Zbornik

NEW CONCEPTS FOR JUST TRANSITIONS

Towards Living Well within Planetary Boundaries

OIKOS

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New Concepts for Just Transitions

Towards Living Well within Planetary Boundaries

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Part II: ENERGY AND HOUSING

Introduction

The existing development paradigm relies only on "greening" existing policies, which does not lead to more radical changes, but only reinforces an anthropocentric approach to addressing environmental issues and neglects the eco-centric one. Within existing institutions, environmental issues are thus addressed only at the technological level, further depoliticising environmental issues.

While young people recognise that previous approaches to tackling environmental problems have not produced the expected results, that they will be the ones most affected by today's decisions and will live in a worse environment than current generations, they do not have the knowledge to initiate a different approach to environmental issues.

The existing institutional education – especially at university level – does not provide them with adequate knowledge on how to re-politicise environmental issues and provide a basis for green active citizenship, while there is also a deficiency in the social science literature (Slovenian and translated) that needs to be urgently addressed.

Green active citizenship requires a recognition of the different environmental discourses and concepts of development, and the development of an environmental political imagination that can be used to devise new possibilities for development (or so-called 'post-development' orientations, e.g., to degrowth), to formulate new approaches to strategies for (more environmentally acceptable) community development and to initiate more appropriate and effective forms of communication. The present collection thus aims to fill a gap in the field of green active citizenship, which is not included in the curricula of educational institutions (especially at university level1). The creation of an environmental political imagination capable of reflecting existing forms of communication at a systemic level, and of looking beyond anthropocentric and

technological approaches to environmental issues and their resolution, taking into account different environmental discourses, development concepts and environmenta[1] and ecological ethics, is seen as necessary to increase the effective participation of young people in communication and decision-making processes when it comes to the issue of living conditions.

In recent decades, the world has experienced a series of global crises – ecological, health and financial crises, as well as a crisis of increasingly precarious living conditions. We are therefore increasingly confronted with a multifaceted crisis situation, which, in addition to the crises of financial markets, climate change and resource depletion (NEF, 2010), also encompasses crises of political representation, of the very conditions of life and of social reproduction. Although the current multifaceted crisis has different manifestations – both in terms of local specificities and in terms of intensity itself – it is necessary to speak of its global dimension, which goes along with the model of global capitalist development, whereby countermeasures remain inadequate or trapped in the paradigm of growth and austerity, despite the great awareness of the existence of crises. As Brand and Wissen (2022) note, we are living in a paradoxical time: on the one hand, there is a broad social and political debate about the ecological crisis (especially climate change), while at the same time environmental destruction continues apace. For example, global resource consumption has tripled since 1970 and has been accelerating since the turn of the millennium (UNEP, 2016), and Kallis et al. (2022, p. 14) make a similar point: the exploitation of human and natural resources, and the generation of emissions and other waste, cannot continue to increase without exacerbating the planetary crises, because it is no longer (even economically) rational to maintain growth: the social, ecological and personal costs of growth outweigh its benefits. Brand and Wissen thus highlight a key flaw in the ways in which the multifaceted crisis has been tackled so far: the emerging mainstream debates ignore the

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[1]   The lack of environmental social science knowledge was addressed by two student projects of ŠIPK (2016-2017): Youth for a Better Environment 1 and Youth for a Better Environment 2 (Eko-kolektiv, n.d.).

dominant capitalist dynamics and the social relations that are linked to them, resorting to a "greening" of existing dominant policies that further reproduces the existing way of life. This is why the authors introduce the concept of the imperial mode of living, the idea of which is that everyday life in capitalist centres is made possible by shaping social relations and the relationship between society and nature elsewhere, i.e., by having unlimited access to (cheap) labour, natural resources and sinks on a global scale, thus shifting exploitation to ever new locations. The global North or capitalist centres are fundamentally dependent on the way in which societies, including their relationship to nature, are organised elsewhere – especially in the capitalist peripheries – in a way that ensures the transfer of cheap labour and natural resource products from the global South to the economies of the global North (Brand and Wissen, 2022); the same dynamics occur within the capitalist centres. There is thus a close connection between the capitalist mode of production and our everyday practices, which must be critically reflected upon when we talk about current challenges and their solutions.[2]

In *The Case for Degrowth*, Kallis et al. (2022, p. 82) note that even if the current paradigm of advocating infinite growth within capitalist frameworks were economically, socially and ecologically sustainable, it would still not bring about the fullness of human life. As one of the post-development orientations, Degrowth[3] thus advocates a reorientation of social economies to promote collaborative and creative lives that are enjoyable, healthy, satisfying and sustainable for many more people and places, with the ultimate goals of degrowth (decent work, less selfish competition, fairer relationships, communities in solidarity, humane rhythms of life, respect for natural environments) are already being understood as the means by which new ways of living and policies for the future can be practised here and now.

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[2] For more on the concept of the imperial mode of living itself, its historical implications, the false alternatives and the outline of a solidarity way of life, see U. Brand and M. Wissen (2022). *The Imperial Mode of Living: Everyday Life and the Ecological Crisis of Capitalism*. Institute for Ecology and Institute for the Critique of Science.

[3] For more on degrowth, see G. Kallis, S. Paulson, G. D'Alisa and F. Demaria (2022). *The Case for Degrowth*. Institute for Ecology and Institute for the Critique of Science.

The more complex the situation, the more possible ways of looking at it, and this is especially true when it comes to environmental issues and the multifaceted crises themselves. It is therefore necessary to mention here the different environmental discourses – that is, common ways of understanding the world – which offer different approaches to tackling environmental issues.

Environmental discourses are inventoried and analysed by Dryzek in *The Politics of the Earth* (2018), who highlights, among others: administrative rationalism, which leaves problem-solving to experts; democratic pragmatism, where problem-solving is left to the people; and economic rationalism, where solutions are left to the market. There are, however, also discourses that do not acknowledge the finitude of natural resources at all (prometheanism) or that advocate planetary boundaries that we have to adhere to in order to survive (constraints and subsistence). Then again, some discourses are already more sustainable (albeit more ostensibly so), such as the dominant discourses of sustainable development or ecological modernisation – the former is about the idea of meeting present needs without compromising future generations, but within the framework of the existing system, while the latter is about restructuring the capitalist political economy in an environmental direction, but again without changing the capitalist system itself. Last but not least, green radicalism, which materialises, for example, through various social movements and relies on changing people's consciousness or way of thinking, cannot be overlooked. Through each of these environmental discourses[4] it is thus possible to interpret environmental problems in a different way and to offer different solutions, which means that active awareness and reflection is one of the important steps both in understanding the complexity of environmental issues and in practising green active citizenship. But just as crises are multifaceted, so too are the individual issues that young people face – from housing and mobility to precarity – multifaceted

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[4]   For an in-depth analysis of all the environmental discourses listed, see further J. S. Dryzek (2018). *The Politics of the Earth*. Environmental discourses. Institute of Ecology and Institute for the Critique of Science.

and interconnected. Faced with insecurity in living conditions, we need, on the one hand, to re-politicise environmental issues, whose solutions will not only rely on technology, but will build on broader social and political considerations, while, on the other hand, we need to produce and transfer knowledge in the field of political ecology for active participation in communication and decision-making processes.

The times of multiple environmental and social crises thus encourage us to look for alternative solutions to organise ourselves socially, economically and institutionally, but before alternative development trajectories can even begin to be practised, the conceptual field of political ecology, and of ecology in general, needs to be clarified. In public discourses, conceptual confusion and conflation of key ecological concepts, different ideologies and approaches to environmental problems can be observed.

Students have prepared ten texts that reflect on some of the current issues in the field of political ecology through theory and practice. In the first, i.e. theoretical part of the proceedings, the authors take the reader through some key conceptual considerations: Jovanovska (Chapter 1) reflects on the concepts of discernment and community sense, Tepež (Chapter 2) derives the concept of imagination-as-praxis for thinking through alternative possibilities, Dagalev (Chapter 3) deals with the question of participation in institutional frameworks in the field of environmental polis, Smole (Chapter 4) deals with the interplay between the climate crisis and (progressive) populism, Baptiste Salmon, Jean-Paul Vanderlinden, Charlotte Da Cunha and Yorghos Remvikos (Chapter 5) deal with the existential risk as a salient concept for transition studies and Riccardo Biella, Giuliano Di Baldassarre (Chapter 6) answer the question why climate services need to address vulnerabilities to avoid maladaptation.

The second part of the volume focuses on studies in the energy sector and housing in Slovenia and Chile, with Marčenko and Šilak (Chapter 7) analysing coal phase-out, Poglajen, Klopčič, Žalec and Maraž (Chapter 8) analysing sustainability and democratisation in the energy sector, and Žnidarič and Lukšič

(Chapter 9) analysing sustainability in the Zasavje region. Paz Araya (Chapter 10) focuses on analysing the heating deprivation and the unfulfilled promise of a modern house in southern Chile, and Maraž (Chapter 11) analyses a new position of action research in policy analysis in the case of the transition from energy to sustainable renovation and construction of buildings in Slovenia.

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Part I:
THEORETICAL AND CONCEPTUAL REFLECTIONS

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Rehabilitation of plurality and opinion: sensus communis and judgement in the thought of Hannah Arendt

Abstract: The purpose of inquiring into the nature of judgement and *sensus communis* is to disclose faculties by which we situate ourselves in the political world without relying upon explicit rules and methods, and thus to open up a space of deliberation that is being closed even more tightly in technocratic societies. In this paper, we focus on the phenomenon of judgement and *sensus communis* in the thought of Hannah Arendt, which gives an insight on not only why deliberation is what enables us to collectively address the ecological crisis we are encountering in the contemporary world context, but also to think of these faculties as a strategy of how to achieve collectivity and collective thinking. In the first and second chapter of the paper, we analyse the phenomenon of judgement and *sensus communis*, we turn to Hannah Arendt and Immanuel Kant's Third Critique to emphasise the political applications of these concepts. In the third chapter of the paper, we focus on the relationship between *sensus communis* and modern sciences and philosophy, arguing that the two have come into conflict which has led to the loss of *sensus communis*. In the conclusion, we focus on the rehabilitation of plurality and opinion as a moment of rehabilitation of the political, and we rethink the faculty of judgement and *sensus communis* as crucial faculties that enable us to transcend subjective goals and interests and to open up the possibilitiy for political deliberation.

Keywords: judgement, *sensus communis*, modern science, plurality, opinion, Hannah Arendt.

Introduction

There is a general consensus among green political theorists that addressing ecological issues and challenges requires deliberation and transcending subjective goals and interests, that green democracy should be sought in deliberative democracy and not in the shadow of preference aggregation in liberal democracy (see Dryzek, 2000; Eckersley, 2000, 2019; Barry, 1999; Bahor and Lukšič, 2017; Humphrey, 2007; Smith, 2003; O'Neill, 2007). The process of deliberation offers spaces and opportunity to express opinions and judgements and gives recognition to participants with different perspectives and experiences. As argued by Bahor and Lukšič (2017) the essence of deliberative democracy lies in the "content and style of interactions" and the discussion in the public sphere, which is composed of all those who are affected by or experience the consequences of certain decisions or practices. Eckersley as well points out that "the primary appeal of deliberative democracy is that it eschews the liberal paradigm of strategic bargaining or power trading between self-interested actors in the marketplace in favour of the paradigm of unconstrained egalitarian deliberation over questions of value and common purpose in the public sphere" (2000, p. 121). But, according to Fischer an important political dimension of our time is the tension between democracy, which emphasises and demands deliberation and the opinion of citizens, and scientific expert's rational, calculating spirit. Overapplication of scientific rationality to public policy-making raises questions about the role of democratic participation in an expert-driven society: do most citizens have the knowledge and intellectual wherewithal to contribute meaningfully to the complex policy decisions facing an advanced industrial society? (2000, str. ix). For example, Hansen (2015) writes in his essay *"To think what we are doing"* that ecological issues are left to the experts, arguing that the ecological crisis is too serious and urgent to be left to ordinary citizens, to the layperson, who are unable to make appropriate and sufficiently informed judgements and decisions due to the complexity

of environmental problematics. Such was the statement by James Lovelock, scientist and environmentalist, who told *The Guardian* that "humans are too stupid to prevent climate change", so "it may be necessary to put democracy on hold for a while".[1]

According to Hannah Arendt, matters that are political cannot be solved through scientific means, but should be subjected to public debate and collective decision-making. In this paper we will focus on the phenomenon of judgement and *sensus communis* in Arendt's thought, which gives an insight on not only why deliberation and deliberative democracy is what enables us to collectively address the ecological crisis, but also to think of it as a strategy of how to achieve collectivity and collective thinking. In the present paper we will rethink judgement and *sensus communis* as crucial faculties that enable us to transencd subejctive goals and interests and to open up the possibilitiy for political deliberation; moreover, as faculties that actors and spectators need to preserve in order to maintain the public realm in which political action takes place and in order to ensure responsibile action.

Judgement and the mental process of judging

In the scholarship of Hannah Arendt, we can easily identify different references and discussion on the faculty of judgement; however, she presents her thoughts on judgement at length in her essay *The Crisis in Culture: its social and political significance,* included in Between Past and Future, and moreover in her *Lectures on Kant's Political Philosophy*, which is seen as the third part of *The Life of the Mind.* Immanuel Kant's *Critique of Judgment* is central in Arendt's views on judgement. Arendt argues that Kant is the first major thinker to appreciate the significance of the faculty of judgement and give it the attention it deserves. Kant's third *Critique*, according to Arendt, introduces a different way of thinking, which is not the same as the thought process of pure reasoning, the dialogue between me and myself and being in agreement with one's own self, but consists of the ability to think in the place

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[1] Hickman, 2010.

of everybody else which he therefore called enlarged mentality (Arendt, 1969, p. 220). *Critique of Judgment* as such, Arendt claims, contains an unknown and unsuspected political philosophy that has never been recognised or appreciated; she explains that this *Critique* intimates more adequately the political significance of judging than Kant's earlier texts, because it "speaks of men in the plural, as they really are and live in societies" and not simply as "singular cognitive or intelligible beings". What is usually considered to be Kant's political philosophy is the *Critique of Practical Reason*, which deals with the law-giving faculty of reason, the principle of lawgiving – always act in such a manner that the principle of your action can become a general law - is based upon the necessity for rational thought to agree with itself (Arendt, 1969, pp. 219-220). The *Critique of Practical Reason* as well as the *Critique of Pure Reason* focus on the conditions for the possibility of reason and intellect that would be formally valid for all rational beings irrespective of their empirical differences, and on the basis of which it would be possible to legislate for humanity as a whole; which means, these works do not deal with concrete differences in their particularity such as the third *Critique*, which introduces conception of the faculty of judgement that deals with differences in their particularity without being subsumed under a pre-given universal law (Hayden, 2014, p. 174). Herewith, we could lay bare a distinction between what Kant's terms as determinative and reflective judgements. According to Kant, "judgement in general is the ability to think the particular as contained under the universal (the rule, law, principle). And, if the universal is given, then judgement, which subsumes the particular under it, is *determinative* […] but if only the particular is given and judgement has to find the universal for it, then this power is merely *reflective*" (1987, pp. 18-19). In *The Life of the Mind*, deriving from Kant, Arendt argues as well that reflective judgement does not descend from the general to the particular but ascends from the particular to the universal by deciding, without any overall rules, 'this is beautiful, this is ugly, this is right, this is wrong' (1978, p. 69). Namely, the other reason why she draws her theory of judgement from Kant's

third *Critique* is that from his theory of aesthetic judgements we can come to judgements without a pre-given set of values, thus we can come to *reflective* judgement. At the Toronto conference, in January 1973, she told her audience:

> The reason why I believe so much in Kant's *Critique of Judgment* is not because I am interested in aesthetics, but because I believe that the way in which we say 'that is right, that is wrong' is not very different from the way in which we say 'this is beautiful, this is ugly.' That is, we are now prepared to meet the phenomena, so to speak, head-on, without any preconceived system. And please, including my own! (1982, p. 452)[2]

Thus, Arendt places judgement in contrast to practical reason. Judgement is not practical reason, since "practical reason 'reasons' and tells me what to do and what not to do; it lays down the law and is identical with the will, and the will utters commands; it speaks in imperatives. Judgment, on the contrary, arises from a merely contemplative pleasure or inactive delight" (Arendt, 1989, p. 15).

The phenomenon of judgement is derived in Kant from the sense of taste, i.e *Critique of Judgment* was originally called *Critique of Taste.* And there are no objective rules or any standards in taste that can be given in advance of each particular object in its particularity, because matters of taste are subjective. Taste is a purely private sense and is not communicable, what we taste cannot be expressed in words, it cannot be represented as a feeling, it is inherently judgmental. What we like or dislike is directly present, it is not mediated by thought or reflection (Arendt, 2018, p. 116). That is, it is a subjective sense in which objectivity itself is nullified. The inner sense immediately decides whether we like the object or not, the feeling of it-please-or-displeases me is immediately present to the perceiver, and the judging subject has no control over this decision. And according to Arendt, "the it-pleases-or-displeases me is almost identical with it-agrees-or-disagrees-with-me […] The point of the matter is: I am directly

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2 Cited in Young-Bruehl, Elisabeth (1982) Hannah Arendt: For Love of the World. New Haven, CT: Yale University Press.

affected"[3] (1989, p. 66). For example, the food we taste or when we smell something, we immediately react, whether we like it or not. And since everybody is differently affected by objects, experiences, events, etc., nobody can attribute an absolute value or truth at it, or to a work of art in itself, nobody can attribute an absolute value of "beautiful" or "ugly", which means, unlike deduction or induction, aesthetic judgement will have to be a part of an inherently ambiguous and situated process of trying to envision the perspectives of others within the representational sphere of public opinion. That is, subjective matters of taste are not yet judgements, but in order to achieve judgements and agreement from everyone else, we must exercise our subjective position in public and overcome our subjective conditions for the sake of others (Arendt, 1989, p. 67); which raises the question: how do we overcome our subjective conditions and achieve judgements? How do I judge?

According to Arendt, there are two mental operations in judgement: the operation of imagination and the operation of reflection. The operation of imagination prepares the object for the operation of reflection. The reproductive faculty of imagination enables us to distance ourselves and establish a proper distance that is a requisite for evaluating something at its proper worth. Namely, with the faculty of imagination one judges objects which are not present, that are removed from immediate sense perception and therefore no longer affect us directly (Arendt, 1989). With imagination we internalise objects that can affect us even though we are not directly confronted with them, the object removed thus becomes an object for the inner senses. In this way we can recall an event, an object, music we've heard, an experience, and so on. Arendt writes "imagination […] transforms the objects of the objective senses into sensed objects, as though they were objects of an inner sense. This happens but reflecting not on an object but on its representation. The represented object now arouses one's

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[3] Arendt in her work modifies Kant's theory of aesthetic judgement in order to construct her own theory of judgement; that is, while Kant answers the question of 'how aesthetic judgements are possible,' Arendt reads the theory of aesthetic judgements as a theory of judgements in general. That is, moral and political judgement becomes for Arendt the "art" of giving to others a part or place in our mental processes of assessing whether the "tremendous wealth of raw experiences" that are disclosed in human affairs are right or wrong (Arendt 1978, p. 12).

pleasure or displeasure" (Arendt, 1989, p. 65). That is in Kant "the operation of reflection" (1999, p.124). That means the immediate feeling evoked by taste is a subject to another choice and with the operation of reflection, we can approve or disapprove the very fact of pleasing, namely one can approve or disapprove the immediate feeling. This operation evokes an additional feeling of pleasure or displeasure "in this additional pleasure is no longer the object that pleases but *that* what we judge it to be pleasing". Arendt writes:

> Only what touches, affects one in representation, when one can no longer be affected by immediate presence [...] can be judged to be right or wrong, important or irrelevant, beautiful or ugly, or something in between. One then speaks of judgement and no longer of taste because, though it still affects one like a matter of taste, one now has, by means of representation, established the proper distance, the remoteness or uninvolvedness or disinterestedness, that is requisite for approbation and disapprobation, for evaluating something at its proper worth. By removing the object, one has established the conditions for impartiality (1989, p. 67).

Imagination thus enables the operation of reflection, and the reflected feeling is the operation of judgement, i.e. the actual activity of judging. And this too is subject to approbation and disapprobation, which raises another question: how does one choose between approbation and disapprobation? The answer brings Arendt to the crux of her reading of Kant: the concept of *sensus communis* (1989, p. 69). Arendt writes that the nonsubjective element in the nonobjective senses is intersubjectivity (1989, p. 67), namely judgement of taste always reflects upon others and their taste, take their (possible) judgements and opinions into account, which is only possible through the community sense. In her *Lectures of Kant's Political Philosophy* Arendt writes "one judges always as a member of a community, guided by one's community sense, one's *sensus communis*" (1989, p. 75). Beiner (1983) following Arendt argues that taste is thus the faculty of judging *a priori* of the communicability of feelings that are bound up with a given representation; in order to overcome our subjective position and our private feelings we have

to appeal to another extra sense, that is the community sense – "an extra sense, extra mental capability, that fits us into a community with others (Arendt, 1989, p. 70), which is the exact opposite from our private conditions and feelings.

Sensus communis

In the following section we will try to briefly examine what *sensus communis* is and why it is of great relevance for (political) judgements and action. Arendt in her scholarship adapts Kant's concept of *sensus communis*, which Kant introduces in his third *Critique.* The community sense is presented in Arendt as well as in Kant as "an extra sense – like an extra human capability – that fits us into a community" (Arendt, 1989, p. 70); that fits us into, and makes possible, a common world; corresponds reality, and also it is what makes human beings capable of broadening their minds, and makes us capable of thinking from the perspective of others, that is, enlarged mentality (thinking).

In *The Life of the Mind* Arendt argues that the sensation of reality derives from this "inner sense", she also calls it the "sixth sense"; which is not a natural sense, does not have a bodily organ, like our other five "private" senses we possess, that is: smell, touch sight, hearing and taste – each of them has it is own particular organ, and its own particular object and medium. These five senses are subjective and are our building blocks of perception, each of them corresponds a specific, sensorily, perceptible property of the world. And our sixth mysterious sense is what keeps these five senses together, according to Arendt; she writes:

> *S/ensus communis*, is a kind of sixth sense needed to keep my five senses together and guarantee that it is the same object that I see, touch, taste, smell, and hear; it is the "one faculty [that] extends to all objects of the five senses. This same sense, a mysterious "sixth sense" […] fits the sensations of my strictly private five senses – so private that sensations in their mere sensational quality and intensity are incommunicable – into a common world shared by others (Arendt, 1978, p. 50).

We live in a plural world that contains a diversity of appearances which are matched with diverse senses through which we perceive these appearances. For Arendt (1978, p. 19) "plurality is the law of the earth", and not only because of the diversity of appearances we encounter, but in a sense that everything that appears does not exist in the singular, but is meant to be perceived by somebody. Namely, beings and appearances perceive and are perceived at the same time – the subject who perceives is also an object and appearance to somebody else, "who guarantees its reality". According to Arendt, everything we perceive is a perception in the mode of 'it-seems-to-me', thus is open to error and illusion, and the indication of 'realness', the certitude that what I perceive is a real – the identity of the thing I see, touch, smell, taste, or hear – is gained by the fact that others are able to perceive what I perceive through the interplay of my senses, namely it is also acknowledged by others even though they perceive it from a different standpoint, different perspective. Arendt writes "the subjectivity of the it-seems-to-me is remedied by the fact that the same object also appears to others though the mode of its appearance may be different", and realness is the "sixth sense's corresponding worldly property" (1978, p. 50). While, on one hand, realness accompanies our perceptions, is available to our senses; on the other hand, this perception of reality is not a perception in the ordinary sense – it cannot be perceived in the same way as its other sensible characteristics, such as visibility or audibility – but it is related to the experience of the context in which individual things manifest themselves and in which we likewise exist in the midst of other beings (Peeters, 2009). Peeters argues that Arendt, thus, describes a dual function of the community sense. First, the one that puts our five senses together and relates them to the same object, a common sensory root allows us to identify a given object that manifests itself differently to each of the five senses, thus allowing us to designate a name to the said object with a name shared by every observer. Namely without the interplay of the senses how one can be sure that, for example, the person you see standing there behind the tree is the same person

you hear speaking (2009, pp. 342-343). Moreover, this sense frees us from the private nature of our perceptions and subjectivity by locating our subjective and incommunicable perceptions of the private senses in a common world shared by others – what frees us, thus, is the fact that the same thing I perceive is also perceived by others, albeit in a different way.

That is, by virtue of *sensus communis* our other senses can disclose reality from the particular data they perceive, and this reality is guaranteed by plurality, namely the community sense presupposes the existence with others in a common world – all other sense-endowed beings, though perceiving the object from utterly different perspectives agree on its identity. For the citizens of the Greek polis, Arendt writes in her *Philosophy and Politics*:

> */D/oxa* was the formulation in speech of what *dokei moi*, that is, of what appears to me. This *doxa* had as its topic […] the world as it opens itself to me. It was not, therefore, subjective fantasy and arbitrariness, but also not something absolute and valid for all. The assumption was that the world opens up differently to every man, according to his position in it; and that the "sameness" of the world, its commonness […] resides in the fact that the same world opens up to everyone and that despite all differences between men and their positions in the world – and consequently their *doxai* (opinions) – "both you and I are human." (Arendt, 1990, p. 80)

In the public space of appearances men constitute reality of the world which is "guaranteed by the presence of others, by its appearing to all" (Arendt, 1958, p. 199), that is, to be without such a public space means to be deprived of reality. With acting and speaking in public, people are able to reflect on different perspectives of the world they share with each other, to understand the meanings of others' actions and the reasons behind their opinions.

Communicability, which depends on communication, is a touchstone of this "sixth sense". Arendt in the *Lectures of Kant's Political Philosophy* says, "truth is what I communicate […] unless you can somehow communicate and expose to the taste of others, either orally or in writing, whatever you may have found

out when you were alone, this faculty [of enlarged thinking] exerted in solitude will disappear" (Arendt, 1989, p. 40). Arendt makes the community sense dependent on actual communication – without actual communication, without interaction with one another, one can lose one's *sensus communis.* In the *LKPP* she stresses that "the only general symptom of insanity is the loss of the *sensus communis*" (Arendt, 1989, p. 70). Degryse (2011) at this point argues that Arendt, even though she adapts this concept from Kant, differs from Kant's understanding of the concept, or more specifically, that Arendt *detranscendentalises* Kant. *Sensus communis* in Kant's scholarship is an a priori principle; in the third Critique Kant presents *sensus communis* as:

> /T/he idea of a *public* sense, i.e. a faculty of judging which in its reflective act takes account *a priori* of the mode of representation of everyone else, in order, *as it were*, to weigh its judgement with the collective reason of mankind, and thereby avoid the illusion arising from subjective and personal conditions which could readily be taken for objective, an illusion that would exert a prejudicial influence upon its judgement. This is accomplished by weighing the judgement, not so much with actual, as rather with the merely possible, judgements of others, and by putting ourselves in the position of everyone else, as the result of a mere abstraction from the limitations which contingently affect our own judging (1987, p. 123)

In Arendt's understanding, intersubjective commonality precedes the intrasubjective one. That is, while for Kant it is a transcendental principle and a natural, *a priori*, faculty, Arendt understands it as a sense that has to be located in the common, public domain, before it is internalised to become a part of an individual's perceptual mechanism; otherwise, it can be lost, and for this reason she does not confuse potential dialogue with actual dialogue with everyone else.

Borren argues that Arendt's *sensus communis* is embedded in the human conditions, which are not immutable and universal, but subject to alteration because they are the outcome of human action and speech as a consequence of which new and unexpected sta-

tes of affairs happen that subsequently may alter the world (2013, p. 246); namely, it depends upon the particular historical and political context and situation and simultaneously constitutes the context within which human beings act, speech, judge and make sense of the world (ibid.). Snir (2015) also argues that Arendt conditions the very existence of this faculty upon the socio-political context. It is acquired through everyday experience from daily interaction with the world. However, while Arendt indeed appreciates the actual exchange of opinions within a particular community in her analysis of *sensus communis*, Borren (2013) furthermore notes that Arendt applies a hermeneutic circle which implies that *sensus communis* always needs critical appropriation through the operation of imagination and reflection – the imaginative representation of others' views and *Selbstdenken* – to accomplish judgement and understanding. Hinchman (1984, p. 331) understands this as a double-layered dialogue: the public, actual dialogue in which we exchange our position and perception with everyone else, and the private mental dialogue in which we formulate our tentative positions. While the second layer is a course of active thinking, the first layer is important for judgement and an enlarged mentality, where through public dialogue and communication we can enlarge our mentality and then imagine and reflect on the world from many different perspectives. For Arendt, thus the validity of (political) judgements relies on the community sense, which fits us into a community with others and gives us a sense of reality. And this sixth sense is, thus, a product of human activity, without which it may gradually disappear and be forgotten.

The loss of *sensus communis* and critique of modern sciences

In Arendt's writings we are not only able to understand what *sensus communis* is and its importance for judgement, but also what is focal in her work, 'what does it mean for one to lack one's community sense' and the historical process which led to the loss of *sensus communis.* The idea of losing one's community sense, Arendt shows,

culminates into an alienation from the world of human affairs and explains not only the idea why some men lack the ability to judge but also why some professional thinkers failed to judge events properly. In the previous chapter we discussed that Arendt conditions the *sensus communis* on communication and speech, and the very opposite of *sensus communis* is *sensus privatus* - the private sense, which Kant also calls "logical *Eigensinn*", which is bound to logic and can function without communication, without connection with others[4]. The *sensus privatus* Arendt transcribes, through various writings, to philosophers and scientists who withdraw from the world of human affairs into the world of thought as a professional vocation, think in solitude and silence, in order to search for eternal truths that lie beyond human sense perception and whose understanding exceeds common sense experience.

The gradual demise of *sensus communis* in the modern world Arendt locates in this very activity of thinking – the activity that calls the reality produced by the community sense into doubt. In *The Life of the Mind*, she writes:

> It is precisely the thinking activity – the experiences of the thinking ego – that gives rise to doubt of the world's reality and of my own [...] It was thought – Descartes' reflection on the meaning of certain discoveries – that destroyed his common-sense trust in reality, and his error was to hope he could overcome his doubt by insisting on withdrawing from the world altogether, eliminating every worldly reality from his thoughts and concentrating only on the thinking activity itself (Arendt, 1978, pp. 49-52)

In *The Life of the Mind* and *The Human Condition* Arendt criticise Cartesian and Hobbesian reason, which is inner faculty without any world relationship, 'the playing of the mind with it-

4   In the *Lectures of Kant's Political Philosophy* Arendt claims that the loss of the *sensus communis* is a symptom of insanity and argues that even though this person is detached and functions without communication with others "has not lost his powers of expression to make his needs manifest and known to others" (1989, pp. 70-71), thus she makes distinction between expression and speech; to express fear, joy, what do we want, etc., we do not need speech. Such symptom of insanity Arendt, moreover argues, can lead to insane results because it has separated itself from the experience that can be valid and validated only in the presence of others (1989, p. 64).

self, which comes to pass when the mind is shut off from all reality and senses only itself (Borren, 2013). The thinking activity is autonomous activity which is not conditioned or necessitated by anything outside itself, transcend all biological data and is able to withdraw from the world of appearances, from the world of everyday experience and common sense, and one can engage in an inner dialogue with her- or himself rather those with whom they share the world (Snir, 2015; Arendt, 1978). Thinking, according to Arendt, arises simply out of the fundamental existential need of a living human being to engage in the quest for meaning of whatever exists[5]; and the questions raised by our thirst for knowledge and curiosity about the world, the desire to investigate whatever is given to our sensory apparatus, call our sense experience into doubt; its suspicion that things might be quite different from the way they appear to human senses (1978, pp. 50-55). These questions regarding the meaning of appearances which turned into a search for the hidden basis that makes phenomena appear as they do lead to, according to Arendt, the oldest and most stubborn metaphysical fallacies – the distinguishing between the world of appearances and the real world, while placing the latter on a higher rank than the former (1978, p. 20; Snir, 2015, p. 370). The search for truth and the attempt to see the world from a point of unworldly abstraction Arendt calls reaching the Archimedean point and argues that "earth alienation became and has remained the hallmark of modern science" (1958, p. 264). Arendt takes up the critique of modern sciences as a kind of an earth alienation, and the crucial events, according to her, that established relations of alienation between men and the world were the inventions and the great achievements of modern sciences that made possible to consider the nature of the earth from the viewpoint of the univer-

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[5]   Arendt argues in *The Life of the Mind* that the key to any inquiry into the nature of human thinking is the distinction between the truth and meaning, which is a consequence of Kant's crucial distinction between reason and intellect. Kant distinguished the faculty of thinking, which in his terms is reason, from the faculty of cognition, which is intellect (understanding). The distinction lies in the fact that the concepts of reason serve us to conceive, to comprehend perceptions, while the concepts of intellect serve us to apprehend perceptions. Thus, the intellect (*Verstand*) desires to grasp what is given to the senses, but reason (*Vernunft*) wishes to understand its *meaning* (Arendt, 1978, p. 57).

se.[6] Arendt mainly discusses the rise of the modern epistemology and especially the modern sciences, which discredited the validity of the human senses in *The Human Condition* and, furthermore, *The Conquest of Space and the Stature of Men*, included as the final essay to the second edition of *Between Past and the Future*; where she points towards the consequences of the search for eternal truths and the attempt to see the world from a point of unworldly abstraction. Namely, Arendt sees the scientific activities and actions which attempt to achieve this point and the conceptual distinction between the world of appearances and an examination, what lies "behind appearances" as a threat and troubling and lays bare the challenges this poses to humanity.

In the first place, the activities whose pursuit reveals a world "behind appearances" have the potential to make obsolete our entire sense of reality, insofar as our senses orient us to the world and enable us to experience reality, the detachment from the ordinary way of things which characterise everyday living in the common world and the "renunciation" of the human senses destabilises the world that we have been built between one another, this public space of appearance where our activities are seen and given meaning (Tyner, 2017). Furthermore, Arendt argues, that the scientist who is forced under the compulsion of facts and experiments to renounce *sensus communis* and their total awareness of reality, has also been forced to renounce normal, ordinary language (1958, p. 264; 2007, p. 2). That is, unlike the ordinary everyday world, the world of new science is abstract, alien and cannot be described in ordinary language but only through mathematical symbols and abstract concepts. And one of the most troubling consequences for Arendt from such renunciation is the inability of the scientist and the layman to talk to one another, the inability to communicate, to connect their language and meanings. Moreover, Arendt suggests, that is it not only

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6   The crucial event that made modern science possible, according to Arendt, was the invention of the telescope, or the use of the telescope by Galileo, who used it to develop a new science that considers the nature of the earth from the viewpoint of the universe. The fact that man, still bound to Earth, could think in terms of the universe and develop a worldview not limited to the human condition on Earth led to the great achievements of modern science, but also established relations of alienation between man and world (1958, p. 248).

a disconnection between the scientists and the layman, but also a disconnection between the two parts of a scientist's self; Arendt writes "the scientist has not only left behind the layman with his limited understanding; he has left behind a part of himself and his own power of understanding, which is still human understanding, when he goes to work in the laboratory and begins to communicate in mathematical language" (2007, p. 263). That is, driven by the will to truth, scientists and philosophers have thus claimed themselves a detached, solitary, supposedly objective position altogether removed from the disorderly realm of the politics and human affairs to contemplate a realm of eternal concepts and ideas, "what is forever invisible [...] and truly everlasting" (Arendt, 1978, p. 131).

The concern and the main problem for Arendt here is the difficulty of controlling the destructive fallouts if we forget our fundamental human limitations and detach, alienate from the world of human affairs; she argues that "man can [...] successfully do what he cannot comprehend and cannot express in everyday human language" (Arendt, 2007, p. 7). She points to a range of potentially dangerous and destructive consequences, from computers and machines "whose doings we cannot comprehend although we devised and constructed them" (ibid.), to the invention of the most murderous gadget, and challenges the natural limits to the point of threatening the future of life itself, and having a complete disregard for the survival of the human race on Earth or about the survival of the planet and natural world itself. That is, when scientists fail to attend equally to the world of senses and have lost the ability to talk to laymen, they can introduce to the world the most destructive technologies, capacities and actions with unthinkable consequences. Arendt suggests that it does not mean that they do not know the consequences of their actions and activities, she is clear that scientists know the potential consequences of their activities, but there is a distinction between knowing the consequences and comprehending their meaning which is the distinction between the scientist and the citizen, even when these are the same person (Tyner, 2017, p. 7). Arendt in *The Conquest of Space and the Stature of Men* wrote:

The simple fact that physicists split the atom without any hesitations the very moment they knew how to do it, although they realized full well the enormous destructive potentialities of their operation, this demonstrates that the scientist qua scientist does not even care about the survival of the human race on Earth nor, for that matter, about the survival of the planet itself (Arendt, 2007, str. 15).

The alienation from the world which, according to Arendt, brought the gradual demise of *sensus communis* also meant a transformation in the way people relate to each other, which in the modern mass societies reached such a level that people are no longer tied together. Namely, Arendt's criticism of solipsism of modern Cartesian metaphysics extends to a much broader criticism of modernity, which she grasps under the heading of 'world alienation' and the 'flight into the self'. She suggests that the theories of seventeenth century philosophers foreshadow a more general 'subjectification of the real' and withering away from common sense; and, moreover, argues that the society of scientists only "anticipated in many respects, by sheer force of trained and controlled imagination, the radical change of mind of all modern men which became a politically demonstrable reality only in our own time" (1958, p. 271). After some time, the scientific worldview, and, with it, world-alienation, became the fate of a much wider public, so that, in the course of the twentieth century, the loss of common sense became a predominant feature in the lives of the many (Snir, 2015, p. 375).

With the prevalence of the scientific and rationalist worldview, the call for one truth and objective reality, Arendt notes that the voices of the scientists have more authority than the voice of the laymen and "they do so only because the scientists are in possession of more precise information", that is the privileged position the precise information enjoys over "humanist concerns"[7]; which is troubling, because it gave birth to the belief that also the world of political affairs can be approached on the model of rational or philosophical truth: that is, by pretentiously

7   Arendt is not denying the legitimacy of scientists' precise information or their achievements, but points out the consequences for humanity and the world their actions may lead to when they claim authority over human affairs.

assuming that results reached in solitude also possess universal validity in politics, and then applying them to the political realm, so to speak, from the outside and above.

Conclusion: Rehabilitation of plurality and opinion

The desire for truth, that is the desire to be correct or right, is in conflict with the spirit of dialogue and debate that animates political life – it is in conflict with *sensus communis* and brings about its loss. The relationship between truth and politics – consequently the antagonistic relationship between the lives of politics and philosophy – Arendt writes is "the story of a conflict [which is] an old and complicated one" (Arendt, 1969, p. 229); and according to Arendt, the political realm was always inferior to the philosophical realm due to the nature of speech in the political realm: speech as opinion. For example, Arendt (1969) discusses the philosophical hostility towards political life beginning with Plato's allegory of the cave in The Republic, where Plato describes the world of human affairs in terms of shadows and darkness and instructs those who aspire truth to turn away from it in favour of the clear sky of eternal ideas. Arendt interprets this allegory to show that Plato thought the political realm was inferior to the philosophical realm outside the cave due to the nature of the speech in the political realm. This can be seen as well the reason why Hannah Arendt does not turn to the Aristotelian notion of phronesis on the task of political judgment, in her essay *Crisi in Culture* she wrote

> That the capacity to judge is a specifically political ability in exactly the sense denoted by Kant, namely, the ability to see things not only from one's own point of view but in the perspective of all those who happen to be present. . . . The Greeks called this ability pbronesis, or insight, and they considered it the principal virtue or excellence of the statesman indistinction from the wisdom of the philosopher. The difference between this judging insight and speculative thought lies in that the former has its roots in what we usually call common sense, which the later constantly transcends (1969, p. 221)

Arendt comments furthermore in the footnote on this that Aristotle in the Nicomachean Ethic (book 6) deliberately set the insight of the statesman against the wisdom of the philosopher. Arendt's sense of opinion formation thus is in contrast with truth claims. Arendt insists upon a distinction between truth, which belongs to the realm of logic and strict sciences – the solitary act of thinking – and opinion, which is constitutive to the activity of judging. Judgements are, she writes, a distinct faculty of our minds that are not arrived at by either deduction or induction, and have nothing in common with the logical operation (Arendt, 1989, p. 4) and arguments which are oriented towards absolute truth, but consist of (forming) opinions based on different perspectives, through consideration of the standpoints of others, without imagining how the world appears to others from their distinct perspective, essential to opinion formation, the opinion fails to be truly political in nature. One must emphasise that imagining the opinions of others who are absent during the course of reflection must be contrasted with other mental phenomena such as empathy, as in *Truth and Politics* Arendt says:

> /T/his process of representation does not blindly adopt the actual views of those who stand somewhere else, and hence look upon the world from a different perspective; this is a question neither of empathy, as though I tried to be or to feel like somebody else, nor of counting noses and joining a majority *but of being and thinking in my own identity where actually I am not* (1969, p. 237).

