4, the speaker makes a list of Sulcis' natural resources and uses adverbs and conditionals ("potentially", "could provide") to indicate a possible future that is not true now. Then, he proposes his interpretation of why this imagination is not actually true ("we between military slavery and industrial slavery"). Again, similarly to ID 7 in extract 1, the speaker uses the word "slavery", to indicate the condition of being forced. The repertoire "undervalued" is used also to emphasize Sulcis as a truly special place and arouse emotion and curiosity in the interviewee. An example of this can be seen in the following extract:

5) “There is a deep culture of the mine, and also a knowledge of places, of the topsoil, the soil and the subsoil. Sulcis has three dimensions. While all other places have two dimensions, here there are three dimensions and they are three dimensions that also ancestrally have very strong calls: the mother earth, the belly, and what this entails…non-recognition has canceled all these dimensions”.

C’è una cultura profonda della miniera, e anche una conoscenza dei luoghi, del soprassuolo, del suolo e del sottosuolo. Il Sulcis ha tre dimensioni. Tutti gli altri luoghi hanno due dimensioni, qui ci son tre dimensioni e son tre dimensioni che anche ancestralmente hanno dei richiami fortissimi: la madre terra, il ventre, e quello che questo comporta…il disconoscimento ha annullato tutte queste dimensioni” (ID 3).

In line 96, talking about the knowledge of Sulcis, the respondent (ID 3) uses a list of three (“the topsoil, the soil and the subsoil”), that is a rhetorical device to sound particularly complete and convincing, in order to arouse audience emotion and make his argument more persuasive. Moreover, the respondent uses figurative language (“mother earth” and “the belly”) that recall a visceral image. Interestingly, this figure is used also by a journalist (ID 9), as shown in the extract 2:

6) “We are stubborn, determined, very attached to our island, very attached; there is a visceral bond with our island”.

“Siamo testardi, determinati, molto attaccati alla propria isola, molto attaccati…c’è un legame viscerale con la propria Isola” (ID9).

In extract 6, the journalist (ID 9) positions herself in the group of Sardinians ("we are") and repeats the words "very attached" to reinforce and emphasize their relationship with the place. Then, the journalist uses figurative language ("visceral bond") to arouse strong feelings in the interviewer and make her argument more persuasive.

Another focus of this research question was exploring how place narratives influence the understanding of change. Overall, all respondents agree that Sulcis has never experienced real transformations. I identified three different interpretative repertoires used by participants to talk about change: "aid-based change", "change as threatening" and "change as hampered". Firstly, the "aid-based change" repertoire advocates for people's lack of control over their own development and transformation path. This pattern of accounting was used by the majority of the participants to claim that Sardinians usually wait for an external force to drive change. This narrative would therefore allow Sardinians to not take charge of their change, which is rather portrayed as not necessary now but something that concerns the future. The following extract is an actual example of this discursive pattern:

7) "One almost tends to wait, this is my personal feeling, but what I perceive is that it almost seems as if others are solving the problem. As if the solution always had to come by the usual mechanism from above. Sort of welfarism. Today, also due to European constraints, this cannot be postponed. What many are asking to the political decision-maker is paradoxically "give us a few more years of support" and not "give us the legs to go on for the next 200 years"

...now I am trivializing a little...it is the classic example of the fish and not the fishing rod".

"Quasi si tende ad aspettare, questa è una sensazione mia personale, ma quello che percepisco io è che sembra quasi siano altri a risolvere il problema. Come se la soluzione dovesse arrivare sempre con il solito meccanismo dall'alto. Sorta di assistenzialismo. Oggi anche per i vincoli europei questa cosa non è procrastinabile. Quello che molti chiedono al decisore politico è paradossalmente "dacci qualche altro anno di supporto" e non "dacci le gambe per andare avanti i prossimi 200 anni" …ora sto banalizzando un po'…è il classico esempio del pesce e non della canna da pesca" (ID 11).

Secondly, "change as threatening" presents arguments stating that Sardinians prefer to maintain the status quo. In this case, most of the respondents positioned themselves out of the group, suggesting that they were not in accordance with the majority of the group they were describing. I think an example might be seen in the following extract, where the speaker is talking about the narrative of poverty, which is considered out-of-time and instrumentalized:

8) "Therefore, this narrative is used as a tool not to change, but to conserve: I mean, "because we are poor, we must keep what we have" …without realizing that poverty arose exactly from what we wanted to conserve. Thus, an obsolete industrial system based on a few strong points: politics, trade unions and big industry, which form a single block".

“Per cui questa narrazione viene utilizzata come strumento non per cambiare, ma per conservare: “cioè, siccome siamo poveri, dobbiamo mantenere quello che abbiamo” …senza capire che la povertà nasceva esattamente da quello che si voleva conservare. Quindi, un sistema industriale obsoleto, basato su alcuni punti forti: la politica, il sindacato e la grande industria, che costituiscono un unico blocco.” (ID 10).

I believe another illustrative example of the “change as threatening” repertoire could be seen in the extract below, where the politician (ID6) is speaking about the mineral heritage:

9) Mining heritage is a cultural heritage. Therefore, it is seen as intrinsically linked to the culture of the place. There is nothing wrong with that, if only it were a cultural heritage and remained so. The problem is that it carries a message that instead is “we were the industry, we were the regional industry hub... what do we do without industry?”.

Il patrimonio minerario è un patrimonio culturale. Quindi è visto proprio come intrinsecamente legato alla cultura del luogo. In questo non c’è niente di male, se solo fosse un patrimonio culturale e rimanesse tale. Il problema è che si porta dietro diciamo un messaggio che invece è “noi eravamo l’industria, eravamo il centro dell’industria regionale…cosa facciamo senza industria?” (ID 6).

In line 713, the use of passive voice ("it is seen") could be seen as a rhetorical strategy to avoid mentioning the subject of the verb. After that, the speaker uses the rhetorical device of active voicing (in line 716-718), which is used to build the believability of the argument. In this case, the rhetorical strategies used by the speaker do not allow to understand his positioning. I think this could be a strategy for not making the criticism explicit.

Lastly, "change as hampered" might be seen to allow the participants to position themselves in the Sardinian group, while leaderships are those who hamper the transformation.

10) "Change is not wanted by the leadership. I say this as a doctor who has a strong push for change and therefore for all transformation processes, because we are not against industry, but we want a different industry".

"Il cambiamento non è voluto dalle leadership. Lo dico da medico che ha una forte spinta per il cambiamento e quindi per tutti i processi di trasformazione, perché noi non siamo contro l'industria ma vogliamo un'industria diversa" (ID 7).

In extract 10, the expert (ID7) uses her category entitlement ("I say this as a doctor") to build the credibility of her statement. Then, the speaker uses a disclaimer ("we are not…, but…"), which is usually used in discourses to deny the criticism expected from the opinion the speaker is going to advocate. In this case, the speaker clearly position herself in the group, but it is not clear if the group is "Sardinians" or "doctors".

3.1.1 Discussion

According to the analysis, respondents use a wide range of interpretative repertoires and discursive devices to construct the place of Sulcis and his transformations in the discourse. The original question was "what is the talk of stakeholders relating to the place and how this narrative influences the understanding of change" (RQ1). From my analysis, stakeholders seem to interpret the place of Sulcis as "dispossessed" and "undervalued". While on the one hand, the history of colonization and their consequences are emphasized, on the other hand the stress is put on the non-recognition and waste of Sulcis potentialities and resources. As already mentioned in the introduction of this chapter 3, discourse analysis's findings should be identified in the function (i.e., aim and consequences) of the language (Wetherell and Potter, 1988). I would argue that both stakeholders' patterns of accounting of Sulcis seem to make sense of a shared understanding that external influences - be they from the national or the international context - represent a disruption to place attachment and a perceived threat to place meanings and identity. An important consequence of this form of talk is that the outgroup may be viewed with diffidence and mistrust, and thus its own territory and its own ingroup as something to be protected.

Importantly, the symbolic meanings that compose SoP constitute the familiar resource from which people draw to evaluate the potential effects of change (Bergquist et al., 2020). In line with this, "change as threatening" repertoire seems to be based on these assumptions. While the psychological motivation seems to be the fear of losing the last few remaining certainties, the psychological consequences could act as lock-in processes and a resistance to change. Indeed, according to Devin Wright (2009), the resistance to transformations arises from the perceived threat to place attachment,

meanings and identity (Devine-Wright, 2009). Similarly, “change as hampered” implies an understanding of political forces as untrustworthy and can perform in a distrust of institutions and behaviors of rejection and closure.

However, contrary to expectations, the most frequently used repertoire was “aid-based change”, highlighting the contradiction between the perception of external agents as the cause of poverty and disruption, and the actual action of waiting for change to come from outside. From this contradiction, an important reflection on subalternity in Sardinia could open up. The subaltern cannot construct an interpretation in which he is the subject of power but must necessarily adopt one of the two narratives that are possible for him: tradition – in this case, mining culture – and modernity – and thus liberation and support from colonial power (Mongili, 2015). It is important to note that although “change as threatening” and “aid-base change” were reported by interviewees as being very prevalent in Sardinia, speakers very often positioned themselves outside the group, distancing themselves from the narrative they reported. This result will be discussed in more detail in the next chapter (p. 76).