Arendt recovers a sense of opinion beyond the notion of mere idiosyncratic, private position that one "holds", opinion which is produced by the collective deliberation and requires the use of imagination and *sensus communis*, that is, opinion formed through the activity of judgement. The validity of poltical judgements depends on the ability of represenative thinking, the ability to judge from the standpoint of everybody else, which is has to be exercised in the public sphere where people are able to exchange and weigh their opinions with others on particular issues. Public delibarations and enlarged mentality are from most importan-

ce that require more than subjective validity, which means that individuals could have their own opinion about certain matters, however, they should exercise representative thinking in the sense "to always simoultaneously (re)present the opinion of the others" (Arendt, 2003, p. 73). Thus, Arendt attempts to break the stranglehold of rational truth on political thought by rehabilitating opinion formed through the activity of judgement, and its basic condition – plurality. The sense of the common world and the very reality of the public realm as a space of appearance, as Arendt (1958, pp. 55–57) persistently points out, only emerges in relationships *between* a plurality of distinct individuals engaging the world in word and deed, speaking, and acting with, and appearing to, each other. Arendt holds the position that political questions cannot be solved through scientific means but should be subjected to public debate and collective decision-making.

The envrionmental problems are political concerns which are being left to the rule of experts; as argued by Hansen (2015), the argument often put forward in the dominant discourse is that the environmental problems are too technical and complex to be left to the laypeople — they lack the necessary knolwdge to make informed judgement and sound decisions. Experts, on the other hand, are considered better equipped to rule in these matters, because they supposedly possess objective and universal knowledge, and their technical expertise makes them neutral and disinterested. Such arguments are based on the well-known assumption of reducing societal problems to purely scientific and technical concerns, that should be answered obejctively. Imposition of a single absolute standard, a standard of universal validity, into the domain of *praxis* would mean to conduct debate with strict scientific standards, which leaves no room for dialogue, communication, and acknowledgement of difference, which is the touchstone for *sensus communis*. Strict demonstration would become the only legitimate form of discourse; that means that individuals would no longer be required to exercise their judgement and form an opinion, develop their imagination, or cultivate "enlarged mentality", since they no longer deliberate in common

and there is someone else already making judgements for them. As such, the disempowers people from partnering with other humans, with nature, and threatens the existence of the public realm. In *Truth and Politics* Arendt writes "the modes of thought and communication that deal with truth are necessarily domineering, they don't take into account other people's opinions, and taking these into account is the hallmark of all strictly political thinking" (1969, p. 237). D'Entreves (2006), following Arendt, writes that truth has a despotic character and is a set against plurality of opinions, "it compels universal assent, leaves the mind little freedom of movement, eliminates diversity of views and reduces the richness of human discourse" (2006, p. 15).

The climate change and global warming are happening and that are caused by human activity is a fact that can be demonstrated through scientific means and cannot be changed as a fact. However, the questions about what we are goin to do, how to respond to and act on climate change are political and social questions. Hansen (2015) points out that while science and technology certainly have an important role — not only in identifying and measuring environmental problems, but also in searching for various solutions and in developing alternative ecological technologies — it is important to recognise and remember that questions concerning the very goals of scientific research, how the knowledge might be used, and what kind of technologies that should be developed, are all political questions that must be answered 'in terms of common sense and in everyday language', through the political processes of public deliberation and collective decision--making by citizens. The ecological crisis concerns us all, it raises a wide range of complex and contingent political, social, cultural and ethical questions that cannot be answered through the language of mathematical calculations. These are political issues that require collective answers and solutions. Scientists and scholars, when debate about such principles and inform the society with their knowledge and facts, must leave their role as scientists and become citizens with the aim of — as Arendt wrote in her essay *Understanding and Politics*: "If the scholar wants to transcend his

own knowledge [...] he must become humbe again and listen closely to the popular language [...] in order to re-establish contact between knowledge and understanding" (Arendt, 2006, p. 33). Establishing an expert-citizen relations not only enables experts to transcend their knowledge and get a grasp of reality, but also to learn from local knowledges. Fischer (2000), in his book *Citizens, Experts and the Environment*, examines the ways in which the deliberation of ordinary citizens can have an important impact on envrionmental problem solving. Not only can they help in searching for solutions to pressing environmental problems, but they can also contribute a kind of knowledge — in particular, local knowledge — that the professional expert requires.

Imagining new alternatives and possible new horizons in the process of solitary thinking have to be made communicable and public, to be exposed to the test and free communication, where plurality of voices and views participates. By engaging in public debate, we express how the world appears from our point of view, and our opinions and assumptions or ideas for action challenge those of others and vice versa; with interlocutors in a community shaped by multiple "heteronomous" factors, our opinions and assumptions are altered, examined, and refined. The importance of *sensus communis* lies in the fact that it enables us to overcome our subjective conditions and positions and correspond reality. Like argued by Borren, with *sensus communis* one avoids traps of both subjectivism on the one hand and universalism on the other. Instead, we achieve judgement through intersubjectivity and representativeness (2013, p. 244). It is only in this way that we can transcend our subjective conditions and private interests and look at the problem or issue under discussion from multiple perspectives. As opposed to the persuasive validity of scientific statements, then, the validity of political opinions is intersubjective and based on free speech, and as such they have the potential for many possible answers and alternative courses of action, as they can be enalrged and altered throughout dialogue and enables us to build a collective thought.

It can be said that political judgement, as presented by Hannah Arendt, is the most effective strategy for achieving col-

lective thinking; because the activity of judging requiers intersu-
bjectivity that is not simply to be in agreement with one's own self
(the logic's principle of noncontradiction), but consists of being
able to think in the place of everybody else, and to reflect the
plurality of ways in which the world can be seen and understood.
Without political judgement no opinion formation is possible, and
we are not able to attend to the reality around us and recognise
the worldly consequences, the real effects, of our activities and
actions. Thus, the new beginnings must find expression without
losing grasp of the world as it still is and its plurality. As argued
by Beiner (1983), with reflection on these faculties, we cannot tell
how to judge various issues, certain events and actions, or what
particular judgements to make in respect of them; but, rather,
that we cannot help but judge them, or if we think that they can
be judged in our name, alerts us to the fact that we must reclaim
our capacity of judgement from those who presume to exercise
it on our behalf.

Bibliography:

Arendt, H. (1958). The human condition. University of Chicago Press.

Arendt, H. (1969). The crisis in culture: its social and its political significance. V Between Past and Future: Eight Exercises in Political Thought, str. 197–226

Arendt, H. (1969). Truth and politics. V Between Past and the Future: Eight Exercises in Political Thought, str. 227–264.

Arendt, H., in Beiner, R. (1989). Hannah Arendt lectures on Kant's political philosophy. The University of Chicago Press.

Arendt, H. (1990). Philosophy and politics. Social Research, pomlad, letnik 57, št. 1, str. 73–103.

Arendt, H. (1978). The life of the mind. San Diego, New York and London: Harcourt Inc.

Arendt, H. (1994). Essays in Understanding, 1930-1954: formation, exile, and totalitarianism. Ur. Jerome Kohn. New York: Schocken Books.

Arendt, H. (2007). The conquest of space and the stature of man. Dostopno prek: https://www.thenewatlantis.com/publications/the-conquest-of-space-and-the-stature-of-man.

Arendt, H. (2006). Razumevanje in politika. Nova Revija, letnik XXV, št. 289/290, str. 30–43.

Arendt, H. (2018). Predavanja o Kantovi politični filozofiji. Ljubljana: KUD Apokalipsa.

Beiner, R. (1983). Political judgement. Cambridge: Cambridge University Press.

Barry, J. (1999). Rethinking green politics: nature, virtue and progress. London: Sage.

Borren, M. (2013). 'A sense of the world': Hannah Arendt's hermeneutic phenomenology of common sense. International Journal of Philosophical Studies, 21(2), 225–255.

Bahor, M., & Lukšič A. A. (2017). Green political thought and democracy. V Lukšič, A. A. (ur.), Exploration of political ecology in Slovenia, str. 22-34. Fakulteta za družbene vede, Center za politično teorijo.

D'Entreves, M. P. (2006). To think representatively: Arendt on Judgement and imagination. Philosophical papers, 35(3), 367–385.

Dryzek, J. (2000). Deliberative democracy and beyond. Liberals, critics, contestations. Oxford: Oxford University press.

Degryse, A. (2011). Sensus communis as a foundation for men as political beings: Arendt's reading of Kant's Critique of Judgment. Philosophy & Social Criticism, 37(3), 345–358.

Eckersley, R. (2000). Deliberative democracy, ecological representation and risk: Towards a democracy of the affected. V Saward, M. (ur.), Democratic innovation: Deliberation, representation, and association, str. 117–132. London: Routledge.

Eckersley, R. (2019). Zelena država. prev. Andrej Lukšič et al. Ljubljana: IČKZ Oikos.

Fischer, F. (2000). Citizens, experts, and the environment: The politics of local knowledge. Duke University Press.

Hansen, C. (2015). Think What We are Doing. Dostopno prek: http://new-compass.net/articles/think-what-we-are-doing.

Hayden, P., ur. (2014). Hannah Arendt: key concepts. London: Routledge.

Hickman, L. (2010). James Lovelock: Humans are too stupid to prevent climate change. The Guardian, 29. marec 2010. Dostopno prek: https://www.theguardian.com/science/2010/mar/29/james-lovelock-climate-change.

Humphrey, M. (2007). Ecological Politics and Democratic Theory: The Challenge to the Deliberative Ideal. London: Routledge.

Hinchman, S. K. (1984). Common Sense & Political Barbarism in the Theory of Hannah Arendt. Polity, 17(2), 317–339.

Kant, I. (1987). Critique of Judgment, prev. W. S. Pluhar. Indianapolis, IN: Hackett Publishing.

Kant, I. (1999). Kritika razsodne moči. Ljubljana: Založba ZRC SAZU.

O'Neill, J. (2007). Markets, Deliberation and Environment. London: Routledge.

Peeters, R. (2009). Truth, Meaning and the Common World: The Significance and Meaning of Common Sense in Hannah Arendt's Thought, prvi del. Ethical perspectives, 16(3), 337–359.

Smith, G. (2003). Deliberative Democracy and the Environment. London: Routledge.

Snir, I. (2015). Bringing Plurality Together: Common Sense, Thinking and Philosophy in Arendt. The Southern Journal of Philosophy, 53(3), 362–384.

Tyner, A. H. (2017). Action, judgment, and imagination in Hannah Arendt's thought. Political Research Quarterly, 70(3), 523–534.

Young-Bruehl, Elisabeth (1982). Hannah Arendt: For Love of the World. New Haven: Yale University Press.

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Thinking alternative futures: Imagination and *sensus communis* through the political-aesthetic perspective

Abstract: Despite the general recognition of the multiple crises affecting both society and the environment, the concept of transformation remains largely confined to the dominant paradigm of growth and technological development. This paper aims to intervene in this debate by offering a new concept of transformation – based on the notion of imagination – for thinking of alternative futures that might form the potential for radical social change. To address the question of how to imagine the world differently, or what stimulates the processes of political (and other) invention, we first explore the concept of the imagination within the framework of Kant, Arendt and Ranciére. In its duel action, imagination goes beyond the limits of sensible experience and conceptual understanding, making possible the perception and conception of alternative configurations, which carry transformative potential. However, to open up potential futures through the imagination, it is necessary to think of it not as a capacity of the subject, but to reconceptualise it as a collective power that drives creativity – that is, as a social capacity to collectively think of potential futures that intervene in the existing and transform the existing in a moment of dissensus with the not-yet-existing. This paper thus follows two reconceptualisations of the imagination: imagination as a collective, that is a trans-subjective, capacity and imagination-as-praxis. While the first focuses on the trans-subjective moment, the latter focuses on the specific relationship

between imagination and practice or, more specifically, the direct link between the experience of the imagination and its realisation. Such a conceptualisation of imagination opens up new ways of thinking about radical social change as it can lead to new forms of coexisting and new forms of collective production and action.

Keywords: imagination, sensus communis, praxis.

Introduction

> *The crisis consists precisely in the fact that the old is dying and the new cannot be born; in this interregnum a great variety of morbid symptoms appear.*
> – Antonio Gramsci

Despite the general recognition of the multiple crises affecting both society and the environment, the concept of transformation remains largely confined to the dominant paradigm of growth and technological development. This paper aims to intervene in this debate by offering a new concept of transformation – based on the notion of imagination – for thinking of alternative futures that might form a new foundation for social life. The question we are thus faced with is how to imagine the world differently, or rather what stimulates the processes of political (and other) invention. The consideration of imagination and *sensus communis* provides us with some conceptual entry points for thinking about the political potential of imagination-as-praxis as a new concept of transformation. In highlighting the role of the imagination, we want to explore the capacity to create politics.

Our rethinking of the imagination will be based on a reading of selected parts of Kant on the imagination and *sensus communis*, where we will discover the faculties of the imagination. In doing so, we will be able to establish the imagination as a potentiality, as it opens up a space where the sensible reaches beyond itself as it has the potential to both produce and contest the existing. We

want to establish imagination not as a subjective capacity, but as a collective one, the focus will be on the concepts of enlarged thinking and *sensus communis.* The reconceptualisation of the imagination as a social capacity through which we can create politics or new social possibilities will thus result in a new concept for thinking about alternative futures.

Imagination and *sensus communis*

pluralist conceptions of the imagination[1] are linked by the common idea of the human capacity to produce images, understood either as a representational capacity reproducing a pre-existing reality or as a creative capacity producing a non-existent (or not--yet-existing) one. The latter understanding is affirmed in the modern philosophy of imagination, especially by Kant and the German Idealists in the late eighteenth and nineteenth centuries, when imagination was no longer thought of as mere imitation, but as the creative capacity of human consciousness to shape the world. In this paper, imagination is conceived as a power or faculty with which to explore the creative potential of politics. In doing so, we draw on Kant's conception in which imagination stands for a power that creates possibilities. Consequently, imagination is related to the domain of possibilities[2] or the opening up of potential futures, as Kant already suggested in the first *Critique*, where imagination produces the non-existent as the existent, or rather is the capacity to imagine an object even without it being present (Kant, 2019, pp. 149–150).

Although Kant discusses the imagination in several works, his third *Critique* offers a culmination of the conception of the

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[1]　For their genealogies, see Kearney, R. (2002). *The Wake of Imagination.* Routledge; Kearney, R. (1998). *Poetics of Imagining: Modern to Post-Modern.* Fordham University Press; and Sallis, J. (2000). *Force of Imagination: The Sense of the Elemental.* Indiana University Press.

[2]　More specifically, Kant's formulation of imagination in *Anthropology from a Pragmatic Point of View* (2006, pp. 60–62) as *facultas imaginandi* refers to the then standard translation of the Greek word dunamis and indicates an understanding of imagination as a power or potentiality (Tanke, 2011, p. 152), while in his other works, it is also referred to as *Einbildungskraft* or imaginative power (Kant, 2019, pp. 149–150). As Tanke (2011, p. 152) notes, Kant thought of imagination as a power or potentiality, and his discussions can consequently be read as an exploration of the creative means at the disposal of the individual.

imagination, which in its productive capacity operates beyond limitations. Relating to imagination's productive capacity, Kant (1987, p. 182) writes that it is

> very mighty when it creates, as it were, another nature out of the material that actual nature gives it. We use it to entertain ourselves when experience strikes us as overly routine. We may even restructure experience; and though in doing so we continue to follow analogical laws, yet we also follow principles which reside higher up, namely, in reason (and which are just as natural to us as those which the understanding follows in apprehending empirical nature). In this process we feel our freedom from the law of association (which attaches to the empirical use of the imagination); for although it is under that law that nature lends us material, yet we can process that material into something quite different, namely, into something that surpasses nature.

Imagination, then, has the potential to produce, reproduce and contest the sensible, thus having a twofold relationship: imagination is itself part of the sensible, but at the same time, it is capable of distancing itself from it, becoming a space where the sensible goes beyond itself. More specifically, when imagination is intended for cognition, it is consequently subject to the constraint of understanding, since it must correspond to the rational concept, while imagination thought of from an aesthetic perspective is free. As Kant (1987, p. 185) writes: "But when the aim is aesthetic, then the imagination is free, so that, over and above that harmony with the concept, it may supply, in an unstudied way, a wealth of undeveloped material for the understanding which the latter disregarded in its concept".

This means that the imagination, in a moment of free action, is capable of forming so-called aesthetic ideas[3] that go beyond the

3   "In a word, an aesthetic idea is a presentation of the imagination which is conjoined with a given concept and is connected, when we use imagination in its freedom, with such a multiplicity of partial presentations that no expression that stands for a determinate concept can be found for it. Hence it is a presentation that makes us add to a concept the thoughts of much that is ineffable, but the feeling of which quickens our cognitive powers and connects language, which otherwise would be mere letters, with spirit" (Kant, 1987, p. 185).

limits of perceptual experience and conceptual understanding, thus making possible the perception and conception of the ineffable or of an alternative configuration, which carries a transformative potential. This is both free play as the basis of aesthetic experience and free play between the imagination, which forms the representation of the object, and understanding, which forms the corresponding concepts of these representations. However, the latter cannot produce a concept because in this case, no concept can sufficiently capture what is perceived, and at the same time, there is a constantly alternating process or free play between imagination and reason (Kant, 1999, pp. 57–59). It is therefore something more than reason alone can determine, and consequently, unfinished cognition stimulates the imagination into new reconfigurations.

Kant's analysis of aesthetic experience is thus grounded in play, that is, "an activity which has no other end than itself and which does not set itself any assumption of power over things and people" (Ranciére, 2012, p. 59), which in turn is defined by a double abrogation, namely the abrogation of the cognitive power of reason, which defines the sensible according to its own categories, and the abrogation of the power of sensibility, which imposes objects of desire. This establishes a moment of equality – to which we will return later – since free play is conditioned by the abrogation of the domination of form over matter and of reason over sensibility.

In its productive power, the imagination has an indispensable role in opening up possible futures as it allows us to produce images independently of experience: it both contests and transforms the existing, already bearing the alternative configuration. However, for it to carry the potential to constitute a new foundation for social life, it needs further elaboration, both as a trans-subjective capacity and as a praxis.

Arendt's reading of Kant's *sensus communis*

however, to arrive at the opening up of potential futures through imagination, it is necessary to think of it, not as a capacity of the subject, but as its reconceptualisation as a collective capacity that opens up creativity. Although Kant's conceptualisation of the imagination is bound to the subject, his thought offers premises for its tans-subjective extension, namely in *sensus communis* (community/communal sense) and in enlarged thinking, where we can identify the existence of a non-subjective element in the non-objective senses (Arendt, 1989). More specifically, in the first part of *Critique of Judgment*, Kant's conception of man is tied to the collective, namely as part of a community, man possesses a communal sense and consequently needs the company of others to think. As Arendt (1989, p. 70) notes, Kant, by using the Latin term, indicates that he means something different: "an extra sense – like an extra mental capability that fits us into a community". This provides us with a clear distinction between what usually is called common sense and *sensus communis*: "Taste is this 'community sense' (*gemeinschaftlicher Sinn*), and sense means here 'the effect of a reflection upon the mind'" (ibid.).

In the third Critique, Kant (1987, p. 160) presents *sensus communis* as

> the idea of a sense [by all of us], i.e., a power to judge that in reflecting takes account (a priori), in our thought, of everyone else's way of presenting [something], in order *as it were* to compare our own judgment with human reason in general and thus escape the illusion that arises from the ease of mistaking subjective and private conditions for objective ones, an illusion that would have a prejudicial influence on the judgment.

Sensus communis involves three capacities, namely active critical reflection ("to think for oneself"), extended thinking ("to think from the standpoint of everyone else") and the development of a consistent way of thinking that links the first two capacities ("to think always in consistency") (1987, pp. 160–161). As a result, the *sensus communis* is established as a public sphere, or more pre-

cisely, as a paradigm of one of all possible publics, where critical reflection exists without preconditions and constraints, and as such, privileged positions cannot exist (Rundell, 2016, p. 107).

This sense thus opens up collective thinking on the idea of equality, with its three capacities based on the imagination. When we compare our judgements with the possible judgements of others, we do so with the help of the imagination, as it enables us to invite others into our presence (Arendt, 1989, p. 43). As a result, the individual with an expanded mode of thought can rise above the subjective private conditions of judgment and "reflects on his own judgment from a universal standpoint (which he can determine only by transferring himself to the standpoint of others)" (Kant, 1987, p. 161), whereby imagination and reflection free him from the constraints of private conditions. The *sensus communis* thus allows us to think extendedly since it constitutes a sense that manifests the very humanity in man. Kant relates the *sensus communis* to taste itself, and taste becomes "the ability to judge something that makes our feeling in a given presentation *universally communicable* without mediation by a concept" (Kant, 1987, p. 136). It follows that when everyone expects and demands from everyone else this concern for communicability, as if it was some kind of original contract dictated by humanity itself, we can find the condition for the greatest extension of the extension of thinking since this idea would guide our action (ibid.). Imagination, *sensus communis* and extended thinking are thus inextricably linked; for the individual is a member of a community, guided by their community sense – the latter made possible by imagination and the community sense further enabling extended thinking or *vice versa*.

Ranciére and radical equality

by focusing on the transformative role of imagination and its trans-subjective extension, we aim to formulate postulates for thinking up alternative futures. Imagination as a means of transformation is formed the moment we begin to think of it as a capacity or potentiality in terms of the production, reproduction and

contestation of the sensible. As such, imagination is part of the sensible, but it is also capable of distancing itself from it, since its form of action enables us to perceive and conceptualise the ineffable, that is, an alternative configuration. In this double moment, then, imagination can be read as the capacity to anticipate the future through the projection of a horizon of imaginary possibilities, where imagination itself is bound to others for its own activation since it requires an assumption of equality. Namely, imagination itself, in its action (i.e., in its intervention in the existing and in its formulation of alternative possibilities (as a proposition)), allows the simultaneous thinking of potential futures and the evocation of others into the present. The latter, in our reading, refers to the concepts of extended thinking and *sensus communis*, to which the assumption of radical equality is inherent.

When we transcend our subjective conditions and think collectively, the capacity to imagine implies the equality of our capacities, or rather presupposes the equality of all others. Imagination as a collective capacity thus derives from the practice of radical equality, since the latter becomes "the starting point, the capacity through which individuals act as bearers of a common power belonging to all" (Ranciére, 2017). The equality inscribed through free experience implies the equality of the above-mentioned capacities in free play, but it is also precisely because of the new relations between these capacities that the space for political experimentation is opened. Here we follow Rancière's idea that the equality of intelligence is a fundamental principle of emancipatory politics and aesthetics. In this reconceptualisation, imagination acts as a means of transformation, since its action is a process of transformation between the existing and the not-yet-existing. More specifically, imagination as a means of transformation begins with the affirmation of equality, which means the rejection of fixed meanings and the formation of spaces in which these meanings are in constant contemplation.

Following Rancière, imagination thus functions as *dissensus*, that is, a process of transformation of the perceptible through the antagonism between the existing order and the parts that are not

(yet) perceived, which opens up the possibility of forming new subjects and forms of perception, while offering the experience of a world that is different from the existing one. The operation of *dissensus* is thus illuminated by the very conceptualisation of imagination derived earlier, since they both share the same dual structure of action in the sense that they allow for the redistribution of the sensible, while at the same time already suggesting an alternative configuration. When we think of imagination beyond the subject, its power is shaped through collective thinking or radical equality. This means that the imagination is shaped through the practices of solidarity where pre-assumed equality breaks subjective limitations. Such a reconceptualisation of the imagination can lead to new forms of being together, to new forms of collective production and action.

Conclusion: rethinking imagination and *sensus communis* and its potential

rethinking the imagination and *sensus communis* thus reveals its potential for radical social change. Imagination, in its duel action, goes beyond the limits of sensible experience and conceptual understanding, making possible the perception and conception of alternative configurations that carry transformative potential. However, to arrive at potential futures through the imagination, it is necessary to think of it not as a capacity of the subject, but as its reconceptualisation as a collective power that opens up creativity – that is, as a social capacity to collectively think of potential futures that intervene in the existing and transform the existing in a moment of *dissensus* with the not-yet-existing.

Such a conceptualisation opens up creativity and creates the conditions for new modes of collective being: imagination intervenes in the existing and offers alternative proposals (it is not only an oppositional power), considering the moments of extension, that is, imagination as a collective social capacity. It is therefore a transformation of the spatiotemporal conditions that determine our being and a political subjectivation that, with the

assumption of radical equality, implies a relation of being with others and formulates postulates for new ways of being together, thus opening up possibilities for political experimentation in the here and now. This proposed extension deepens the idea of the realisation of future possibilities – as praxis –since it involves resistance and creativity, which open up ways of being together that do not yet exist – that is, new ways of being together. Imagination as a social capacity to create politics or new social possibilities – namely the creation of new mental and physical spaces for the realisation of the common.

Imagination-as-praxis is thus meant as the creation of conditions for the constant becoming of the common, and it must be stressed that this is not simply a question of creating alterity for the sake of alterity as such, but of mobilising it. Such a conception allows us to articulate a specific relationship between imagination and practice, which is not limited by their duality but emphasises their interplay and operates in an in-between space that allows for a creative critique whereby an alternative life is already being enacted. This is "[...] a direct link between the experience of the imagination and its realisation (whether individual or collective) – that is, the experience of a particular form of non-alienated production – and the capacity to imagine social alternatives. This is especially true when the alternative is the possibility of forming society based on less alienated forms of creativity" (Graeber, 2009, pp. 110–111). It follows that the politics of imagination-as-praxis is prefigurative: the key to prefigurative politics is precisely the formation of an alternative life within the framework of the already existing one, which is the beginning of the realisation of social transformation. Imagination-as-praxis thus functions prefiguratively, as it allows for the creation of new social possibilities in the here and now, while the potential for opening up alternative futures lies precisely in the domain of creativity and the imagination, through which new political and cultural forms are created. This consideration thus raises the question of the resolution of the imagination (from its attachment to the subject) and of the future itself (from its on-

tological occupation), while at the same time laying foundations for further reflection on the conceptualisation of imagination--as-praxis as a concept of transformation.

Literature

Arendt, H. (1989). *Lectures on Kant›s political philosophy.* University of Chicago Press.

Graeber, D. (2009). Anarchism, academia, and the avant-garde. In R. Amster, A. DeLeon, L. A. Fernandez, A. J. Nocella, II & D. Shannon, *Contemporary Anarchist Studies: An Introduction of anarchy in the academy.* Routledge.

Kant, I. (1987). *Critique of Judgment.* Hackett Publishing Company.

Kant, I. (1999). *Kritika razsodne moči.* Založba ZRC SAZU.

Ranciére, J. (2012). *Nelagodje v estetiki.* Založba ZRC SAZU.

Ranciére, J. (2017). Democracy, Equality, Emancipation in a Changing World. https://www.versobooks.com/blogs/3395-democracy-equality-emancipation-in-a-changing-world

Rundell, J. (2016). Creativity and judgement: Kant on reason and imagination. In G. Robinson in J. Rundell (eds.), *Rethinking imagination*, (pp. 87–117). Routledge.

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Institutional (in)sensibility and liberal democracy: From the inclusion and participation of local communities to the democratization of environmental policy processes

Abstract: As part of the intensive rethinking of political ecology, the communication vortex between local communities and political and scientific institutions vis-à-vis the environment has been subjected to increasing scrutiny. A recurring critique is present among green (and other) theorists that regulatory environmental science and the institutional configuration of liberal democracy have increasingly consolidated technocracy and eroded the public sphere – the autonomous area that should sustain a vibrant democratic culture. Stretching the argument further, the issue of the scientization of politics has not only exacerbated environmental issues but also fostered their further depoliticization, hence the exclusion of affected and/or organized communities in the communication and decision-making processes. Stemming primarily from an Arendtian-inspired view on politics, this paper seeks to reinvigorate and implant 'the political' as a central element in addressing environmental issues against the backdrop of the descending structural integrity of liberal democracy, simultaneously appraising the appeals of deliberative democracy as a pathway for pronounced citizen participation in environmental (and

other) policy arenas, where the conditions for the existence of humans and other-than-humans are being decided upon.

Key terms: Arendt, liberal democracy, environmental issues, deliberation, institutions

Tensions between science and politics in addressing environmental issues: Can they be overcome?

From the outset, the environmental movement has been – unlike any other social or political movement that emerged in the 1960s – constituted (primarily) on the basis of truth-speaking science. Thus, it is environmental science[1] and the reliable knowledge that it produces that guides political incentives for addressing environmental issues (Sandilands, 2002), though through the severity of the same noisily echoed from the streets (Eckersley, 1992, pp. 8-9). Moreover, environmental issues and ecological risks are typically generated as a consequence of the application of science as a technocratic decision-making strategy in the policy arena, while simultaneously holding the primary methods for both detecting environmental problems and searching for effective solutions (Fischer, 2000, pp. 87-89; Lukšič, 2005). Hence the argument highlighting the communication rifts between citizens and institutions in the search for common sustainable solutions (not 'technological fixes') to environmental (and other) issues.

Beyond a (mere) critical dissection of the instrumental political logic of science – or what Habermas (1989) terms the *'scientization of politics'*[2] – which besides the indisputable and revela-

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[1] Initially and predominantly under the mantle of natural sciences and specialized social sciences that emulated the methodology of the former, hence the tensions as a result of the mounting critiques promulgated by the pioneers of political ecology (for an overarching analysis on the development of political ecology and more, see Robbins, 2012).

[2] In his book *Toward a Rational Society*, Habermas (1989) strongly anticipated the tendency of technocratic (e.g., scientific, professional, corporate and bureaucratic) elites to

tory facts related to the implications of manifold environmental issues, also tends to produce depoliticizing effects by excluding affected and/or organized communities – bearers of shared experiences and indigenous knowledge – from taking an active part in the communication and decision-making processes, which, more often than not, take place solely within gated bureaucratic institutions mediated by agents in power – politicians, scientific experts (in the role of policy advisors), and an exogenous influence from corporate lobbying (Lukšič, 2005, 2011). Put otherwise, *"an environmental issue is not an environmental issue until science can measure a toxin and draw a causal line from the problem to a source, say, nearby industrial livestock production facilities that produce thousands of tons of chemically-laced animal faeces (read: common sense doesn't matter here)"* (Sandilands, 2002, p. 141). Furthermore, as Dryzek (2013) contends, environmental problem-solving is, from the early days of reaching the political agenda, haunted by *'administrative rationalism'*, a discourse that champions the role of the experts and their complex relationship with the political elite and the corporate sector in finding profitable rather than sustainable technological shortcuts that supposedly serve the interests of the publics, let alone *"cognizing all the interrelationships between the human and nonhuman worlds"* (Eckersley, 1992, p. 113). Not only has the opposite been proven in a myriad of cases involving local environmental issues and struggles concerning water access/quality, erecting dams, and hydropower plants, to name a few, but the entire communication and decision-making process reveals itself as exclusionary and undemocratic (one might even say authoritarian).

This paper aims to explore conceptual channels through which affected and/or organized communities can not only be heard and included in an isolated sense – for vague consultation

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pervade the realm of politics by incrementing the number of experts as primary and later sole policy-making consultants. Enacting policy rhetoric in an incomprehensible language, as if the nature of political questions became detached from citizens' experienced/lived reality, effectuated in the cumulative depoliticization of the electorates – who were offered guaranteed safety in situations of uncertainty and risk at the expense of citizenship rights within the private sphere.

realized as a PR spectacle – but will serve as catalysts for further the politicization and institutionalization, that is the democratization of environmental (and other) policy arenas, which would ultimately open up institutional paths for the inclusion and, consequently, participation of the affected and/or organized communities in decision-making processes and, as a result, increase the sensibility of institutions to ecological contexts.

Political plurality as a pathway to environmental sustainability

There exist multiple arguments for Hannah Arendt's assumed silence on the accelerated burdening of the natural world and the overarching technological changes (Sluga, 2014, p. 229), primarily due to her extensive focus on the horrors of totalitarianism, but also because of her death in 1975 – amid a proliferation of diverse radical social movements – which certainly contributes to her marginal position in our contemporary understanding of the ecological crisis (Butler, 2017, p. 11). However, Arendt's sharp criticism of science and technology visible throughout her works provides a cutting-edge account of the immanent relationship between the human and non-human worlds (Arendt, 1994/1995, 2006, 2018). For instance, she opens *The Human Condition* by lambasting the launch of the first satellite into space in 1957, which was greeted not with pride or awe, but as a sign that mankind might escape from earth. She also noted that by escaping the earth through enterprises (which are man-made) like nuclear technology, human beings are successfully challenging the natural limits, while causing the *'unnatural growth of the natural'*[3], posing political questions that are made vastly more difficult by the inaccessibility of modern science to public discussion (Canovan, in Arendt, 2018, xxii).

While holding onto an Arenditan-inspired view of politics (Arendt 1994/1995, 2006, 2018), I shall move on to explore ro-

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[3] Arendt refers to this as an implication of the capitalist tendency to virtually naturalize a quasi-natural rhythm of production and consumption beyond human/natural needs, hence the artificiality of the man-made world (as opposed to the biological cyclicality of the earth).

utes for the democratization of environmental (and other) policy arenas by rendering them sensitive to politically negotiable environmental *opinions* that arise among communities – vis-à-vis scientifically generated rational *truths* (Sandilands, 2002, p. 140) – which tend to not only be the least included agent in the communication and decision-making processes, but ordinarily the most existentially affected by a particular issue. Such conditions pertain to the ideological function of liberalism to protect an individual conception of freedom in the private realm, which Arendt (in Hargis, 2015, p. 2) viewed as increasingly contributing to *'world alienation'*[4] and the decline of politics. Meanwhile, scientific knowledge relies on technology, which, as it becomes more refined and specific to certain experiments, retreats further from the everyday experience available to everyone (Mesly, 2020, p. 62) – stripping away the potency of the diverse local knowledge and agency of indigenous modes of living pertinent for a particular community who are well-aware of their ecological conditions. These opinions, according to Arendt (2018, pp. 200, 244-245), form as a result of deliberation among equal members of a community that *'act in concert'* and share a common view on a subject matter. Communicative action in the public sphere thus discloses the faculty of ascribing meaning and making qualitative judgments about everyday phenomena, generating common stories and memories that subsume in a set of *'factual truths'*[5] that organize people's shared reality of the common world. Similarly, as Whiteside (1994) maintains, *"shared experience and public deliberation*

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[4] Arendt herself was strongly critical of the development of modern science and technology by associating them with *'world alienation,'* meaning a *"twofold flight from the earth into the universe and from the world into the self"* (Arendt, 2018, p. 6, 254). The transformative power of modern science, she wrote, sprang from two key events: the telescope and mathematization. The first leads to a kind of distancing and objectification that nevertheless cannot escape sense experience; the second involves a kind of distancing and objectification of the sense experience that nevertheless cannot escape instrumental mediation (Crease, 2017, pp. 44-45).

[5] Factual truths (as opposed to 'rational truths') are vulnerable to criticism and intentional falsifications because factual truths are contingent and arbitrary; they 'could always have been otherwise' (Arendt, 2006, p. 238, in Hargis, 2015, p. 7). Factual truth needs multiple people to confirm it and agree that it explains reality accurately.

are necessary to build the sense of certainty that gives meaning to our life-preserving and world-creating activities. Standards of equity and justice, beauty and nobility, and risk and responsibility depend on our collective judgment" (pp. 351-352). Besides this, it also reveals the development of power[6] that is vital for the ecological sensibilization of the democratic process. By taking an impartial and detached position on the issue (abandoning private self-interest) while implementing *'representative thinking'*[7], a *common sense*[8] (latin: sensus communis) is established (Arendt, 2006; Sandilands, 2002, pp. 149-151).

Such a presentation of an *enlarged mind* demands first and foremost the creation of a self in relation to the multiple others of public life, anticipating ecological sensibilization through the diversification of the discursive relations toward *other-than-humans* (Blaser & Cadena, 2018), making provisions for overcoming the *'human superiority complex'*, which is, perhaps unsurprisingly, reflected in the new geological epoch of the Anthropocene, or perhaps the *Man*thropocene, as Eileen Christ (2013, p. 133, in Di Chiro, 2017, p. 491) puts it in her critique of the gendered and ra-

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6   Arendt's communications concept of power defines power as *power potential* and not as an unchangeable, measurable and reliable entity like violence/force or strength. It cannot be reserved for emergencies, like instruments of violence, but exists only in its actualization. The development of power is an end in itself. As such, it becomes consolidated in political institutions, which materialize the power as a bestowed legitimacy (Arendt, 2018, p. 200; Habermas & McCarthy, 1977).

7   The aggregation of different perspectives in the process of formulating, defending or discussing proposed collective norms, also embracing a moral consideration of the interests/voices of agents who are unable to speak for themselves (e.g., non-human natural world, future generations).

8   Notwithstanding the multiple understandings of what common sense entails in Arendt's works, in this paper, I refer to her account laid out in *The Human Condition* – the ability to relate to equals in the public realm in re-enacting immortal stories that help shape the shared reality of the community. In short, common sense is connected to the intersubjective. Moreover, in his comprehensive analysis of common sense, Uildriks (2019, pp. 35-36) views common sense as being enabled by two notions: *plurality and communication*. While the former is distinguished by three forms of plurality (*plurality of the senses, plurality of individuals and plurality of objects*), the latter is constituted by *language, speech, storytelling* and *representative thinking*. All eight conditions are ascribed crucial validity in Arendt's works and her explicit insistence on the (re)politicization of everyday lived experiences amid the loss of common sense in the vicissitudes of modernity and its world-alienating effects.

cialized birth of the infamous 'Age of Men'. According to Arendt, beyond a representation of a space of collective creativity with an evocative character and a yearning to illuminate the human condition of a plurality of perspectives and reflections, appearances in the sphere of public life call for a pre-political position on the nature of the issue (e.g. how one understands and relates to the non-human natural world) devoid of a predefined idea of a potential resolution, since speech and action in the company of others necessarily carries *'the burden of irreversibility and unpredictability'*, which are simultaneously the sources of strength latent in action (Sandilands, 2002, p. 147).

Action – the actualization of the plurality of uniqueness among equals – has thus a contingent nature, and precisely this underpins the freedom to act without constraints or the pressures of the external logic of an agent of force (*gewalt*), coercion (*zwang*), or that of a rational (scientific, philosophical) or other[9] form of truth (Arendt, 2018; Arendt, in Habermas & McCarthy, 1977, pp. 3-4). Manifold truths (see footnote), unlike factual truths, have no political nature prior to deliberation – they are singular and private – as a result of the epistemological privilege of self--evidence. Politics understood as the collective deliberation of a community entails an exchange of opinion rather than a prefiguration of statements of fact (Voice, 2013, pp. 189-199). For that matter, an Arendtian view suggests making a distinction between an environmental fact and political opinion. Put another way, environmental facts enter the political realm as opinions and are dependent on a collective *consent*. Hence the existence of climate deniers. For instance, when environmental scientists challenge deniers of climate change with facts, these facts function in the political realm as opinion. In this way, environmental problems are fundamentally political and consequently require an open de-

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9   In *Truth and Politics*, whenever Arendt talks about truth she always specifies what kind of truth she means: historical truth, trivial truth, some truth, psychological truth, paradoxical truth, real truth, philosophical truth, hidden truth, old truth, self-evident truth, relevant truth, rational truth, impotent truth, indifferent truth, mathematical truth, half-truth, absolute truth, and factual truth. There is no "the truth", only truth in reference to something particular (Arendt, 2006).

liberative process that allows citizens to be persuaded, and being (un)persuaded by an opinion is a matter of political choice (ibid., p. 190). In this case, the power of the public, and especially the organized public, not to be pressured by any external logic, is what forms the basis for political action equal to absolute *freedom*, as laid out by Arendt (1994/1995). In other words, she connects politics and freedom only in the case of political freedom, which is the basic theorem for political action and expression. This relationship between freedom and politics is not about freedom of choice or will but about the freedom to make something happen, to give birth to new beginnings. Something that hasn't happened or been born yet, hence the contingent nature of action. Thus, freedom is linked to action. Until (and during) the moment we perform something in the public realm – we are free. And the public sphere is our final terrain for expressing our freedom, because whatever happens on this terrain is considered political. Therefore, there is no freedom without politics – and conversely there is no politics without freedom (Arendt, 1994/1995).

To provide further clarification, by resorting to the *'power potential'* of environmental (and other) opinions shared by members of political communities, I do not intend to repudiate the operational mentality of environmental (and other) experts and their role as an oracle instead of a midwife (Sandilads, 2002, p. 152) in policy-making, though their findings and proposals are more often than not overlooked by policy-makers for a number of reasons, notably the preservation of economically beneficial but ecologically unsustainable conditions for (private) capital accumulation (Lukšič, 2005). Similarly, this does not, in any case, exempt science and scientific institutions from critique unveiling their bureaucratic, elitist, masculine, hierarchical and instrumental modus operandi[10] (Eckersley, 1990, p. 767).

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10 Eckersley (1990) is also vigorously critical of Habermas' insistence on the application of instrumental (manipulative) reason and anthropocentric communication ethics in the approach to non-human species and inter-human relations, respectively, hence his theoretical disparities relative to the ecocentric stream of thought.