Chapter 3.2 Constructing future imaginaries

A central focus of this research was exploring the precise nature of STIs, and how they are constituted in talk and action. As mentioned in chapter 1, STIs are collectively visions and expectations that individuals may project towards material objects and technologies, which become vehicles of new and different forms of social life and social meanings (Magnani & Cittati, 2022). My analysis revealed that respondents seem to draw on four different interpretative repertoires to portray their

discourse on STIs. These repertoires are often combined and include: “localization”, “radical system change”, “energy colony” and “the myth of industrialization”.

The “localization” repertoire presents arguments for the territorialization of the energy system. It was used by most respondents, who argue that energy should be discussed mainly in terms of people, place and their benefits. I believe an example of this repertoire can be seen in the extract below:

11) “These facilities serve people, how do you do it apart from people? Do I produce energy to make money for myself, or for people? Where energy is needed, how much damage does it do? How does it accommodate the needs of the land, the places, the activities that take place there? Everything must be planned with this in mind; regulations must be made to benefit people, to benefit communities, not to punish them or to promote the speculators of the day”.

“Queste strutture servono alle persone, come si fa a prescindere dalle persone? Produco energia per produrre soldi per me, o per le persone? Dove serve l’energia, quanto danno fa? Come si accoppia alle esigenze del territorio, dei luoghi, delle attività che vi si svolgono? Tutto deve essere pianificato in funzione di questo…le norme devono essere fatte per favorire le persone, per favorire le comunità, non per punirle o per promuovere gli speculatori di turno” (ID 3).

This extract 11 can be seen to be organized under the device of rhetorical question. By using this type of questions, the speaker (ID 3) encourages the interviewer

to reflect on the issue. This repertoire seems to make sense of the shared understanding that energy is only a vehicle for people and places wellbeing. By using this pattern, speakers can effectively position power at local level.

"Radical system change" repertoire presents arguments for the necessity of a radical transformation of the socio-technical system. Almost half of the participants used this repertoire. I believe an illustrative example could be seen in the following extract:

12) "…to put it bluntly - unfortunately, there is a vision…the direction is profoundly - let's say - marked by capitalism…In the sense that no drastic intervention to reduce waste and consumption is yet being considered, because as things stand, numbers at hand, no ecological transition is really possible - we must clearly state how things stand - if we think of maintaining and even increasing current energy consumption. This is a fact, the tables that have been published also say so. There is an interesting article that came out in the last issue of International in which the materials that have to be used for renewables are listed, and the scarcity of availability of these materials around the world and the environmental consequences, as well as the social and political ones, let's say this has to be taken into account because what is coming up is really a trigger for new conflicts to hoard these materials. Thus, we are not getting out of the problem but into another one".

"…proprio per dirla papale papale…c'è una visione…purtroppo, l'indirizzo è marcato profondamente…diciamo così…dal capitalismo… Nel senso che non si pensa ancora a un intervento drastico di riduzione degli sprechi e dei consumi perché al dato attuale numeri alla mano, non è possibile proprio - bisogna dire chiaramente come stanno le cose - al momento nessuna transizione ecologica se si pensa di mantenere addirittura aumentare i consumi attuali di energia. Questo è un dato di fatto, lo dicono anche le tabelle che sono state pubblicate. C'è un articolo interessante uscito sull'ultimo numero di internazionale in cui vengono elencati i materiali che devono essere impiegati per le rinnovabili e la scarsità di disponibilità di questi materiali in giro per il mondo e le conseguenze ambientali, oltre che sociali e politiche, diciamo di questo se ne deve tener conto perche' quello che sta prospettando è veramente un innesco di nuovi conflitti per accaparrarsi queste materie. Quindi non stiamo uscendo dal problema ma ci stiamo infilando in un altro" (ID 1).

In extract 12, the speaker uses a wide range of rhetorical devices to build the case and his credibility. In lines 22 and 23, the speaker lays out the case by presenting it as self-evident to increase the credibility of his argument ("as things stand, numbers at hand", "we must clearly state how things stand"). In addition, in lines 25-26 the speaker points out that his argument is supported by scientific numbers and statistics ("This is a fact, the tables that have been published also say so"). After that, the speaker offers a relevant example by emphasizing its provenance, again to lend credibility and support his argument.

Then, “energy colony” might be seen to allow participants to construct in the discourse their imaginary about the future as a repetition of the same story. This pattern of accounting is used by the majority of the respondents to argue that this new technology would bring only speculation and land devastation. As an example, the following extract:

13) “Today we are witnessing an assault on Sardinia by producers from outside, who will make money, who will provide very few jobs, to the detriment of our territory. This is because we have not planned, we have not designed, we have not planned, planning…we have not done it. We have always tried to open the shot and we have always parried it late, and our communities have always suffered. Because we have also tried to anticipate the rule that is now coming from Europe, fortunately, but then we have not been able in any way to implement it, to give us a rule, we have been a bit…like it has always happened historically, colonized…” (ID 3).

“Oggi assistiamo ad un assalto della Sardegna di produttori che arrivano dal fuori, che guadagneranno loro, che daranno pochissimi posti di lavoro, a scapito del nostro territorio. Questo perché noi non abbiamo pianificato, non abbiamo progettato, progettare, gettare avanti…noi non l’abbiamo fatto. Abbiamo sempre cercato di aprire il colpo, lo abbiamo sempre parato in ritardo, e le nostre comunità hanno sempre subito. Perché abbiamo provato anche ad anticipare la norma che adesso viene dall’Europa per fortuna, ma poi non siamo stati in alcun

modo capaci di attuarla, di darci una regola, siamo stati un po' …come è sempre successo storicamente, colonizzati" (ID 3).

The extract 13 can be seen to be organized around the contraposition "us-them": "us" refers to the inhabitants of Sulcis (as can be seen in line 328), while "them" is a more generalized pronoun addressing external producers. In line 326, the speaker makes an interesting use of the term "assault", which literally means a physical attack on someone or a military attack in a war by armed forces. This term is used in the interviews by many of the respondents and highlights the shared underlying conflictual meaning in the psychological experience of colonization that emerges in discourse. In lines 327 – 328, the speaker offers an insight into their imaginary of socio-technical ("who will make money, who will provide very few jobs") and spatial future ("to the detriment of our territory"). This imagination is the direct quote of what the speaker feels happened in the past, as we can see in lines 334-335 ("we have been a bit…like it has always happened historically, colonized"). After that, the speaker continues:

14) "I am sorry to say it but that is how it is, we have been colonized. There are large wind farms that exploit the potential of the wind where it is stronger, where it is more constant, where it is higher up, further away from the sea because too close to the sea is more unstable ... but who has cared about the territory, the people?".

"Mi dispiace dirlo ma è così, siamo stati colonizzati. Ci sono grandi parchi eolici che sfruttano la potenzialità del vento dov'è più forte, dov'è più costante, dov'è più in alto, più distante dal mare

perché troppo vicino dal mare è più instabile…però del territorio, delle popolazioni, chi si è preoccupato?" (ID 3).

The speaker continues his discourse talking about technological infrastructures that "exploit" natural resources. This term used in line 337 ("exploit") is a really strong term that implies using a situation to get benefits as much as possible, even if it is wrong or unfair. In this sense, the "large wind farms" might embody for the speaker the predatory colonization by external forces, exploiting the best resources of the place ("wind where it is stronger, where it is more constant, where it is higher up").

Finally, the "myth of industrialization" suggests that Sardinians are unable to imagine a future other than industry. In contrast to the other repertoires, participants reporting this dominant imaginary position themselves as outsiders. I believe an interesting example of this "myth of industrialization" repertoire could be also seen in the extract below, where the politician (ID3) is speaking about the myth of industrialization:

15) "There is an inability to see a future different from the industrial one. Not industrial manufacturing in general…But industrial hinged on industry… on big metal industry rather than mining, and to assume that you would pass on a different kind of manufacturing. But a type of development hinged on something different. Then, this inability…I'm getting into fields that I don't… I'm an economist and I seem to be more of a sociologist…leads to a fear of the future. Therefore, all the battles that I saw during our initial phase, which were fought in the area, showed an inability of the employees of

623 Alcoa, Igea, Carbosulcis… to see a future different from the one they
624 had been assured until now" (ID6).

"C'è una incapacità di vedere un futuro diverso da quello industriale. Ma non industriale manufatturiero in generale. Attenzione. Ma industriale incardinato sull'industria… sulla grande industria metallifera piuttosto che sulle miniere, e ipotizzare che ci passeresti una manifattura di tipo diverso. Però un tipo di sviluppo incardinato su qualcosa di diverso. Allora questa incapacità…sto entrando in campi che non… io sono un economico e mi sembra di essere più un sociologo…porta ad una paura del futuro. Quindi tutte le battaglie che io ho visto durante la nostra fase iniziale, che son state battute sul territorio, evidenziava una incapacità di dipendenti di Alcoa, di Igea, di Carbosulcis… di vedere un futuro diverso da quello che gli era stato finora assicurato" (ID6).