Liberal democracy challenged: An ecological defense of deliberative democracy

It is not a novel, unconventional argument that the liberal democratic theory, politically moulded in a system of representation, that is representative democracy[11], is in a deep-rooted crisis (Offe, 2011), continuously failing to re-present, or perhaps it under-represents, the interests of the plurality of social groups unequally and unjustly reduced to a single demos, let alone those of the non-human natural world and future generations. However, the pervasive nature of the issue of representative democracy and the overarching institutional architecture of liberal democracy, including the immanent issue of shallow citizen participation in the (everyday) communication and decision-making processes, has not been left unchallenged (Wissenburg & Levy, 2004). Rather, from the outset of the environmental movement and green political thought, a presumably organic agreement has been established between an array of scholars and activists who gradually started persuading spectrums of wider publics about the democratic limits of liberal democracy, thereby proposing a more inclusive and reflexive model of deliberative democracy (see Dryzek, 2000; Eckersley, 2000, 2004; Smith, 2003). By setting out a more socially and ecologically inclusive model of political communication, Eckersley (2004) affirms that:

> The primary appeal of deliberative democracy is that it eschews the liberal paradigm of strategic bargaining or power trading between self-interested actors in the marketplace in favor of the paradigm of unconstrained egalitarian deliberation over questions of value and common purpose in the public sphere. (p. 115)

Or, as Benhabib (1996) maintains:

> According to the deliberative model of democracy, it is a necessary condition for attaining legitimacy and rationality with regard

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11 Arendt herself too was not a particular admirer of representative democracy (for more, see Kateb, 1983).

to collective decision making processes in a polity, that the institutions of this polity are so arranged that what is considered in the common interest of all results from processes of collective deliberation conducted rationally and fairly among free and equal individuals. (p. 69, in Smith, 2003, p. 56)

Moreover, Dryzek (2000) is also assured that the predominant model of liberal, representative democracy is confronted by a renewed, authentic-seeking idea that rests upon free and equal deliberation, which is inclusive and reasoned political dialogue among citizens inclined to reflect upon preferences induced by communication in a non-coercive fashion, as opposed to symbolic democratic control by voting, (private) interest aggregation, or constitutional rights. Put another way, deliberation's value does not stem from some kind of *strategic or instrumental rationality* (Dryzek, 1990, p. 202, in Smith, 2003, p. 57) that is producing and propagating the most rational outcomes, but from subjecting every decision to debate, meaning that the sole source of legitimacy does not come from the pre-determined will of individuals but, as already contended, it is shaped in the deliberation process per se (De Shalit, 2000, p. 153 in Arias-Maldonado, 2005, p. 6). Anne Phillips (1995, p. 13, in Smith, 2003, p. 54) recognizes that making decisions and creating policies *for* rather than *with* a politically marginalized constituency vastly diminishes the possibility of incorporating all the relevant issues. In a similar manner, Eckersley and Dobson uphold that a variety of *'environmental constituencies* – non-nationals, future generations and non-human nature – are poorly represented in the deliberations and decision-making sphere of liberal democratic institutions (ibid.). Val Plumwood (2007, p. 134) also claims that there is a structurally entrenched ecological denial in liberalism through its reason/nature dualism, limitation of democracy, disposition of public/private spaces, and marginalization of collective forms of life.

Furthermore, Arias-Maldonado (2007, p. 235) insists that more than the *democratic* justification of deliberative democracy, there is a necessity for a green one. He suggests that deliberative democracy is more apt to generate green values based on objecti-

ve addressing, with deliberative democracy being more open to ethical reasoning, which is common in green thinking. However, he warns that if we are to embrace the necessity of integrating the protection of the environment as a collective concern, and therefore as a public good, it would necessarily be followed by other, non-environmental political interests and demands. For that matter, he contends that it is most appropriate for subjects related to the public good to be discussed in the public sphere before a collective judgment, consensual or otherwise, is transferred to the policy sphere (Arias-Maldonado, 2005, p. 14). Moreover, the inclusive feature of deliberative procedures, as well as the open nature of debates, nurture the Arendtian conception of *representative thinking* (or enlarged thinking), referring to the ability to immerse ourselves in the perspectives and circumstances of others amid deliberation, steering a discursive inclination toward a diversification of communication forms and thus an expansion of the political community by recognizing nature's agency (Eckersley, 2000, p. 121). The issue, or rather the dilemma of how everyone can have the same possibility of deliberation in relation to unequal *'epistemological authority'* (Sanders, 1997, p. 349-350), that is the knowledge and ability to formulate convincing arguments that otherwise arise as an inevitable obstacle, could be solved by creating deliberative institutions, political bodies (e.g. citizen forums or citizen assemblies) that are capable of translating unconventional communications[12]. Still, central to the deliberation is that the education process takes place through participation alone (Pateman, 1970, p. 105, in Arias-Maldonado, 2005, p. 8). In short, argumentation is, broadly speaking, still the classic modus operandi of political debate insofar as it is a contest of values and norms whose validity cannot ultimately be 'proven', only 'justified' (Manin, 1987, p. 353). Although deliberation tends to increase information and pinpoint the preferences of individuals, helping them discover different aspects of proposed solutions to a particular issue, it is also a process of argumentation and persuasion. In this sense, it is discursive and rational.

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[12]   For instance, see Wohlleben's (2015) account on how trees network and communicate.

Nonetheless, according to Dryzek (2013, p. 200), changing the way people experience the world in relation to increasing environmental or green awareness is crucial, and in this case an argument is necessary but perhaps insufficient. We also need, Dryzek further maintains, rhetorical strategies that exceed reason and touch on passion. If the point is to convince listeners of the desirability of an intuitive and empathetic orientation toward nature, this can be done by connecting personal stories that are analogous to narratives of religious conversion and *"how this changed the life of the narrator"*. Or, as Andrew Dobson (2004, p. 211, in Dryzek, 2013, 200) puts it: *"an hour of experience can lead to more politicization than one year in the classroom"* when it comes to cultivating a sense of ecological consciousness. Ultimately, democracy, and especially deliberative democracy, has to do with real communication, although communication alone is not enough and it must transcend it, that is, it must also approach political decisions in order to classify it as part of the life of the political system (Arias-Maldonado, 2007, p. 240).

Stretching the argument further, Robyn Eckersley (2004, 2020) is persistent with her espousal of ecological democracy, which she sees as being potentially and most appropriately defended by the practical features of deliberative democracy[13]. She distinguishes ecological democracy as a normative complement to, and a practical provocation (not rejection) of deliberative and liberal democracy, respectively. Eckersley insists on an ecological reconceptualization of the democratic polity and its constitutive demos – elevating them beyond the traditional fixations to the levels of territory and/or people. Viewed in its totality, she calls for an ecological democracy that embraces the *'all-affected principle'*, which pertains to the absorption of the voices of relevant affected communities or

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[13] While acknowledging the continuity of forms of deliberative democracy since the ancient polis of Athens, Eckersley singles out three constitutive features that define the ideals and appeals of the deliberative model in relation to ecological problems/risks: *unconstrained dialogue, inclusiveness and social learning*. The first one pertains to a sound flow of communication between equals in the public sphere. The second invokes the Arendtian notion of 'representative thinking' – or enlarged mentality – and respect for the autonomy of others, while the third emphasizes openness and flexibility among deliberators and discloses deliberative democracy's educational and social learning potential (Eckersley, 2004, pp. 115-117).

communities at risk[14] in the communication and decision-making processes (Eckersley, 2004, pp. 111-113). While maintaining a critical reservation about the liberal form of political *representation*, Eckersley repeatedly cautions on the desirability of political representation in the democratic process, especially the representation of the interests of those who are directly affected but lack communicative competence (i.e., future generations and nonhuman others). By extending the democratic imaginary beyond human populations and fixed territorial boundaries, deliberative democracy not only encourages communicative modulations that animate *"reflexivity, self-correction, and the continual public testing of claims"*, but it subsequently strives to amend the adversarial effects of the pervasive scientization of politics (ibid., pp. 117-118). In this light, Maldonado (2007, p. 244) appraises deliberative democracy and its bridging potential for the uneasy relationship between expertise, democratic decisions and participation encapsulated in the deep-seated divergences between technical and lay discourses, though no attempt to equalize the discursive power relations between expert judgment and citizen expertise would be a smooth one, bearing in mind the critiques exposing science's ideological substratum. Similarly, as mentioned earlier, the technocratic imposition of scientifically proven environmental facts are not a sufficient ingredient in the policy processes, since they almost intrinsically strip away the voice of the affected community/community at risk (Voice, 2013, p. 191).

The promises and limits of institutional transformation

To reframe political and scientific institutions in a more ecologically just mode of operation, such as transcending technical regulations emphasizing environmental protection, it is of crucial

[14] Eckersley enlists several examples in the form of proposals that necessitate the inclusion of moral communities bound by the potential harm, and not by bloodline, passport, ethnicity, religion etc. Some of them include the proposal to build a large dam, a nuclear reactor, and/or the proposal to release a genetically modified organism into the environment – all of which encompass both present and future human populations and the ecosystems in which they are embedded, while also transcending fixed territorial boundaries (Eckersley, 2004, p. 113).

significance to reflect upon the everyday contexts and processes that constitute and thus define the society-nature relationship, a shady historical dichotomy that, following the torrent of crises over the past several decades, has become almost impossible to ignore. By breaching all climate parameters and failing to lay a stable benchmark, the realities of biospheric change have already propelled us into a new geological epoch, highlighting human activity and the impact on the planet's climate and ecosystems, yet the institutional arrangement of the liberal democratic order remains deaf to ecological contexts, namely for hearing and incorporating the silent, or perhaps silenced voices of affected communities/communities at risk. Such inattentiveness is deeply entrenched in liberalism's philosophical reverence for the human-individual, which, historically, was exclusively referential among, and for, men. Hence the mastery over the "inferior" female gender, whose ontological essence was equated with that of nature – an object reduced to a resource for economic production (for more, see Merchant, 1980; Plumwood, 2007; Salleh, 2009). Meanwhile, the role of the liberal democratic state has, in spite of the neoliberal orthodoxy of reducing it to a yes-sayer for the modus operandi of market fundamentalism, expanded dramatically in parallel with the advent of technocratic anti-politics (Eckersley, 2004; Fischer, 2000). In spite of numerous successes in constructively affecting the political agenda, this has led to the marginalization (one might even say suffocation) of a broad-spectrum of environmental and other civil society networks, who merely received a declarative appreciation for particular achievements with no substantial inclusion in the crucial processes of policy-making. Having said that, it might sound more than reasonable that profound institutional transformations will be necessary if we are to course-correct the politically and ecologically unequal, unjust and unsustainable modes of living. For such a process to be instigated, the policy realm has the responsibility to make room for the participation of the least included and existentially most affected agents. Remaining adherent to the principles of deliberative democracy, Frank Fischer (2000, pp. 255-256) proposes a model of policy inquiry termed

'policy epistemics'[15], which has its focus on *"the ways people communicate across differences, the flow and transformation of ideas across borders of different fields, how different professional groups and local communities see and inquire differently, and the ways in which differences become disputes"*, proffering an alternative to the structural communication ailments between various *'policy communities'* (networks of scientists, policy experts, politicians, administrative practitioners and engaged citizens in an ongoing discourse). Moreover, he suggests stretching the understanding of what is considered 'knowledge' in policy-making, bearing in mind the everyday experience of ordinary citizens, of which professional experts are no exception (ibid.). Striving for an intelligible conversation/dialogue between experts and citizens thus requires a mutual commitment to the meticulous interpretation of the issues members of a political community struggle with and, as a result, diligent effort on the part of strategically located political agents (public officials or policymakers) in tailoring a set of efficacious and just solutions to them (Jennings, 1987, in Fischer, 2000, p. 254). Conversely, Eckersley (2004) earnestly forewarns that:

> In a world where power disparities are ever-present, it is naïve to expect policy makers always to be so virtuous and patient as to put the public good ahead of their own interests, concerns, and identities and genuinely listen to, and accommodate, all opposing viewpoints in the course of political dialogue and decision making. (p. 129)

Ultimately, however daunting this may seem, Eckersely, as well as the other proponents of green and just transitions that we have referred to so far, firmly defend the appeals of deliberative democracy as the most socially and ecologically inclusive model of political communication capable of challenging the institutions of

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15   Fundamental to this model is a profound scrutiny of the communication forms between a multitude of involved agents in the policy arena, highlighting the salience of the institutional senzibilization of local perceptions and knowledge of environmental issues and their interpretation when fused with those of the experts. Emphasis is not placed on the search for policy solutions per se, but on the conversational process.

liberal democracy and science, reversing the effects of the scientization of politics, while simultaneously un-making and re-making the conditions under which diverse agents appear, participate and/or are represented in political and scientific institutions and the overall communication and policy processes (Arias-Maldonado, 2005, 2007; Bäckstrand, 2004, Eckersley 1990, 2004, 2020).

Conclusion

While acknowledging the institutional fragility of science and liberal democracy when it comes to enacting inclusionary and participatory communication grounds for finding sustainable solutions to the wide diversity of environmental issues, it is precisely their complacency that enables the rise of increasingly consolidated technocracies and the subsequent withering of a vibrant public sphere. By recalibrating Arendt's environmental silence through her understanding of politics as a distinctive quality that constitutes the human condition as a means for reinvigorating the knowledge and experience of environmentally affected and/or organized communities, complemented with notable green defences of deliberative democracy set out by several green (and other) theorists, I have attempted to elucidate the necessity for the re-politicization and re-institutionalization of environmental issues in a way that would stretch the democratic imaginary not only to cover marginalized human populations, but beyond human populations and fixed territorial boundaries. Namely, extending it to diverse moral communities in a relational way as an offset for recognizing existing, but also for designing new, ecological modes of living and their subsequent incorporation into the policy processes that are indispensable for just socio-ecological transitions.

References

Arendt, H. (1995). *Zwischen Vergangenheit und Zukunft: Übungen im politischen Denken* (D. Debenjak, Trans.) (pp. 295-306). New York: Harcourt, Brace & World Inc (Original work published 1994).

Arendt, H. (2006). *Between past and future: Eight exercises in political thought.* New York: Penguin Books.

Arendt, H., Allen, D. S., & Canovan, M. (2018). *The human condition.* Chicago: University of Chicago Press.

Arias-Maldonado, M (2007). An Imaginary Solution? The Green Defence of Deliberative Democracy. Environmental Values, 16(2), 233–252. Retrieved from: http://www.jstor.org/stable/30302255

Arias-Maldonado, M. (2005). Green Politics and Deliberative Democracy. Berkeley Workshop on Environmental Politics Working Paper 04–13. Retrieved from: http://globetrotter.berkeley.edu/GreenGovernance/papers/WP/13-Arias.pdf

Bäckstrand, K. (2004). Precaution, scientization or deliberation? Prospects for greening and democratizing science. In Wissenburg, M. L. J., & Levy, Y. (Eds.), *Liberal democracy and environmentalism: The end of environmentalism?* (pp. 100–112). London: Routledge.

Butler, E., R. (2017). Between Nature and Artifice: Hannah Arendt and Environmental Politics. *Master's thesis.* University of Victoria. Retrieved from https://dspace.library.uvic.ca/handle/1828/8523

Cadena, M., & Blaser, M. (2018). *A world of many worlds.* Durham: Duke University Press.

Crease, R. (2017). Arendt and the Authority of Science in Politics. *Arendt Studies*, 1, 43–60. Retrieved from: https://www.jstor.org/stable/48511462

Dryzek, J. S. (2013). *The politics of the earth: Environmental discourses.* Oxford: Oxford University Press.

Dryzek, J. S. (2000). *Deliberative democracy and beyond: Liberals, critics, contestations.* Oxford: Oxford University Press.

Di Chiro, G. (2017). Welcome to the white (m)Anthropocene? A feminist-environmnetalist critique. In MacGregor, S. (Ed.), *Routledge handbook of gender and environment* (pp. 487–505). London: Routledge.

Eckersley, R. (1990). Habermas and Green Political Thought: Two Roads Diverging. *Theory and Society*, 19(6), 739–776. Retrieved from: http://www.jstor.org/stable/657758

Eckersley, R. (1992). *Environmentalism and political theory: toward an ecocentric approach.* UCL Press.

Eckersley, R. (2014). *The green state: Rethinking democracy and sovereignty.* MIT Press.

Eckersley, R. (2020). Ecological democracy and the rise and decline of liberal democracy: looking back, looking forward, *Environmental Politics*, 29(2), 214–234. https://doi.org/10.1080/09644016.2019.159453

Eckersley, R. (2000). Deliberative democracy, ecological representation and risk: Towards a democracy of the affected. In Saward, M. (Ed.), *Democratic innovation: Deliberation, representation, and association* (pp. 117–132). London: Routledge.

Fischer, F. (2000). *Citizens, experts, and the environment: The politics of local knowledge.* Durham, N.C: Duke University Press.

Hargis, I. (2015). Hannah Arendt's turn to the self and environmental responses to climate change paralysis, *Environmental Politics*, 25(3), 475–493. https://doi.org/10.1080/09644016.2015.1106423

Habermas, J. (1989). *Toward a rational society: Student protest, science, and politics.* Cambridge: Polity Press.

Habermas, J., & McCarthy, T. (1977). Hannah Arendt's Communications Concept of Power. *Social Research, 44*(1), 3–24. Retrieved from: http://www.jstor.org/stable/40970268

Hill, S., R. (2020). Hannah Arendt and the politics of truth. *Opendemocracy*. Retrieved from: https://www.opendemocracy.net/en/transformation/hannah-arendt-and-politics-truth/

Kateb, G. (1983). Arendt and Representative Democracy. *Salmagundi*, 60, 20–59. Retrieved from: http://www.jstor.org/stable/40547751

Lukšič, A. (2005). Modificiranje in odpiranje okoljskih političnih aren. *Časopis za kritiko znanosti*, 33(219), 91–107. Retrieved from: https://www.dlib.si/details/URN:NBN:SI:DOC-BMX2X40I

Lukšič, A. (2011). Trajnostni razvoj, znanstveni diskurzi in nova politika, 423–435, in Lukšič, A. et al. (Eds.). *Politološke refleksije.* FDV, IDV, Center za kritično politologijo.

Manin, B., Stein, E. & Mansbridge, J. (1987). On Legitimacy and Political Deliberation. *Political Theory*, 15(3), 338–368. Retrieved from: http://www.jstor.org/stable/191208

Mesly, P. (2020). The Concept of Nature in the Thought of Hannah Arendt. *Master's thesis*. York University. Retrieved from: https://yorkspace.library.yorku.ca/xmlui/handle/10315/38375

Merchant, C. (1980). *The death of nature: Women, ecology, and the scientific revolution.* San Francisco: Harper & Row.

Offe, C. (2011). Crisis and Innovation of Liberal Democracy: Can Deliberation Be Institutionalised? *Sociologický Časopis / Czech Sociological Review*, 47(3), 447–472. Retrieved from: http://www.jstor.org/stable/23073263

Plumwood, V. (2007). Has democracy failed ecology? An Ecofeminist perspective, *Environmental Politics*, 4(4), 134–168, DOI:10.1080/09644019508414231

Robbins, P. (2012). Political ecology: *A critical introduction.* Chichester, U.K: J. Wiley & Sons.

Sluga, H., D. (2014). *Politics and the search for the common good.* Cambridge University Press.

Sandilands, C. (2002). Opinionated Natures: Toward a Green Public Culture. *Public*, (26), 138–154. Retrieved from: https://public.journals.yorku.ca/index.php/public/article/view/30560

Smith, G. (2003). *Deliberative democracy and the environment.* London: Routledge.

Sanders, L. (1997). Against Deliberation. *Political Theory*, 25(3), 347–376. Retrieved from: http://www.jstor.org/stable/191984

Salleh, A. (2009). Nature, woman, labor, capital: Living the deepest contradiction. *Capitalism Nature Socialism*, 6, 21–39. DOI:10.1080/10455759509358619

Uildriks, M. (2019). Hannah Arendt's Notion of Common Sense and Reality. *Master's thesis.* University of Nijmegen. Retrieved from: https://theses.ubn.ru.nl/bitstream/handle/123456789/7692/Uildriks,_M.E._1.pdf?sequence=1

Voice, P. (2013). Consuming the World: Hannah Arendt on Politics and the Environment. *Journal of International Political Theory*, 9(2), 178–193. https://doi.org/10.3366/jipt.2013.0054

Whiteside, H, K. (1994) Hannah Arendt and Ecological Politics. *Environmental Ethics*, 16(4), 339–358. Retrieved from: https://www.pdcnet.org/enviroethics/content/enviroethics_1994_0016_0004_0339_0358

Wissenburg, M. L. J., & Levy, Y. (2004). *Liberal democracy and environmentalism: The end of environmentalism?*. London: Routledge.

Wohlleben, P. (2017). *The hidden life of trees: What they feel, how they communicate.* London: William Collins.

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The climate crisis and (progressive) populism

Abstract: The goal of this paper is to present how populism can be involved in the post-political framing of climate change. The paper investigates the perspectives of two notable theorists of the "post-political" on populism and climate change, Chantal Mouffe and Erik Swyngedouw. In the first part the focus is on how progressive, left populism can mobilise people around the "ecological question" and "Green Democratic Transformation". The second part investigates Swyngedouw's perspective on the depoliticisation of the environment and climate change in the post-political era. The paper concludes with a possible leftist response and ways of the politicisation of the issue.

Introduction

In recent years populism has mostly been attributed a negative connotation, referring to the right-wing antidemocratic movement, pitted against immigrants and other social categories, which are regarded as a threat to the identity and prosperity of a nation. However, in this essay (mostly in the first part) I discuss populism from the perspective of Laclau and Mouffe's discourse theory. In this theoretical framework, populism is a political logic and discursive strategy of constructing a political frontier dividing society into people against "those in power"/"the oligarchy" (Laclau, 2005, pp. 105–106); (Mouffe, 2018, p. 11). Such political logic assumes various ideological positions and can also be directed towards progressive socio-political goals.

In the first part I present the way the so-called political logic of left populism (the concept of Chantal Mouffe) emphasises the central importance of the "ecological question" in the process of the deepening of democracy in the post-political era, and also that it needs to be combined with the social aspect. The focus is also on how the Green Democratic Transformation should be delivered in a socially equitable way, as well as on the importance of articulating the environmental/climate struggle with other emancipatory social struggles.

In the second part I relate to the contents of the IPE Summer School by referring to the lecture of Erik Swyngedouw on how the issue of climate change is being de-politicised in the post--political era. I research on how the post-political apocalyptic discourses about climate change are producing de-politicised, populist imaginary (which is decidedly populist) and what role the externalisation and reification of CO_2 has in this process. Swyngedouw's approach is also within the post-political frame.

In the third part I deal with what elements of populism (populist discourse) can be identified in a post-political framing of climate change.

Finally, I do a synthesis of Mouffe's and Swyngedouw's approaches and make some final remarks.

The aim of this paper is to present how populism can shape political perception of climate crisis.

Political strategy of left populism

According to Chantal Mouffe (2018, p. 5) the 2008 economic crisis brought to the fore contradictions of the neoliberal model, which has systematically eroded equality and popular sovereignty in modern democratic societies since the 1970s and has been labelled as "postdemocracy" (Mouffe, 2018, p. 13). Austerity, declining living conditions, poverty, etc. have sparked a variety of resistances to the neoliberal order. Mouffe described such a situation as a "populist moment", when the dominant neoliberal hegemony is being destabilised by the multiplication of unsatisfied demands (Mouffe, 2018, p. 11). The "populist moment" is the expression of a variety of resistances to the political and economic transformations seen during the years of neoliberal hegemony that have led to a situation of a "post-democracy", where the two basic pillars of the democratic ideal – equality and popular sovereignty – have been eroded (Mouffe, 2018, p. 13).

We have been witness to different reactions to the widespread socio-economic crises and unsatisfied demands of "the people". There was a significant rise in right-wing populism all across Europe (Orban, Salvini, Brexit, etc.), which claimed it would restore democracy and bring back sovereignty. The obvious problem of such claims of course was that sovereignty was/is regarded in a nationalist context, exclusively reserved for those deemed to be "true nationals", and therefore excluding everyone not fitting into this category. On the contrary, left populism aims to recover democracy to deepen and extend it. Mouffe's central argument is that nowadays, in the age of the "post-political consensus", the left populism ", /.../ understood as a discursive strategy of construction of the political frontier between 'the people' and 'the oligarchy', constitutes the type of politics needed to recover and deepen democracy" (Mouffe, 2018, p. 5).

Hence, right-wing populism is exclusionary, while left-wing populism is inclusionary, to put it simply. Analytically, from the perspective of discourse theory, Stavrakakis (2019, p. 202) identifies two crucial differences between left-wing and the right-wing populism: "(a) /i/n inclusionary populism, "the people" operates as a fluid "empty signifier" without a fixed signified, while, in exclusionary populism, "the people" usually refer back to a fantasmatic transcendental signified (the nation, race, etc.). In addition (b), in inclusionary populism, the dichotomisation of the political space is arranged in a mostly vertical manner (up/down, high/low), while exclusionary populism involves a horizontal (inside/outside) dichotomic arrangement". Stavrakakis concludes that extreme right-wing or exclusionary populism can actually be better described as a nationalist, xenophobic ideology, where populist elements are secondary or peripheral (ibid.).

According to Mouffe (2018, p. 24), a left populist strategy constructs a "people" by federating the democratic demands into a collective will. She refers to the work of Laclau, who defines democratic demands by two basic characteristics: 1) that these demands are formulated to the system by an underdog of sorts, and have an implicit egalitarian dimension; 2) that their very emergence presupposes some kind of exclusion or deprivation (Laclau, 2005, p. 125). Here it is crucial how people's demands are articulated. Mouffe (2018, p. 64) illustrates this with an example of right-wing populism, where demands for democracy can be articulated with a xenophobic vocabulary and they do not automatically have a progressive character. People's demands acquire a radical democratic dimension only when they are articulated through a plurality of democratic demands, proceeding from women, immigrants or other groups discriminated against (ibid.).

Nowadays there are multiple struggles for emancipation, which are founded on the plurality of social agents and of their struggles. The field of social conflict can no longer be described only in terms of class-struggle and for the left it is crucial to articulate various emancipatory struggles (environmental struggles, struggles against sexism, racism etc.) (Mouffe, 2018, pp. 3, 6). Mo-

uffe and Laclau theorised the so-called "new social movements" as political actors, which articulate above mentioned struggles and demands. They described them as differentiated from purely workers' struggle and not considered as a "class struggle" (Laclau & Mouffe, 1987, p. 131). Their distinctive feature is plurality. We can see this nowadays, when for example the Slovenian movement Youth for Climate Justice declares climate struggle as international, anticolonial, feminist, antispecist etc. (Ostan Ožbolt, 2020, p. 320).

Mouffe's concept/idea of left populism is very interesting and relevant nowadays because among other things Mouffe emphasises the importance of the "ecological question" in a project of radicalisation of democracy. She claims that it is essential to combine this with the social question (Mouffe, 2018, p. 61). Furthermore, the "Green Democratic Transformation" and the ecological transition could provide the articulating principle of deepening of democracy as a project around which a diversity of democratic demands can crystallise (Mouffe, 2020). Mouffe (2018, pp. 75–76) emphasises that for this purpose it is important to mobilise collective affects among the people, such as passion and hope for a better future.

This emphasis is a very important insight of the Laclau and Mouffe's discourse theory and also one of the key concepts of their approach to populism. The affective dimension is constitutive to the construction of political identities. Furthermore, one of Laclau's central thesis on populism is that "there is no populism without affective investment in a partial object" or the *objet petit a*[1] (Laclau, 2005, p. 116). He explains that if in a society such an institutional order was achieved that all demands were satisfied within its own immanent mechanisms, "there would be no populism, but, for obvious reasons, there would be no politics either" (ibid.). In Laclau's words, "/t/he need to constitute a people /…/ arises only when that fullness is not achieved, and partial

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[1] This concepts originates from Lacan's psychoanalytic theory. It posits "that once we enter the realm of symbolic discourse as infants, we lose our blissful sense of wholeness in our attachments to our mother. At this point of separation our subjectivities are formed with a fundamental 'void of Being', a constitutive lack that we attempt to fill through affective investment in partial objects (the *objet petit a*)" (Salter, 2016, p. 123).

objects within society (aims, figures, symbols) are so cathected that they become a name of its absence" (Laclau, 2005, pp. 116–117). I will relate to this theoretical point later in the paper.

According to Mouffe (2018, pp. 72–73), affective libidinal bonds play the decisive role in processes of collective identification. She further elaborates that "/t/he fostering of a collective will aiming at the radicalisation of democracy requires mobilising affective energy through inscription in discursive practices that beget identification with a democratic vision" (Mouffe, 2018, p. 73). However, it is worth considering that this libidinal energy is malleable and can be oriented in multiple directions and therefore producing different affects (ibid.). It can be mobilised in the context of a democratic-egalitarian vision, but unfortunately it can also be used for the promotion of an exclusionary, xenophobic, reactionary, right-wing populist collective project (Mouffe, 2018, pp. 71, 73). Mouffe observes that, in order to maintain its hegemony, the neoliberal system's fundamental aim is to mobilise people's desires and shape their identities in a consumerist and individualist manner (Mouffe, 2018, pp. 76-77). To undermine and replace neoliberal hegemony it is necessary for the left populist strategy to "create a different regime of desires and affects through inscription in discursive/affective practices that will bring about new forms of identification" (ibid.). Especially important within the constitution of different forms of subjectivities are the cultural and artistic fields, which for that reason have an important role to play in a left populist strategy (Mouffe, 2018, p. 77). We could witness that in 2021 before the Waters Act referendum, when the members of the Youth for Climate Justice Movement organised numerous artistic performances to illustrate a threat of the intended Water Act's changes.

The "Green Democratic Transformation" should aim at the protection of society and its material conditions by empowering people. It should be delivered in a manner of social justice and solidarity. The climate emergency has changed the general struggle for social justice in the last two decades, which now requires putting into question the prevailing productivist and extractivist

neoliberal model. Unlimited economic growth has ceased to be the guarantee of social stability. Instead, it has become a threat to the existence of society and especially to the more vulnerable and excluded social groups (Mouffe, 2020). Therefore the concept of social justice has acquired a new, ecological dimension.

For the deepening/radicalisation of democracy, it is very important that the climate/environmental struggle is related to other (above-mentioned) emancipatory social struggles and is oriented to eradicating different inequalities (Ostan Ožbolt, 2020, pp. 311, 321). After all, even the struggle for climate justice is a struggle against inequality, as future generations will be deprived of a sustainable environment and climate. This is also important because the emancipatory "nature" of the environmental struggle is not self-evident or taken for granted. There have been cases when the protection of the environment was defined in a racist manner. For example, some environmentalists have failed to respect the land claims of the aboriginal people and in other cases population control has been embraced as a policy necessary for the protection of ecology from excessive pressure (Smith, 1998, p. 34).

Climate change and the post-political era

In the second part of this essay, I would like to relate my subject to the content of the IPE Summer School. The most relatable contribution content-wise was the lecture from Erik Swyngedouw titled *"The Apocalypse is Sisappointing": Enjoying Climate Change and the Deadlock of the Climate Consensus.*

Swyngedouw (2010, p. 215) builds his argument on the premise that the "elevation of climate change and its consequences onto the terrain of the public concern and policy has unfolded in parallel to the consolidation of a political condition that has evacuated dispute and disagreement from the spaces of public encounter to be replaced by a consensually established /.../ post-political frame". This post-political frame is crucially determined by being "structured around the perceived inevitability of capitalism and a market economy as the basic organisational structure of

the social and economic order, for which there is no alternative"
(Swyngedouw, 2010, p. 215). This also shapes the prevailing mode
of governmentality, structured around technocratic management,
dialogical forms of consensus formation and problem-focused go-
vernance, sustained by populist discursive regimes (ibid.).

Furthermore, Swygedouw (2010, p. 216) contends that the
environmental question in general, as well as the climate change
argument and the way it is publicly staged in particular, has been
and continues to be one of the markers through which post-poli-
ticisation is wrought. The author maintains that "/t/his process of
de-politicisation – or the colonisation of the political by politics/
the police – which operates through elevating the state of nature
onto the public terrain in thoroughly depoliticised ways calls for
a reconsideration of what the political is, where it is located and
how the democratic political can be recaptured" (ibid.).

Nowadays environmental problems "are commonly staged
as universally threatening to the survival of humankind, anno-
uncing the premature termination of civilisation as we know it
and sustained by what Mike Davis (1999) called ecologies of fear"
(Swyngedouw, 2013, p. 11). This means that the environmental
condition we are in is systematically discursively presented by the
continuous invocation of fear and danger, the spectre of ecolo-
gical annihilation, etc., or what we could describe as apocalyptic
imaginaries (ibid.). As Swyngedouw (2010, p. 217) illustrates:

> /T/his cultivation of "ecologies of fear", in turn, is sustained in part
> by a particular set of phantasmagorical imaginaries (Katz, 1995).
> The apocalyptic imaginary of a world without water, or at least with
> endemic water shortages, ravaged by hurricanes whose intensity
> is amplified by climate change; pictures of scorched land as global
> warming shifts the geopluvial regime and the spatial variability
> of droughts and floods; icebergs that disintegrate around the po-
> les as ice melts into the sea, causing the sea level to rise; alarming
> reductions in biodiversity as species disappear or are threatened
> by extinction; post-apocalyptic images of waste lands reminiscent
> of the silent ecologies of the region around Chernobyl; the threat
> of peak-oil that, without proper management and technologically

innovative foresight, would return society to a Stone Age existence; the devastation of wildfires, tsunamis, diseases like SARS, avian flu or HIV, all these imaginaries of Nature out of synch, destabilised, threatening and out of control are paralleled by equally disturbing images of society that continues piling up waste, pumping CO_2 into the atmosphere, deforesting the Earth, etc.

To return to the post-political theoretical framework; at the symbolic level, the above-illustrated apocalyptic imaginaries are extraordinarily powerful in disavowing or displacing social conflict and antagonisms (Swyngedouw, 2010, p. 219). Talking of climate change as a global humanitarian cause produces deeply depoliticised imaginary, which does not revolve around choosing one trajectory rather than another, and is not articulated with specific political programs or socio-ecological project or revolutions (ibid.). It is therefore decidedly populist and depoliticised. Furthermore, it maintains the status quo in a sense that radical techno-managerial and socio-cultural transformations, which are initiated to retrofit the climate, are organised within the horizons of a capitalist order that is beyond dispute. This means that these transformations are meant to be carried out in a manner that nothing really has to change (Swyngedouw, 2013, p. 13).

At this point, we come to the most interesting part of Swyngedouw's theorisation. His claim (he also held a lecture on it in Ljubljana) is that "/t/he negative desire for an apocalypse that few believe will really happen /.../ finds its positive injunction around a fetishist invocation of CO_2 as the 'thing' around which our environmental dreams, aspirations, contestations, as well as policies crystallise" (Swyngedouw, 2013, p. 13). The CO_2 acquires a role of the so-called *objet petit a* (a partial object as I explained above in the context of populism; a "positivisation", filling out, of the void[2]) as a "thing" around which our environmental dreams, aspirations, contestations, as well as policies crystallise (ibid.). This *objet petit a* is never really IT, meaning that it always fails or is insufficient. Desire becomes articulated around CO_2 that is fantasised as "the

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2   Glynos & Stavrakakis, 2004, p. 208.

little thing" around whose management and containment a "better" world can be constituted. In his lecture Swyngedouw explained how enjoyment circles around some kind of a painful and strangely partially satisfying manner (he mentioned recycling, flight-shame, avocado-eating, obsessive climate activism, etc.). He emphasised that CO_2 (and other greenhouse gasses – GHGs) operates as a fetishist object: the fantasmatic desire for a different society becomes framed around handling of the CO_2 as the privileged object to re-direct the history of the future. Hence, CO_2 is the *objet petit a* that simultaneously expresses our deepest fears and is the thing around which the desire for change, for a better socio-climatic world, is expressed (Swyngedouw, 2013, p. 13). According to Swyngedouw it hides that subjects do not really desire a different socio-ecological order, but somehow enjoy the symptoms of the present one. It was interesting how at this point Swyngedouw reminded us of the right-wing populism for having the exactly parallel discursive architecture (the xenophobic-nationalist anti-migration discourse).

Many of us listeners wondered what Swyngedouw meant by this enjoyment of the symptoms. He explained (and I am referring to his PPT slides here) that "/e/njoyment (*joissance*) refers to an excessive pleasure and pain, to that something extra that twists pleasure into a fascinating, even unbearable intensity. /…/ It is a special kind of agony, an agony that makes us feel more alive, more fully present, more in tune with what makes life worth living, and dying for, than anything else. Enjoyment, then, is this extra, this excess beyond the given, measurable, rational and useful".

Swyngedouw further elaborated on how the imaginary enjoyment is nowadays present in the political action of (many) climate activists. From Al Gore to Greta Thunberg and XR, many climate activists and movements proffer the enjoyment of sacrifice as a way out of our climate pickle. In Swyngedouw's opinion "sacrificial practices seemingly pave the road to a wholesome, socially just and ecologically more sensible environment" (author's PPT slides). The author again related to the following "sacrificial practices": renouncing excessive consumption, promoting flight shame and reducing auto-mobility as moralising ploys, vegetarianism, recycling,

green new deals and the anxiety-ridden if not depression-inducing loop of the always insufficient ascetism to make the earth and its climate whole(some) again. He concluded that these practices again indicate "a libidinal attachment to sacrifice as a road to fullness".

Populist framing of climate change

Next, I would like to relate the above-mentioned summary of apocalyptic imaginaries to the deepening consolidation of a political populism that characterises the present post-political condition. This part is a synthesis of sorts of the previous parts.

Swyngedouw (2010, p. 221) observes that in the face of a pending environmental catastrophe caused by worsening climate change, environmental politics and debates over "sustainable" futures signal a range of populist gestures that decidedly characterise the post-political post-democratic condition, of which I will list a few in the following.

Firstly, populism can be identified already in how the antagonism between human and non-human nature is portrayed in the mainstream political discourse. Swyngedouw paraphrases Žižek (2006, p. 553) writing that:

> /P/opulism occurs when a series of particular "democratic" demands (in this case, a good environment, a retro-fitted climate, a series of socio-environmentally mitigating actions) is enchained in a series of equivalences /.../. This enchainment produces "people" as the universal political subject ... and all different particular struggles and antagonisms appear as part of a global antagonistic struggle between "us" (people) and "them" (in this case "it", i.e. CO_2).

Climate change has become a global and universal humanitarian threat, where we all – as humanity (as well as non-human world) – are potential victims. Swyngedouw (2010, p. 221) claims that one can identify characteristics of populism in this universality of the "people" suffering from processes beyond their control. "As such, populism cuts across the idiosyncrasies of different,

heterogeneously constituted, differentially acting and often an-
tagonistic human and non-human 'natures'; it silences ideological
and other constitutive social differences and disavows conflicts
of interests by distilling a common threat or challenge to both
Nature and Humanity" (ibid.).

Furthermore, as Laclau (2005, p. 87) and Mouffe (2018, p.
5) have already observed, populist discourse works in a way of
displacing social antagonism and constructing the enemy. For
populism it is necessary to externalise or reify the enemy into a
positive ontological entity (for example CO_2), whose annihilation
would restore balance and justice (Swyngedouw, 2010, p. 222). An
important emphasis here is that the enemy is always externalised
and objectified. Swyngedouw illustrates this with CO_2 (in the
context of the depoliticisation of climate change) "as the classic
example of a fetishised and externalised foe that requires dealing
with if sustainable climate futures are to be attained" (ibid.). Such
"framing" of CO_2 enables the system to shift responsibility for
the worsening climate change from unevenly distributed power
relations, networks of control and influence, rampant injustices,
fatal flaws inscribed in the system, etc., onto an "outsider" (that
is CO_2) (Swyngedouw, 2010, p. 222).

There are some other characteristics of the populist framing
of climate change that Swyngedouw (2010) elaborates on, but they
are not so important for the context of this article.

Climate crisis and leftist response

In this last part, let me refer back to Mouffe's concept of the left
populism. If she develops her argument more in terms of a politi-
cal logic/political strategy as a response to the quickly spreading
right-wing populism in the last decade, and more or less only
mentions the importance of "ecological question" within the "ra-
dicalisation of democracy", Swyngedouw elaborates on ecological
leftist response more thoroughly.

According to Swyngedouw (2013, p. 15), the leftist response
should first of all acknowledge that the environmental apocalypse

is not something which will happen in a distant future, because it is already here and has already happened. Many are already struggling because of climate change (water conflicts, struggles for food, environmental refugees, etc.). Therefore, Swyngedouw claims that "it is only within the realisation of the apocalyptic reality of the now that a new politics might emerge" (ibid.).

Secondly, the leftist argument should go beyond the politics of the environment (where non-human nature is something external) and instead move to "politicising the environment". The non-human world should become 'enrolled' in a process of politicisation. Swyngedouw (2013, pp. 16–17) claims that the politicisation of nature happens through the affirmation of the historical-geographical co-production of society with nature. He concludes that, from a leftist perspective, "the process of the egalitarian socio-ecological production of the common of life is precisely what our politics are all about" (Swyngedouw, 2013, p. 17). The apocalypse may already be here, but instead of giving up, "let us fully endorse the emancipatory possibilities of apocalyptic life" (ibid.).

Conclusion

The intention of this paper was to present how populism can be involved in the (post)-political framing of the climate change. I illustrated this by referring to two notable theorists and critics of the "post-political" era: Chantal Mouffe and Erik Swyngedouw.

In the first part of the paper, I investigated how the issue of climate change/crisis can be politically mobilised in the manner of Mouffe's concept of a progressive, left populism. Then I presented Swyngedouw's perspective on how climate change / the climate crisis is being depoliticised in the post-political era. It is especially interesting how Swyngedouw illustrates this depoliticisation with an example of CO_2 as a fetishised and externalised foe that enables the system to shift responsibility for the climate crisis from inequality/unevenly distributed power relations onto an "outsider" (CO_2).

To conclude, although both authors are critics of the post--political dealing/confronting with climate change, their approa-

ches somehow differ in emphasis. While Mouffe is more engaged with the idea of possible progressive, left populist mobilisation to address the neoliberal extractivist model, Swyngedouw is more interested in the possible ways of "politicisation" of the environment in the manner of the process of the egalitarian socio--ecological production of the common of life.

Bibliography:

Davis, M. (2002). *Dead Cities, and Other Tales.* New Press/I.B. Tauris.

Katz, C. (1995). 'Under the Falling Sky: Apocalyptic Environmentalism and the Production of Nature'. In A. Callari, S. Cullenberg and C. Biewener (eds.), *Marxism in the Postmodern Age* (pp. 276–82). The Guilford Press.

Laclau, E. (2005). *On Populist Reason.* Verso.

Mouffe, C. (2018). *For A Left Populism.* Verso.

Ostan Ožbolt, I. (2020). Kaj pomeni podnebna pravičnost in kako jo doseči? *Časopis za kritiko znanosti, 48* (279), pp. 308–333.

Salter, L. (2016). Populism as a fantasmatic rupture in the postpolitical order: integrating Laclau with Glynos and Stavrakakis. *New Zealand Journal of Social Sciences Online, 11* (2), pp. 116–132.

Smith, A. M. (1998). *Laclau and Mouffe: The Radical Democratic Imaginary.* Routledge.

Smith, A. M. (2003). *The Radical Democratic Imaginary.* Routledge.

Stavrakakis, Y. (2019). Populism, the (radical) left and the challenges for future research. In G. Katsakembis and A. Kioupkiolis (ed.), *The Populist Radical Left in Europe* (pp. 194–212). Routledge.

Swyngedouw, E. (2010). Apocalypse Forever? Post-political Populism and the Spectre of Climate Change. *Theory, Culture & Society, 27* (2–3), pp. 213–232.

Swyngedouw, E. (2013). Apocalypse Now! Fear and Doomsday Pleasures. *Capitalism, Nature, Socialism, 24* (1), pp. 9–18.

Žižek, S. (2006). 'Against the Populist Temptation', *Critical Inquiry 32* (spring), pp. 551–74.

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The climate crisis and (progressive) populism

Abstract: Transitions – system changes through natural or sociopolitical forces – have the potential to significantly threaten one's way of being in the world. In this paper we propose to acknowledge fully this "dark side" of transitions. We posit that transition studies would benefit from cross fertilisation with existential risk studies. In order to start exploring such a hybridisation, we propose avenues for identifying changes, within human communities' trajectories, that may threaten their very way of existence. We identify the mourning of immaterial, pangenerational losses as potentially central to such situation of existential threat. We associate these immaterial pangenerational losses to the loss of place, to the loss of ontological security and to cultural devastation. Finally, we argue that transitions that appear less extreme and dramatic could nevertheless threaten one's way of being human in the world. As an illustration we use the example of Métabief (France), a ski resort that is currently transitioning to non-snow-based activities.

Introduction

For the past twenty years, a new stream of academic discourse is taking shape in the Western scientific world: existential risk studies, also known as X-risk studies. This relatively new field focuses on the risks that threaten humanity's existence. In this paper, we argue that the concept of existential risk constitutes a salient category for transition studies. Given the definition proposed by Kralik et al. (2006), a *transition* is a forced or chosen change, an inner reorientation and the disruption of someone's reality that reshapes the "sense of self." Such "transitions" are close to Scheffer's concept of *critical* transitions in nature and societies: "sharp shifts in systems driven by runaway change toward a contrasting alternative state once a threshold is exceeded" (Scheffer, 2020, p. 105). They are not necessarily positive nor desirable. When a community's critical values are brutally lost, to such an extent that its way-of-being-human-on-Earth vanishes, it may reveal that an undesirable transition has occurred. In such instances, mobilising the existential risk discourse could clarify the challenges at hand.

Existential risks in a nutshell

In 2001, Nick Bostrom defined an *existential risk* as a one that is global, catastrophic, associated with potentially terminal events, bringing humanity to extinction or irreversibly impeding its potential (e.g. a nuclear world war, deadly pandemic, resource depletion, comet impact, misaligned artificial intelligence, catastrophic global warming) (Bostrom, 2001; Bostrom & Cirkovic, 2011). The definition of existential risks remains an ongoing subject of debate. For the purpose of this paper, the definition that we use is taken from Torres (2019). He recommends, for the specific context of scientific deliberations, the adoption of the definition proposed by Cotton-Barrat and Ord (2015): "An event X is an existential risk if, and only if, X could cause the loss of a large fraction of expected value" (p.3). Torres further recommends that it be made clear that the "value" under consideration may be de-

fined as one sees fit within the context. Finally, a "large fraction" involves loss at a global scale and of a pangenerational nature.

As Torres' caveat indicates, *Value* is a relative concept (Morrissey & Oliver-Smith, 2013) which focuses on "personal or societal judgement of what is important and valuable in life" (Adger et al., 2009). Values are socially constructed (Barnett et al. (2016, p. 2)) – the identification of what counts as "value" belongs to, and inform on, the utterer:

> Values are constructed through cultural influences and worldviews, narratives that help make sense of places and ways of living, markets and marketing, family and social networks, and people's lived experiences, relationships with nature, memories and aspirations.

Tschakert et al. (2019) identify 20 values important to people's lives that are susceptible to harm, including, non-exhaustively, knowledge, culture and traditions, dignity, identity, human mobility, sense of place, social fabric, sovereignty and order in the world. In some instances, these harms may be pangenerational and thus potentially perceived as irreversible.

Climate change is already harming important values of many communities around the world (IPCC [H.-O. Pörtner, 2022)Adaptation, and Vulnerability. Contribution of Working Group II to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change</title><secondary-title>Cambridge University Press. In Press.</secondary-title></titles><periodical><full-title>Cambridge University Press. In Press.</full-title></periodical><dates><year>2022</year></dates><urls></urls></record></Cite></EndNote>. The damage is greater than was assumed previously, and some of these may qualify as pangenerational. In the future, the frequency and magnitude of impacts on both human and natural systems will most probably increase (IPCC [H.-O. Pörtner, 2022)Adaptation, and Vulnerability. Contribution of Working Group II to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change</title><secondary-title>Cambridge University Press. In Press.</secondary-title></titles><periodical><full-title>Cambridge University Press. In

Press.</full-title></periodical><dates><year>2022</year></dates><urls></urls></record></Cite></EndNote>. In this paper we posit that these impacts are of existential nature.

A significant fraction of the existential risk research community (Bostrom & Cirkovic, 2011; Cotton-Barratt & Ord, 2015; Ord, 2020) tend to focus on "sexy" risks such as sudden global catastrophes and extinction-level events (Kuhlemann, 2018). Yet, large fractions of *existing* values are being lost right now at the local level, and large fraction of *expected* values will be lost, as consequences of slow-onset, "unsexy" risks associated to environmental degradation. If we were to focus solely on a limited set of existential risks, the field of their studies would present ethical, philosophical and epistemological shortcomings (Schuster and Woods (2021)). One key critic relies on the fact that "this [global existential risk] model regretfully but purposefully ignores the violence and suffering inflicted on *groups of people* in which their existential condition is at stake" (Schuster & Woods, 2021, p. P24). Many local communities have experienced or are currently facing existential-level losses and local terminal situations. Perpetrators of genocides, for instance, actively try to change the human condition by removing some "way of being human on Earth" (ibid, p. 24). This is precisely what a local terminal situation is about: the loss of certain ways of being human on Earth.

The extent to which a sudden and dramatic change in climate patterns can induce a local, societal collapse, remains a fierce debate between scholars, especially in fields such as archaeology, history and paleoclimatology (Dugmore et al., 2012; Middleton, 2012; Orlove, 2005; Weiss & Bradley, 2001). What is clear, however, is that many human communities experience important losses in the context of a changing climate. These can be connected to the material world, to the non-material world, or to both the non-material and the material worlds (Ackerman & Stanton, 2007; Alston et al., 2018; Barnett et al., 2016; Edwards et al., 2009; Hanewinkel et al., 2013; Morrissey & Oliver-Smith, 2013; Preston, 2017; Reguero et al., 2018; Serdeczny et al., 2018; Tschakert et al., 2019). Non-material losses, such as place-atta-

chment, knowledge, identity and social relations are often reduced to psychological harm, which fails to acknowledge the ethical implications of such losses (Preston, 2017).

In the following sections, we will explore the relationships between climate change and local existential losses. We argue that such local terminal situations are better captured through the gathering of communities' narratives. We also highlight possible clues that help us to identify those situations in order to better engage in interventions.

Identifying local terminal situations

Listening to people expressing mourning for immaterial, pangenerational losses

Local terminal situations have both a material dimension, which is the main focus of the risk studies discourse, and an immaterial dimension that we must acknowledge The materialist bias of Western science (Kovach, 2017)2017 tends keep these immaterial dimensions out of sight and thus neglected.

But how can we precisely identify a situation where a community is losing its way of being human in the world? How do we overcome the "invisibility" (Turner et al., 2008) of immaterial losses? How do we acknowledge them? Narratives are promising entry points. Generally speaking, narratives are stories:

> /T/hat include a temporal ordering of events and an effort to make something out of those events: to render, or to signify, the experiences of persons-in-flux in a personally and culturally coherent, plausible manner. (Sandelowski, 1991, p. 162)

It is the way people frame experiences, places, identities and lives, through a storied form (Josselson, 2011; Moezzi et al., 2017). Narratives inform on how people perceive changes and "assign specific meaning and valuation to social and environmental issues" (Doloisio & Vanderlinden, 2020). Gathering local narratives is a way of giving voice to threatened place-based communities,

making the invisible visible, as explained by Turner et al. (2008): "we are saying: ask the people who were hurt about the nature of their losses" (p.2). First-person narratives better capture what matters to people, what values and needs are important for a community (Preston, 2017; Tschakert et al., 2019). We argue that, in the context of a local terminal situation, members of communities will mobilise various narratives of loss, evoking a damaged relationship between community and place, a growing sense of ontological insecurity and the loss of cultural practices indicating a potential cultural devastation.

Furthermore, narratives may be framed as one side of a two--sided coin, the other side being "community". Indeed, narratives are also the concrete manifestation of the fabric that allows communities to exist: narratives are the carriers of shared experiences, values and contexts (de Fina et al., 2006). This fits Benedict Anderson's concept of "imagined communities," i.e. communities that exist through "imagined" narratives (2020; see also Rommetveit et al., 2013). Human communities exist through the sharing of narratives, which define the very nature of the variety of communities: local communities, for instance, aggregate around narratives of the places they inhabit.

Box 1: Presenting Métabief, our illustrative example

Throughout this paper, we discuss the case of Métabief, a town and ski station located in Jura (France). The case of Métabief is an interesting example of an ongoing, worrying transition that involves a profound change in local narratives and ways of being in the world, but which does not quite close off the possibilities of achieving a desirable future. With this example, we want to show that although some transitions may seem less dramatic than others, they may nonetheless create spaces where a community's way of being in the world is threatened.

Since the 1930s, Métabief and Jura has been deemed a top destination for cross-country skiing. Ski-lifts were established after the Second World War and have favoured the development of

alpine skiing. Since then, one of the main local narrative that has prevailed is that Métabief is first and foremost a family and budget-friendly ski resort, the closest ski-station from Paris (Davin, 1967; Douay, 2014). This narrative extends to the whole region: "with its variety of slopes, its altitude and its prices, the Jura is an excellent family ski resort"[1] (Faber, 1971). Snowy winters, with high-quality snow, has constituted a central component of local narratives, as reported by the local and national press: "A harsh, rigorous winter [...]. For five months the snow covers the land. It is even frequent that it falls during all the months of the year"[2] (Bole-Richard, 1977). Jura used to receive "heavy snowfall from 1000m upwards" in the 1950s (Balseinte, 1958, p. 142) and has been famous amongst skiers for decades because of "the constant composition of its snow which ensures a good impression of the tracks, thus better guidance of the skis"[3] (Tarrago, 1983).

Thus, narratives about snowy winters have thrived for decades, both within the local community and outsiders' representation of the territory; a "white gold", a tool for economic development. In the region of Métabief, skiing and winter tourism still represent a significant part of the revenue and have widely contributed to the development of local infrastructures (Pommier, 2021). Its recent rarefaction has already produced a slight change in narratives. In the 2010s, the station of Métabief praised the quality of its *artificial* snow, described as even better and more resistant than natural snow (France 3, 2017).

But a recent climate simulation by ClimateSnow indicates that artificial snow will not be sufficient to compensate for the future decrease in snow cover due to climate change. The viability of the station is not guaranteed. In 2020, the station and the municipality have therefore decided to close the alpine ski lifts by 2030–2035,

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[1] « Par la variété de ses pistes, par son altitude, par ses prix, le Jura est par excellence un centre de ski familial. »

[2] « Un hiver rude, rigoureux [...]. Pendant cinq mois la neige recouvre la terre. Il est même fréquent que celle-ci tombe pendant tous les mois de l'année. »

[3] « La composition constante de sa neige qui assure une bonne impression des traces, donc un meilleur guidage des skis. »

in hope that they will have enough time to develop new economic activities, initiate a change in local narratives and transform the community's identity. This decision may be an interesting example of a community which has identified an emerging risk for its own existence and has decided to anticipate and bifurcate.

Mourning the loss of a place

As we presented above, we understand *community* as a group of people sharing common narratives and imaginaries. Although we acknowledge the existence of a great diversity of *communities*, not necessarily bonded by attachment to place, we purposefully focus on place-based, or local, communities in this paper.

Climate change is increasingly destabilising the connection between communities and their place and pose a serious threat to "the values those places embody as a result of being lived in and transformed into sites of human significance" (Nomikos, 2018)r Druckmaschinen AG and its licensors, and may not be reproduced, used, displayed, modified, disclosed or transferred without the express written approval of Heidelberger Druckmaschinen AG.Copyright (c. Our understanding of place-based communities is therefore close to Jean-François Médard's who defines community as "both a place, people living in that place, the interaction between those people, the feelings that arise from that interaction, the common life they share and the institutions that regulate that life" (as quoted in Jacquier, 2011, p. 39)2011, p. 39. Community and their components are not fixed, they evolve through time, especially in the long run (Jacquier, 2011)2011. We therefore use the term "community", but imply "place-based community" all along this article.

Faulkner et al. (2018)1990, 1993 Adobe Systems Inco emphasise *place-attachment* as the keystone for (place-based) community's resilience, acting as a catalyst for common experience, the "backbone supporting interactions between other individual capacities" (Faulkner et al., 2018, p. 6). Even in extremely hazardous conditions, some communities can decide to voluntarily remain on site in order to preserve their identities, way of life

and being in the world, as shown by some coastal communities' voluntary immobility (Adger et al., 2009; Farbotko, 2019; Jamero et al., 2017; Pörtner et al., 2022; Simms, 2021).

Arto Haapala defines *place* as "the 'area' in which the everyday is realised" (as quoted in Nomikos, 2018, p. 454). The impaired relationship between community members and place has been explored through the concept of *solastalgia*, "the distress experienced when one's sense of place is under assault due to degrading environmental conditions of a home region" (Simms, 2021, p. 3), a feeling of powerlessness, a loss of familiarity with the place. Displacement, forced migration, or the loss of places can indeed be felt as a "forfeiture" of a certain way of life and lead to the dislocation of social networks (Simms, 2021). It is not so different from what Pearson et al. (2021) frame as "feeling homesick while still being at home" (p.13). Indeed, the world, as Francisco Varela points out, is something we engage in "by moving, touching, breathing, eating" (as quoted in Escobar, 2020, p. 22), something we can feel. In *Pluriversal Politics*, Arturo Escobar emphasises the importance of *sentipensar* (feel-think), because communities and human beings are deeply committed *to* and part *of* their environment (Escobar, 2020, p. 22):

> For Maturana and Varela, an uninterrupted coincidence exists between our being, our doing, and our knowing; the corollary is that "we confront the problem of understanding how our experience — the praxis of our living — is coupled to a surrounding world which appears filled with regularities that are at every instant the result of our biological and social histories" (1987, 241).

Climate change modifies the environment, i.e. this continuum between a community and its place, disrupting the social-ecological system. When important places with cultural, ontological and spiritual significance such as burial grounds, landscapes, homes, religious buildings, or historical monuments are destroyed, people suffer both from physical impacts (i. e. the material conditions of survival), the "erosion of *self*", destabilised connection to the place (Alston et al., 2018) and the disruption of political subjecti-

vity (Farbotko, 2019). Climate change is a threat to communities' values and relationship with place creates space for potential loss of meaning at a community scale and, therefore, the disruption of the "foundational building blocks of social coordination" (Morrissey & Oliver-Smith, 2013). As Nomikos (2018) states (p. 457):

> Drastic and unexpected changes can make it too "hard to define the thread of continuity or stability in life" and cause a disruption to place attachment that is both alienating and hard to recover from. When living in an era characterised by rapid environmental change, the power of place over our lives is no small matter.

Therefore, we consider the disruption of place-attachment as a potential indicator of a local terminal situation at community's scale.

Box 2: Is place attachment in Métabief under threat?

Because skiing is a significant aspect of the local history, the closing of the ski lifts in Métabief will redefine the local community's identity. Métral (2021) explains that "these ski areas have had a profound effect on the territories and their inhabitants. If the transition proves to be a way out for these places, it is also a heartbreak for many" (par. 29). We believe that the process of slow transition that has been decided in Métabief offers possibilities to transform the community's narratives of the place. A more dramatic and sudden closing would have potentially harmed the community's sense of place. In that sense, we think that Métabief offers an interesting example of a transition that could act as "a bridge [between two worlds], an improved union that recreates, reinforces, or revives the value of place", as Métral (2021) defines it (par. 29).

Mourning the loss of one's way of being-in-the-world

Local terminal situations imply a threat to the ontological security of community's members. Ontological security "refers to the confidence that most humans beings have in the continuity of their self-identity and in the constancy of the surrounding social and material environments of action" (Giddens, 1990, p. 92).

It is the security of "being" (Dupuis & Thorns, 1998; Farbotko, 2019) and being-in-the-world, the possibility to rely on and trust familiar places, relationships and objects. Ontological *insecurity* is often linked with the loss of the social fabric and a sense of loss for the people and places that represented that security (Hawkins & Maurer, 2011). As Hawkins and Maurer (2011) note, quoting a resident of New Orleans after hurricane Katrina: "Even when New Orleans is back it will never be back" (p. 150).

Scholars from environmental sociology and queer studies have since then made a critical analysis of the original concept. Its initial definition relies on a form of conservatism (reluctance to change), binarism (we are either ontologically secure or insecure), and it fails to question the political power-structure which determines *whose* identity matters (Banham, 2020; Rossdale, 2015). However, Banham (2020) emphasises the possibilities this concept offers if it is not limited to self-interests and self-preservation, but also includes the wellbeing of other humans and non-humans beings. Her definition is as follows:

> I define ontological security as a subjunctive state of being; an experience emerging at the point of contact with that which symbolises a reflexive acceptance of the past and an assurance of the future. This acceptance and assurance contribute to emotional experiences of ease, hope, comfort, and confidence. Ontological insecurity is not the opposite or absence of security but rather, the experience of the diminishment (whether through relational, cultural, and/or material processes) of these qualities of acceptance and assurance. This diminishment contributes to emotional experiences of grief, anxiety, and fear. (Banham, 2020, p. 3)

She then establishes a framework to operationalise ontological security and describes how Tasmanian forests help residents frame and materialise time, create a sense of home and familiarity, embody the possibilities of the future and serve as a way of "locating oneself as human amidst a bigger network" (p. 7) of life, connections and responsibilities. Hence, ontological security is a continuum and does not simply mean feeling safe. It is the

capacity to rely on our experience and knowledge of the past and the confidence in the possibilities of the future. In that sense, the loss of ontological security can indicate a local terminal situation, especially because ontological security can shape and be shaped by connection to place, as Nomikos (2018) puts (p.459):

> The ordinary aesthetic of everyday life, connected to sense of place and linked to positive emotions, favours stability, ontological security and subjective well-being.

Box 3: Is the ontological security of Métabief's community members at threat?

If skiing is no longer an option in Métabief, it will threaten specific jobs, skills and incomes of many inhabitants – thus eroding their ontological security. In a 2006 study, Foltête and Masson (2006) asked a panel of inhabitants of the Haut-Doubs (the region in which Métabief is located) "How can we delimitate the Haut-Doubs?" They found out that more than 50% of participants (inhabitants from the region) identified the mountains as the main identity factor, followed by gastronomy (~45%), fauna and flora (~38%) and climate (~37%). Two subgroups of narratives coexisted, one specifically linked to the physical aspects of the region and the other one on human aspects. In the area of Métabief and Pontarlier, the dominant narrative was that "Haut-Doubs is first of all a high land where the winter is harsh and the landscapes are specific" (p. 15). Hence, warmer winter, decrease in snow cover and change in vegetation patterns question what it *means* to be from Haut-Doubs. We can hypothesise that this transition is impairing the relationship between community and place, a potential driver of ontological insecurity. Had Métabief not decided to initiate a 10-year transition period, the region would have most probably face tough times in the 2030s and experience a brutal closure of the ski lifts at the end of the decade. Thus, how would inhabitants have secured a "reflexive acceptance of their past" if the present implies a dramatic disconnection from the past? How could they have kept an "assurance of the future" if the future brings financial losses, uncertainty, grief and a disruption of their identity?

"Perhaps the bull of winter will no longer be": mourning cultural devastation

Cultures are "shared and patterned meanings held my members of social groups" (Thomas et al., 2019), embodied in daily practices which are locally specific. Thomas et al. (2019) tie the "intangible aspects of social life" to the preservation of one's place. Relocation and displacement act as uprooting processes that can harm cultural way of life:

> /T/here may be no equivalents to the territory with important mythic associations, the fishery that supported culturally salient livelihoods, or simply the sense of place that provided an emotional and spiritual foundation for multiple generations. (Thomas et al., 2019, p. 10)

This pangenerational loss of access to significant places illustrates how tangible losses have intangible consequences on cultural way of life. Cultures are mostly anchored in a specific place. A weakened link between the two, because of displacement or dramatic changes in the environment which severs these emotional and spiritual ties, can have "devastating repercussions for individuals and societies" (Adger et al., 2009, p. 349). These ties vary in space and time and between cultures.

Indigenous cultures are often founded on particular bonds to their land and show a strong sense of place (Farbotko, 2019; Lear, 2006; Morrissey & Oliver-Smith, 2013; Schwarz, 1997; Simms, 2021; Zickgraf, 2021). Schwarz (1997) vividly depicts how the Navajo people experienced the Land Settlement Act of 1974 as a disaster and a "breach of personhood" (p. 44). In the Navajo culture, parents bury the umbilical cord of their new-borns in specific places – thus symbolically and spiritually anchoring their children to the land. This "anchoring cord" constitutes an indissociable part of the definition of being human, as a member of the tribe explains: "Are you trying to kill us? Moving away from here would be dying a slow death" (Kammer (1980) as quoted in (Schwarz, 1997, p. 50)). In the context of climate change, Tschakert et al.

(2019) comes to the same conclusion for the Tikiġaġmiut (Inupiat) people, an arctic Indigenous community losing its land to sea level rise and erosion. In Siberia, Susan Crate analyses how climate change affects the Sakha people's culture. Permafrost melting, for example, impacts *alaas*, symbolic places that have both a material and cosmological importance (Crate, 2021). She also quotes Jyl Oghuha, a Sakha elder worried about warmer winters:

> The bull of winter is a legendary Sakha creature whose presence explains the turning from the frigid winter to the warming spring. The legend tells that the bull of winter, who keeps the cold in winter, loses his first horn at the end of January as the cold begins to let go to warmth; then his second horn melts off at the end of February, and finally, by the end of March, he loses his head, as spring is sure to have arrived. It seems that now with the warming, perhaps the bull of winter will no longer be. (Crate, 2008, as quoted by Pearson et al., 2021)

This loss of "cultural keystone places" (Cuerrier et al., 2015) threatens cultural identities, wellbeing and can generate a form of cultural trauma, i.e. the disruption of "the cultural basis of social order" (Brulle & Norgaard, 2019). Although place constitutes a critical aspect of cultural identities, the loss of other important symbols (objects, practices, knowledge, people) may also endanger the "cultural integrity of a community" (Morrissey & Oliver-Smith, 2013). In *Radical Hope: Ethics in the face of cultural devastation*, Lear (2006)in jurisdictions. describes how the disappearance of buffalos and the end of the traditional warrior practice of counting-coup contributed to the collapse of what it meant to be a Crow in the late 19th century. When the US government forbade warfare and that hunting was no longer possible, Crow people experienced a loss of meaning. More than a cultural trauma, Lear qualifies this process as cultural *devastation.* He quotes a grand-mother: "I'm living a life I don't understand" (p. 62). Because a culture cannot conceive its own devastation, it also lacks the concepts to fully understand new worlds, where being the best individual in one's culture – in the Crow way, being an outstanding warrior – does not mean being able

to efficiently confront the challenges of "a radically new future"(Lear, 2006, p. 64) What Lear describes can be linked to what Brulle and Norgaard (2019) mean when they analyse how climate change, by disrupting communities' routine, narratives, social relations and habitus, creates a sense of cultural trauma in "WEIRD" (Western Educated Industrialised Rich and Democratic) societies.

Box 4: Do cultural changes in Metabief qualify as manifestations of cultural devastation?

The current changes are most probably not sufficient to provoke a *cultural devastation* in Métabief such as the one that have occurred for many Indigenous people and other communities. Skiing is an important part of the local community's culture, but it is not the only thing. Whereas being an outstanding Crow meant being the best warrior, being an outstanding inhabitant of Métabief does not necessarily mean being the best alpine skier. Members of the community will presumably not face a situation in which they can no longer understand the world they inhabit. Decrease in snow cover and change in vegetation will be progressive and will not threaten, for example, the existence of the mountains. The important cultural practice of skiing and the narratives of a "white gold" will simply evolve into something different: a new relationship with the mountain and the landscape.

Conclusion. Radical transition and transformative adaptation

Important and irreplaceable values vary amongst individuals, communities, cultures and social-ecological systems. Narratives connected to ontological security, solastalgia, communities' attachment to places, cultural keystone places, cultural trauma and devastation, constitute discursive clues, in the form of mourning, to potentially uncover local terminal situations and existential risks. A community's existence is at risk when it faces a threat over its key values, its crucial bonding to a place, and when its members are threatened in their unique way of *being human in the world*.

Communities can face local, terminal situations, which implies that there is no prospect of recovery and no possibility to adapt to dramatic changes, resulting in existential-level losses. In that sense, climate change may constitute a new, critical pressure on communities and social-ecological systems that may produce local existential risks. Thus, existential risks and local terminal situation constitute interesting categories for transition studies to explore.

Nonetheless, we can make the hypothesis that existential risks and local terminal situations do not always coexist. Other radical and transformative pathways could lead to locally desirable outcomes and reinforce the resilience of communities. Facing cultural devastation, the Crow people ended-up reinventing what it meant to be a Crow. They did so through traditional ways of understanding the world – dreams and myths. It did not attenuate the losses and harms that their culture experienced, but it showed that transformation can occur from within and redefine a community's or a culture's way of being human. This is what Lear (2006)r calls "radical hope".

Another, rather less dramatic example that we used in this article is the city of Métabief, in France. The decision to close the ski lifts by 2035 constitutes a radical transition for the territory and an attempt to transform its identity. It is possible that this decision to opt for transformative adaptation will give enough time for the community to grieve and recreate local narratives, cultural practices and sense-of-place. Rather than waiting for fifteen years, and potentially facing a terminal situation – the brutal closing of the ski station, job losses, the sudden disruption of local identity – the community might be able to mitigate the existential risk through a transition toward a more desirable outcome.

Finally, we may claim that research about existential risks would beneficiate from reflections about which *apocalypse* matters, for whom and who should be given a voice? Who has the capacity to leave a *trace* about their existence and their losses? "Roughly speaking, it can be said that victors and elites tend to leave more traces than defeated and dominated groups", writes (Bernardot, 2011, p. 5) If cultural trauma is constructed and institutiona-

lised through a long social process that includes the appropriation of trauma narratives by the media (Alexander, 2004), there is a risk that the devastation experienced by marginalised communities and dominated groups remains unseen, invisible to a larger audience such as the scientific community. Following the same logic, dominant groups can establish narratives that do not fit the reality of the lived experience of communities facing terminal situations. We must be vigilant to the instrumentalisation of the trace, as described by Foucault, which implies the "dispossession of the narrative agentivity of the scriptors" (Rouge, 2015, p. 58). Identifying existential risks and local terminal situations might simply be "a matter of letting people speak and make them speak" (ibid., p. 59) and accompany the narratives with silence.

Literature

Ackerman, F., & Stanton, E. A. (2007). The cost of climate change: what we'll pay if global warming continues unchecked. *The cost of climate change: what we'll pay if global warming continues unchecked.*

Adger, W. N., Dessai, S., Goulden, M., Hulme, M., Lorenzoni, I., Nelson, D. R., Naess, L. O., Wolf, J., & Wreford, A. (2009). Are there social limits to adaptation to climate change? *Climatic Change*, *93*(3), 335-354.

Alexander, J. C. (2004). Toward a Theory. *Cultural trauma and collective identity*, 1.

Alston, M., Hargreaves, D., & Hazeleger, T. (2018). Postdisaster social work: Reflections on the nature of place and loss. *Australian Social Work*, *71*(4), 405-416.

Anderson, B. (2020). Imagined communities: reflections on the origin and spread of nationalism. In *The new social theory reader* (pp. 282-288). Routledge.

Balseinte, R. (1958). Les stations de sports d'hiver en France. *Revue de Géographie Alpine*, 129-180. https://www.persee.fr/doc/rga_0035-1121_1958_num_46_1_1819

Banham, R. (2020). Emotion, vulnerability, ontology: operationalising 'ontological security'for qualitative environmental sociology. *Environmental Sociology*, *6*(2), 132-142.

Barnett, J., Tschakert, P., Head, L., & Adger, W. N. (2016). A science of loss. *Nature Climate Change*, *6*(11), 976-978. https://doi.org/10.1038/nclimate3140

Bernardot, M. (2011). À la recherche des sans-trace: cultures, espaces et citoyenneté. *L'Homme trace: perspectives anthropologiques des traces contemporaines, Paris, CNRS Éditions*, 331-347.

Bole-Richard, M. (1977). Le massif jurassien : les gens du haut. *Le Monde*. https://www.lemonde.fr/archives/article/1977/04/23/le-massif-jurassien-les-gens-du-haut_2859253_1819218.html

Bostrom, N. (2001). Analyzing human extinction scenarios and related hazards.

Bostrom, N., & Cirkovic, M. M. (2011). *Global catastrophic risks*. Oxford University Press.

Brulle, R. J., & Norgaard, K. M. (2019). Avoiding cultural trauma: Climate change and social inertia. *Environmental Politics*.

Cotton-Barratt, O., & Ord, T. (2015). Existential risk and existential hope: definitions. *Future of Humanity Institute: Technical Report*, *1*(2015), 78.

Crate, S. A. (2021). Sakha and Alaas: Place Attachment and Cultural Identity in a Time of Climate Change. *Anthropology and Humanism*.

Cuerrier, A., Turner, N. J., Gomes, T. C., Garibaldi, A., & Downing, A. (2015). Cultural Keystone Places: Conservation and Restoration in Cultural Landscapes. *Journal of Ethnobiology*, *35*(3), 427-448, 422. https://doi.org/10.2993/0278-0771-35.3.427

Davin, M. (1967). *La station de sports d'hiver de Métabief*. INA. https://www.ina.fr/ina-eclaire-actu/video/lxf04006730/la-station-de-sports-d-hiver-de-metabief

de Fina, A., Schiffrin, D., & Bamberg, M. (2006). *Discourse and identity* [doi:10.1017/CBO9780511584459]. Cambridge University Press. https://doi.org/10.1017/CBO9780511584459

Doloisio, N., & Vanderlinden, J.-P. (2020). The perception of permafrost thaw in the Sakha Republic (Russia): Narratives, culture and risk in the face of climate change. *Polar Science*, *26*, 100589. https://doi.org/https://doi.org/10.1016/j.polar.2020.100589

Douay, A. (2014). *Grand Direct à Métabief : les activités des stations franc-comtoises*. https://www.youtube.com/watch?v=nE-Z46sYhMQ

Dugmore, A. J., McGovern, T. H., Vésteinsson, O., Arneborg, J., Streeter, R., & Keller, C. (2012). Cultural adaptation, compounding vulnerabilities and conjunctures in Norse Greenland. *Proceedings of the National Academy of Sciences of the United States of America*, *109*(10), 3658-3663. https://doi.org/10.1073/pnas.1115292109

Dupuis, A., & Thorns, D. C. (1998). Home, home ownership and the search for ontological security. *The sociological review*, *46*(1), 24-47.

Edwards, B., Gray, M., & Hunter, B. (2009). *A Sunburnt Country: The Economic and Financial Impact of Drought on Rural and Regional Families in Australia in an Era of Climate Change* (Vol. 12). Curtin University of Technology. https://doi.org/10.3316/ielapa.929928050111615

Escobar, A. (2020). *Pluriversal politics: The real and the possible*. Duke University Press.

Faber, P. (1971). L'hiver dans les vosges et le jura: des hôteliers avec leur rouleau à peindre. *Le Monde*. https://www.lemonde.fr/archives/article/1971/11/13/l-hiver-dans-les-vosges-et-le-jura-jura-des-hoteliers-avec-leur-rouleau-a-peindre_3062278_1819218.html

Farbotko, C. (2019). Climate change displacement: Towards ontological security. *Dealing with climate change on small islands: Towards effective and sustainable adaptation*, 251-266.

Faulkner, L., Brown, K., & Quinn, T. (2018). Analyzing community resilience as an emergent property of dynamic social-ecological systems. *Ecology and Society*, *23*(1), Article 24. https://doi.org/10.5751/ES-09784-230124

Foltête, J.-C., & Masson, F. (2006). Délimiter le Haut-Doubs : entre représentations mentales et limites physiques. *Images de Franche-Comté*(33), 14-17. https://hal.archives-ouvertes.fr/hal-00756167

France 3, U. r. (2017). Haut-Doubs - La station de Métabief tente de sauver la neige. *Bourgogne-Franche-Comté France 3*.

Giddens, A. (1990). *The Consequences of Modernity* (P. Press, Ed.).

Hanewinkel, M., Cullmann, D. A., Schelhaas, M.-J., Nabuurs, G.-J., & Zimmermann, N. E. (2013). Climate change may cause severe loss in the economic value of European forest land. *Nature Climate Change*, *3*(3), 203-207. https://doi.org/10.1038/nclimate1687

Hawkins, R. L., & Maurer, K. (2011). 'You fix my community, you have fixed my life': the disruption and rebuilding of ontological security in New Orleans. *Disasters*, *35*(1), 143-159.

IPCC [H.-O. Pörtner, D. C. R., E.S. Poloczanska, K. Mintenbeck, M. Tignor, A. Alegría, M. Craig, S. Langsdorf, S. Löschke, V. Möller, A. Okem (eds.). (2022). Summary for Policymakers. Climate Change 2022: Impacts, Adaptation, and Vulnerability. Contribution of Working Group II to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change. *Cambridge University Press. In Press.*

Jacquier, C. (2011). Qu'est-ce qu'une communauté? En quoi cette notion peut-elle être utile aujourd'hui? *Vie sociale*(2), 33-48.

Jamero, L., Onuki, M., Esteban, M., Billones-Sensano, X. K., Tan, N., Nellas, A., Takagi, H., Thao, N. D., & Valenzuela, V. P. (2017). Small-island communities in the Philippines prefer local measures to relocation in response to sea-level rise. *Nature Climate Change*, *7*(8), 581-586.

Josselson, R. (2011). Narrative research: Constructing, deconstructing, and reconstructing story. *Five ways of doing qualitative analysis: Phenomenological psychology, grounded theory, discourse analysis, narrative research, and intuitive inquiry*, 224-242.

Kammer, J. (1980). *The second long walk: The Navajo-Hopi land dispute*. Albuquerque: University of New Mexico Press.

Kovach, M. (2017). Doing indigenous methodologies. *The SAGE handbook of qualitative research*, 383-406.

Kralik, D., Visentin, K., & van Loon, A. (2006). Transition: a literature review. *J Adv Nurs*, *55*(3), 320-329. https://doi.org/10.1111/j.1365-2648.2006.03899.x

Kuhlemann, K. (2018). Complexity, creeping normalcy and conceit: sexy and unsexy catastrophic risks. *Foresight*.

Lear, J. (2006). *Radical hope: Ethics in the face of cultural devastation*. Harvard University Press.

Métral, P.-A. (2021). Les trajectoires de reconversion post-touristiques des stations de ski fermées françaises. *Géocarrefour*, *95*(95/2).

Middleton, G. D. (2012). Nothing lasts forever: Environmental discourses on the collapse of past societies. *Journal of Archaeological Research*, *20*(3), 257-307.

Moezzi, M., Janda, K. B., & Rotmann, S. (2017). Using stories, narratives, and storytelling in energy and climate change research. *Energy Research & Social Science*, *31*, 1-10.

Morrissey, J., & Oliver-Smith, A. (2013). Perspectives on non-economic loss and damage: understanding values at risk from climate change. *Loss and damage in vulnerable countries initiative report*.

Nomikos, A. (2018). Place matters. *The Journal of Aesthetics and Art Criticism*, *76*(4), 453-462.

Ord, T. (2020). *The precipice: Existential risk and the future of humanity*. Hachette Books.

Orlove, B. (2005). Human adaptation to climate change: a review of three historical cases and some general perspectives. *Environmental Science & Policy*, *8*, 589-600.

Pearson, J., Jackson, G., & McNamara, K. E. (2021). Climate-driven losses to Indigenous and local knowledge and cultural heritage. *The Anthropocene Review*, 20530196211005482.

Pommier, R. (2021). Réchauffement climatique : fin du ski pour la moyenne montagne en 2030 ? Le cas d'école de Métabief Interview d'Olivier Erard, le directeur du Syndicat Mixte du Mont d'Or. *Tourmag.com*. https://www.tourmag.com/Rechauffement-climatique-fin-du-ski-pour-la-moyenne-montagne-en-2030-Le-cas-d-ecole-de-Metabief_a108268.html

Pörtner, H. O., Roberts, D. C., Adams, H., Adler, C., Aldunce, P., Ali, E., Begum, R. A., Betts, R., Kerr, R. B., & Biesbroek, R. (2022). Climate change 2022: impacts, adaptation and vulnerability.

Preston, C. J. (2017). Challenges and opportunities for understanding non-economic loss and damage. *Ethics, Policy & Environment*, *20*(2), 143-155.

Reguero, B. G., Beck, M. W., Bresch, D. N., Calil, J., & Meliane, I. (2018). Comparing the cost effectiveness of nature-based and coastal adaptation: A case study from the Gulf Coast of the United States. *PLoS One*, *13*(4), e0192132.

Rommetveit, K., Gunnarsdóttir, K., Jepsen, K. S., Bertelsson, M., Verax, F., & Strand, R. (2013). The TECHNOLIFE project: an experimental approach to new ethical frameworks for emerging science and technology. *International Journal of Sustainable Development*, *16*(1-2), 23-45.

Rossdale, C. (2015). Enclosing critique: the limits of ontological security. *International political sociology*, *9*(4), 369-386.

Rouge, R. (2015). Foucault et les politiques du récit: les traces de l'infâme. *Encyclo. Revue de l'école doctorale ED 382*(7).

Sandelowski, M. (1991). Telling stories: Narrative approaches in qualitative research. *Image: the journal of nursing scholarship*, *23*(3), 161-166.

Scheffer, M. (2020). *Critical transitions in nature and society*. Princeton University Press.

Schuster, J., & Woods, D. (2021). *Calamity Theory: Three Critiques of Existential Risk*. U of Minnesota Press.

Schwarz, M. T. (1997). Unraveling the anchoring cord: Navajo relocation, 1974 to 1996. *American anthropologist*, *99*(1), 43-55.

Serdeczny, O. M., Bauer, S., & Huq, S. (2018). Non-economic losses from climate change: opportunities for policy-oriented research. *Climate and Development*, *10*(2), 97-101.

Simms, J. (2021). Solastalgic Landscapes: Prospects of Relocation in Coastal Louisiana. *Frontiers in Environmental Science*, *9*. https://doi.org/10.3389/fenvs.2021.578724

Tarrago, L. (1983). Ski de fond : le Jura à l'heure du T.G.V. *Le Monde*. https://www.lemonde.fr/archives/article/1983/11/26/ski-de-fond-le-jura-a-l-heure-du-t-g-v_2846682_1819218.html

Thomas, K., Hardy, R. D., Lazrus, H., Mendez, M., Orlove, B., Rivera-Collazo, I., Roberts, J. T., Rockman, M., Warner, B. P., & Winthrop, R. (2019). Explaining differential vulnerability to climate change: A social science review. *WIREs Climate Change*, *10*(2), e565. https://doi.org/https://doi.org/10.1002/wcc.565

Torres, P. (2019). Existential risks: a philosophical analysis. *Inquiry*, 1-26.

Tschakert, P., Ellis, N. R., Anderson, C., Kelly, A., & Obeng, J. (2019). One thousand ways to experience loss: A systematic analysis of climate-related intangible harm from around the world. *Global Environmental Change*, *55*, 58-72.