In this extract, the speaker (ID 6) makes an interesting use of pronouns, using "I" , "we" or "they", according to the function of the discourse. In particular, in line 614 the speaker uses a partitive subject to avoid making explicit the subject performing the action. Then, in lines 621-622 the speaker positions himself in the group ("our initial phase") and positions the "employees" out of the group, to highlight the discordance in relation to the proposed imaginary.

3.2.1 Discussion

According to my analysis, respondents used four different interpretative repertoires in their discourses to construct socio-technical imaginaries. The original

question was “what is the precise nature of STIs, and how they are constituted in talk and action” (RQ2). To begin with, the analysis reveals a significant spatial component in the construction of STIs. In all participants’ discourses, the imagination of the socio-technical future was highly intertwined with the future of the place and people who live here. Indeed, in the majority of participants’ discourses, the place was the starting point for shaping the discourse on technology and society imaginations. This research finding is in line with Chateau et al. (2021), according to which spatial imaginaries and STIs are co-produced, mutually constructing, feeding and reinforcing each other.

Moreover, several competing imaginations emerged from the analysis. The most frequently used repertoire was “energy colony”, which seems to make sense of a shared understanding that the current plans for energy transition represent another colonizing force that will bring devastation and poverty. A consequence of this truly stressful pattern of accounting could be seen in an oppositional actions towards infrastructure installations. On the other hand, “localization” and “radical system change” have often been combined and constructed in the discourse as the only sustainable socio-technical future. These proposed discursive repertoires are far from recalling the NIMBYs concept and, on the contrary, presuppose a very radical imaginary.

Finally, the “myth of industrialization” implies an inability to reimagine society, a sort of “imaginary lock-in” (Marquardt & Nasiritousi, 2022) that functions as a conservative force. This repertoire was brought up in the discourse as the dominant imaginary in Sardinia, even though none of our participants seemed to feel or share it. Indeed, the discursive devices used by speakers seem to allow them to position themselves outside the dominant group, constructing their imaginaries as a minority and distancing themselves from the dominant “myth of industrialization” imaginary – as it

was for “change as threatening” and “aid-based change”. This research finding is really interesting, especially considering that many studies have shown that it is quite common among people to reject an opinion, but incorrectly assume that the majority of others hold it (Sokoloski et al., 2018). This psychological phenomenon is called pluralistic ignorance and is also likely to affect behavior. In fact, many studies have shown that underestimating the prevalence of one’s majority position may lead to a “silencing effect” in public.

Chapter 3.3 Interpretations of a Just Transition

This chapter explores the range of discursive devices and strategies that participants used talking about their understanding of a Just Energy Transition. My analysis revealed that respondents seem to draw on three different interpretative repertoires to portray their understanding of a Just Energy Transition. These repertoires include: “cost-benefit assessment”, “practice of reappropriation” and “recognition”. As for the previous chapters, these patterns of accounting are likely to be used combined. The most common pattern of accounting was “re-appropriation”, followed by “cost-benefit assessment” and “recognition”, which were used by about half of the participants.

The “practice of re-appropriation” repertoire might be seen to allow the participants to construct the energy transition as a way to take control of both local resources and their own development path. On the one hand, it arguments for the re-appropriation of soil, natural resources and economic benefits. On the other hand, this “practice of re-appropriation” could be seen to perform other indirect dimensions such as the experimentation of a circular economy, solidarity, the value of diversity, the

recycling and a richer and better way of living. In a broad sense, some speakers talk about “self-determination”. Lastly, some participants emphasized the importance of local citizens' participation in energy decisions as a way to regaining possession of their future. An example of “practice of re-appropriation” could be seen in the extract below:

16) “the protection of the landscape, of communities, but also the mere respect for the wishes of a given territory, even with regard to energy supply, is also a value. So yes, perhaps from the point of view of mere mathematical planning it would be more appropriate to work on a large scale, even in the global concentration that policies should have… it would be appropriate to work on a large scale; however, especially in a region like Sardinia, and as a Sardinian politician, I can tell you that the value attributed to people in terms of the possibility given to them to self-determine as a community, as districts, in the path of energy transition is also great.