Turner, N. J., Gregory, R., Brooks, C., Failing, L., & Satterfield, T. (2008). From invisibility to transparency: identifying the implications. *Ecology and Society*, *13*(2).

Weiss, H., & Bradley, R. S. (2001). What Drives Societal Collapse? *Science*, *291*(5504), 609-610. https://doi.org/doi:10.1126/science.1058775

Zickgraf, C. (2021). Theorizing (im) mobility in the face of environmental change. *Regional Environmental Change*, *21*(4), 1-11.

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Why climate services need to address vulnerabilities to avoid maladaptation

Abstract: Over the past decades, climate scientists have been refining their models to offer more accurate and precise information. However, many researchers have shown how better information does not necessarily lead to better adaptation. Paradoxically, getting information out there, without addressing how and by whom this is being used, can potentially lead to maladaptation or other unintended consequences. On this premise, I critically discuss three main aspects that should be kept in mind in the production of climate services in order to avoid maladaptation.

First, not everyone can afford to use climate information. While such information is often public and available for free, it is rarely in a format that can be used by all types of decision-makers (Cortekar et al. 2020). Instead, third parties often need to translate the information into a usable format. As such, making information publicly available may only make it "free" in theory. Second, not all decision-makers have the necessary knowledge to make use of such information and to act on it. Planning capacity, language proficiency and time constraints all hamper the ability to act in a timely and effective way (sometimes they might even prevent the recognition of the issue). This contrasts with the pressing need for transformative adaptation, which requires a deep understanding of the adaptation needs and the possible ways forward. Finally, not all voices are equal. Competing

interests offer differing visions of adaptation and alternative options to build resilience depending on the stakeholder's values and epistemology, as well as political and economic interests. Climate information can be instrumentalised in the service of a certain worldview and for specific political interests, sometimes to the detriment of society at large.

In this paper, I show how failing to account for these aspects might risk entrenching existing vulnerabilities and foster maladaptation. I call for climate information producers and climate scientists to engage with stakeholders, decision-makers and social scientists to create climate service packages that explicitly address the risk of maladaptation by reflecting on the aforementioned aspects.

Introduction

"It is better to be approximately right than precisely wrong" is often repeated to climate scientists accused of wasting resources fiddling with their models and losing sight of the bigger picture. While this is certainly an unfair depiction of one of the pillars of contemporary science, it does highlight the often true disconnect that exists between the scientific realm and the applied reality of climate change adaptation.

Climate services (CSs) transform and translate climate information into products that are usable by stakeholders (Hewitt et al. 2012; Brasseur and Gallardo 2016). They have been considered the necessary missing link connecting science and practice. However, many researchers have highlighted the gap between what the producers consider *useful* information and what the users think is *usable* (here-on referred to as the *usability gap)* (Lemos et al. 2012; Brasseur and Gallardo 2016; Lourenço et al. 2016; Lemos et al. 2018; Bruno Soares and Buontempo 2019; Hewitt et al. 2020; Jacobs and Street 2020; Hewitt and Stone 2021). As a solution, a linear value chain is often touted, whereby climate information is enriched in each subsequent step, gaining context and meaning and becoming usable by stakeholders (Hamaker et

al. 2018; Cortekar et al. 2020; Hewitt and Stone 2021). This value chain usually depicts information being collected by data providers, then run through models by research teams, developed into the information necessary for specific sectors and finally tailored to user needs by private or public purveyors.

Most climate services are produced by a combination of public organizations, such as meteorological services, research institutes and universities, as well as private firms, mainly working in the area of consultancy (Cortekar et al. 2020). While a mixture of expertise is present, these mostly revolve around natural and managerial sciences, with a significant lack of inclusion of the social sciences (Brasseur and Gallardo 2016). This often results in a top-down techno-managerial approach, where the information is imbued with the authority given to it by scientific rigour, and is used to manage and direct. This view of CSs presents information as an apolitical object produced by the science community, which can only yield benefits to the stakeholders. However, not all stakeholders are receptive to climate information in the same way, nor have they equal access to the necessary resources to turn knowledge into action, nor are they interested in the well-being of the system as a whole. This implies that CSs can unintentionally contribute to exacerbating the differences between stakeholders, favouring certain groups over others and replicating many of the vulnerabilities present in the system (Muema et al. 2018; Nost 2019). Adaptation needs are also complex and context-specific, and no single adaptation strategy can work under all circumstances. Different adaptation pathways can lead to vastly different outcomes, and in many cases a transformation of the system may be the best adaptive strategy in the long term (Fedele et al. 2019; Fedele et al. 2020). However, with political and economic interests at stake, users and producers can use information to achieve their interests or preserve the status quo, shielded by its perceived scientific objectivity (Nost 2019).

Far too often, scientific information is portrayed as apolitical and value-free and it is my intention to highlight the ways in which this is not only false but harmful. I conclude by arguing

that it is the responsibility of the research community and of the service providers to ensure that the climate information they produce benefits society at large and does not replicate existing power relationships and vulnerabilities.

In this commentary, I explore the question "can climate services lead to maladaptation by failing to tackle existing vulnerabilities?". To do so, I examined several case studies and analyses by experts in various fields. Thereafter, I present three main aspects that need to be taken into consideration by CS producers and researchers during the creation, transformation and dissemination of climate information. I present them as three equations namely: *Free access ≠ free to use*; *Knowledge ≠ action*; and *Information = power*. First, free access to information does not directly translate to the free use of information. In order to be usable, information needs to be tailored to the specific stakeholder's needs, with associated additional costs. Second, knowledge does not necessarily translate into adaptation, and not all adaptation is effective given the different contexts and stakeholders' needs. Instead, different groups may have different levels of uptake of information and ability to adapt. Last, climate information is a source of power that can be wielded by certain stakeholders to achieve their economic or political interests. These three aspects are examined against the typology of maladaptation described by Juhola et al. (2016).

Conceptual framework

Climate services

CSs are a broad concept that encompasses the many ways in which climate information can be distributed from producers to users along the climate information value chain. The European Commission's Roadmap for Climate Services defines them as "the transformation of climate-related data – together with other relevant information – into customised products such as projections, forecasts, information, trends, economic analysis, assessments (including technology assessments), counselling on best practices,

the development and evaluation of solutions and any other service in relation to climate that may be of use for the society at large. As such, these services include data, information and knowledge that support adaptation, mitigation and disaster risk management (DRM)", CSs often take the shape of online or mobile platforms, geoportals and other technology-based services. However, they can also include consulting services, stakeholders' consortia, sharing platforms and other forms of decision-making assistance.

Adaptation

The IPCC AR6 report (2022) defines adaptation in human systems as: "the process of adjustment to the actual or expected climate and its effects in order to moderate harm or exploit beneficial opportunities".

An example would be, after recognising the risk of flooding in a floodplain area, building levees around the river.

The IPCC report also distinguishes between various typologies of adaptation. Relevant to this paper are *incremental* and *transformative* adaptation (IPCC 2022).

Incremental adaptation

Incremental adaptation consists in the progressive adjustments of the socio, ecological or socio-ecological system in order to reduce risk or to mitigate the effects of a hazard. For example, building progressively higher levees every few years as climate change increases the flood risk.

Transformative adaptation

Transformative adaptation refers to changes that "fundamentally alter the entire system's ecological and/or social properties and functions. It aims to reduce the root causes of vulnerabilities to climate change" (Fedele et al. 2019). To continue with the flooding examples, a transformative solution would be relocating our community out of the floodplains.

Maladaptation

Finally, maladaptation can be defined as "a result of an intentional adaptation policy or measure directly increasing the vulnerability of the targeted and/or external actor(s), and/or eroding preconditions for sustainable development by indirectly increasing society's vulnerability" (Juhola et al. 2016).

As a consequence of this definition, a typology of maladaptation can be derived that distinguishes between three types of maladaptive outcomes (Juhola et al. 2016):

- *Rebounding vulnerability*, where the maladaptive nature of the measure reflects on the subject that employed it, often after some lag-time.

- *Shifting vulnerability,* where vulnerability is transferred from one subject to another in the system, sometimes giving the illusion of successful adaptation to the first actor.

- *Degrading the common pool*, the reduction of vulnerability is accompanied by a non-sustainable degradation of resources in the system. The key difference with shifting vulnerabilities is that vulnerability is transferred to the wider system.

Free access ≠ Free to use

While most information is provided freely, most of it is not directly usable. Instead, provision is not homogeneous and the information provided freely is usually not suited for small-scale or medium-range decision-making (Brasseur and Gallardo 2016; Webber and Donner 2017). Research groups and developers mostly focus on improving the quality and quantity of the information provided. However, this does not necessarily translate into better decision-making at the user level, as most stakeholders do not possess the necessary knowledge to make effective use of the said information (Jacobs and Street 2020; Findlater et al. 2021). To circumvent the issue, the corporate world often turns to private consultant companies to downscale, fit the information to their

needs, create tailored tools, or even deliver policy recommendations (Brasseur and Gallardo 2016; Cortekar et al. 2020). The usability gap represents a "last mile" issue that is often bridged by relying on a market-based model ensuring that access to usable information is often only free in theory.

Whether climate information should be considered a public good or should be exploited for its economic interest is a contested topic (Bruno Soares and Buontempo 2019). While many research institutes and universities strive to develop CSs that can serve a wider public, consultancy firms work directly with the private sector to deliver tailored adaptation with great success (Cortekar et al. 2020). Samuel Randalls (2010) explored the development of the current model for the delivery of weather information in the US and UK. In both cases, the system relies on free, or partially free, data provided by the public sector, which is then translated into more tailored products by private entities (ibid). However, over the years, a tendency towards commercialization has been highlighted in both countries (ibid). A study by Lemos et al. states that when forecasting is treated as a product, it may not consider the user's needs and decision-making behaviour, in favour of more marketable products (2002). While the studies by Randall and Lemos focus on weather information in particular, a trend towards a neoliberal model can be observed throughout the natural sciences (Webber and Donner 2017).

In a market-based model, competition is encouraged both between users and producers of CSs. Thus, stifling collaboration and partnerships when they are not motivated by economic interests (Brasseur and Gallardo 2016). This system reinforces existing economic disparities, as it only guarantees access to the tools necessary to carry out adaptation to climate change and to weather extremes to those stakeholders who can afford it (Fankhauser and McDermott 2014; Findlater et al. 2021). While information on the impact of CSs on adaptation is scarce and hard to gather, most researchers believe them to be indispensable tools to manage risk and opportunities (Hewitt et al. 2012; Brasseur and Gallardo 2016; Hewitt et al. 2020; Hewitt and Stone

2021). As such, the risk of a market-based model is locking out the more vulnerable stakeholders from accessing vital services while rewarding the more privileged ones.

A market-based system not only entrenches differences within countries, but also between low and high-income countries. Researchers have shown how the availability of climate information increases with higher GDP, despite low-income countries being more vulnerable and, in many cases, more exposed to climate variability and weather extremes (Georgeson et al. 2017). Even within Europe, the availability of CSs is far from homogeneous, with Northern, North-Western and Central Europe having much higher per-capita availability than Southern, South-Eastern and Eastern Europe (Cortekar et al. 2020). Higher-income countries can benefit from their privileged position to reduce their climate risk, while low-income countries often struggle to even guarantee access to global datasets, relying on international NGO and humanitarian groups (Brasseur and Gallardo 2016). Georgeson et al. (2017) show how the per-capita availability of CSs is 3 to 10 times higher in North American and Europe compared to Sub--Saharan Africa, the Middle East and North Africa, and South Asia. Not only this, but the availability of CSs correlates neatly with the countries' Human Development Index (Georgeson et al. 2017). High-income countries also benefit from greater demand for CSs, as well as a more efficient uptake and implementation of information due to the spill-over effect of more efficient services and institutions (Fankhauser and McDermott 2014). This *adaptation deficit* punishes already vulnerable countries, further aggravating their situation, while rewarding more affluent countries with more resources to invest in adaptation.

Knowledge ≠ Action

The dissemination and production of climate information rests on the assumption that "knowledge", is produced by scientists and distributed to those who lack it (Brasseur and Gallardo 2016). This assumption is not only flawed but also highlights a top-

down, managerial idea of knowledge production as a privilege of the few (ibid). Following this logic, considerable resources are spent on providing more and/or more accurate information, disregarding how this can be implemented in decision-making (Nost 2019; Findlater et al. 2021). Such was the case of the drought forecast provided by the state of Ceará, Brazil, where the *Hora de Plantar* program delivered top-down instructions to farmers "based on the assumption that farmers do not know when to plant" (Lemos et al. 2002). This encountered resistance by local farmers, and in subsequent years, the programme was redesigned to allow farmers more autonomy in the decision-making process (ibid). Thanks to cases like this, the research community has started to recognize that information alone is insufficient to change people's behaviour, or could be misused due to a lack of capacity on the user side (Brasseur and Gallardo 2016).

CSs could be a powerful tool of empowerment for many vulnerable groups. However, there is the risk that they will instead reinforce existing inequalities if they are not capable of distributing their benefits effectively to all stakeholders equitably. Instead, the effective use of CSs is constrained by the socio-economic conditions of the beneficiary community (Lemos et al. 2002). By reviewing 37 publications comparing access to CSs between women and men, Gumucio et al. (2020) highlight how despite access to information being "equal", women faced more socio-cultural barriers when it came to implementing such information. Additionally, since adaptation needs can vary significantly between genders, CSs producers should make sure they include all voices when designing their products (ibid).

Co-production is often cited as the solution to the issue of transforming knowledge into action. By ensuring that stakeholders are involved during the production process, it is assumed that CSs will be able to better reflect their needs (Lemos et al. 2018; Hewitt and Stone 2021). While evidence for this is compelling, co-production should not be expected to be a panacea (Lemos et al. 2018). Several issues may undermine the co-production process. First of all, the process must be inclusive and report

the needs of all relevant stakeholders and socio-economic groups to avoid entrenching existing vulnerabilities. Second, inclusion should be sincere. The tokenistic inclusion of certain groups as a way to legitimise a project is often apparent, especially when facing time and resource constraints. Finally, resources should be allocated to ensure that co-production is continuous and sustainable (Bruno Soares and Buontempo 2019). This is particularly challenging as many research projects are limited by budget and time constraints, and cannot ensure that coproduction will be an ongoing process once the project has ceased.

Even when knowledge does lead to action, it is paramount to ensure that it leads to the best possible adaptive pathway. CSs should cater to long-term adaptation capable of bringing benefits throughout the system and avoid maladaptive scenarios such as the degradation of the common resource pool or vulnerability shifts (Boon et al. 2021). Transformative adaptation is particularly difficult to implement, as it not only requires deep knowledge of the system and of the needs of the stakeholders, but it should also be a restructuring endeavour capable of redesigning the resilience pathway of a system (Fedele et al. 2019; Fedele et al. 2020). This can often manifest as several barriers since many stakeholders might be interested in maintaining the status quo, or do not want to invest resources as they are not among the most vulnerable (Nost 2019). CSs developed with transformative adaptation in mind should therefore cater to the knowledge requirements of the stakeholders by providing deep system knowledge of feedback loops, having a long-term vision, and delivering clear guidance addressing the needs and interests of the stakeholders (Boon et al. 2021).

Information = Power

So far, we have explored circumstances where climate information fails to deliver effective adaptation due to contextual vulnerabilities, such as economic disparities, socio-cultural vulnerabilities, and lack of capacity. All these cases are characterized by a lack of intentionality, whereby the harm to the system arises as a byproduct

of an unfair system. However, in some cases, climate information can be used to deliberately assert one stakeholder's power over another. Information can be altered, omitted and misinterpreted in order to yield political and economic gains (Lemos et al. 2002).

Lemos et al. (2002), again, highlight how in the state of Ceará, information from the drought forecast programme FUNCEME was used as a source of state authority by mandating seed distribution only when specific early warnings were triggered. Thus eliminating the agency of the farmers to choose when to plant (ibid). By effectively considering them incapable of choosing for themselves, the state tried and failed to directly manage a crisis (ibid). In their brilliant study, Eric Nost documents several case studies where CSs have been instrumentalised by various competing groups during the design of the Louisiana Coastal Master Plan in 2017 (Nost 2019). In one case, the interests of the residents of New Orleans, and those of shrimp fishers in the Mississippi delta were at odds over the need to construct more river diversion to relieve pressure from the city's flood barriers (ibid). Both groups voiced their disagreement using various models as political tools, and in the end, the shrimp farmers managed to get their status as a vulnerable system recognized, preventing some of the diversion and gaining significant political leverage in the process (ibid). In another example from the same paper, a large natural channel of the Mississippi river delta formed in 2011 during a storm (ibid). This was hailed by conservation groups as the release of sediments in that area was expected to increase the land area and benefit the ecosystem (ibid). However, this was in contrast with the interests of an oil and gas company, which lost an important road, and of the shipping industry, which would need to redesign the shipping lanes to account for the new land (ibid). Both sides armed themselves with models supporting their interests. While the channel offered an opportunity for the transformative adaptation of the area, corporate interests were instead concerned with conserving the status quo. While planners favoured the corporate interest and decided that the channel would be closed, as of today (August 2022), it remains open and is hailed as a haven for the local ecosystem.

Examples like these are a stark reminder that information is not politically neutral, but instead is often instrumentalised by groups with opposing interests. Imbalances in power can therefore be enhanced, threatening the needs for adaptation. According to Fedele et al. (2019) in particular, transformative adaptation, due to its long-term and restructuring nature, can often be resisted by powers interested in maintaining the status quo (Fedele et al. 2019; Fedele et al. 2020).

The road to maladaptation

I argue that the three aspects presented in this paper need to be considered when designing CSs in order to avoid possible maladaptation pathways. This is evident when exploring these aspects in the context of the typology of maladaptation of Juhola et al. (2016).

Unequal access to climate information due to its associated costs gives a clear and unfair advantage to the more privileged actors at the expense of the less affluent and often more vulnerable ones. This means that designing CSs that do not address these inequities can only result in the transformation and transfer of vulnerability from one part of the system to another (*shifting vulnerability*). The neo-liberalization of science and the market-based model that are currently part of the value chain of CSs can also stifle cooperation between producers of CSs, as well as the creation of collaborative platforms among users, thus making the wider system more vulnerable (*degrading the common pool*).

Lacking the necessary capacity to recognize the need for transformative adaptation can lead to dire consequences in the long run. Fedele et al. (2020) argued that overreliance on CSs focussed on short-term incremental adaptation, which might have hindered the development of more long-term services capable of supporting more desirable transformations. As a consequence, the system does not shed its vulnerabilities, but rather pushes them further into the future (*rebounding vulnerability*), or to other parts of the system. A failure in recognizing the needs of the stakeholders and the complexity of their decision-making process can also result in resistance

to adaptation, as in the case presented by Lemos et al. (2002). Additionally, when some social groups do not benefit from CSs as much as others, existing inequalities can be entrenched, causing vulnerability to shift from the included to the excluded, or the capacity of the system to be eroded (*degrading the common pool*).

Lastly, when political and economic imbalances cause stakeholders to use information to further their interests or to maintain the status quo, the entire system is affected as this gets in the way of effective system-wide adaptation, effectively *degrading the common pool* of resources or *shifting adaptation* to the less powerful stakeholders.

Table 1 recapitulates the finding of this section, connecting the typologies of maladaptation with the various aspects that can influence the use of CSs.

Table 1: summary of the ways in which climate services can lead to maladaptation.

Shifting vulnerability	**Unequal access:** Unfair advantage leads to the success of wealthier stakeholders at the expense of others. Vulnerability is transferred from the rich to the poor.
	Lack of capacities: Social groups with less capacity are left out of adaptation.
	Lack of capacities: Failing to recognize the need for transformative adaptation can have consequences affecting other parts of the system.
	Power imbalances: A stakeholder can take deliberate advantage of information, getting in the way of system-wide adaptation with consequences for others.
Rebounding vulnerability	**Lack of capacities:** Failing to recognize the need for trans-formative adaptation can have consequences in the long run.
	Lack of capacities: Failing to recognise the complexity of the decision-making process can lead to resistance.
	Power imbalances: Attempting to impose a top-down model encounters stakeholder resistance.
Degrading the common resource pool	**Unequal access:** Competition stifles possible collaborative efforts.
	Lack of capacity: Social groups with less capacity are left out of adaptation with system-wide consequences.
	Power imbalances: Stakeholders can take deliberate advantage of information, getting in the way of system-wide adaptation with consequences for the wider resource pool.

A way forward

There are several recommendations that researchers have brought forward in order to avoid maladaptive pitfalls.

As discussed earlier, the co-production of services has long been touted as a panacea (Lemos et al. 2018), yet despite its significant contributions, it has its limits. User-centred approaches should expand their focus by asking *"climate services for whom?"* (Nost 2019), therefore assessing the winners and losers, as well as possible system externalities, such as long-term consequences and resource degradation. For these processes to be meaningful, inclusion should be genuine and system-wide. Gumucio et al. (2020) advocate the inclusion of women's groups and networks in the development of CSs to ensure that their needs are met. The inclusion of vulnerable groups should also be mindful that these groups often have less time and resources to participate in the co-production process and should therefore be provided with the necessary incentives.

The hegemony of positivist sciences, such as the natural sciences and techno-managerial sciences, can also be a barrier to the development of inclusive CSs. The inclusion of social scientists, political ecologists, urban planners, architects and other epistemologically inclusive sciences should be a priority in the development of any CS (Brasseur and Gallardo 2016; Bruno Soares and Buontempo 2019; Boon et al. 2021). Shifting from a top-down, command-and-control system to a more collegial, flat system, where producers and users are all on the same level, will also ensure the wider uptake of the services (Brasseur and Gallardo 2016).

Finally, the project-based nature of many of the funding mechanisms threatens the long-term sustainability of many CSs (Webber and Donner 2017). In order to ensure the sustainability of the project, mechanisms should focus on ensuring the continuity of existing services, rather than investing in newer, flashier products (ibid). Market-based mechanisms can be effective funding tools, but relying on them to cover the last mile of the usability gap can lead to an entrenchment of vulnerabilities and inequities in the system. This applies particularly in the international development context, where inequities in access, capacity and power are heightened (Webber and Donner 2017).

Concluding remarks

CSs have promised to transform climate change adaptation by providing stakeholders with essential decision-making tools. However, an excessive focus on the natural science aspect has left many system vulnerabilities unaddressed. Maladaptation can stem from these vulnerabilities by enhancing, transferring or transforming them. CS development projects should be mindful of who the winner and losers are in the adaptation, and not limit themselves to mere inclusion, but really dig deep into the systemic consequences of these products' application.

The natural sciences need to stop hiding behind the perceived pursuit of truth and start taking responsibility for the societal impact of their (our) work. It is imperative that we stop investing all our resources into trying to improve technologies without taking into consideration how people will use them and who will benefit from them. It is not only "better to be approximately right than precisely wrong", it is important to do something right in the meantime.

Literature

Boon E, Goosen H, van Veldhoven F, Swart R. 2021. Does Transformational Adaptation Require a Transformation of Climate Services? Frontiers in Climate. 3. doi:10.3389/fclim.2021.615291.

Brasseur GP, Gallardo L. 2016. Climate services: Lessons learned and future prospects. Earth's Future. 4(3):79–89. doi:10.1002/2015EF000338.

Bruno Soares M, Buontempo C. 2019. Challenges to the sustainability of climate services in Europe. Wiley Interdisciplinary Reviews: Climate Change. 10(4). doi:10.1002/wcc.587.

Cortekar J, Themessl M, Lamich K. 2020. Systematic analysis of EU-based climate service providers. Climate Services. 17:2405–8807. doi:10.1016/J. CLISER.2019.100125. [accessed 2022 Apr 20]. www.elsevier.com/locate/cliser.

Fankhauser S, McDermott TKJ. 2014. Understanding the adaptation deficit: Why are poor countries more vulnerable to climate events than rich countries? Global Environmental Change. 27(1):9–18. doi:10.1016/J.GLOENVCHA.2014.04.014. [accessed 2022 Apr 14]. http://dx.doi.org/10.1016/j.gloenvcha.2014.04.014.

Fedele G, Donatti CI, Harvey CA, Hannah L, Hole DG. 2019. Transformative adaptation to climate change for sustainable social-ecological systems. Environmental Science and Policy. 101:116–125. doi:10.1016/j.envsci.2019.07.001.

Fedele G, Donatti CI, Harvey CA, Hannah L, Hole DG. 2020. Limited use of transformative adaptation in response to social-ecological shifts driven by climate change. Ecology and Society. 25(1). doi:10.5751/ES-11381-250125.

Findlater K, Webber S, Kandlikar M, Donner S. 2021. Climate services promise better decisions but mainly focus on better data. Nature Climate Change. 11(9):731–737. doi:10.1038/s41558-021-01125-3.

Georgeson L, Maslin M, Poessinouw M. 2017. Global disparity in the supply of commercial weather and climate information services. SCIENCE ADVANCES. 3. https://www.science.org.

Gumucio T, Hansen J, Huyer S, van Huysen T. 2020. Gender-responsive rural climate services: a review of the literature. Climate and Development. 12(3):241–254. doi: 10.1080/17565529.2019.1613216.

Hamaker R, Jiménez-Alonso E, Rycerz A, Baglee A, Stegmaier P. 2018. Analysis of Existing Data Infrastructures for Climate Services.

Hewitt CD, Allis E, Mason SJ, Muth M, Pulwarty R, Shumake-Guillemot J, Bucher A, Brunet M, Fischer AM, Hama AM, et al. 2020. Making society climate resilient: International progress under the global framework for climate services. Bull Am Meteorol Soc. 101(2):E237–E252. doi:10.1175/BAMS-D-18-0211.1.

Hewitt CD, Stone R. 2021. Climate services for managing societal risks and opportunities. Climate Services. 23. doi:10.1016/j.cliser.2021.100240.

Hewitt C, Mason S, Walland D. 2012. The global framework for climate services. Nature Climate Change. 2(12):831–832. doi:10.1038/nclimate1745.

IPCC. 2022. Climate Change 2022: Impacts, Adaptation, and Vulnerability. Contribution of Working Group II to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change. H.-O. Pörtner, D.C. Roberts, M. Tignor, E.S. Poloczanska, K. Mintenbeck, A. Alegría, M. Craig, S. Langsdorf, S. Löschke, v. Möller, et al., editors. Cambridge University Press.

Jacobs KL, Street RB. 2020. The next generation of climate services. Climate Services. 20. doi:10.1016/j.cliser.2020.100199.

Juhola S, Glaas E, Linnér BO, Neset TS. 2016. Redefining maladaptation. Environmental Science & Policy. 55:135–140. doi:10.1016/J.ENVSCI.2015.09.014.

Lemos MC, Arnott JC, Ardoin NM, Baja K, Bednarek AT, Dewulf A, Fieseler C, Goodrich KA, Jagannathan K, Klenk N, et al. 2018. To co-produce or not to co-produce. Nature Sustainability. 1(12):722–724. doi:10.1038/s41893-018-0191-0.

Lemos MC, Finan TJ, Fox RW, Nelson DR, Tucker J. 2002. THE USE OF SEASONAL CLIMATE FORECASTING IN POLICYMAKING: LESSONS FROM NORTHEAST BRAZIL.

Lemos MC, Kirchhoff CJ, Ramprasad V. 2012. Narrowing the climate information usability gap. Nature Climate Change. 2(11):789–794. doi:10.1038/nclimate1614.

Lourenço TC, Swart R, Goosen H, Street R. 2016. The rise of demand-driven climate services. Nature Climate Change. 6(1):13–14. doi:10.1038/nclimate2836.

Muema E, Mburu J, Coulibaly J, Mutune J. 2018. Determinants of access and utilisation of seasonal climate information services among smallholder farmers in Makueni County, Kenya. Heliyon. 4(11). doi:10.1016/J.HELIYON.2018.E00889.

Nost E. 2019. Climate services for whom? The political economics of contextualizing climate data in Louisiana's coastal Master Plan. SCIENCE ADVANCES. 15:27–42. doi:10.1007/s10584-019-02383-z. [accessed 2022 Apr 27]. https://doi.org/10.1007/s10584-019-02383-z.

Randalls S. 2010. Weather profits: Weather derivatives and the commercialization of meteorology. Social Studies of Science. 40(5). doi:10.1177/0306312710378448.

Webber S, Donner SD. 2017. Climate service warnings: cautions about commercializing climate science for adaptation in the developing world. Wiley Interdisciplinary Reviews: Climate Change. 8(1). doi:10.1002/wcc.424.

Part II:
ENERGY AND
HOUSING

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Coal phase-out in the European Union from the perspective of ecological modernisation – a case study of Slovenia

Abstract: Coal phase-out is an integral part of the modern-day political agenda, as well as a crucial point in the fight for large-scale emissions reduction. In recent decades many European countries have pledged to phase out coal. Some of these states are falling behind with their pledges and financing the transition beyond coal. The main goal of this paper is to provide a critical insight into the sufficiency or insufficiency of current governmental policies in the case of the coal phase-out in Slovenia and to outline policy frameworks and mechanisms defined by the European Union. We discover the fundamental elements of transitioning away from coal consumption and, at the same time, emphasise the importance of a just transition. Furthermore, we analyse key factors, institutions and actors in the specific transition in Slovenia.

Keywords: Climate change, coal phase-out, just transitions, greenhouse gas emissions reduction, EU climate policies, national strategies, triple embeddedness framework.

Introduction

In recent decades, there has been an extensive leap within the contemporary political agenda in the area of climate action. "Climate change is no longer a future problem. It is a now problem," (UNEP, 2021) has become a phrase used constantly throughout the political spectrum. As propositions, international acts and localised governmental regulatory frameworks are being worked on, a serious question starts to arise: are we taking the necessary steps for solving the ecological crisis fast enough? In the latest assessment report of the Intergovernmental Panel on Climate Change (IPCC), it is becoming clear that without rapid and large-scale emissions reductions, our collective goal of limiting warming to close to 1.5° Celsius, or even to 2°C, will be beyond reach (IPCC, 2022).

Coal phase-out has become a high-priority theme of debate in recent years. In the European Union, coal "accounts for about a fifth of the total electricity production. It is also a significant economic driver, providing jobs for around 230,000 people in mines and power plants across 31 regions and 11 EU countries" (EC, 2022). While coal remains a central fuel in the European energy mix, the transition to cleaner forms of energy and innovative technologies is imperative to meet the EU's commitment to reduce CO2 emissions. McGlade and Ekins (2015, page 187) set out a global limit for fossil fuel extraction. They estimated that a third of the oil reserves, half of the fossil methane gas reserves and over 80% of the current coal reserves should remain unused from 2010 to 2050 in order to meet the target of 2°C.

Analysing the development of concrete regulation and policies from the stage of political promises and pledges to actual implementation is critical for understanding climate action. The trends of phasing out coal usage show a lack of strong political agendas and robust policies. In this article, we will present the broader aspect of the coal phase-out and analyse the specific case of Slovenia. We are trying to stress the importance of understanding the embeddedness of different actors and environments in the case of the coal industry. By embeddedness, we refer to the degree economic activity is controlled by non-economic institutions. The conceptual/theoretical background will be accompanied by the triple embeddedness framework (TEF).

Climate and energy policies in the European Union

The policies of the EU regarding the decarbonization transition started in the 1990s with the first IPCC summary report and the European Community (EC) leaders agreed to stabilize the GHG at 1990 levels by 2000 (European Council, 1990). Since that time, the EU decision-making process has initiated several policy packages and instruments for transitioning away from burning coal and replacing it with RES (Climate Policy Info Hub, 2022). The Climate and Energy Package was the most comprehensive policy package ever established in the EU and the directives were most successfully enforced through the ETS market mechanism (Erbach and Foukalová, 2022).

The ETS covers around 45% of the EU's GHG emissions, which is more than 11,000 installations, such as power stations and larger industrial power plants (EPA, 2022). Under the current system, up to 43% of the emission cap can be distributed each year to industry and the rest is sold by Member States or the Commission to raise revenues (Sandbag, 2022a). Even though it is seen as one of the flagship instruments of European climate policy, its effectiveness has been far lower than expected (Collins, 2019, page 3). After 2013, the Linear Reduction Factor (LRF) was put in effect, which defined the start of the annual decrease of allowances provided to the market and until 2018, this instrument did not provide a strong enough incentive to lead to coal phase-out compatible with the Paris Agreement goal (Rocha et al., 2017). The prices were hovering at around €5 per tonne of CO_2 (tCO_2) and the system ceased to motivate low-carbon investment.

With the new reform package and the anticipated start of the Market Stability Reserve (MRS) in 2019 (EC, 2022b), the prices started rising and are now at around €78 per tCO_2 (Trading Economics, 2022).
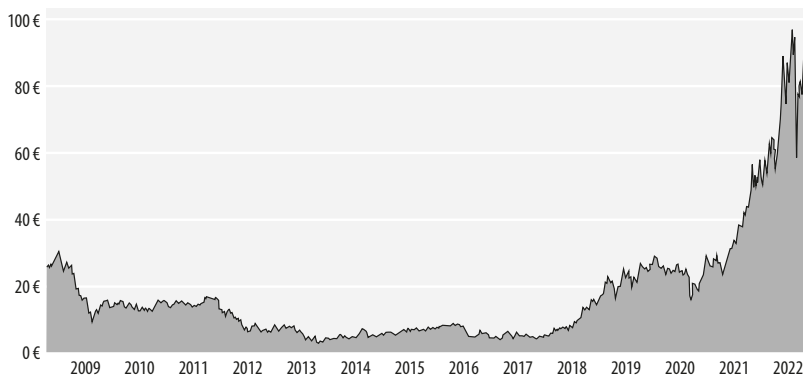
Figure 1 ETS - price of one tonne of carbon dioxide from 2008 to 2022 (Sandbag, 2022)

Empirical findings show that a significant part of the costs of emission allowances is passed through to power prices, resulting in higher electricity prices for consumers and additional profits for power producers (Joltreau and Sommerfeld, 2019). The market price of electricity is driven by the marginal cost of production, which typically uses fossil gas, so electricity prices include an element of carbon cost as though all electricity was produced from fossil fuels. This is not only harmful to socially vulnerable people but also to the climate goals (Quemin, 2022).

The phase-out of coal power plants goes hand in hand with the closure of mining facilities, which can have a profound impact on whole communities in regions that depend economically on these activities. There are numerous examples where they had a significantly negative socioeconomic impact (Heilmann and Popp, 2022) and are fundamentally unjust (Sovacool, 2021), which can lead to resistance and a coal lock-in effect (Lehotský and Černík, 2019). People in the communities lose their jobs and, with that, the ability to secure the necessities of life in that particular space, as well as their identities. One of the few options that remain is to move away from the area. To avoid such drastic outcomes, the so-called "just transition" needs to be carefully planned and realised by a multi-stakeholder participatory process involving workers, industry and governments addressing asymmetrical re-

lations (Arora and Schroeder, 2022) regarding race, class (Winkler, 2020), age and gender (Walk et al., 2021). There are examples of communities in cities and regions that are successfully managing the transition with the implementation of policies that guarantee the creation of new well-paying jobs, re-education, early retirement schemes, etc. (START, 2021). Countries in Europe needed their own strategies and funds to manage such transitions but since 2021, this has also been addressed on an EU level as part of the EU Green New Deal (EC, 2022a). The EU's Just Transition Mechanism (JTM) aims to address the socioeconomic impact of the transition to a low-carbon economy and environmental legacy problems to "harness new sustainable economic development opportunities" for the most affected places and communities. The JTM provides financial tools in the form of:

- Just Transition Fund (JTF), which will invest €17.5 billion in the 2021-2027 period in the territories most affected by the transitions,
- InvestEU Just Transition scheme, which will support just transition projects,
- Public Sector Loan Facility (EIB, 2022).

Altogether, 55 billion euros are expected to be mobilised from public and private sector investments for the Territorial Just Transition Plans, which are expected to be finalised and reviewed by the EU Commission.

Critics from a heterogeneous array of actors coalesced in favour of a large JTF: conservative Eastern European governments, environmental non-governmental organisations (NGOs), trade union federations and big European companies emphasised that the size of the JSM is too small for a just and accelerated transition. Union and Industrial representatives point out that smaller budgets can have a potential impact on competitiveness for a broad range of companies from different industries. There is a reluctance to expand the budget from other member states (the Netherlands, Finland, Sweden, Denmark, Austria, etc.), which have concerns that the expansion could divert resources needed

for other industries (Kyriazi and Miró, 2022). These dynamics emphasise that the social dimension of a genuine and comprehensive framework for the transition to a sustainable economy and society is still underdeveloped (Cameron et al., 2020). There is a fragmentation of policies, limited scope, purpose and a lack of the transparent participation of workers, citizens and communities that will be affected (Akgüç et al., 2022).

Theoretical overview of the coal phase-out

Understanding and explaining policy shifts regarding coal requires recognising the political influence of powerful stakeholders (Goulder and Parry, 2008). This has led to a strong shift in contemporary academic literature towards incorporating social sciences into energy and transition analysis (Caldecott et al., 2017; Diluiso et al., 2021; Sovacool et al., 2015). This shift conjointly includes analysis focusing on how the current fossil fuel regimes can be destabilised and eventually replaced (Geels, 2014).

Diluiso et al. (2021, page 2–3) identify four main arguments as to why phasing out coal can prove extremely challenging:

- Coal is historically and even currently abundant, based on established technologies, and relatively easy to handle,

- 60% of all coal power plants, mostly constructed in the Global South, are younger than 20 years. Coal-fired power plants require high initial capital costs, which have to be amortised throughout the average life of the plant,

- The coal industry is deeply rooted in the culture and economy of territories. Economic and employment impacts from coal phase-out policies are highly localised, making the phase-out a sensitive issue in specific areas and for specific communities,

- The coal industry is a powerful economic stakeholder with significant vested interests and lobbying power. Coal-dependent economies often share an institutional design that is more susceptible to vested interests and corruption.

As outlined above, the resistance to a shift away from coal can be seen in the form of various actors: coal firms, unions, parts of civil society, investors and the government. The motives for this resistance can originate from different reasons. Still, it is important to understand that policy outcomes regarding coal production and consumption are deeply influenced by these motives, actors, and the coalitions they form (Leipprand and Flachsland, 2018; Oei et al., 2019; Turnheim and Geels, 2013).

Current research shows a strong critique of the status of coal phase-out in European countries (Brown and Kolle, 2022; Driskell Tate et al., 2021; Haas et al., 2022). In this sense, it is important to consider the concepts of politics and power. By political power, we are focusing on structural forms, institutional politics and discursive expressions of power that are important for the creation of a certain pathway for policies. A transformation of policies is not planned and then put into place by politicians but is rather a "product of competition and interaction between a number of pathways, supported by diverse social actors" (Scoones et al., 2015, page 5). Additionally, to politics and power, economic development and technological innovation are important elements influencing energy transitions (Cherp et al., 2018).

We found that we can include the factors sketched above in our analysis using the Triple Embeddedness Framework, which conceptualises interactions of industry regimes with economic and socio-political environments (Geels, 2014). Even though the focal points of TEF are the technological and market levels, this framework enables the incorporation of politics, powers of the state and citizen power into the discussion.

Triple Embeddedness Framework (TEF)

The TEF is a conceptual framework that can mostly be found in literature focusing on socio- technical transitions. The TEF acknowledges the ability of firms to respond to their environments and influence them through strategic actions. The responses of firms-in-industries are both externally oriented (towards the economic and the socio-political environments) and internally

oriented (Geels, 2014). The TEF enables us to investigate these influences and the environment that determines the actions of a specific firm or industry.

Industries suitable for this framework are reluctant to change, have a high level of political influence, and are scale-intensive with many sunk investments, which is a recurring case in the coal sector (Brauers and Oei, 2020). With the help of the TEF, we can pin down changes made on the institutional level while including strategic behaviour and the power of individual actors. The TEF can be used for understanding destabilizations within different industry regimes. Geels (2014) stresses that despite the existence of an industry regime, separate actors can present different behaviours. This means that it can take a long period of time to align pressures from the external environments to prompt a transition. In this period, the ambiguous socio-political and economical context can trigger unassociated responses from firms (Kungl and Geels, 2018). In this sense, the actors embedded in an industry regime can adopt strategies ranging from resisting to maintaining their core activities, as well as strategies
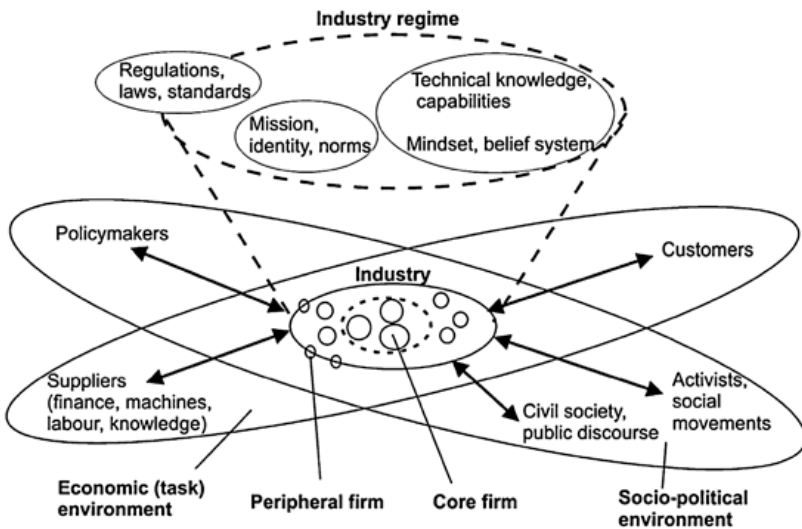

Figure 2: The Triple Embeddedness Framework of industries (Geels, 2014, page 266)

that completely reinvent their business models (Geels, 2014). In most cases, studies using the TEF discovered a uniform behaviour from the actors (Brauers and Oei, 2020; Kungl and Geels, 2018). Pinning down and especially understanding the concept of the embeddedness of the regime in different environments enables us to indicate how incumbents protect their interests and can create lock-ins in the sense of coal dependence. At the same time, we were able to recognize the threats of the dominance of coal usage, as well as to find a way for potential change.

Slovenia coal phase-out plans

In the case of Slovenian past experiences and future coal phase-out plans, there was and still is a lack of coverage in the academia, media and governmental reports. Therefore, our research mostly relied on media reports, scarce research studies that were made and a few existing examples of the state's future coal phase-out plans. Our theoretical background and methodology consist of the historical description and contextualization, as well as analysis of contemporary social, political and economic environments based on TEF.

The history of coal in Slovenia

Slovenia has a long history of the mining and extraction of energy mineral resources. Two coal mining sites covered most of the production capacities in the state throughout its modern history, the Velenje lignite mine (Premogovnik Velenje) and the Trbovlj -Hrastnik brown coal mine.

The most important case example in the field of coal phase-out in Slovenia was the closure of the Trbovlje-Hrastnik mine, which was signalled at the national referendum in 1999 with the rejection of the plan for the construction of a new thermal power plant (Trbovlje 3). The closure was officially endorsed in 2000 with the adoption of an umbrella Act on the Gradual closure of the mine and the Development and Restructuring of the

Region,[1] which was subsequently amended several times.[2] The coal mine was planned for total closure in 2015 but the lack of funds postponed the spatial and ecological reshabilitation works until the end of 2023 (Janjič, 2021).

The process and its consequences are still ongoing. The transition period is not seen as just, because of the ramifications for the people living in the region involved in the coal industry. Despite the committed state aid, the region lost and never regained the jobs that had been dependent on the industry, which led to the emigration of working-age and young people to bigger and more economically active cities (ZRSZ, 2022; SURS, 2022). According to data from the Statistical Office of the Republic of Slovenia, at the end of 2014, as much as 42.6% of the working population of the Zasavje region went to work outside their home region.

The problem is identified as one of a lack of funding in strategic employment programs through public and private initiatives (Trap, 2014).

Socio-political environment of coal

The Premogovnik Velenje mine is still operational and serves the (nearby) Šoštanj coal-power plant. The mining company and power plant operator are owned by the state company HSE (Golob, 2017). The Šoštanj coal power plant generates 36% of Slovenian electrical energy needs.

In 1983, the coal mine employed 5443 workers, the power plant generated 4077 GWh and used 5,244,070t of lignite. (Žerdin, 2019, page 14). A new part of the coal power plant (Blok 6) was built in 2015 and other older generators were decommissioned. In 2016, the coal mine employed 2,224 workers, the power plant generated 4117 GWh and used 3,282,304t of lignite. Obvi-

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[1] Zakon o postopnem zapiranju Rudnika Trbovlje–Hrastnik in razvojnem prestrukturiranju regije; 2000; Uradni list RS, št. 26/05 – uradno prečiščeno besedilo, 43/10, 49/10 – popr., 40/12 – ZUJF, 25/14, 46/14, 82/15, 84/18 in 204/21

[2] Zakon o dopolnitvah Zakona o postopnem zapiranju Rudnika Trbovlje-Hrastnik in razvojnem prestrukturiranju regije (ZPZRTH-H); 2021

ous improvements were made regarding emissions of SO_2, NO_x and dust but in terms of CO_2, the progress was inadequate.

The Savinjsko-Šaleška region (SAŠA), where the mine and coal power plant are located, is part of the Savinjska statistical region and covers the area of ten municipalities with a population of 61,397 (RA-SAŠA, 2022).

Non-state actors

There are several actors influencing the process of the coal phase-out and transition to a more sustainable society in general. There are public representatives of the state and those of the municipalities directly involved (RA-SAŠA, 2022a), workers and their unions.[3,4] Although mining and coal power plant companies are owned by the state, they represent their own interests. Broader regional societal structures depend a lot on the jobs of the sectors involved.

There is also concern from other industries, as well as citizens in the country who are used to the relatively stable availability and price of electricity (Slovenian Energy Agency, 2021). However, because of the causality between emissions of CO_2 and climate change, there has been mounting pressure in Slovenian society to transition away from fossil fuels altogether. The main actors initiating the conversation and the push towards the transition were and are environmental movements[5] and non-governmental organisations (Lukšič, 1998).[6]

Another crucial point of influence is the role of the media and scientific work in shaping the opinion of the public and the opinion of policymakers. We applied a simple quantitative method of measuring the occurrences of different keywords connected

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[3] Union of mining and energy Workers of Slovenia [Sindikat delavcev rudarstva in energetike Slovenije]

[4] Union of workers in the energy sector of Slovenia [Sindikat delavcev dejavnosti energetike Slovenije]

[5] Youth for Climate Justice movement [Mladi za podnebno pravičnost]

[6] More information is available in the Open Data of Slovenia database (Slovenian Ministry for Public Administration, 2022)

to coal phase-out on the internet. Firstly, we performed several searches in different time periods involving different keywords connected to the topic of coal phase-out. The most interesting results came from a search for the phrase »just transition away from coal« (in Slovenian *»pravičen prehod iz premoga«*), strictly focusing on media releases. After the review of articles and works accessible in the media, we found that there were:

- no mentions of the just transition process in the articles in the period from 2000 to 2010,
- 42 mentions of the just transition process in the articles in the period from 2010 to 2020,
- 85 mentions of the just transition process in the articles in the period from the end of 2020 to August 2022.

In the first two periods, there was a substantial number of mentions regarding "transition" (in Slovenian language *»prehod«*), which didn't reference a just process.

This changing dynamic can be explained by the mounting pressure and politicization from the citizens, non-state and state actors in the context of the more obvious consequences of climate change (Wetts, 2020). These dynamics entailed the spread of information and the search for solutions from journalists (Schmidt et al., 2013) and researchers themselves (Tai and Robinson 2018). Despite this media and academic coverage, it is still underwhelming in comparison to other countries.

The role of the Slovenian state

Historically, the Slovenian state has played an important role in the energy production and distribution sectors. The main production capacities of coal, nuclear and gas power plants, as well as hydropower plants, are owned by the state. The share of renewable energy sources (RES) in electricity production has not changed a lot, rising from 28.7% (100% hydropower) in 2005 to 36.7% (92.2% hydro, 0.1% wind, 4.8% solar and 2.9% biomass) in 2021 (Slovenian Energy Agency, 2021).

The share of RES in the final energy consumption has also not changed a lot, rising from 19.8% in 2005 to 25% in 2021 (Slovenian Energy Agency, 2021). Although the national support scheme for the development of the RES sector was implemented by the Energy Act in 2009 and changed to the EZ-1 in 2014 with the introduction of a competitive selection process for beneficiaries of the support, which is carried out as part of a public call for investors to apply for RES production plant projects (Slovenian Energy Agency, 2014), the progress is underwhelming.

Furthermore, successive Slovenian governments' approaches to phasing out the last operational coal mine (Velenje) were also underwhelming. In 2017, the Slovenian government initiated the development of comprehensive national strategies for the long--term energy balance of Slovenia. The »Reference scenario« decided to follow the wider European commitment to reducing GHG by 80% in 2050 and envisaged the phasing out of coal in 2054 (Slovenian Ministry of Infrastructure, 2017). This target was influenced by the availability of coal in the mine itself (in 2017, inventories were estimated at 124 million tons and the power plant was planning to use 90 million tons by 2054) (Umanotera, 2010) and a range of concerns regarding the economic situation and the dependency of the SAŠA region on the coal mining industry. This timeline was highly controversial amongst nongovernmental environmental organisations, environmental movements and the European Union (Focus, 2017).

At the end of 2020, the consortium led by the Ministry of Infrastructure revealed a »National strategy for coal mining and restructuring in accordance with the principles of a fair transition« with three scenarios:

- Ambitious scenario with the coal phase-out timeline of 2033. This scenario supports the environmental and climate goals that the state has set for itself within the framework of climate and energy policy,
- Financially sustainable scenario with the coal phase-out timeline of 2038. According to the consortium, this is the most balanced treatment of all four elements of a fair

transition - energy, the environment, the economy, human resources and social infrastructure,

- Flexible scenario with the coal phase-out timeline of 2042. This scenario prioritises the gradual economic adjustment of the area and envisages the least amount of resources available (Slovenian Ministry of Infrastructure, 2020).

The strategy was created with market prices of the EU carbon trading scheme (ETS) in mind. The prices of carbon permits reached 25.01 EUR/tCO$_2$ in 2018 and resulted in 58 million EUR annual losses for the parent energy company HSE (Focus, 2021). In the year 2020, the prices were 29.9 EUR/tCO$_2$ and losses reached 280 million euros (Šoštanj thermal power plant, 2021). Independent research shows that by 2030, the total net losses would amount to 870 million euros (Brown, 2021).

The role of the EU

The directives and regulations mentioned in the climate and energy policies in the European Union were not so effective and lacked accountability mechanisms (Nasiri et al., 2022). That is especially important in cases where nation-states are stalling the transition process or ignoring it completely. Countries that are highly dependent on coal and with established industries and capabilities lack the political, social and economic capacities (Sartor, 2018). Because of the previous shares of RES in its energy mix, Slovenia lacked the initiative to be more ambitious in its targets and the EU did not have enough policy tools to enforce or financially incentivize such countries. In spite of this, the role of the EU is still very important in pushing the transition towards RES. The package of climate and energy laws called "Fit for 55" was proposed in July 2021 and included a broad set of measures for additional support for the EU's climate target. The Renewable Energy Directive[7] set an in-

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[7] Proposal for a Directive of the European Parliament and of the Council amending Directive (EU) 2018/2001 of the European Parliament and of the Council, Regulation (EU) 2018/1999 of the European Parliament and of the Council and Directive 98/70/EC of the European Parliament and of the Council as regards the promotion of energy from renewable sources, and repealing Council Directive (EU) 2015/652

creased target to produce 40% of energy from RES by 2030, though the overall climate target was still well below the 65% required by science based on equity and historical responsibility (EEB, 2021).

Internal and external response strategy

Countries and established political forces have their internal logic and are still primary focused on maintaining sovereignty (Makinda, 1996). This was the case with the first COVID lockdowns (Brosemer et al., 2020) and is the case with the 2022 war in Ukraine where the geopolitical realities cumulating in the lack of certain types of energy (especially gas) forced countries to choose between maintaining fossil fuel production capacities and self-sufficiency or doubling down on RES (Nevitt, 2022). These dynamics constrain EU policy decisions in certain directions and because of this, the EU influence is limited. Nevertheless, in May 2022, the EU Commissions REPowerEU plan doubled down on the implementation of Fit for 55 and increased the RED target to 45% by 2030, as well as initiated a set of policies and mechanisms that will focus on diversifying the gas supply to the EU countries (EC, 2022c).

Although the liberalization of the EU energy market began in the 1990s, the Slovenian state still controls most of the companies, funds and strategic capacity for the transition (Slovenian Ministry of Economic Development and Technology, 2011). At the end of 2020, one of the most comprehensive plans for a just transition away from coal and the restructuring of coal mining regions was created. At the beginning of 2022, the Slovenian government adopted a national strategy for exiting coal which stipulates that Slovenia will stop using coal for electricity generation in 2033 at the latest (Slovenian Ministry of Infrastructure, 2021).

After the 2022 Slovenian parliamentary elections, the ruling coalition led by Robert Golob (Freedom Party) declared that it supported a coal phase-out timeline by 2033. The strategy falls short of detailing the financial and practical side of the just transition for the workers and their families.

The role of non-state actors

In 2021, the workers' unions the Union of Energy Workers (SDE) and the Union of Energy Raw Materials Extraction of Slovenia (SPESS) were emphasizing their position for an additional study of coal extraction scenarios and the process of closing the coal mine and the impact on the power plant from the point of view of the operation of the Slovenian electricity system and the increase in energy poverty in Slovenia. Using empirical data and dialogue, they were trying to convince the stakeholders that 2042 would be the most suitable year for the exit from coal for the SAŠA region and Slovenia. Later in the year, they abandoned their participation in the working group of different stakeholders that was coordinated by the state ministries (Hočevar, 2021). They said that the strategy the state is preparing is without concrete details of how the transition will be just. They were especially concerned about the workers employed in the coal mine, for which they estimated that in 2030, less than half of them would be eligible for retirement and social benefits (in 2042 around 70%).

In early 2022, the state eventually initiated the strategy for coal mine closure in the year 2030. The Union of Mining and Energy Workers of Slovenia (SDRES) expressed their concern that the state had changed the timeline for the closure from the year 2054 to 2033. They felt excluded from the plans and don't see enough concrete plans for new employment opportunities in the region (Celje.info, 2022).

The civic sphere composed of non-governmental environmental organizations responded to the news of the new timeline with criticism. They emphasized that the strategy lacks the just component. The timeline is fundamentally incompatible with the Paris Agreement (RTV, 2022).

The representatives from the largest municipality of Velenje don't support the strategy and are convinced that there was not enough participation from the local communities. They are most concerned with the unambitious job creation, which suggests the creation of several thousand by 2050, but not until 2033 (Celje.info, 2022). When the 2021 open letter to the Ministry of Infra-

structure was signed by different mayors, all three trade unions, and the coal mine company, it emphasized that their numerous initiatives were not included in the strategy (Pirc, 2021).

The state-owned companies are aware that the transition is needed (HSE, 2020) and want to divert their financial and human resources in the long term, but they still have their own current interests, which are defined as maintaining the energy security of the state. This is especially true in the case of the 2022 energy situation with regard to the energy prices on international markets (Appunn, 2022). They are warning about the lack of focus on homemade reserves of energy potential and want to point out the danger of the lack of employment and schooling for the next generation of miners if the energy security is worsened and the need to extract even more coal arises (Premogovnik Velenje, 2022).

Conclusion

Tackling ecological modernisation and especially the transition beyond fossil fuel consumption is proving to be very challenging. It is important to include all perspectives and different fields to develop a successful climate-policy-induced transition, which in essence represents a complicated and heterogeneous policy mix. Despite the relevance of this specific topic, evidence remains fragmented throughout different research fields and is not easily accessible. This paper provides a conceptual insight into a detailed system with many key components and actors that need to work accordingly to develop and maintain a strong agenda for phasing-out fossil fuels.

The Slovenian process of transitioning away from coal is slower than the rest of the EU, which is planning on phasing out coal before 2030. Various factors influenced and are still influencing the transition process. Even though there have been attempts to tackle coal usage, governmental pledges are underwhelming. We discovered that the current national strategies lack funding, especially in the sense of funding RES projects. On the other hand, there are strong disagreements between the government,

the civic sphere and the workers in the energy sector. The mounting pressure from various key actors in the non-state sphere of the socio-political environment can culminate in destabilising the regime of coal use. Achieving a better national strategy is strongly connected to external and domestic pressures. The analysis suggests that these pressures will be necessary since the coal lock-in is still favoured by the majority of powerful actors.

We are arguing that the academic debate about climate pledges and policies in the case of coal transitions should focus on interdisciplinary work. We conclude that a just transition needs to be carefully planned and realised through a participatory process involving workers, industry and governments. We found that in the sense of the social dimension, a comprehensive framework for transitioning to a sustainable economy and society is underdeveloped. This can be seen in the fragmentation of policies, the lack of transparent participation of non-state actors and workers, as well as affected communities.

Literature

Akgüç, M., Arabadjieva, K. and Galgóczi, B. (2022). Why the EU's patchy 'just transition' framework is not up to meeting its climate ambitions. ETUI, The European Trade Union Institute. Available at https://www.etui.org/publications/why-eus-patchy-just-transition- framework-not-meeting-its-climate-ambitions

Appunn, K. (2022, 7. February). The energy crunch – What causes the rise in energy prices? Clean energy wire. Available at https://www.cleanenergywire.org/factsheets/energy-crunch- what-causes-rise-energy-prices

Arora, A. and Schroeder, H. (2022). How to avoid unjust energy transitions: insights from the Ruhr region. Energy, Sustainability and Society 12, 19. Available at https://energsustainsoc.biomedcentral.com/articles/10.1186/s13705-022-00345-5

Brauers, H. and Oei, P.Y. (2020). The political economy of coal in Poland: Drivers and barriers for a shift away from fossil fuels. Energy Policy, 144, 111621.

Brosemer, K., Schelly, C., Gagnon, V., Arola, K. L., Pearce, J. M., Bessette, D. and Schmitt Olabisi, L. (2020). The energy crises revealed by COVID: Intersections of Indigeneity, inequity, and health. Energy research & social science, 68:101661. Available at https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7338883/#:~:text=Energy%20sovereignty% 20is%20a%20critical,the%20most%20vulnerable%20among%20us

Brown, S. (2021). Projecting potential future profitability of TEŠ from 2021 to 2030. EMBER. Available at https://focus.si/wp-content/uploads/2021/05/EMBER_ Projecting-potential- future-profitability-of-TE%C5%A0-from-2021-to-2030_ april-2021.pdf

Brown, S. and Kolle, K. (2022). Limited Utility: The European energy companies failing on net zero commitments. Europe Beyond coal campaign. Available at https:// beyond- coal.eu/2022/01/25/limited-utility-the-european-energy-companies- failing-on-net-zero- commitments/

Caldecott, B., Sartor, O. and Spencer, T. (2017). Lessons from previous "Coal Transitions": High-Level Summary for Decision Makers. IDDRI and Climate Strategies. Available at https://www.researchgate.net/publication/319059729_ Lessons_from_previous_Coal_Transiti ons_High-Level_Summary_for_Decision_ Makers

Cameron, A., Claeys, G., Midões, C. and Tagliapietra, S. (2020) How good is the European Commission's Just Transition Fund proposal? Bruegel. Available at https://www.bruegel.org/policy-brief/how-good-european-commissions-just- transition-fund- proposal

Celje.info. (2022, 18. January). Napovedano zaprtje Premogovnika Velenje naletelo na deljene odzive [The announced closure of the Velenje coal mine met with mixed reactions]. Available at https://www.celje.info/gospodarstvo/napovedano- zaprtje-premogovnika-velenje-naletelo-na- deljene-odzive/

Cherp, A., Vinichenko, V., Jewell, J., Brutschin, E. and Sovacool, B. (2018). Integrating techno-economic, socio-technical and political perspectives on national energy transitions: a meta-theoretical framework. Energy Research & Social Science 37, 175–190.

Climate Policy Info Hub. (2022). European Climate Policy – History and State Play. Available at https://climatepolicyinfohub.eu/european-climate-policy-history- and-state- play.html#footnote1_knjygij

Collins, C. (2019). Beyond Coal: Phase-Out Policies in the EU and Implications for the United States. The Climate Institute New York. Available at http://climate.org/ wp- content/uploads/2019/05/Beyond-Coal-Phaseout-policies-in-the-EU-and- implication-for-the- United-States.pdf

Diluiso, F., Walk, P., Manych, N., Cerutti, N., Chipiga, V., Workman, A., Ayas, C., Cui, R., Cui, D., Song, K., Banisch, L, Moretti, N., Callaghan, M., Clarke, L., Creutzig, F., Hilaire, J., Jotzo, F., Kalkuhl, M., Lamb, W. and Minx, J. (2021). Coal transitions—part 1: a systematic map and review of case study learnings from regional, national, and local coal phase-out experiences. Environmental Research Letters. Available at https://www.researchgate. net/publication/355564639_Coal_transitions- part_1_a_systematic_map_and_ review_of_case_study_learnings_from_regional_national_an d_local_coal_ phase-out_experiences

Driskell Tate, R., Shearer, C. and Matikinca, A. (2021). Deep Trouble: Tracking Global Coal Mine Proposals. Available at https://globalenergymonitor.org/report/deep- trouble-tracking- global-coal-mine-proposals/

Employment service of Slovenia (ZRSZ). (2022). Stopnja registrirane brezposelnosti [Registered unemployment rate in Slovenia]. Available at https://www.ess.gov.si/trg_dela/trg_dela_v_stevilkah/stopnja_registrirane_brezposelnosti

Environmental Protection Agency (EPA). (2022). EU Emissions Trading System. Available at https://www.epa.ie/our-services/licensing/climate-change/eu-emissions-trading-system-/

Erbach, G. and Foukalová, N. (2022). Review of the EU ETS 'Fit for 55' package. European Parliamentary Research Service. Available at https://www.europarl.europa.eu/RegData/etudes/BRIE/2022/698890/EPRS_BRI(2022)69889 0_EN.pdf

European Commission (EC). (2022). Coal regions in transition. Available at https://energy.ec.europa.eu/topics/oil-gas-and-coal/eu-coal-regions/coal-regions-transition_en#documents

European Commission. (2022a). Just Transition Mechanism. Available at https://ec.europa.eu/info/strategy/priorities-2019-2024/european-green-deal/finance-and- green-deal/just-transition-mechanism_en

European Commission. (2022b). Market Stability Reserve. Available at https://ec.europa.eu/clima/eu-action/eu-emissions-trading-system-eu-ets/market-stability- reserve_en

European Commission. (2022c). REPowerEU: A Plan to rapidly reduce dependence on Russian fossil fuels and fast forward the green transition. Available at https://ec.europa.eu/commission/presscorner/detail/en/IP_22_3131

European Council. (1990). Presidency conclusions. Annex II: The Environmental Imperative, SN 60/1/90. Available at https://www.consilium.europa.eu/media/20562/1990_june_-_dublin eng_.pdf

European Environmental Bureau (EEB). (2021). EEB's main asks for the Fit for 55 Package: A Package fit for the planet and fair to society. EEB. Available at https://eeb.org/wp- content/uploads/2021/07/EEB-Mains-asks-FitFor55.pdf

European Investment Bank (EIB). (2022). Supporting the Just Transition Mechanism – comprehensive proposal of the EIB Group. Available at https://www.eib.org/en/publications/supporting-the-just-transition-mechanism

Focus, Society for Sustainable Development. (2017). The government is not interested in abandoning coal - Response to the proposal of the Energy Concept of Slovenia. Available at https://focus.si/vlade-opuscanje-premoga-ne-zanima-odziv-na-predlog-energetskega- koncepta-slovenije/

Focus, Society for Sustainable Development. (2021). Financial analysis of TEŠ: an estimated loss of EUR 870 million by 2030. Available at https://focus.si/financna-analiza-tes-do-leta- 2030-predvidoma-870-milijonov-evrov-izgube/

Geels, F.W. (2014). Reconceptualising the Co-evolution of firms-in-industries and their environments: developing an inter-disciplinary Triple embeddedness framework. Research Policy 43 (2), 261–277. Available at https://www.research.manchester.ac.uk/portal/files/27320765/POST-PEER-REVIEW- PUBLISHERS.PDF

Golob, L. (2017, 18. August). Premogovnik ni več delniška družba [Coal Miner is no longer a joint stock company]. Delo newspaper. Available at https://old.delo.si/gospodarstvo/podjetja/premogovnik-nic-vec-delniska-druzba.html

Goulder, L.H. and Parry, I.W.H. (2008). Instrument choice in environmental policy. Review of Environmental Economics and Policy. 2 (2), 152–174.

Haas, T., Herberg, T. and Löw-Beer, D. (2022). From carbon democracy to post-fossil capitalism? The German coal phase-out as a crossroads of sustainability politics. Sustainability: Science, Practice and Policy, 18:1, 384–399.

Heilmann, F. and Popp, R. (2022). How (not) to Phase out Coal. Lessons from Germany for Just and Timely Coal Exits. Briefing paper E3G. Available at https://coaltransitions.org/publications/how-not-to-phase-out-coal/

Hočevar, B. (2021, 14. July). Sindikati so zapustili operativno skupino za slovo od premoga [Unions quit coal phase-out task force]. Finance. Available at https://oe.finance.si/8977634/Sindikati-so-zapustili-operativno-skupino-za-slovo-od-premoga

Holding Slovenske elektrarne (HSE). (2020, 24. December). Pozdravljamo strategijo izstopa iz premoga, ki temelji na zanesljivi oskrbi. [We welcome a coal exit strategy based on security of supply]. Press release. Available at https://www.hse.si/sl/pozdravljamo-strategijo-izstopa- iz-premoga-ki-temelji-na-zanesljivi-oskrbi/

Intergovernmental Panel on Climate Change. (2022). Climate Change 2022: Impacts, Adaptation, and Vulnerability. Contribution of Working Group II to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change. Cambridge University Press. Available at https://www.ipcc.ch/report/ar6/wg2/

Janjič, B. (2021, 23. December). Rudnik Trbovlje-Hrastnik naj bi dokončno zaprli leta 2023 [The Trbovlje-Hrastnik mine is expected to be finally closed in 2023]. Naš stik. Available at https://www.nas-stik.si/novice/podrobnosti-novice/rudnik-trbovlje-hrastnik-naj-bi-dokoncno- zaprli-leta-2023

Joltreau, E. and Sommerfeld, K. (2019). Why does emissions trading under the EU Emissions Trading System (ETS) not affect firms' competitiveness? Empirical findings from the literature, Climate Policy. Available at https://www.tandfonline.com/doi/full/10.1080/14693062.2018.1502145

Kungl, G., & Geels, F. W. (2018). Sequence and alignment of external pressures in industry destabilisation: Understanding the downfall of incumbent utilities in the German energy transition (1998–2015). Environmental Innovation and Societal Transitions, 26, 78– 100.

Kyriazi, A., Miró, J. (2022). Towards a socially fair green transition in the EU? An analysis of the Just Transition Fund using the Multiple Streams Framework. Comparative European Politics. Available at https://link.springer.com/article/10.1057/s41295-022-00304-6#Sec3

Lehotský, L. and Černík, M. (2019). Brown coal mining in the Czech Republic - lessons on the coal phase-out. Research Centre of Slovak Foreign Policy Association, Vol. 28, No. 3/4 (2019), pp. 45-63. Available at https://www.jstor.org/stable/26905905

Leipprand, A. and Flachsland, C. (2018). Regime destabilization in energy transitions: the German debate on the future of coal. Energy Research & Social Science 40, 190–204.

Lukšič, A. (1998). Okoljske nevladne organizacije v Sloveniji: Prve portretne poteze [Environmental non-governmental organizations in Slovenia: First portraits]. Teorija in praksa let 3, 5/1998. pp. 887-894. Available at http://dk.fdv.uni-lj.si/db/pdfs/tip19985Luksic.pdf

Makinda, S. M. (1996). Sovereignty and International Security: Challenges for the United Nations. Global Governance, 2(2), 149–168. http://www.jstor.org/stable/27800134

McGlade, C. and Ekins, P. (2015). The geographical distribution of fossil fuels unused when limiting global warming to 2 °C. Nature 517, 187–190.

Nasiri, E., Rocha-Meneses, L., Inayat, A. and Kikas, T. (2022). Impact of Policy Instruments in the Implementation of Renewable Sources of Energy in Selected European Countries. Sustainability, 14(10):6314. Available at https://www.mdpi.com/2071-1050/14/10/6314

Oei, P.Y., Brauers, H., Philipp, H. (2019.) Lessons from Germany's hard coal mining phase- out: policies and transition from 1950 to 2018. Climate Policy, 20:8, 963–979.

Nevitt, M. (2022). Climate Security, Energy Security, and the Russia-Ukraine War. Just Security forum. Available at https://www.justsecurity.org/81440/climate-security-energy- security-and-the-russia-ukraine-war/

Pirc, M. (2021, 7. June). Slovenija zapira zadnji premogovnik, Velenjčani zahtevajo upoštevanje lokalnih vidikov [Slovenia is closing its last coal mine, the people of Velenje demand that local aspects be taken into account]. MMC RTV SLO. Available at https://www.rtvslo.si/lokalne-novice/stajerska/slovenija-zapira-zadnji-premogovnik- velenjcani-zahtevajo-upostevanje-lokalnih-vidikov/583266

Premogovnik Velenje. (2022, 18. August). Potrebe TEŠ po premogu presegajo odkopne zmožnosti Premogovnika Velenje [TEŠ's needs for coal exceed the mining capabilities of Premogovnik Velenje]. Press release. Available at https://www.rlv.si/2022/08/18/potrebe-tes- po-premogu-presegajo-odkopne-zmoznosti-premogovnika-velenje/

Radiotelevizija Slovenija (RTV). (2022, 17. January). Napoved zaprtja Teša razburila velenjske rudarje, občino, sindikate [The announcement of the closure of TEŠ upset the miners of Velenje, the municipality, and the trade unions.]. MMC RTV SLO. Available at https://www.rtvslo.si/gospodarstvo/napoved-zaprtja-tesa-razburila-velenjske-rudarje-obcino- sindikate/608866

Quemin, S. (2022). Raising climate ambition in emissions trading systems: The case of the EU ETS and the 2021 review. Available at https://www.sciencedirect.com/science/article/pii/S0928765522000173

Razvojna agencija savinjsko-šaleške regije (RA-SAŠA). (2022). Available at http://ra- sasa.si/sasa-regija/

Razvojna agencija savinjsko-šaleške regije (RA-SAŠA). (2022a). Available at http://ra- sasa.si/svet-zupanov-sasa/

Rocha, M., Parra, P.Y., Sferra, F., Schaeffer, M., Roming, N., Ancygier, A., Ural, U. and Hare, B. (2017). A Stress Test For Coal In Europe Under The Paris Agreement. Climate Analytics. Available at https://climateanalytics.org/media/eu_coal_stress_test_report_2017.pdf

Sandbag. (2022). Carbon price viewer. Available at https://sandbag.be/index.php/carbon- price-viewer/

Sandbag. (2022a). EU ETS Revenues: Who receives what? The trillion-euro question. Available at https://sandbag.be/index.php/2022/02/09/eu-ets-revenues-who-receives-what- the-trillion-euro-question/

Sartor, O. (2018). Implementing coal transitions: Insight from case studies of major coal-consuming economies. IDDRI and Climate Strategies. Available at https://www.iddri.org/sites/default/files/PDF/Publications/Catalogue%20Iddri/Rapport/20180 9-Synthesis%20Report%20Iddri-COALTRANSITIONS-def.pdf

Scoones, I., Leach, M. and Newell, P. (eds.). (2015). The Politics of Green Transformations. Pathways to Sustainability. Routledge.

Schmidt, A., Ivanova, A. and Schäfer M. S. (2013). Media attention for climate change around the world: A comparative analysis of newspaper coverage in 27 countries. Global Environmental Change Volume 23, Issue 5, p. 1233-1248. Available at https://www.sciencedirect.com/science/article/abs/pii/S095937801300126X

Secretariat Technical Assistance to Regions in Transition (START). (2021). Good practice examples of regional and sub-regional strategies in coal regions in transition. Available at https://energy.ec.europa.eu/good-practice-examples-regional-and-sub-regional-strategies- coal-regions-transition-karlovy-vary_en

Slovenian Energy Agency. (2014). Podpore za proizvedeno eleketriko [Subsidies for produced electricity]. Available at https://www.agen-rs.si/izvajalci/ove-ure/obnovljivi-viri-in- soproizvodnja/podpore-za-proizvedeno-elektriko

Slovenian Energy Agency. (2021). Poročilo o stanju na področju energetike v Sloveniji 2021 [Report on the energy sector in Slovenia 2021]. Available at https://www.agen- rs.si/web/portal/-/porocilo-o-stanju-na-podrocju-energetike-v-sloveniji-v-letu-2021

Slovenian Ministry of Economic Development and Technology. (2011). Sektorska politika – Energetika [Sectoral policy – Energy]. Available at https://www.energetika- portal.si/fileadmin/dokumenti/publikacije/strokovne_podlage/sektorska_politika_energetika_ objava.pdf

Slovenian Ministry of Infrastructure. (2017). Projekcija dolgoročne energetske balance: Povzetek strokovnih podlag za projekcijo dolgoročnih energetskih bilanc za Energetski koncept Slovenije [Long-term energy balance projection: Summary of expert bases for the projection of long-term energy balances for the Energy Concept of Slovenia]. Available at https://www.energetika- portal.si/fileadmin/dokumenti/publikacije/eks/razprava_jun_2017/eks_priloga1.pdf

Slovenian Ministry of Infrastructure. (2020).). Nacionalna strategija za izstop iz premoga in prestrukturiranje premogovnih regij v skladu z načeli pravičnega prehoda [National Coal Exit Strategy and the restructuring of coal regions in accordance with principles of just transition]. Available at https://www.cnvos.si/media/filer_public/fa/86/fa8672a2-1c5f-40fb-aeaf- 0714b2f15656/strategija_osnutek_cpvo.pdf

Slovenian Ministry of Infrastructure. (2021). Nacionalna strategija za izstop iz premoga in prestrukturiranje premogovnih regij v skladu z načeli pravičnega prehoda [National Coal Exit Strategy and the restructuring of coal regions in accordance with the principles of just transition]. Available at https://www.energetika-portal.si/dokumenti/strateski-razvojni- dokumenti/nacionalna-strategija-za-izstop-iz-premoga-in-prestrukturiranje-premogovnih-regij/novica/n/zakljuceno-vsebinjenje-v-okviru-cpvo-za-nacionalno-strategijo-za-izstop-iz- premoga-4458

Slovenian Ministry of Public Administration. (2022). Seznam društev/nevladnih organizacij, ki delujejo v javnem interesu na področju okolja [List of societies/ non-governmental organizations that work in the public interest in the field of the environment]. Available at https://podatki.gov.si/dataset/podeljevanje-statusa-drustvom-ki-delujejo-v-javnem- interesu/resource/146d100c-8b8b-402a-818a-e5948fabd27a

Sovacool, B.K., Ryan, S.E., Stern, P.C., Janda, K., Rochlin, G., Spreng, D., Pasqualetti, M.J., Wilhite, H. and Lutzenhiser, L. (2015). Integrating social science in energy research. Energy Research & Social Science 6, 95–9.

Sovacool, B.K. (2021). Who are the victims of low-carbon transitions towards? Towards a political ecology of climate change mitigation. Energy Research and Social Science, Volume 73, 101916. Available at https://coaltransitions.org/publications/who-are-the-victims-of-low- carbon-transitions-towards-a-political-ecology-of-climate-change-mitigation/

Statistical Office of the Republic of Slovenia. (SURS). (2022). Population numbers by municipalities. Available at https://pxweb.stat.si/SiStatData/pxweb/sl/Data/-/2640010S.px

Šoštanj thermal power plant. (2021). Letno poročilo [Annual report]. Available at https://www.te-sostanj.si/wp- content/uploads/2021/09/03_TES_letno_porocilo_2020_slo_SPLET.pdf

Tai, T.C. and Robinson, J.P.W. (2018). Enhancing Climate Change Research with Open Science. Frontiers in Environmental Science 6:115, 1–5.

Trading Economics. (2022). EU carbon permits. Available at https://tradingeconomics.com/commodity/carbon

Trap, M. (2014). Employees and crisis resolution in the selected company. Available at http://www.ediplome.fm-kp.si/Trap_Maja_20140922.pdf

Turnheim, B. and Geels, F.W. (2013). The destabilisation of existing regimes: confronting a multi-dimensional framework with a case study of the British Coal Industry (1913–1967). Research Policy 42, 1749–1767.

Umanotera, Slovenian Foundation for Sustainable Development. (2010). TEŠ 6: Slovenia's future? Slovenia's new development vision, EU climate policy and the project for the construction of the sixth block of the Šoštanj Thermal Power Plant. Available at https://www.umanotera.org/upload/files/Forum_TE 6 porocilo.pdf

United Nations Environment Programme (UNEP). (2021). Emissions Gap Report 2021: The Heat Is On – A World of Climate Promises Not Yet Delivered. Available at https://wedocs.unep.org/20.500.11822/36990

Walk, P., Braunger, I., Semb, J., Brodtmann, C., Oei, P.-Y. and Kemfert, C. (2021). Strengthening Gender Justice in a Just Transition: A Research Agenda Based on a Systematic Map of Gender in Coal Transitions. Energies, 14, 5985. Available at https://coaltransitions.org/publications/strengthening-gender-justice-in-a-just-transition-a-research-agenda-based-on-a-systematic-map-of-gender-in-coal-transitions-2/

Wetts, R. (2020). In climate news, statements from large businesses and opponents of climate action receive heightened visibility. Proceedings of the National Academy of Sciences 117 (32) 19054-19060. Available at https://www.pnas.org/doi/10.1073/pnas.1921526117

Winkler, H. (2020). Towards a theory of just transition: A neo-Gramscian understanding of how to shift development pathways to zero poverty and zero carbon. Energy Res Soc Sci. 2020 Dec;70. Available at https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7518974 /

Žerdin, F. (ed.). (2019). Razmislek o prihodnosti energetike v Šaleški dolini [A reflection on the future of energy in the Šaleška Valley]. Zbornik predavanj regijske konference. Velenje. Mestna občina Velenje, Občina Šoštanj, Javni zavod Center za razvoj terciarnega izobraževanja SAŠA Velenje, Savinjsko-šaleška gospodarska zbornica. Available at http://crti.si/dat/Zbornik_Razmislek_o_prihodnosti_energetike.pdf

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Analysis of the sustainability and democratisation of the slovenian energy sector

Abstract: Sustainability streinghtens new values, a new focus, new relationships between social actors and, consequently, new ways of decision-making. If we want to understand what the Slovenian electricity arena should look like in order to be considered sustainable, we first need to understand the values, focuses and relationships between the social actors operating within it today, as well as the challenges that the energy sector is facing. The understanding of the economic and technical aspects of the problem, to which the state is currently dedicating by far the most time and energy, cannot comprise an understanding of the political foundations of the energy sector. However, political foundations are crucial for a successful ecological transition. Therefore, this paper focuses on the functioning of the institutions that formulate the Slovenian energy policy and on the basic decision-making processes. This will lay an important foundation for further studies in the field.

Keywords: sustainability, energy sector, electricity arena, participation, state, public, deliberative democracy, legal democracy, Slovenia, EU

Introduction

Due to climate change, sustainability has become a key development principle at the end of the 20th century, and the energy sector one of the focal points of public interest. Effective socio-technical development is inconceivable without this sector, but at the same time, it is one of the greatest environmental polluters. If emissions of greenhouse gases resulting from energy production and consumption are not prevented, temperatures will rise by 1.4 to 5.8 degrees Celsius (relative to the year 1990) over the next seventy years, which will have significant consequences, manifesting as rising ocean levels and the drying up of large parts of the land. This makes energy policy increasingly connected with environmental policy, and as a result, it generates similar demands for the democratisation of decision-making as the practice in the field of environmental protection.

One of the fundamental requirements of sustainability is "that residents and communities can be full participants in a clean energy future, from owning renewable energy projects and controlling how we distribute energy, to gaining the power to make decisions about how energy investments are made in our neighbourhoods" (Welton, 2018, 583).

This article will be primarily focused on how the process of introducing sustainability has affected the structure of institutions and the process of adopting energy policies in the Republic of Slovenia. After an informal conversation with the actors in the energy field, it was decided to proceed based on the thesis that in the Slovenian energy sector, the democratisation process at the level of functioning of institutions and decision-making processes has not been implemented and is not intended to be implemented. The sector focused on discussing technical solutions, but without considering the possibility of the more extensive engagement of the public in the decision-making processes, let alone making concrete proposals on how to expand the participation.

Before defining the basic concepts that are included in the thesis, it is important to analyse the models of legal and delibe-

rative democracy, i.e. the two basic versions of understanding the relationship between the state, the citizen and the developmental moment of society. In addition, ecological modernisation will be an object of the discussion, being the theme of environmental discourse that is currently central in European policies. In this way, following the analysis of the Slovenian energy sector and the Slovenian electricity arena, we will gain a better understanding of the broader political context of the findings.

Models of democratisation and the functioning of political institutions

In order to understand the logic behind the functioning of political institutions and decision-making processes in the Slovenian energy sector, it is important to briefly explain the theoretical foundations of democratic systems before proceeding to the practical part of the study. David Held, one of the world's foremost theorists on democracy, pointed out that the specifics regarding the functioning of the state, the relationship between the state and the public, and the resolution of conflicts between actors with widely divergent views, beliefs and interests can be explained in terms of models of democracy. By comparing the underlying patterns of relationships and decision-making, he formed 13 models of democracy, i.e. 13 different types of democratic governance with 13 different organisational, relational and philosophical underpinnings and 13 different understandings of priorities.

Starting from the foundations laid by Held's work, the models of legal and deliberative democracy could be defined as the two that are currently dominant. The model of legal democracy builds on the legacy of the older "model of protective democracy" and the "model of elitist competitive democracy", while the model of deliberative democracy draws on the legacy of pluralism and the "model of participatory democracy" (see Held, 2007, 13). This creates differences both at the level of understanding the optimal form and role of the state, and at the level of understanding the relationship between the state, the citizen and institutions.