“la tutela del paesaggio, delle comunità, ma anche il solo rispetto delle volontà di un determinato territorio, anche in merito all’approvvigionamento energetico, è un valore anche quello. Quindi sì, forse sotto un punto di vista di mera matematica programmazione sarebbe più opportuno anche in opera di concentrazione globale che le politiche dovrebbero avere… sarebbe opportuno lavorare su larga scala; però, soprattutto in una regione come la Sardegna, e da politico sardo, ti posso dire che è grande anche il valore attribuito alle persone relativamente alla possibilità a loro data

all’autodeterminarsi come comunità, come distretti, nel percorso di transizione energetica” (ID 5).

In lines 166-169, the speaker provides a concession (“So yes, perhaps… However, …”) to acknowledge potential counter-arguments, but eventually advocate his position. The speaker constructs the discourse in order to present himself as reasonable, balanced and informed, as we can also see from line 169, where the speaker uses a category entitlement (“as a Sardinian politician”) to build his credibility. Using these discursive devices, the opinion the speaker advocates seem more robust and evidence-based, since he appears to have considered several perspectives before coming to the conclusion.

Re-appropriation could be interpreted also as resignification. As an example, in the following extract, the speaker shifts the discourse from the production of energy as the central core to energy as a means to achieve something:

17) “I have never heard in recent years of a goal for the future. Apart from the issue of energy transition, which means nothing to me. We no longer talk about us, about what we want to become, what goals we set for ourselves in life” (ID 1).

“Io non ho mai sentito parlare negli ultimi anni di un obiettivo per il futuro. Oltre alla questione della transizione energetica, che di per sé per me non vuol dire nulla. Noi di noi non parliamo più, di che cosa vogliamo diventare, cioè, quali obiettivi ci poniamo per la vita” (ID1).

In extract 17, the environmentalist (ID1) formulates the case as very extreme ("nothing", "never") to make his argument really serious and worrying. Moreover, he makes a careful choice of pronouns, using sometimes "I" and in other instances "we". I believe the speaker uses the pronoun "we", thus including himself in the group, in order to address the issue as a problem to be tackled together, as a group. It is not clear whether "we" states for inhabitants of Sulcis, Sardinians, Italians or even all people in the world.

"Cost-benefit assessment" stresses the fact that the energy transition should bring benefits to the community, instead of bringing only costs. An example of this repertoire is the following extract:

18) "I reiterate the concept that even in the smallest enterprises, a cost-benefit ratio is always made, always; if an operation is worthwhile, it is done, but it must also benefit. And instead, here we know: the benefit is profit, and goes in one direction, and the costs fall instead on the community and are costs in terms of the destruction of the territory. With what that means, it also means burning all the resources linked to the land, pollution of the environment and disease. You know now the case of this very high incidence of children with mental retardation, but how can such a thing be possible? So we need political intelligences that govern the territory, that govern the environment, that really promote an ecological transition that does not even use the name. Because in

449 Sardinia, in the name of eco-compatibility, in the name of things on a
450 human scale, in the name of I don't know what, they have screwed us!"

"Io ribadisco il concetto che anche nelle più piccole imprese si fa sempre un rapporto costi-benefici, sempre; se un' operazione conviene si fa, però deve trarre anche beneficio. E invece qui si sà: il beneficio è il profitto, e va in una direzione, e i costi ricadono invece sulle collettività e sono costi in termini proprio di distruzione del territorio. Con quello che significa, vuol dire anche bruciare tutte quelle che sono le risorse legate al territorio, l' inquinamento dell'ambiente e le malattie. Sapete adesso il caso di questa incidenza altissima di bambini con ritardi mentali, ma come può essere possibile una cosa del genere? Quindi noi abbiamo bisogno di intelligenze politiche che governino il territorio, che governino l'ambiente, che promuovano davvero una transizione ecologica che non usa neanche il nome. Perché in Sardegna in nome dell'eco-compatibilità, in nome delle cose a misura d'uomo, in nome di non so che, ci hanno fregato!" (ID 7).

In this extract, the speaker (ID 7) organizes his discourse around a categorial contrast costs – benefits and us – them (e.g., "the benefit is profit, and goes in one direction, and the costs fall instead on the community"). In lines 449-450, the speaker uses a three-part list ("in the name of…") to arouse the feeling of the interviewer and then, she uses the verb "screw", which implies an unfair behavior. This patterns of

accounting seem to make sense of a shared understanding that "us" (e.g., the community) must defend itself against a "them".

The "recognition" repertoire might be seen to allow the participants to construct Transition as a way to recognize the place, shaping Just Transition as localized and environmentally compatible. I believe an example of the "recognition" repertoire can be seen in the extract below:

19) "If energy production harms the environment, it harms us. We are landscape, landscape is man's habitat. It is not a postcard; it is not what we look at. Now I use a Sardinian phrase: everything that does not have a Sardinian word, for Sardinians, does not exist. A very good anthropologist who is Marchisio Bandini says this. "Su paesaggi" does not exist, that is, the word "landscape" in Sardinian does not exist. What does exist is "su lugu", the place…the place is made of perception, the place is what I tread on, what I breathe, what I feel, what I look at, and it is such a strong concept that, how can I say, brings us back to the need to recognize the characteristics of what we tread on, breathe, look at, touch. Thus, the production of energy cannot apart from place" (ID 3).

"La produzione di energia se danneggia l'ambiente danneggia noi. Noi siamo paesaggio, il paesaggio è l'habitat dell'uomo. Non è la cartolina, non è quello che guardiamo. Adesso uso una frase sarda: tutto ciò che non ha una parola sarda, per i sardi non esiste. Lo dice un antropologo bravissimo che è Marchisio Bandini. "su paesaggi" non

esiste, cioè la parola paesaggio in sardo non esiste. Esiste "su lugu" il luogo…il luogo è fatto di percezione, cioè il luogo è ciò che calpesto, che respiro, che sento, che guardo, ed è un concetto così forte che, come dire, ci riporta alla necessità di riconoscere le caratteristiche di ciò che calpestiamo, respiriamo, guardiamo, tocchiamo. Quindi la produzione di energia non può prescindere dal luogo" (ID 3).

In extract 19, the speaker uses different discursive devices to arouse speakers emotion. As an example, in lines 240-241 the speaker uses figurative language ("we are landscape") and in lines 246-247 he repeats "the place" ("su lugu" in sardinian dialect) to emphasize the concept. After that, the speaker uses a list of words related to the five senses ("what I tread on, what I breathe, what I feel, what I look at") in order to evoke emotions. The speaker might want to shape the people- place relationship as really valuable to build into the discourse the need for transition to be environmentally compatible and in harmony with place.

3.3.1 Discussion

According to the analysis, respondents use three interpretative repertoires to shape a Just Transition in their discourse. The original question was "how do stakeholders interpret a Just Energy Transition" (RQ3). From my analysis, stakeholders seem to interpret the Just Transition as "reappropriation", "recognition" and "cost-benefit assessment". Indeed, the interviews confirmed what already emerged from the context analysis: Sulcis was victim of various forms of procedural, distributive and recognition injustices. In the interviews, participants offered an insight into their

personal experiences with regard to the environmental and energy injustices perpetrated in Sulcis and what this meant and might mean for Sardinians. Many participants used different rhetorical devices to convey their emotions to the listener. Overall, I would argue that all stakeholders' patterns of accounting seem to make sense of a shared understanding that transition, to be just, should represent in a broad sense a "reclamation" of the characteristics of the environment, of economic benefits, of one's dignity and self-determination. An important consequence of this form of talk is that previous damages should be restored. Not only the environmental and economic damages, but also a restoration of consciousness and dignity. From this perspective, I believe this analysis shows that EJ and Energy Justice principles as put into practice are strongly linked to the practice of restoration.

Conclusions

This final dissertation aimed to explore stakeholders' narratives with respect to past, present and future of place, society and technology in the context of transition. The core questions for this research were as follows: What is the talk of stakeholders relating to the place and how this narrative influences the understanding of change (RQ1); What is the precise nature of STIs, and how they are constituted in talk and action (RQ2); How do stakeholders interpret a Just Energy Transition (RQ3). After providing a comprehensive description of the main theoretical contributions on EJ, energy justice and just transition, as well as on STIs and SoP, an in-depth description of the case-study context and the methods adopted was given. After that, a discourse analysis was carried out in order to explore stakeholders 'narratives.

By analyzing representations of the place of Sulcis, this thesis has shown how the spatial dimension can directly and indirectly shape STIs and the understanding of change. Moreover, it shown how Just Transition principles as put into practice are really linked to the practice of restoration. With respect to the RQ1, my discourse analysis revealed that stakeholders' accountings of Sulcis seem to make sense of a shared understanding that external influences represent a disruption to place attachment and a perceived threat to place meanings and identity. As a consequence, in line with postcolonial studies, the "dominated" seem to interpret change in two ways: as a preservation of tradition; or as an intervention by colonial forces. In the first case, the interpretation of change as threatening could lead to lock-in processes and a resistance to change. In the second case, people could function as non-owners of their change.