The legal democracy model advocates the *laissez-faire* or minimal state principles, while the deliberative democracy model supports the strong state model. Influenced by theorists such as Fukuyama and Noszick, the legal democracy model understands the market as the key domain of society and the basic metric for assessing the success of development, and regards making decisions that are necessary for the functioning of the market as the fundamental goal of politics. Based on this understanding, the foundations for the successful democratisation of decision-making could be identified as: a clear separation of the executive, legislative and judicial branches of government, the rule of law, and minimal state interventionism (Held, 2007, 218). On the other hand, the concept of deliberative democracy identifies the active involvement of the community in creating solutions that affect the community as a key objective for the effective functioning of the state. The state is thus recognised not only as an actor that ensures order and makes decisions, but also as an actor responsible for the full involvement of all segments of society in the decision-making process on matters that will affect everyone. It plays a key role in both confronting opinions and creating solutions. In other words, the role of the subjects managing social discourse is to provide shared rules, decide the topics and ensure the availability of all the necessary knowledge and information relevant to the discourse.

In legal democracy, the understanding of the citizen's ability and capacity to participate in the shaping of complex social decisions is primarily based on the premise advocated by Max Weber, which derives from his understanding of society. He argues that parliamentary democracy is the only adequate foundation for the defence of liberal culture, and that parliament is the only space for the development of systematic and reasoned political debate, while emphasising that members of the parliament can only be individuals who simultaneously have the necessary capacity to represent the people, the necessary time, and a clearly expressed desire to systematically participate in policy-making. As he points out, individuals meeting these criteria are relatively few (Weber, 1972, 34). This idea was further developed in the 20th

century by Schumpeter, who intensified the negative attitude towards citizens, arguing that the electorate is inherently weak and that the intellectual and political capacities of the average citizen are low. In his view, therefore, democracy does not mean and cannot mean a system in which the people actually rule in any obvious sense of the terms "people" and "rule." "Democracy means only that the people have the opportunity of accepting or refusing the men who are to rule them" (Schumpeter, 1976, 235). The responsibility of politics is to govern. The understanding of the relationship between the state and the citizen as advocated by the model of deliberative democracy is radically different from the one just described. It emphasises that the citizen is as qualified to make decisions in the public sphere as in the private sphere. However, in order for the citizen to be actively involved in decision-making, it is necessary to provide adequate information, enable discourse and ensure an inclusive decision-making process. As Offe points out, within the democratic system, the confrontation of opinions in the framework of an orderly, guided and active discourse is crucial (Offe, as cited in Held, 2007, 243). This should be accompanied by the belief that the individual's worldview is not immutable and can change if the person is confronted with well-reasoned positions. This, however, requires the individual to understand the views and positions of others, become familiar with the challenges that the community is facing, and take note of the data prepared by professionals and of the possible alternatives (Fishkin, 1991, 144). The proponents of both democratic models defend the existing foundations of parliamentarism, but differences arise when considering the transformation of the decision-making process. Considering the basic logic described beforehand, the existing institutional structure is entirely adequate according to the legal democracy model, with the individual tools of participation only having control or complementary roles; on the other hand, the model of deliberative democracy sees discursive arenas as the first condition for upgrading the existing models of decision-making. According to Fishkin's analysis of political decision-making, in order to upgrade existing systems,

it is necessary to first choose an appropriate framework to enable the deliberative discourse and subsequently determine the method for selecting the citizens, businesses, field of expertise and NGOs that will be involved in the formulation of a particular policy (Ackerman and Fishkin, as cited in Held, 2007, 259).

It is important to bear in mind the differences in how the dominant models of democracy understand the role of the state, the capacities of the citizen, and the relationship between the state and the citizen because this provides an explanation of the framework within which environmental discourses and an understanding of sustainability operate.

Ecological modernisation

The theory of ecological modernisation is one of the most advanced theoretical approaches that interpret the relationship between development, nature and society. It is based on the premise that economic growth and environmental protection are not mutually exclusive—that society can continue to develop if it radically transforms both production and consumption. The central narrative line or principle according to which society should develop is the view that the economy should be rendered environmentally friendly or, from an economic point of view, that preventing pollution brings financial advantages. Pollution is, in fact, seen as a sign of inefficiency, the poor use of resources and the inadequate management of production processes. As the advocates of ecological modernisation point out, the costs that society will have to pay in the future as a result of pollution will be greater than they are now. This means that immediate action is justified not only from an environmental and political standpoint, but also economically. The long-term planning of development is necessary within the field to rethink both the concept of growth and the concept of how society functions (Dryzek, 2018, 201).

In older environmental discourses, the state or the economy are considered an important actor, while experts, and to some extent also the economy, are mostly regarded as supportive actors, however, ecological modernisation requires broad disco-

urse arenas involving the four main types of actors: the state or competent institutions, the economy, experts, and non-governmental organisations (or civil society).

In the process of ecological modernisation, the state plays the role of the moderator or actor, who is under the control of democratic institutions and has to ensure the balance, integrity, and dynamism of the discussion. All other participating actors are equal. It is important that decisions are actually taken in a democratic manner. In the case of policy-making within the Slovenian electricity arena, this would mean that the members of the arena are informed continuously and in depth about the alternatives that the government is deliberating, and that they have the right to participate in the formulation of decisions from the initial to the final stage, in which the government adopts a specific policy or submits the bill to the National Assembly. In line with the principles of ecological modernisation, the aim of policy arenas should be twofold: all relevant actors should be involved in the formulation of decisions, and the public should be informed in a clear and comprehensible manner about the possible policy or law alternatives and the reasons for the choice of the policy or law that is eventually adopted (Smith, 2003, 80).

Political arenas should be sector-specific and not tied to the preparation of a concrete law or sectoral policy, as is currently the case. Their work should be directed towards decision-makers and the public. In outward communication, policy arenas should offer a multifaceted view of particular legislative or policy proposals, while in inward communication, policy arenas should guarantee the right to environmental information, information about all the interventions that pose a risk to the environment, participation in the development of environmental standards, the expert interpretation of environmental risks, and the environmental liability of the government (Eckersly, 2004).

Unlike green radicalism, ecological modernisation does not require a radical reconstruction of the democratic system, but it demands the modernisation of the institutions of representative democracy, in particular of the representatives of the executive

branch of government. Institutions need to establish permanent political arenas within all sectors, and thus become much more reflexive (Dryzek, 2018, 205). This means that, in line with the requirements of ecological modernisation, it is not sufficient for institutions to make a decision on the basis of their own judgement and inform the public about it, but rather to take into account the views of the different publics throughout the preparation of a specific policy, i.e. from the gathering of initial opinions to the preparation of the final proposal. This means that they have to respect the basic principles of deliberation or the concept of deliberative democracy.

Definitions of the key terms

In order to be able to undertake the practical study of sustainability in the Slovenian energy sector presented in Chapter 3 and to answer the primary research question as clearly as possible, it is important to first analyse sustainability as a basic development principle, as well as democratisation as a basic principle for the functioning of institutions on a sustained basis. But beforehand, the focus will be placed on the energy sector as the studied area and on the electricity arena as the part of the energy sector where representatives of the state, business, fields of expertise, and various publics come together.

The energy sector

The Dictionary of Standard Slovenian language defines "sector" as a "field" or "industry" and, based on the definition in the Global Industry Classification Standard (GICS), the energy sector is a complex network of interconnected companies that produce and supply energy. The United Nations included the sector among the 17 Sustainable Development Goals (SDGs) in its 2030 Agenda, while the European Union has gone one step further in this area by linking energy transition as a key element to the majority of the eight SDGs from the European Green Deal, which were adopted to reduce greenhouse gas emissions (Machin, 2019,

208). Among the key priorities, the document systematically included energy production (the supply of clean and safe energy at affordable prices), as well as energy consumption (industry's commitment to a clean and circular economy, building and renovating in an energy- and resource-efficient manner, accelerating the transition to sustainable and smart mobility).

If the definition of the global industry standard is transposed to the Slovenian context, the energy sector comprises organisations such as the Electricity Transmission System Operator – ELES, the Electricity Market Operator – Borzen, the Electricity Distribution System Operator – SODO, the BSP Energy Exchange, and individual companies involved in energy production and distribution. In order to have a comprehensive understanding of the energy sector, it is necessary to add to this definition a list of key institutions that develop energy policies, supervise their implementation, and ensure the overall functioning of the sector. These are: the Ministry of Infrastructure, the Ministry of the Environment and Spatial Planning, the Government, and the National Assembly (Committee on Infrastructure, the Environment and Spatial Planning). The Energy Agency should be included in overseeing the implementation of policies as an independent body that can connect decision-makers with the public, i.e. the electricity arena. The electricity arena could be identified as one of the institutions that are least well-regulated and most often criticised for this reason.

The electricity arena

The electricity arena is one of the fundamental discursive arenas. Discursive arenas are spaces of political action in which solutions to particular political problems are formulated, implemented and monitored (Tkalec, 2016, 81). As the name suggests, discursive arenas are spaces where the views of different actors are confronted. Their aim is to help decision-makers to best understand and address the complexity of particular policy problems (Kitschelt, as cited in Lukšič, 2002, 1023–1024). Given the demands that sustainability places on society, the electricity arena is one of the most important discursive arenas, and it is relevant for the present

analysis because it is the only one that allows the direct engagement between state actors and non-state actors, such as companies involved in energy production, supply and distribution, energy-intensive companies, research institutions, experts, NGOs, local communities, and the general public (Dryzek, 2018, 201).

The functioning and structure of the electricity arena depend on the model of democracy that a particular society supports. Discursive arenas can be institutionalised and closely managed, or open, unstructured and left entirely to the power of individual actors. They can be seen as legitimating instruments, as the part of the process in which the public can respond to proposals, or as a fundamental part of the decision-making process. Unlike the legal democracy model, which sees the arena as broad and integrating only in certain stages of policy-making, deliberative democracy sees the constant integration of actors as the fundamental principle of the whole process. It defines much more precisely the rules of discourse, the necessary procedures, and confrontations of opinion (Goold and Diebel, 2012, 3). Such deliberative electricity arenas are not prevalent in Europe, but nevertheless exist in Denmark, Norway and Germany. Lieb argues that in the future, discursive arenas should become the fourth branch of government or a lever for the citizens to exercise their right to participate in the preparation of laws that affect them and must be respected in all sectors (Dryzek, 2010, 31).

Sustainability

According to Vogt, to effectively implement sustainability, a breakthrough is needed at the level of ecology, politics, democracy, culture of living and the basic understanding of the world. At this point, if we were to add the contribution of the advocates of socio-technical transitions, it would be necessary to expand the sustainability analysis by observing the impact of technological progress (Hofman, 2005, 73), but to test the thesis, it is more important to define sustainability, in particular at the political, i.e. social, level.

The Commission on the Environment and Development, chaired by Norwegian Prime Minister Gro Harlem Brundtland,

defined sustainability as a fundamental development principle or as: "development that meets the needs of the present without compromising the ability of future generations to meet their own needs" (Our Common Future, 1987). The Intergovernmental Panel on Climate Change operationalised the concept in 2007, defining it as: "the responsibility of the state to lead the coordination of society's development, to ensure opportunities for the participation of a wide range of stakeholders, to promote research and development, to focus on actions that are clear and achievable, and to integrate economic, social and environmental objectives" (Meadowcroft, 2009, 325). This interpretation has been embraced by the European Commission, which in its 2019 European Green Deal emphasised that pursuing the SDGs will require "massive public investment and increased efforts to direct private capital towards climate and environmental action" (EGD, 2019, 2), and that development policies can only be successful if the public has the opportunity to be actively involved in their design (EGD, 2019, 2). The democratisation of decision-making processes is therefore one of the fundamental starting points for the development of sustainability, and the democratisation of the energy sector is one of the key foundations for energy transformation.

At this point, it can therefore be emphasised that in order to achieve sustainability, the state should be the undisputed leader of the energy sector, informing the public in a continuous, comprehensible and transparent manner, but also enabling representatives of the fields of expertise, businesses, civil society and the public to participate in decision-making and engage in inclusive discourse (Welton, 2018, 585).

Analysis of the Slovenian energy sector and the Slovenian electricity arena

The functioning and sustainability of the Slovenian energy sector can be examined from elemental perspectives. We can take a closer look at the legislation regulating the sector or at the actors participating in the arena and that have experience with

the functioning of the legislation in practice. In order to perform a comprehensive assessment of the extent to which the energy sector is meeting the fundamental requirements of sustainability at the level of institutional action and decision-making, the article analyses both aspects. The first, second and third parts examine the selected laws that regulate the activity in the energy sector, and the fourth part contains semi-structured interviews with actors in the electricity arena to examine the functioning of the laws on the practical level.

Fundamental principles of the Slovenian energy sector

The principles are set out in the introductory parts of the energy laws. They reveal the priorities and attitudes of decision-makers towards the covered topics and the actors with whom they interact. These principles are relevant for our analysis because they set the basic framework for the relations in the energy sector and electricity arena.

We will analyse the Energy Act, the Environmental Protection Act, and the Spatial Planning Act. At the procedural level, we will also examine the Resolution on Legislative Regulation, which regulates the preparation of bills up to their discussion in the National Assembly, and the Rules of Procedure of the National Assembly regulating the discussion of bills once they are received by the National Assembly. We will also mention the Energy Policy Act currently being drafted, which will certainly have an impact on the principles of operation in the energy sector.

Among the thirteen guiding principles included in the Energy Law (EZ-1) and governing the regulation and development of the energy sector are: the "principle of equal treatment" (Article 10), the "principle of publicity" (Article 12), and the "principle of environmental sustainability" (Article 19). This set of principles also indirectly comprises the "principle of integrity" (Article 14) and the "principle of incentives" (Article 15). The principle of equal treatment requires decision-makers to ensure that all participants in procedures related to capacity-building, the supply of energy, or the

use of energy are treated equally. The principle of publicity includes the commitment to engage the public in the processes concerning the adoption of policies, strategies, programmes and plans relating to energy supply and use, and to involve the public in the processes of issuing general legal acts regarding energy use. According to the principle of environmental sustainability, in adopting policies, strategies, programmes, plans, general and specific legal acts and implementing measures, public authorities should take into account environmental burdens throughout the entire life cycle. According to the principle of integrity, the State and local authorities should take into account the impact on achieving objectives in the fields of energy efficiency, renewable energy sources and environmental acceptability; however, it does not specify whether and how the NGOs and other publics should be involved in monitoring the impact. The incentive principle provides the clearest definition of the State's priorities in relation to public engagement, as it sets out in three points the duties of the State and local authorities in relation to ensuring energy efficiency, using more environmentally friendly installations, technologies and equipment, providing information, awareness-raising and education. However, there is no obligation to promote greater public participation.

The Environmental Protection Act (ZVO1) places the "principle of sustainable development" (Article 4) at the top of the list of thirteen principles; in addition, public involvement and participation are also addressed by the "principle of participation" (Article 6), the "principle of incentives" (Article 12), and the "principle of publicity" (Article 13). Besides the principles that are defined in the Energy Law and relevant for the present discussion, it also contains the principle of the "protection of rights" (Article 14) and the "principle of admissibility of activities affecting the environment" (Article 15). The content of the first four principles is similar to the Energy Law, but it should be pointed out that the principle of incentives mentions energy as a particularly important category for environmental protection. The definition of the principle of the protection of rights states that citizens, associations or organisations may apply to the court for an injunction to cease an

activity affecting the environment if they consider that it causes an excessive environmental burden. The Ombudsman is specifically identified as the institution in charge of the protection of the public. The definition of the principle of the admissibility of activities affecting the environment clearly specifies that interventions are only admissible if they do not cause an excessive burden.

Similarly, like the Environmental Protection Act, the Spatial Planning Act (ZUreP-3) places sustainability at the top of the list of seven principles. Alongside the principle of "sustainable spatial development" (Article 6), the "principle of public participation" (Article 11) and the "principle of the alignment of interests" (Article 9) are particularly relevant for the present analysis. The principle of publicity includes the commitment to engage the public in processes concerning the adoption of policies, strategies, programmes and plans relating to spatial planning, and to involve the public in the processes of issuing general legal acts regarding energy use. The principle of the alignment of interests includes the obligation for the subjects carrying out spatial planning tasks to take account of public and private interests, and that the alignment of interests is carried out through responsible cooperation between the participants.

The Energy Policy Act (ZeP) does not foresee any substantial innovations in the area of public involvement and participation. The basic principles governing energy policy consistently follow those already defined by the Energy Act.

However, the Resolution on Legislative Regulation (ReNDej) and the Rules of Procedure of the National Assembly (PoDZ-1) treat the principles in a different way from the laws presented above. They do not include the principle of participation or the principle of public involvement.

Fundamental principles of the Slovenian energy arena

The legislation divides the procedure of adopting policies or measures into three stages or 12 steps. Applying the analysis to the energy level, we can see that the Ministry of Infrastructure first prepares a situation analysis, followed by a decision to adopt a specific regulation. After that, the Ministry prepares working do-

cuments, conducts a public debate and then submits the materials for interministerial coordination. The coordinated material is then submitted to the Government, where the proposal is discussed by the working bodies and at the Government meeting. Before submitting it to the National Assembly, a final review is carried out. In the National Assembly, the bill goes through a triple reading. In the first round, members of parliament get acquainted with the law; in the second round, they discuss individual articles; in the third round, they vote on the proposal. The last step of the procedure is the (possible) submission of a veto.

Civil society and members of the interested public can only engage in the process in the fourth step of the first phase, when the Ministry of Infrastructure and the Ministry of the Environment and Spatial Planning call on them to respond to the prepared working materials. This means that members of the public are only involved in one phase, that they only have very limited information available, and that they do not have an equal opportunity to participate in the discussion compared to the actors included in the consortium by the Government.

Members of civil society and the public can also deliver their opinion in the first step of the third stage, when the proposal is discussed in the National Assembly. This is just a possibility. Their engagement only takes place if the Committee on Infrastructure, the Environment and Spatial Planning decides to obtain an additional opinion or a public consultation on the subject under discussion. However, this is not necessary and only members of the National Assembly can decide on this matter.

Structure and functioning of the Slovenian electricity arena

After reviewing the legislation and talking with its key actors, we can estimate that the electricity arena in the Republic of Slovenia is ill defined. The Energy Act, the Environmental Protection Act, the Spatial Management Act, and the bill on the Energy Policy Act completely fail to mention the concept. While these acts define the actors who can or must be involved in energy policy-making, they do not define the necessary scope of participation or how individu-

al actors are included in the functioning of the electricity arena. In addition, the Ministry has no guidelines on who to include in the energy arena, the staff capable of conducting deliberation (in the sense that we have defined), or the means to properly inform the public and effectively involve it in policy-making. Usually, actors who are actively included in the discussion of substantive importance are those considered by the Ministry to have suitable expert, economic or environmental interests.

The public can also join the discussion on the bill in the siting phase, which includes more coordination and public confrontations. However, these coordination processes are, by nature and by way of action, related to the coordination processes regarding substance. Therefore the public can only enter the decision-making process at one level and that the state may or may not express its opinion regarding the proposals from the public. When drafting an act relating to the energy field, representatives of the consortium formed by the Ministry of Infrastructure are included in the drafting process. Similarly, members of a closed group are included in the drafting of the final bill, while the bill is then discussed by the Committee on Infrastructure, the Environment and Spatial Planning, and adopted by the National Assembly. In the case of the Integrated National Energy and Climate Plan (NEPN), representatives of the Ministry of Infrastructure explain that the public has been invited to respond to the bills and that there is a period of 30 days available for public discussion.

Views of the actors within the Slovenian electricity arena

n the interviews conducted with the actors in the Slovenian electricity arena, we first touched upon the question of the »gatekeeper«, meaning the actor who includes and excludes other actors, as well as the issues to be discussed. The representatives of the state emphasized that according to them, gatekeepers can be divided into two groups. The first group, which bears more importance, includes ministries or directorates dealing with the electricity sector within the ministries, while the second group includes professional associations and the media—actors that

can have the power to point put certain issues to the public and give them importance. In the business sphere, opinions on the definition of gatekeepers differ. Some interviewees pointed out that within the electricity arena, gatekeepers are domain experts, others are of the opinion that ministries play the role of gatekeepers, while some said that the gatekeepers are representatives of powerful energy companies who have a clear interest. However, all the interviewees agreed that it is the state that must create a communication platform and ensure that there is no restriction of discourse (which, according to them, can occur quickly if the gatekeeper or moderator is not confident in their role).

The gatekeeper role was addressed by three out of five interviewees from the expert arena. The biotechnology representative pointed out that the most important gatekeepers are directors of energy companies who have the power to exclude actors from the arena, while ministries merely play an administrative role. An expert in the field of electrical engineering said that there are several areas within the electricity arena, which results in several gatekeepers. An expert in the field of political science said that this area is not entirely clear. In his opinion, the gatekeeper seems to be the ministry, but it is quite possible that individual domain experts also play the role of gatekeeper within certain substantive issues. The representative of the non-governmental organization has not defined the gatekeeper.

With regard to the power relations between the actors within the electricity arena, we asked the interviewees who, in their opinion, is the most powerful or key player in the electricity arena and who will become the most powerful in the future. The representatives of the state said that currently, the most powerful actors are the energy producers and distribution companies. They pointed out Holding Slovenske elektrarne (HSE) and GEN energija, as well as the two transmission system operators (Eles and Plinovodi). In addition, they mentioned smaller dispersed renewable energy sources and professional associations such as the Energy Chamber of Slovenia, as well as the media that influence public opinion.

Representatives of business failed to give a uniform response to the question of who the key actor in the electricity arena is. Their views differed in terms of who the key actors are and how many key actors there are. Some interviewees identified specific institutions or economic operators as key actors, while others included different actors in this group. Some named companies, others the state, and still others the consumers. Straightforward answers to the initial open question of who, in their opinion, the key actors are included: "The key actors are the heads of companies that make up the electricity arena"; "The key actor is the regulator or the Energy Agency"; "The key actors are the system network and market operators" (SODO and Borzen); "The key actors are small and large customers" (production companies and households). One of the responses was that the most powerful members of the electricity arena jointly represent the key actors (i.e. energy producers, distributors, regulators and market operators).

When asked how the importance of actors within the electricity arena will shift in the future, representatives of the state said that this depends mainly on the distribution and production companies. In short: how distribution and production companies will be able to restructure in the future. Due to the highly-structured Slovenian electricity and energy sector, the arrival of "completely new" actors is not anticipated, so according to them, the two energy pillars (HSE and GEN) will retain the predominant role in the future. However, most interviewees from the business sphere were of the opinion that the public will become an important actor in the electricity arena. They emphasised that the future will require a more direct, but mostly a more structured dialogue with the public. The interviewees emphasized that at this moment, the actors' communication with the public is problematic (in our country) and that it would be necessary to include more experts from the field of social sciences to contribute to the development of discourse at this level. They strongly emphasized the concept of the so-called energy-conscious or energy-literate citizen, who is responsible and interested in the development of the energy sector.

Within the expert arena, the opinions on who the key actor in the electricity arena is differed, but not to the extent seen within the business sphere. Both the interviewee from the field of political science and the interviewee from the field of energy emphasized that the key actors can be divided into three groups: energy producers included in clusters, distributors and organizations enabling transfers, and organizations representing consumers' interests (the Chamber of Commerce and Industry of Slovenia being one, according to them). According to the interviewee from the business sphere, the key actors are energy producers and organizations enabling transfers as key players, while the interviewee from the field of biotechnology named energy producers. They included the reflection on new actors within the energy zone in the context of ecology and emphasised that the arena will have to open up and allow a much larger number of actors to make decisions if it wants to solve the issues faced in connection to energy development. The non-governmental sector representative said that due to the power relations and characteristics of the energy arena, he does not expect new actors to enter.

When considering the problems within the electricity arena, the representatives of the state pointed out the public perception of energy. They emphasised that the issues relating to electricity remain foreign to the majority of citizens, and that people tend to push them away into the field of the imaginary. In order to change this, they say that it is necessary to implement an awareness-raising and education campaign that will bring the subject closer to the people. As the main problem in the Slovenian electricity arena, representatives of business pointed out the lack of coordination in the discourse between various stakeholders. In their opinion, the most destructive trait is principally the defence of single actors' interests, regardless of other actors, as well as the recurring sentimentality in presenting the views and the maladaptation of expert materials to the language of the general public, which must define its position regarding particular projects. In addition, they pointed out the rigidity of the institutions that are supposed to moderate the discourse, as well as the lack of

time to discuss and respond to legislative changes, thus depriving mostly NGOs and the public (often including companies) of the possibility of fully participating in the dialogue.

Representatives of fields of experts emphasized the lack of an integrated communication system and incomplete and poor public awareness efforts on the issues related to this field. They also believe that there is a lack of a consistent strategic vision to indicate how the state plans to develop the electricity sector in the future. This results in confused, often conflicting opinions and views on individual solutions, as well as to adopting non-coordinated decisions. Energy agencies, which should promote public interest and energy literacy, remain—as representatives of fields of expertise pointed out—inactive. Furthermore, they expressed the belief that it is in the interest of policy-makers and representatives of business for the people to know as little as possible. In addition, they believe that actors whose key priorities do not include business-motivated objectives are excluded from the communication. Experts also point to the strong influence of lobbies and to the fact that individual decisions in the electricity sphere are taken without the necessary (interdisciplinary) dialogue within and involvement of the public. The representative of non-governmental organizations pointed out two problems, in particular a very clear imbalance of power within the electricity arena and the consequent imbalance in decision-making and implementation, as well as the neglect of the social component of the electricity sector.

The issue of energy democracy was not touched upon by the representatives of the state, though they pointed out that both members of the European Union and their citizens should be more actively involved in policy-making within the electricity sector. The issue of the democratization of the energy arena was also not given direct attention by the representatives of business. However, they emphasised that the state does not sufficiently encourage actors to collaborate and that representatives of the so-called energy nomenclature have an explicit advantage in influencing policy-making, which confirms the assumption that representatives of business consider the separation of actors and the distinction between them to be problematic.

According to the experts, democratization is one of the key conditions for successful ecological modernization and the effective adaptation of the decision-making process to the increasing demand for electricity, as well as to the more radical technological innovations needed within the process. However, according to them, in order to increase the ruggedness of the system, democratization must be introduced in both the public and expert discourse levels. It is critical to involve social sciences and humanities in solving concrete problems. In the part regarding political decision--making, representatives of fields of expertise raised a reflection on whether it is better for the energy sphere to be publicly or privately owned. The interviewees who offered political, environmental or ethical points of view believe that infrastructure and supervision should be public, while those who offered an economic point of view believe the state should be the key actor as far as the operator is concerned, while private capital and public-private partnerships should be encouraged to partake in investments (especially at the level of the electricity market). A difference in opinions mainly arose when considering to what the extent the state should leave the initiative to the private sector. In his reflection on the democratization of the energy sector, the NGO representative pointed to the fact that there is currently no transparency and no proper ideas about how individual actors should collaborate in the process of making political decisions, which makes these processes impossible from the outset. With some issues, both are well documented, while with others, it is the opposite. The decision-making process is often unclear for those decisions that are directly related to large state-owned enterprises, and to a lesser extent for other issues.

Conclusion: Are the Slovenian energy sector and electricity arena democratized?

Based on the analysis of the Slovenian energy sector, we can fully confirm the hypothesis that opened the research paper. The state insists on the closed adoption of energy policies while enabling public participation in a very limited part of the decision-making

process. This is, as indicated in the introduction, contrary to the fundamental principles of democracy and sustainability.

The laws defining the functioning of the sector also include among the main principles the principle of the public, the principle of equal treatment, the principle of promotion, the principle of cooperation, the principle of environmental sustainability, the principle of the admissibility of interference with the environment, the principle of the coordination of interests, the principle of sustainable spatial development and the principle of integrity. However, these principles are designed to maintain the status quo and practices that are very similar to those used before the environmental crisis and the development of the concept of sustainability, both at the level of infrastructure within the energy sector and at the level of the decision-making process. This means decision-making at a level that only includes the state and the economy (and to some small extent the expertise).

A similar conclusion can also be reached based on a discursive analysis of interviews with the actors in the electricity arena. The first condition for a successful collaboration between the economic and expert spheres, civil society and the public in energy policy-making is that the rules of operation of the electricity arena and the relations within it are clearly communicated, so that it is clear that the state is the gatekeeper and the actor moderating the discussion and the confrontation of different viewpoints, so that we know who, where and how actors may participate, and so that there is a common reflection on what problems need to be addressed first. Without this, active participation and an inclusive decision-making process cannot be expected to develop. As it follows from the responses given by the Slovenian electricity arena actors, the rules are neither clear nor well-communicated. It is not clear who the gatekeeper is, or who needs to be involved in specific stages of the decision-making processes (Welton, 2018, 585); furthermore, there is divergence in the understanding of the problems and priorities of the sector.

Based on research on the regulatory regime, political practice and the actors' viewpoints, we can conclude that a more deter-

mined political intervention within the energy sector is essential to ensure the democratization of the institutional structure and decision-making process. In fact, as Jossop points out, energy policy remains at a subpolitical level. This means that "political institutions are like anaemic administrators, who did not plan for development nor are they capable of structuring it in the given context" (Lukšič, 2001, 9), while decision-making is a poorly defined and unclear field dominated by representatives of business, of fields of expertise, and the state, while civil society and the public are mere observers. This is sufficient to meet the requirements for the model of legal democracy and older environmental discourses (for example, ecological rationalism, administrative rationalism and democratic pragmatism), while the requirements for sustainability, the model of deliberate democracy, and ecological modernization—the cornerstone of energy development as envisaged by the European Green Deal—remain unmet.

Additional information: About the interviews and the interviewees

We conducted 12 semi-structured interviews and one structured interview. There were 4 female interviewees and 9 male interviewees included in the research. We paid special attention to selecting the interviewees in accordance with the basic principles of ecological modernization and, therefore, divided them into four basic groups: representatives of the state (1), representatives of business (2), representative of fields of expertise (3), and representatives of non-governmental organizations (4). Profession-wise, we included in the research energy experts, economists, political scientists, legal experts, biotechnicians, communicology experts and philosophers. For the discursive analysis of interviews, we used a methodological framework similar to that used by Lukič, Hočevar and Maraž in 2018. Our starting point was a concept created by Margaret Archer, who first examined the segments of the policy process in parallel and thus avoided the occurrence of structuralism, intentionalism or narrow dialectic

approaches (Archer, 1996). The analysis was carried out following four steps set up by Ruth Wodak and Michael Meyer (Lukšič and others, 2018). Data collection was followed by data reduction, data analysis and display.

Interviewees

Representatives of the state: Blaž Košorok (Ministry of Infrastructure, State Secretary), interview conducted in February 2021; Tina Sršen (Ministry of Infrastructure, Head of the Legal and International Energy Affairs Division), interview conducted in December 2021; Anton Pelko (National Assembly, Secretary of the Committee on Infrastructure, the Environment and Spatial Planning), interview conducted in December 2021.

Representatives of business: Uroš Kerin (ELES, Assistant Director), interview conducted in November 2020; Mateja Čuk Orel (Čuk Orel Law firm, supervisor at Elektro Maribor), interview conducted in February 2021; Mojca Drevenšek (Consensus, Communication specialist), interview conducted in February 2021; Vekoslav Korošec (Engineering Association – CCIS, President), interview conducted in February 2021.

Representatives of fields of expertise: Lučka Kajfež Bogataj (Centre for Biometeorology at the Biotechnical Faculty, Director; expert in environmental sciences), interview conducted in February 2021; Andrej Lukič (Institute of Ecology, Director; expert in political science), interview conducted in February 2021; Igor Papič (Faculty of Electrical Engineering, Professor; expert in electrical engineering), interview conducted in February 2021; Marko Jaklič (Faculty of Economics, Professor; expert in economics), interview conducted in February 2021; Luka Omladič (Institute of Applied Ethics, researcher; expert in philosophy), interview conducted in February 2021.

Representative of non-governmental organizations: Tomislav Tkalec (Focus, researcher).

References

Archer, Margaret A. (1995): Realist Social Theory: The Morphogenetic Approach, Cambridge University Press, Cambridge.

Biedenweg, Kelly, Martha C. Monroe and Annie Oxarart (2013): »The Importance of Teaching Ethics of Sustainability«, International Journal of Sustainability in Higher Education 14(1): 6–14.

Blacksher, Erika et al. (2012): »What Is Public Deliberation?«, Hastings Center Report 42(2): 14–16.

Bohman, James: The Coming of Age of Deliberative Democracy, The Journal of Political Philosophy: Volume 6, Number 4, 1998, pp. 400–425.

Commission on Environment, World. *Report of the World Commission on Environment and Development: Our Common Future Towards Sustainable Development 2. Part II. Common Challenges Population and Human Resources 4.*

Conard, Bruce R. (2013): »Some Challenges to Sustainability«, *Sustainability (Switzerland)* 5(8): 3368–81.

Dryzek, John S. (2018): »The Politics of Earth: Environmental Discourses«, Oxford University Press, Oxford.

Eckersly, Robyn (2004): »The Green State«, MIT Press, Cambridge.

Fishkin, James S. (1991): »Democracy and Deliberation: New Directions for Democratic Reform«, Yale University Press, New Haven.

Hajer, Maarten A. (2002): »The Politics of Environmental Discourse Ecological Modernization and the Policy Process«, Clarendon Press, Oxford.

Held, David (2007): »The Models of Democracy«, Polity Press, Cambridge.

Hofman, Peter S. (2005): »Innovation and institutional change«, Universiteit Twente, Enschede.

Goold, Sussan Dorr (2012): »What Is Public Deliberation?«, The Hastings Center, New York.

Jessop, Bob (2014): »Repoliticising Depoliticisation: Theoretical Preliminaries on Some Responses to the American Fiscal and Eurozone Debt Crises«, *Policy and politics* 42(2): 207–23.

Kemp, René, Jan Rotmans and Derk Loorbach (2007): »Assessing the Dutch Energy Transition Policy: How Does It Deal with Dilemmas of Managing Transitions?«, *Journal of Environmental Policy and Planning* 9(3–4): 315–31.

Lukšič, Andrej (2001): »Rizične tehnologije kot izziv za premislek o odločevalskih formah«, Teorija in praksa, let. 38. 3/2001, str. 412–422.

Lukšič, Andrej, in Maja Bahor (2011): »Zelena politična teorija in državljanstvo«, Teorija in praksa, letnik 48, str. 1166–1183.

Machin, Amanda (2019): »Deliberating Bodies: Democracy, Identification, and Embodiment«, University of Witten/Herdecke.

Meadowcroft, James (2007): »Who Is in Charge Here? Governance for Sustainable Development in a Complex World«. *Journal of Environmental Policy and Planning* 9(3–4): 299–314.

Orr, David A. (2002): Four Challenges of Sustainability, Conservation Biology, Volume 16, No. 6., 1457–1460.

Ponthieu, Eric: Springer briefs in climate studies, The Climate Crisis, Democracy and Governance Transition in Ten Steps: Action Points for Governments, Springerbriefs in Climate Studies, Springer, Brussels, Belgium.

Schumpeter, Josph A. (1976): »Capitalism, Socialism and Democracy« Allen and Unwin, London.

Smith, Adrian (2004): »The governance of sustainable socio-technical transitions«, Science Direct; Research Policy 34 (2005) 1491–1510.

Tkalec, Tomislav (2016): »Politološki aspekti decentralizacije proizvodnje električne energije«, doktorska disertacija, Univerza v Ljubljani.

Vogt, Markus, in Weber, Christopher (2019): »Current Challenges to the Concept of Sustainability«, Global Sustainability 2, Cambridge University Press, Cambridge.

Weber, Max (1972): »Politics as a vocation« Oxford University Press, New York.

Welton, Shelly (2018): »Grasping for Energy Democracy«, Michigan Law Reiview, University of South Carolina School of Law; Volume 116, Issue 4.

Online sources

Energetski zakon (2014) Uradni list RS, št. 60/19 – uradno prečiščeno besedilo, 65/20, 158/20 – ZURE, 121/21 – ZSROVE, 172/21 – ZOEE in 204/21 – ZOP, dosegljivo prek: http://www.pisrs.si/Pis.web/pregledPredpisa?id=ZAKO6665; dostop 14. 2. 2022.

Evropski zeleni dogovor (2019) Evropska komisija, 52019DC0640 - EN - EUR-Lex, dosegljivo prek: https://eur-lex.europa.eu/legal-content/SL/TXT/?uri=celex:52019DC0640; dostop 11. 2. 2022.

Global Industry Standard Classification, dosegljivo prek: fd3a7bc2-c733-4308-8b27-9880dd0a766f (msci.com); dostop 14. 2. 2022.

Predlog Zakona o energetski politiki (2021) Ministrstvo za infrastrukturo, dostopno prek: https://e-uprava.gov.si/drzava-in-druzba/e-demokracija/predlogi-predpisov/predlog-predpisa.html?id=13051; dostop 14. 2. 2022.

Resolucija o normativni dejavnosti (2009) Uradni list RS, št. 92/07 – uradno prečiščeno besedilo, dostopno prek: http://www.pisrs.si/Pis.web/pregledPredpisa?id=ZAKO5516 ; dostop 11. 2. 2022.

Zakon o urejanju prostora (2017) Uradni list RS, št. 61/17, 199/21 – ZUreP-3 in 20/22 – odl. US, dostopno prek: http://www.pisrs.si/Pis.web/pregledPredpisa?id=ZAKO7341; dostop 15. 2. 2022.

Zakon o varstvu okolja (2004) Uradni list RS, št. 39/06 – uradno prečiščeno besedilo, dostopno prek: http://pisrs.si/Pis.web/pregledPredpisa?id=ZAKO1545; dostop 15. 2. 2022.

Davorin Žnidarič
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Zasavje and sustainable development – towards greater justice and equality in the region

Abstract: In the present paper, the authors bring to the fore the development issue of Zasavje as a region that, in the last thirty years, has experienced a fall from the group of more developed regions to the group of underdeveloped regions in Slovenia. Jobs have been lost, social problems have deepened, inequality has grown, as has poverty, the region is aging, young people are emigrating, there are not enough new jobs, and the environment has experienced industrial pollution, where the consequences of previous pollution events have not yet been thoroughly rehabilitated, the health condition of the population has been deteriorating accordingly. The key issue for the further development of the region is how to reverse this negative trend. The authors defend the idea of sustainability (reflexive ecological modernisation) and the democratisation of the communication and decision-making process, as well as the establishment of a green public sphere, which would allow hitherto marginalised civil society actors and interdisciplinary perspectives to enter into discussions about the future (forming a vision of development) and later to decide on measures in development police in the region and the municipalities that make it up.

Key terms: Zasavje, sustainability, reflexive ecological modernisation, environmental pollution

Introduction

In developed countries, there are areas that, due to inadequate local and state policies, have increasingly stagnated economically, socially and environmentally, and the basic human rights of the inhabitants of these areas have also been restricted, which was most manifested in the pollution of their living environment. These areas also include post-mining industrial areas, to which Zasavje can also be included. If in the past it was possible to blame the burden on the environment on the desire for development and environmentally problematic technologies, as well as ignorance of the consequences of such practices and technologies on nature and humans, today the situation has completely changed.

On the one hand, the environmental awareness among the inhabitants is rising, as a result of which there is a public questioning of development visions, and new environmentally acceptable technologies and production of goods and services are also appearing. However, the differences in space have not diminished; almost everywhere in the world, we witness that narrow partial interests are more easily asserted in development policies, which are legitimised by neoliberal ideology, which causes, on the other hand, the most affected to resist this according to the principle "not in my backyard and try not anywhere else" and thus defend their living areas.

In Zasavje, as a mining industrial area, during the industrialisation period of Slovenia, mainly heavy industry was established for decades with technology that was environmentally problematic, and in the post-industrial period, despite the closure of energy and coal plants and also heavy industry plants, the situation did not change significantly; other owners with the same environmentally problematic industry entered the region (e.g. Lafarge is the most well-known).

Due to the lack of an alternative vision of the development of the region – which would be based on the concept of sustainability and on environmental and ecological ethics – and with the inert insistence on industry, which elsewhere in Europe has already been abandoned and replaced by cleaner technologies that are more

acceptable for the environment, nature and inhabitants, the differences in the region actually increased rather than decreased; social problems, unemployment, poverty and emigration also increased.

Zasavje as an energy industrial region

Today, Zasavje is the smallest statistical region[1] in Slovenia. Until 2015, only three municipalities[2] belonged to the region, which, ever since the discovery of brown coal at the beginning of the 18th century, developed into a prominent energy industrial area.

The intensive exploitation of coal as an energy source from the immediate vicinity (domestic basin) made it possible, on the one hand, to build many industrial facilities in a small, geographically and weather-specific area[3], and on the other hand, to distribute electricity to other regions throughout Slovenia for the needs of industrialisation.

The use of coal with a high content of sulphur and metals (PTEs[4]) and the use of environmentally inappropriate technological systems from today's perspective, caused negative environmental[5] and related health problems. Local environmental problems

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[1] Until 1 January 2015, the Zasavje statistical region was united by only three municipalities: Zagorje ob Savi, Trbovlje and Hrastnik, after that date Litija was added to the existing municipalities. Although the area of the region has increased by almost double, the region is still the smallest of all in the country both in terms of area and population.

[2] Due to the fact that the municipality of Litija was added to the region only in 2015, only three municipalities, Zagorje ob Savi, Trbovlje and Hrastnik, are treated as Zasavje in the task, while Litija is excluded from comprehensive consideration and is summarised in some segments in the task only as a comparison with the original municipalities (note by the author).

[3] Specific weather conditions are manifested in a lack of ventilation and long-term circulation of air in narrow valleys surrounded by hills in winter and the inversion phenomena.

[4] PTE is an abbreviation for Potentially Toxic Elements, which in excessive concentrations in living beings can pose a danger to their growth and development.