Regarding RQ2, my analysis confirmed previous research, according to which STIs are not spatially neutral, but rather emerge from local context (Chateau et al.,

2021). In fact, it shows that symbolic meanings underlying the understanding of place were also the resources from which participants draw to construct STIs. Moreover, my discourse analysis revealed different and competing imaginaries. Stakeholders' accounting of STIs seem to make sense of a shared understanding that the only possible and socio-technical future implies a radical system change and a return to the local dimension. However, current energy transition is shaped as another colonizing force. Lastly, we explored stakeholders' understandings of a Just Transition to respond to RQ3. From our analysis, stakeholders' accounts of Just Transition seem to make sense of the shared understanding that the only way for a Transition to be Just involves the prior restoration of environmental and economic damages, as well as people's consciousness and dignity. Indeed, a Just Transition is understood as a way to regain ownership of their own path of development and self-determination.

The present research opens up new and different questions. Firstly, specific narratives regarding change ("aid-based" and "threatening") and STIs ("myth of industrialization") were brought up in the discourse as dominant in Sardinia, even though none of our participants seemed to feel or share it. There could be different explanations for this phenomenon. One possible reason is that stakeholders are a very well-informed and experienced target group and therefore, they may have developed élite positions shared by a minority. Another explanation could be the effect of pluralistic ignorance, that is, a psychological phenomenon for which people reject an opinion, but incorrectly assume that the majority of others hold it (Sokoloski et al., 2018). To better understand the implications of these findings, future research could examine how pluralistic ignorance, and in general people perception of others' beliefs, could influence the narrative in the discourse. Secondly, another interesting issue to be

investigated is the contradiction between the Sardinian perception of external agents as the cause of poverty and disruption and the actual action of waiting for change to come from outside and seeing the colonial model as the only practical alternative. To better understand these results, future studies might replicate this research exploring narratives of the "average citizen" in order to investigate their positions and "make the subalterns speak".

My study presents some limitations. To begin with, the sample size was small, and we used a non-probability sampling method, that is, Snowball sampling. For this reason, we were unable to calculate sampling errors. Moreover, since participants selected other participants, it is possible that sampling bias occurred (e.g., some participants may have indicated other stakeholders with positions very close to their own). However, this method of sampling allowed us to reach very valuable people and thus collect high-quality material. In addition, our findings are specific to a particular group of Sardinian stakeholders, and, for this reason, the identified patterns of accounting are not expected to be generalizable to the entire target population. Nevertheless, the expectations from the literature review were confirmed, suggesting that the results are worthwhile.

However, this research succeeded in its implicit attempt to give voice to minority narratives, usually oppressed by the dominant mainstream view. As already mentioned in chapter 3, according to postcolonial studies the subaltern cannot construct an interpretation in which he is the subject of power (Mongili, 2018). This question of who can imagine and talk about the futures of places raises the question of how just and acceptable energy transitions are (Chateau et al., 2021). It must be acknowledged that the negotiation of energy futures is fraught with power (Chateau et al., 2021) and that

“modern political power is built upon a foundation of energy power, sustained by the control of that power, and enriched and legitimized by the export of that power” (Hamilton, 2022). The energy transition, as proposed by capitalism, certainly promises system continuity, continuing to create energy “to drive the movement and acceleration needed for constant growth” (Hamilton, 2022). But “could the energy transition hold within it the potential for something more? The substitution of one type of power for another?”. This question was posed in a recent article by Omar Robert Hamilton, which was published in the journal “Internationale”. According to the journalist, although capitalism is likely to lead to a reduction in polluting emissions, it could never “create a natural balance or erase the legacy of colonialism”. Therefore, this reflection on socio-technical futures and the confrontation between conflicting narratives cannot but open up another question: “What do we want to achieve with energy?”. The widely shared question of “climate reparations” and “just transition” already includes an idea of energy transition that goes beyond emission reduction to include a restoration of places. However according to Hamilton (2022), without a process of decolonization “it will not be possible to achieve an environmental justice that goes beyond emissions reduction”. This alternative imaginary, which has come up repeatedly in interviews in this research, sees the energy transition as a great opportunity to redress injustices and overcome the legacy of colonialism that continues to oppress so many places and countries around the world. Different studies suggested that a major obstacle towards a fossil-free future is the failure to deal with conflicting decarbonization narratives and imaginaries (Marquardt and Nasiritousi, 2022; Hulme, 2020). From this point of view, tipping points enabling transitions should be seen as transformations in shared narratives and meanings associated with practices. The question that now arises is “whether the state

can open up spaces to explore deep transformations and alternative futures or whether it is hindered by dominant actors, vested interests, and established narratives" (Marquardt & Nasiritousi, 2022, p.637).

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