[5] Negative environmental consequences are manifested in degraded areas on and below the Earth's surface associated with mining and energy activities, which have not been satisfactorily rehabilitated. The problem is caused by PTEs in land and the additional loading of surfaces with ash (from Krško). The ash is not properly incorporated in the area, as it is brought in and deposited in a dusty state, and is spread to the surroundings by winds. Failure to solve environmental problems and, in the case of mining areas in Trbovlje, also additional burdens, is a burden for present and future generations.

were first solved by building a 365m-high chimney at TET[6] (in 1976 it was the highest chimney in Europe), which later turned out to be an inadequate technological solution, as environmental pollution continued in a wider area; there was only an allocation of the environmental problem, but not an appropriate final solution.

After Slovenia gained independence in 1991, mining and energy activities[7] and factories, which had a heavy impact on the environment, were gradually closed; during the transition, these closures enabled a relative improvement of the air, but caused social upheavals[8], which were the most intense here compared to other regions in Slovenia (SURS, 2016, Žnidarič, 2016).

Transition and change of ownership

During the transition period, the socio-economic system also changed, but it did not bring improvements to the region; the situation in the economic, social and environmental fields did not improve, but rather worsened.

Thus, during the period of privatisation, the ownership structure of many companies, such as STT, Mehanika, Iskra, Sijaj, was transformed; these passed into private hands and most of the new owners worked according to the neoliberal concept, namely to create the largest possible short-term profit, which was at the expense of the environment and workers; eventually it led to layoffs and factory closings; unemployment in the region increased, social problems began to accumulate and increasing inequality began to appear.

Of the major employers, only TET and RTH remained state-owned at that time, and both were bankrupt after 2010 and in the process of winding down their operations; both

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[6] TET is the abbreviation for Thermal Power Plant Trbovlje, which is currently (2022) in a state of readiness, but otherwise employs only the necessary maintenance staff.

[7] Mining activity decreased due to the lower consumption of brown coal

[8] Social consequences such as increasing inequality among residents, ageing of the population, emigration of young people and promising employees, psychosocial problems, are increasing. There are no jobs in the region for unemployed critical groups who are losing contact with society (Žnidarič, 2016).

companies solved the issue of employment in a softer way, namely through retirement, self-employment or reassignment of workers, but the other "supporting activities" were not given adequate support here either.

The expectations of the inhabitants that the situation in the region would change for the better with the introduction of a new economic and social system soon gave way to disappointment, and the region increasingly regressed[9]. Also, not much action was taken to address the degradation of surfaces and to solve accumulated environmental problems, and the health and social crisis only worsened over the years[10].

Thus, the long-term trend of job losses, emigration of young people to larger towns and the ageing of the population on the one hand, and the continuation of environmental pollution with unresolved environmental problems from the past on the other, brought the region to the last place among the regions in Slovenia according to most statistical indicators (SURS[11], 2019).

Transition and changes in decision-making processes

The replacement of the socio-political system, together with the change of ownership, also changed the decision-making processes. If in the past socialist system, Slovenia had social property and at least a virtual management of workers, in the post-transition period the relations in the decision-making processes regarding direct producers completely changed.

[9] In the past, precisely because of coal mining and energy and related industries, the region was behind only the central Slovenian region in terms of GDP, which has the highest GDP throughout, while Zasavje has been in last place for several years. If in the rest of the regions the economic indicators are already turning in a positive direction, in Zasavje they are still headed for a negative decline (according to most indicators, the region is in the last place or in the lower half, Žnidarič, 2016).

[10] Statistical data show that the Zasavje region has been at the top of all regions in Slovenia in terms of the number of cancer cases for years (Oncology Institute, 2008, 2019). Due to the loss of jobs, the ageing of the population and the environmental crisis, according to the data of applicants for social assistance (CSD Zasavje and the Red Cross), social problems are clearly intensifying since the number of applicants is increasing every year.

[11] SURS stands for the Statistical Office of the Republic of Slovenia.

With the introduction of company ownership certificates, which to a large extent ended up in the hands of individuals and elites, the ownership structure of previously "social" companies changed, and they passed into the hands of new owners, modern-day capitalists. Management rights passed into their hands, as well as profit, and workers' wages were lowered due to the desire for as much profit as possible, and the rights to trade union activity were curtailed by limiting the role of unions (with rare exceptions) and social rights were reduced. Instead of self-management, workers (in most cases) were given the role of wage workers without co-management rights, which is characteristic of the classic form of capitalist production.

Consequences of changes

From a social and environmental point of view, these changes in Zasavje led to increasing inequality, poverty and injustice within and between regions.

Due to the closing of factories and the loss of jobs, and the fact that new factories with replacement jobs did not appear, social inequality, poverty and injustice spread in the region.

In addition to others, environmental injustices have accumulated particularly prominently in the region, as due to the long-term burden with dust particles and PTEs in them, the degradation and burden of the environment has only intensified; long-term air pollution results in a whole range of health problems for the population (see Table 5 and 6).

Inequality and injustice can also be found in relation to other regions in Slovenia; real estate became cheaper than elsewhere, the solution of the resulting problems was tackled more enthusiastically in non-mining industrial regions, also with the support of the state authorities.

The trends in the region are now as follows: the region's population is ageing, young people are emigrating because there are no suitable jobs, social problems are deepening, pensioners who do not come from mining or energy activities are especially socially exposed, as they face low pensions, which do not enable a decent life.

Zasavje (Zagorje ob Savi, Trbovlje and Hrastnik) through basic statistical data

The situation in the three basic municipalities can be considered through three dimensions, namely economic, environmental and social.

If the region was one of the most successful in the former federal state (Yugoslavia) in terms of GDP due to coal and industry and many supporting activities, even at the expense of local environmental pollution, today it is at the very bottom of the ranking.

The data in Table 1 indicate the stagnation of the region, which is still declining according to most statistical indicators. Compared to the rest of the regions, Zasavje achieves a little more than half of the national average, which confirms the thesis of inadequate development measures in the region; both at the local and especially at the national level. Appropriate development policies have not been adopted in recent decades, which, in relation to other regions, is required by the specifics of the current development of the mining and energy region.

Three areas of development

Inadequate practices are visible in all areas, but mostly in the environmental, social and economic areas.

In the environmental field; the problems of the past have not been solved; a large number of industrial facilities, which operated in a small and weather-specific and geographically specific area, released various pollutants into the space; to the greatest extent, it was the use of brown coal in the production of electricity in TET (Table 2), and later also for the incineration of waste in the Lafarge cement plant, which greatly burdened the nearby and wider surroundings. In Trbovlje, environmental burdens have increased in recent years due to the non-environmental stance of local political structures, namely through additional importation and inadequate disposal of hazardous waste in the area of RTH areas.

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Table 1: GDP in Slovenia and Zasavje between 1995 and 2020 (Source: SURS and Žnidarič, 2021)

Place	Region	1995	2008	2013	2014	2015	2016	2017	2018	2019	2020
	SLOVENIA	100	100	100	100	100	100	100	100	100	100
1	South East Slovenia	88.7	95.9	95	96.1	96	95	98.3	97.9	99.7	99.7
2	Central Slovenia	138	142.2	141.6	140	141.3	141.2	141.1	141.1	140.8	144.2
3	Spodnjesavska	80.9	83.2	86.3	85.2	83.5	82.8	83.2	82.9	84	87.7
4	Podravska	81.6	83.5	82.4	82.6	82.7	82.1	80.9	80.8	81.5	81.5
5	Primorko-kraška	108.5	107	98.2	97.5	100.2	101.8	102.1	102.5	98.8	92.2
6	Koroška	79.6	76.7	79.1	80.1	80.8	80.6	79.6	81	80.7	79.6
7	Goriška	99.3	95.4	90.4	90.5	91.7	91.8	91.9	90.2	89.4	87.6
8	Gorenjska	89.2	85.3	85.2	87.5	87.9	88.2	88.9	89.8	89.7	84.7
9	Savinjska	93	88.8	90.2	90.9	92.1	92	91.5	90.5	90.5	89.1
10	Notranjska-kraška	78.7	71.1	69.7	71.7	73.8	73.6	72.1	71.7	69.7	68.9
11	Pomurska	74,9	63,4	69,5	67,8	66,5	67,6	67,2	67,6	67,8	69,2
12	Zasavska	84,8	66,4	62,5	60,2	53,8	53,3	52,4	52,4	53	54,6
Zasavje - position		7	11	12	12	12	12	12	12	12	12

GDP and the status of the region compared to the rest of the country's regions

Table 2: Coal consumption, emissions and energy produced at the Trbovlje thermal power plant in the period between 1980 and 1999 (source: TET, Jeran in Žnidarič, 2021)

Year	Electricity (MWh)	Cuolm (t)	SO2 (t)	Nox (t)	CO_2 (t)	Dust (t)
1980	487,303	600,284	23,434	1,669	586,925	534
1981	426,646	477,711	20,517	1,328	467,080	470
1982	485,321	598,813	23,339	1,665	585,487	645
1983	543,596	673,633	26,141	1,873	658,642	789
1984	605,610	687,485	29,123	1,911	672,186	870
1985	449,529	574,061	23,844	1,596	561,286	781
1986	476,501	519,074	22,915	1,443	507,523	710
1987	617,150	705,679	30,880	1,962	689,975	1,283
1988	374,185	415,137	17,994	1,154	405,899	985
1989	659,480	713,222	31,714	1,710	697,350	1,403
1990	552,534	597,210	25,607	1,606	583,920	1,047
1991	509,481	554,562	21,899	1,323	542,221	800
1992	650,396	746,127	28,661	2,071	729,523	943
1993	621,183	631,321	23,380	1,805	617,272	1,404
1994	662,962	662,962	28,637	1,997	648,208	1,758
1995	614,083	704,826	25,576	1,530	689,141	1,259
1996	531,767	528,798	22,835	1,203	593,796	503
1997	no data	no data	31,244	1,550	727,040	374
1998	no data	no data	33,372	1,478	765,036	252
1999	no data	no data	30,229	1,650	647,087	260
total	9,267,727	10,390,905	521,341	32,504	12,375,597	17,070
average	545,160	611,230	26,067	1,625	618,780	854

With the help of Table 2 and 3, we can get an insight into the enormous environmental impact of TET, which was the biggest polluter of the environment in the region and beyond. Due to inadequate technological systems (from today's point of view), the desire for the greatest possible production of electricity and the greatest possible profits, the burden on the environment by the thermal power plant continued even after 2004, when Slovenia entered the EU as an independent country, and also after 2006, when a desulfurisation device[12] was installed.

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[12] Until then, more than 26,000 tonnes of sulphur were annually emitted into space from TET together with dust particles as carriers of PTEs (Krasnik, 2004).

Table 3: Share of emissions of the largest environmental pollutants in 2005 (source: Institute of Energy, 2007)

Company / emissions	SO_2 (t)	NO_x (t)	TDa (t)	TDb(t)
LAFARGE	1,080.5	1,079.3	6.9	62.0
TET	20,408.7	1,625.8	352.3	352.3
Total	23,557.2	3,501.6	516.7	571.8

The two biggest polluters in the region are TET with SO2 emissions and dust particles, which are carriers of heavy and other environmentally problematic metals (see Table 4), and Cementarna Trbovlje, later the Lafarge cement plant with hazardous waste incineration, especially after the company was taken over by French owners; both first polluted the local environment with enormous emissions into the air, and later (the example of TET) also the wider surroundings.

In the period up to 1976, due to the low chimney and closed valley with enormous emissions, TET dominated in the local area; after the construction of a 365m-high chimney next to the thermal power plant, the pollution spread to other areas and also to the areas of neighbouring countries (Žnidarič, 2014); pollution was not limited or reduced by the chimney, but was allocated from the local to the wider environment.

According to the direction of the winds, the TET represented a dangerous and for human health the biggest problem for the areas in the north-south direction, i.e. for the area of the local community of Dobovec, and in the case of an inversion, for the entire basin and the town of Trbovlje; to a lesser extent, the west-east, where there was a greater load on Kolk in Hrastnik municipality.

In the period when Cementarna Trbovlje was taken over by the multinational company Lafarge, pollution continued to increase, mainly due to the incineration of hazardous waste, until the moment when the civil society movement and individuals managed to stop co-incineration through opposition.

This was not the only pollutant that TET, Lafarge and other "smaller" polluters released into the environment. Many metals,

later PTEs, which were fed into the TET boilers with coal, also ended up in the environment; in Table 4, you can see which and in what quantities were introduced into TET boilers in 1989 and 1993.

Table 4: Amounts of metals introduced into TET coal-fired boilers in 1989 and 1993 (source: Uhan, 1993 in Poličnik, 2008)

metals - PTE	chemical label	quantities in tons and year of introduction 1989	quantities in tons and year of entry 1993
Lead	Pb	17.7	4.7
Chrome	Cr	52.3	9.2
Nickel	Ni	29.3	11.9
Copper	Cu	35.5	8.1
Zink	Zn	185	20.9
Cadmium	Cd		0.7

Before the construction of the desulphurisation plant in TET, these metals were released into the atmosphere and today they represent a major problem; due to inadequate filtering systems, enormous amounts of dust particles and metals were released into the air, which were then deposited on the surface of the Earth; the half-life of some of the listed chemical elements is several centuries and therefore they can still be detected in soils; however, the production and consumption of food on land containing the mentioned metals poses a major nutritional and health risk to all residents of degraded areas in the region, which has been confirmed by studies (ERICO and others).

Table 5: Comparison of cancer cases in Zasavje in 1971 and 2005 (source: Oncology Institute and **Žnidarič**, 2021

year	1971	2005
men	64	248
woman	64	136
total	128	112

Table 6: Data on cancer diseases by municipality (source: Oncological Institute of Ljubljana, 2008 and **Žni**darič, 2021)

2005	Number of cases
Hrastnik	60
Trbovlje	108
Zagorje ob Savi	80

The data on cancer cases in Zasavje (Table 5 and 6) confirm the thesis that the main cause of health problems in the region is primarily environmentally inappropriate behaviour in the past. In various studies on the habits of the inhabitants and their state of health, this hypothesis was already confirmed ten years ago, namely by dr. Vudrag and experts from ERICO from Velenje as well as dr. Batič with colleagues as well as other experts from the Faculty of Biotechnology (University of Ljubljana).

Failure to solve environmental problems such as PTEs in the soil, waste of various forms in and on land, releases of gaseous pollutants into the space with dust particles, pollution of watercourses, etc. have caused a general decrease in the quality of living space and living in it. In addition to logistical problems and access to the highway cross, such a degraded environment led to new numerous negative consequences; the price of real estate decreased, prospective employees emigrated, health, economic and social inequalities accumulated, which caused apathy and a feeling of helplessness among the population of the region.

The negative image of the region and the general mood then influenced new development possibilities; the inclusion of domestic and foreign investors was made more difficult and thus the circle of non-development of the region was concluded, and the deepening of inequality compared to other regions in Slovenia increased.

The only bright opportunity on the horizon for the development of the region seemed to be an initiative by some economic and political structures that advocated incineration[13]. Despite

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[13] Incinerators and incineration is the second worst option for waste management, right after dumping waste in nature. In Slovenia, there were soon interlocutors of waste incineration according to the NIMBY principle. Due to the mentioned inactivity and the low

the negative effects[14] on the environment, these structures found the business with waste and incineration to be a suitable way out of the economic and social crisis in the region, despite the fact that this meant the continuation of pollution and pressure on the environment (Vudrag, 2008; Oncology Institute, 2008). Such a development solution was also supported by the state; individual ministries (in principle with the MOP[15]), inspection services, the highest state authorities and other political actors supported this idea and allowed foreign capital (Lafarge Cementarna) to burn hazardous waste in the last twenty years, which certainly did not contribute to improving the value of environmental indicators in the region. This story ended years ago in Trbovlje; with joint efforts, the citizens managed to stop co-incineration. A similar story with co-incineration was repeated in Anhovo (2020); the same way, the same stories, the same consequences, the same scenarios and the suffering of people fighting to live in a healthy and clean environment (Aarhus Convention).

In the economic and social sphere, after the changes in the socio-economic system, poverty and inequality in the region only increased. This led to the second most economically successful region in Slovenia[16] gradually became the most underdeveloped

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environmental awareness of the inhabitants regarding the consequences of the pollution in the area, the lobbies in Zasavje burned waste (Lafarge Cementarna Trbovlje), there were also tendencies for waste to be burned in TET as well. Currently, the waste is „thermally processed" in Celje and Anhovo. In Celje, incineration is wrapped in the term „thermal treatment of waste". In Anhove, however, „such incineration" represents an additional problem for residents who have health problems due to problems with asbestos production. Asbestosis, together with incineration, only worsens the current negative health and environmental social problems. In Anhovo, the location of the factory itself, next to the Triglav National Park and in the valley of the Soča River (due to tourism and water activities), is problematic.

[14] Negative aspects are heavy metals, potentially toxic elements in soils, health problems, degradation in and on surfaces, economic and social stagnation.

[15] MOP is shortly for Ministry of the Environment and Spatial Planning

[16] Until the 1980s, Zasavje (Zagorje ob Savi, Trbovlje and Hrastnik) was considered the second most successful region in economic terms, after the Central Slovenian Region, due to mining, energy and industry. The growth and status of a successful region was made possible by domestic energy and industry, which employed most of the inhabitants of the region and its surroundings. An even larger number of immigrants from the countries of the former Yugoslavia were employed in mining.

in Slovenia due to various reasons; the region as a whole has declined according to most (statistical) indicators[17].

Tabel 7: Economic and social overview of the situation in Zasavje (source: RTH in **Žnidarič**, 2021)

Amount of accumulated coal in tonnes per year		Amount of accumulated coal in tonnes per day in years		Number of employees in RTH	
year	tonnes	year	tonnes	year	employees
2000	603,000	2000	3,000	2000	1,300
2005	594,000	2005	2,500	2005	850
2010	420,000	2010	1,650	2010	450

After 1991, the economic and social situation in the region changed drastically with the change of the social and economic system and the loss of Yugoslav markets; many workers lost their jobs. The biggest employers were Rudnik Trbovlje Hrastnik, Mehanika Trbovlje, Ipoz, STT, Iskra, Peko, Svea, and later also TET and Lafarge Cementarna, to name just a few of the biggest companies. These companies lost thousands of jobs because they did not know how to properly adapt to the new economic conditions and also because of wrong business decisions.

The loss of jobs in these companies was compensated in different ways, thereby mitigating the social crisis to the best of their ability. If the TET, RTH and Lafarge cement plants adequately rehired their workers with severance payments and retraining, the same cannot be said for other companies that simply fired redundant workers and left them to the state and social transfers. The case of the former Mechanika from Trbovelj showed that the ownership relationships changed overnight; without the knowledge of the workers, parallel systems were established abroad, which exhausted the parent company; the workers of the parent company ended up losing their jobs, they found themselves on the labour market without severance pay and the possibility of further work.

17 GDPin Zasavje has been the lowest in the country for years, and cancer is more common than elsewhere in Slovenia.

Due to lower wages and increasing unemployment, the number of applicants for cash social assistance increased; this was no longer limited only to the unemployed, but also to the working poor; basic living costs, especially for food, electricity and heating, have increased enormously, especially in towns; the reasons for this were not only changed external conditions, but also internal ones, e.g. inadequate management of companies and the involvement of local politicians in their business operations.

In such economic and social conditions, of course, people are looking for better opportunities, and emigrating from the region and looking for opportunities for a healthier and better life elsewhere is not surprising. The table below shows the ten-year trend of migration from the region by municipality.

Tabel 8: The number of inhabitants in the three (basic) Zasavje (and Litija) municipalities (source: SURS in **Žnidarič**, 2021)

Leto/mesto	Zagorje ob Savi	Trbovlje	Hrastnik	Litija
2008	17,136	17,571	10,155	14,443
2009	17,095	17,525	10,120	14,640
2010	17,076	17,376	10,031	14,830
2011	17,013	17,134	9,959	14,923
2012	17,004	16,938	9,833	14,949
2013	16,880	16,814	9,647	15,024
2014	16,763	16,562	9,499	15,002
2015	16,705	16,461	9,350	15,051
2016	16,655	16,282	9,314	15,215
2017	16,566	16,149	9,210	15,332
2018	16,476	16,041	9,191	15,342
2019	16,453	16,037	9,140	15,429
2019-2008	-683	-1,534	-1,015	+986

Table 7 shows data on the number of inhabitants in the period between 2008 and 2019, which show that the number of inhabitants decreased in all three municipalities. The reasons for this have already been mentioned: unemployment, lack of jobs, migration of young people from the region in search of better living and working

conditions, and others. In ten years, the population in the region decreased from 44.862 in 2008 to 41.630 in 2019; the most in Trbovlje and the least in Zagorje ob Savi, and in terms of the share of the population, the population decreased in Hrastnik by 10%, followed by Trbovlje with 8.7% and Zagorje ob Savi with 3.9%.

Inequality, poverty and social differences in the region have only deepened in the post-independence period, and the reasons for this must be sought both outside and within the region. It seems that the biggest problem for the further development of the region was the loss of jobs that were not replaced by new ones and the further pollution of the environment; this led the people of the region to increasing poverty and social distress, which some solved by emigrating from the region.

Is there an alternative concept for the development of Zasavje?

Zasavje can no longer continue with such a concept of development if it wants to stop emigration, the reasons for which are environmental pollution and economic stagnation. Environmental initiatives have already been formed in the region, which want to prevent further pollution and reduce the existing pollution with appropriate policy measures; economic initiatives have also appeared, which are no longer based only on production, which would neglect its social and environmental impacts. In the future, regional policy should be based on these initiatives and at the same time, by cooperating with state institutions and together with the European ones, ensure a fairer transition of this sometimes very developed energy industrial region.

The development concept that is offered in the EU after 2019 as appropriate is the concept of sustainability. Dryzek (2018) includes both sustainable development and ecological modernisation under this concept.

If economists interpret sustainable development as the continued exploitation of natural resources (Kirn, 2014), environmentalists interpret it as reducing pressure on nature and natural

resources and as increasing the role of a healthy and clean environment (Plut, 2014). There is an important difference between these two views, and in the public sphere this turns into a conflict between developers and environmentalists, which must be turned into a development decision in decision-making institutions (Lukšič and Bahor, 2011). A development decision can, on the one hand, mean the continuation of the exploitation of man and nature, which is happening with the existing socio-economic system, or it can mean the limitation of this exploitation and the direction towards the construction of social and environmental responsibility, which through development policies asserts greater justice and the reduction of social and environmental inequalities.

For the appropriate "greening of society" we need development policies that, in addition to limiting the consumption of natural resources, changes in consumer mentality, introducing a circular economy, greater food and energy self-sufficiency, etc., will need to be aimed at reducing one's own (individual) consumption of natural resources, which due to the increase in the population at the global level is still increasing; but we also need policies that will reduce inequality and poverty and enable a decent life for all residents (Kirn, 2014; Plut, 2014; Low and Glesson, 2021).

Of course, greater justice cannot be built only in the region, it must also be built on a global level through the economic and financial redistribution of wealth (from the rich to the poor), through the assumption of responsibility for the resulting social and environmental conditions by the developed and the largest polluting countries and also by reducing state sovereignty at the expense of common global environmental policy (Eckersley, 2004; Low and Glesson, 2021).

Sensitising the public to political justice is a necessary condition for more equal environmental and social participation, which would enable currently excluded actors to enter the decision-making process and open the possibility for a potentially different future; participation is a necessary prerequisite for changes that are not yet implemented in an adequate way and at all levels.

The concept of ecological modernisation, especially Beck's and Low's reflexive variant, enables the gradual transformation of capitalist society into a more just society. To put it another way, green capitalism, with an appropriate and truly green change policy, could represent a step in the direction of a different system that would place appropriate emphasis on environmental content, but at the same time should not become a mere cover for the continuation of consumerism and the exploitation of natural resources. For an effective and appropriate transition of this kind, the political will of the "main" actors is lacking, and there was also a lack of strong civil society support for this project, which would have forced decision-makers at various levels in this direction. Adequate and environment- and society-oriented changes – both at the local and global levels – will not occur without those who advocate economic solidarity, reduction of consumerism, reuse of materials, implementation of truly green concepts in practice, which will not be green just because of marketing moves capital, etc. Policies designed in this way must therefore be based on satisfying the needs of society and not on profit and satisfying the interests of capital, which are often in conflict with the interests of the public and people.

Conditions for this transition must also be created at the regional level, so that it will be possible to adopt development policies that will lead to community projects, and not to projects against the community, as was the practice in the case of Zasavje, when it came to the conflict between Lafarg and EKO Round; there, part of the public authorities turned away from the interests of the population for a healthy environment and defended the interests of capital and further pollution with the argument that it solves the social crisis in the region.

So that such "blackmail" situations no longer occur, where both local and state authorities would act against the community's long-term interest in fair green development, it is necessary to enable a greater influence of the public sphere on development issues in the future, to build a systemic integration of civil society organisations in decision-making processes, where future development will be decided on the basis of (interdisciplinary) professi-

onally designed development alternatives (which would prevent the current practice of ignoring or denying scientific knowledge and findings in decision-making processes). Only this way of working ensures the establishment of a fairer and more equal society.

Community policies and the increasing role of organised civil society in decision-making are steps that enable the transition to a more appropriate socio-economic system. Changes in the hierarchy of personal and community values, which determine the relationship with the environment, nature and fellow human beings, will narrow the space for the assertion of capital interests and enable the assertion of community interests in the creation of more ecological social policies.

Due to its long-standing mining tradition, which was based on camaraderie, self-help, cooperation, solidarity, etc., Zasavje has appropriate value foundations on which people can rely for further development and changes in the region. First of all, they will have to provide themselves with greater social and economic security and conditions for a decent life by advocating through their elected representatives for changes in local and state policies that will enable at least a similar status to that of those regions that use energy they do not face the industrial heritage – and especially its consequences and problems.

Conclusion

Without radical economic and political changes, without changes in human habits and handling of natural resources, and especially in the attitude towards nature, society will be subject to many sharp conflicts and frictions in the future. First of all, conflicts will intensify between those who still have natural resources and those who have already used them up; but also between those (the majority of the planet's inhabitants) who will experience increasing hardship and suffering due to inequality and poverty, and those who will have enough of everything.

If humanity wants to survive on this planet, it will be necessary to overcome the narrow partial interests (primarily of

capital and those policies that support its interest for profit), the egoism of individuals and various forms of superpowers, and instead establish a common orientation towards the public good (Kirn, 2014; Lukšič, 2002); this can be achieved, despite the unequal development level and standard between countries, only through the enforcement of the concept of global democracy (Low and Glesson, 2021), but not through the introduction of "green absolutism" at the global level.

According to Eckersley (2004 in Lukšič and Bahor, 2011, p. 1180), in addition to the greening of liberal democracy (green capitalism), the introduction of new institutions is also necessary in order to overcome obstacles in the establishment of an environment- and society-oriented system and to enforce a true ecological and green society. Principles, decision-making procedures and participation, which includes not only communication and empathy with non-human living and non-living nature, but also its equal status, which nature does not yet have due to human domination. This applies to all levels of decision-making. At the national and local level, it is necessary to focus on the creation of community policies and alliances of regions and countries, which would make it easier to achieve the greatest possible self-sufficiency, greater participation of people in decision-making, greater public influence; responsibility towards the environment and social inequalities would increase and policies would be adopted to address these problems. For this mental and conceptual leap, quick and effective changes are also needed at the individual and group level (Žnidarič, 2022).

Due to many unfulfilled expectations and, in most cases, only partial effects, the existing sustainability policies need to be upgraded in the direction of asserting the existential interests of people, who must demand changes in local and national political, legislative and executive structures in order to reduce inequalities and pollution, simultaneously in doing so, citizens would regain confidence in democratic "state" structures, which are the only tools available to human communities for effective collective action.

The environmental, economic and social crisis obliges mankind to reduce consumption and pollution, to achieve greater energy and nutritional self-sufficiency and to preserve natural resources, especially water, land and air, which represent a necessary natural condition of life. In regions such as Zasavje, which are characterised by many complex problems due to industrial heritage, it is necessary to combine and upgrade good practices from the domestic and foreign environment in order to cope with a more ecological and socially just development.

Literature and sources

Aristotel (1989). Retorika. (Naprijed, Zagreb).

Bračko, K. (2021). Cene gradbenih materialov v nebo: Preverili smo kaj so razlogi za enormno naraščanje. (Maribor. info.)

Skyrocketing prices of building materials: We have checked what are the reasons for the enormous increase. (Maribor.info.)

Dostopno prek - Available via: https://mariborinfo.com/novica/slovenija/cene-gradbenih-materialov-v-nebo-preverili-smo-kaj-so-razlogi-za-enormno

Drašček, M. (2008). Aristotelova pravičnost v teoriji vodenja podjetja. Magistrsko delo, (UL, Fakulteta za družbene vede, 2008).

Aristotle's justice in the theory of business management. Master's thesis, (UL, Faculty of Social Sciences, 2008).

Dryzek, J. (2018). Politika Zemlje. Okoljski diskurzi. (IČKZ, Ljubljana).

Politics of Earth. Environmental discourses. (IČKZ, Ljubljana)

Eckersley, R. (2019). Zelena država. Premišljanje demokracije in suverenosti. (IČKZ, Ljubljana).

A green state. Rethinking democracy and sovereignty. (IČKZ, Ljubljana).

Ekošola (2021). Gozd in gozdarstvo v Sloveniji. (Zavod za gozdove Slovenije, Slovenski državni gozdovi d.o.o., Gozdarski inštitut Slovenije, Ministrstvo za kmetijstvo, gozdarstvo in prehrano). Dostopno na - Available via: https://ekosola.si/wp-content/uploads/2021/03/GozdingozdarstvovSloveniji-predstavitevza%C5%A1ole.pdf.

Ecoschool (2021). Forests and forestry in Slovenia. (Institute of Forests of Slovenia, Slovenian Forestry Institute d.o.o., Forestry Institute of Slovenia, Ministry of Agriculture, Forestry and Food)

EPA. (2021). Environmental Justice. Dostopno na - Available via: https:// www.epa.gov/environmentaljustice.

Gosar, A, (1935). *Za nov družabni red (sistem krščanskega socialnega aktivizma),Prvi zvezek-UVOD IN OSNOVE-1935* (Založila družba Sv. Mohorjeva v Celju).

For a new social order (a system of Christian social activism), Volume One - INTRODUCTION AND FUNDAMENTALS - 1935 (Published by the Society of St. Mohorjeva in Celje).

Gosar, A, (1935), *Za nov družabni red (sistem krščanskega socialnega aktivizma), Drugi zvezek-CILJI IN POTA -1935.* (Založila družba Sv. Mohorjeva v Celju).

For a new social order (a system of Christian social activism), Volume Two-GOALS AND THE WAY -1935. (Published by Sv. Mohorjeva company in Celje).

Green Planet (2015). Water Crisis:Is Australia Running Out of Water? Dostopno na - Available via: https://www.greenplanetplumbing.com.au/water-crisis-is-australia-running-out-of-water/?keyword=&matchtype=&device=c&g clid=Cj0KCQiAmKiQBhClARIsAKtSj-kFiJH0qsoz-jmIV_orH-i10GywRbVk_cXttuSVxQbvElO0O5I6aXsaAgSyEALw_wcB

Kirn, A. (2012). *Družbeno ekološki obrat ali propad.* Ljubljana. (Znanstvena založba FDV). Socio-ecological turnaround or collapse. Ljubljana. (Scientific publishing house FDV).

Kirn, A. (2014). Ekosocializem kot alternativa. *Teorija in praksa 51*(6), 1021- 1056. (Znanstvena založba FDV).

Ecosocialism as an alternative. Theory and practice 51(6), 1021-1056. (Scientific publishing house FDV).

Klein, N. (2009). Doktrina šoka-Razmah uničevalnega kapitalizma, Mladinska knjiga Založba d.d. (Zbirka Premiki, Ljubljana).

The shock doctrine - The rise of destructive capitalism, Mladinska knjiga Založba d.d. (Premiki collection, Ljubljana).

Krasnik, I. (2004). TET z zamudo priključen v omrežje. (Časopis Dnevnik 21.7.2004).

TET connected to the network with a delay. (Newspaper Dnevnik 21.7.2004).

Dostopno prek- Available via: https://www.dnevnik.si/89478

Lukšič, A. A. (2002). Vloga države pri zagotavljanju nacionalnih interesov. (Teorija in praksa: revija za družbena vprašanja; jun.2002, letn. 39, str. 1017 -1027).

The role of the state in ensuring national interests. (Theory and Practice: Journal of Social Issues; June 2002, Vol. 39, pp. 1017 -1027).

Lukšič, A. A., Bahor, Maja. (2011). Zelena politična teorija in državljanstvo. (Teorija in praksa: revija za družbena vprašanja, ISSN 0040-3598, okt. 2011, letn. 48, jubilejna št., str. 1166-1183, 1385). Green political theory and citizenship. (Theory and Practice: Journal of Social Issues, ISSN 0040-3598, Oct. 2011, Vol. 48, Jubilee No., pp. 1166-1183, 1385).

Dostopno na - Available via: http://dk.fdv.uni-lj.si/db/pdfs/TiP2011_J_Luksic-Bahor.pdf.

Low, N. in R. Glesson (2021). Pravičnost, družba in narava. (IČKZ, Ljubljana).

Justice, society and nature. (IČKZ, Ljubljana).

Mill, J.S (2008). On Liberty and Other Essays. (Oxford University Press).

Plut, D. (2014). Ekosocializem ali barbarstvo? Demokratični ekološki social izem in trajnostni sonaravni razvoj, (Društvo gibanje za trajnostni razvoj Slovenije-TRS Ljubljana). Ecosocialism or barbarism? Democratic ecological socialism and sustainable co-natural development, (Society movement for sustainable development of Slovenia-TRS Ljubljana).

PV magazine (2020). European agrivoltaics. (PV Magazine).

Stat.si (2020). Preskrba z energijo. Oskrba z energijo, Slovenija, 2020. Energy supply. Energy supply, Slovenia, 2020.

SiStat. (2021). Poraba vode na prebivalca v Sloveniji. Water consumption per inhabitant in Slovenia. Dostopno na - Available via: https://pxweb.stat.si/SiStatData/pxweb/sl/Data/-/2700002S.px/table/tableViewLayout2/ Dostopno prek : https://www.stat.si/StatWeb/news/Index/9554.

Vrhovšek, D.; Korže, Vovk, A. (2009). Ekoremediacije. (UM Filozofska fakulteta Univerze v Mariboru). Ecoremediation. (UM Faculty of Philosophy, University of Maribor

Žnidarič, D. (2011). Čiščenje komunalnih odpadnih voda na odročnih ruralnih področjih Zasavja. (Magistrsko delo. Fakulteta za organizacijske vede. Kranj). Cleaning of municipal wastewater in remote rural areas of Zasavje. (Master's thesis. Faculty of Organizational Sciences. Kranj).

Žnidarič, D.(2016). Prehranska samooskrba v luči trajnostnega razvoja v Sloveniji; (4. konferenca z mednarodno udeležbo.Konferenca VIVUS s področja kmetijstva, naravovarstva, hortikulture in floristike ter živilstva in prehrane. »Z znanjem in izkušnjami v nove podjetniške priložnosti« 20. in 21. april 2016, Biotehniški center Naklo, Naklo, Slovenija). Food self-sufficiency in the light of sustainable development in Slovenia; (4th conference with international participation. VIVUS conference in the fields of agriculture, nature conservation, horticulture and floristry as well as food and nutrition. "With knowledge and experience for new entrepreneurial opportunities" April 20 and 21, 2016, Naklo Biotechnical Center, Naklo, Slovenia).

Žnidarič, D. (2021a). Anketa za potrebe doktorske naloge. Opravljena sredi leta 2021. Elektronski vir. A survey for the needs of a doctoral thesis. Completed in mid-2021. Electronic resource.

Žnidarič, D. (2021b). Priprava doktorske disretacije v okviru študija Varstva okolja na UL, FGG. Preparation of a doctoral dissertation within the study of Environmental Protection at UL, FGG.

Žnidarič, D. (2022). Trajnostni razvoj in politična pravičnosti. (Konferenca UM-FOV CIS. Portorož-Kranj). Sustainable development and political justice. (UM-FOV CIS Conference. Portorož-Kranj).

Paz Araya

Fitting or retrofitting? Heating deprivation and the unfulfilled promise of a modern house in southern Chile

Abstract: Heating deprivation is a manifestation of energy poverty resulting from a combination of inadequate thermal insulation of the building and budget restrictions for heating services. In the case of Chile today, 33.5% of the population reports feeling cold inside their houses during the winter, particularly in southern Chile. Heating deprivation is a complex problem related to high levels of pollution resulting from firewood being burned for heating, low incomes, and increased inequality resulting from decades of neoliberal planning. As a complex problem, a territorialised energy poverty framework is used to understand the dimensions of equity, access and quality, which allows an understanding of how thermal comfort is articulated with practices to regulate the body and in-house temperatures, as well as having long-term responses to the lack of equitable access, as is the case in habitation with lower indoor temperatures. This paper provides a reflection, based on the early findings of an ethnographic study related to strategies for living in cold houses, about the tipping point from adaptation or habitation to life in a cold dwelling to interventions into the housing infrastructure. Recognising both sides for their actions, tackling heating deprivation and energy poverty seems possible.

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Heating deprivation in southern Chile

Heating deprivation is the result of a combination of a deficit in thermal insulation in the construction of a dwelling, coupled with a household's budget restrictions, which does not cover the heating costs needed to reach a healthy temperature for the members of a family. A house that does not have sufficient thermal insulation will require more significant amounts of energy to achieve an indoor temperature that allows its inhabitants to carry out their daily tasks with a minimum of comfort. Consequently, the cost of heating the living spaces will be higher. Therefore, if an inadequately insulated dwelling is combined with high heating costs or insufficient household income, the result is heating deprivation. This situation forces household members to develop different strategies to adapt to or cope with living in a low-temperature house.

As described above, this is typical among dwellings in the south of Chile (Cortés & Amigo, 2022), where on the one hand, since thermal standards for buildings only began in 2000, the lack of thermal regulation leaves 66% of the current housing stock without adequate energy performance (RedPE, 2022). Despite having climates like those of central and northern Europe, double-glazed windows are not standard and homes are built of lightweight materials due to multidimensional poverty (Pérez-Fargallo et al., 2022). As a result, the temperature inside the homes is, on average, 8% below the minimum healthy standard of 16 degrees Celsius (RedPE, 2019). On the other hand, options such as firewood are the only way to heat a home, which is also an income problem. Still, the cheaper option isn't sufficient to maintain comfortable temperatures all over the house, so a home must decide between overspending their income on heating during the winter, which is the case in 23% of houses that need to avoid other expenditures to satisfy energy needs, or limit spending due to budget restrictions, leaving their house humid and cold, which is the case in 17% of households (RedPE, 2022; Reyes et al., 2019). Therefore, 33.5% of the homes currently report feeling cold in their homes in the winter while reaching the minimum healthy indoor temperatures is more difficult for

lower-income homes. Despite this, only a tiny percentage of the population seek alternatives to retrofit their homes (Schueftan et al., 2021); even today, most homes need improvement, reparations or retrofitting to meet the quality standards (Cortés & Amigo, 2022).

Heating deprivation, in turn, is not an isolated problem and therefore needs to be analysed, revealing the interrelations with other effects of the quality of the energy supply. For the average household in the country, the cheapest and most affordable option is low-quality firewood, causing a nationwide public health problem. Today, a large part of the cities in the south of Chile have been declared saturated with atmospheric pollutants, mainly particulate matter (p.m.) resulting from the combustion of firewood. Nearly 10 million people are exposed to concentrations of 2.5 p.m., which exceed the standards of the World Health Organization and caused more than 3,600 early deaths in 2018 (Huneuus et al., 2020). In most of the cities in the central and southern parts of the country, 90% of these emissions are generated by the combustion of firewood for heating (Ministerio de Medio Ambiente, 2022), which is used in urban and rural areas and in both low- and high-income homes. However, with poor thermal quality for buildings, low incomes and firewood being 5 to 6 times cheaper than any other energy sources (Reyes et al., 2019), people don't seem to have another alternative. Currently, more than 80% of houses in southern Chile use firewood. Indeed, some houses choose high-moisture firewood for heating, which has even higher pollution rates, because it is the only affordable alternative in the market (RedPE, 2022).

Through the lens of energy poverty

In this way, equity in energy needs and access to adequate heating energy is interrelated with the quality of energy processes, transforming the problem into a complex situation that must be analysed using this approach. In this sense, the energy poverty framework provides an appropriate focus by understanding it as an assemblage of "technologies, bodies, infrastructures, economic situations and structures, cultural expectations and climatic con-

ditions" (Day & Walker, 2013), a phenomenon whose causes are determined by larger-scale processes and territorial conditions related to historical, cultural, material, economic and political contexts (Simcock et al., 2018). Although there are various definitions and understandings of energy poverty, given the nature of the problem, the definition developed for the particular case of Chile allows for a context-sensitive approach to the subject (Cortés & Amigo, 2022). "A household is in energy poverty when it does not have equitable access to high-quality energy services (adequate, reliable, non-polluting and safe) to cover basic and fundamental needs, in order to sustain the human and economic development of its inhabitants" (RedPE, 2019). The basic energy needs and energy services are defined in a temporal and spatial context and under specific socio-cultural conditions. This definition provides the dimensions of equity, access and quality necessary for understanding the heating deprivation problem, as shown in *Fig. 1*.
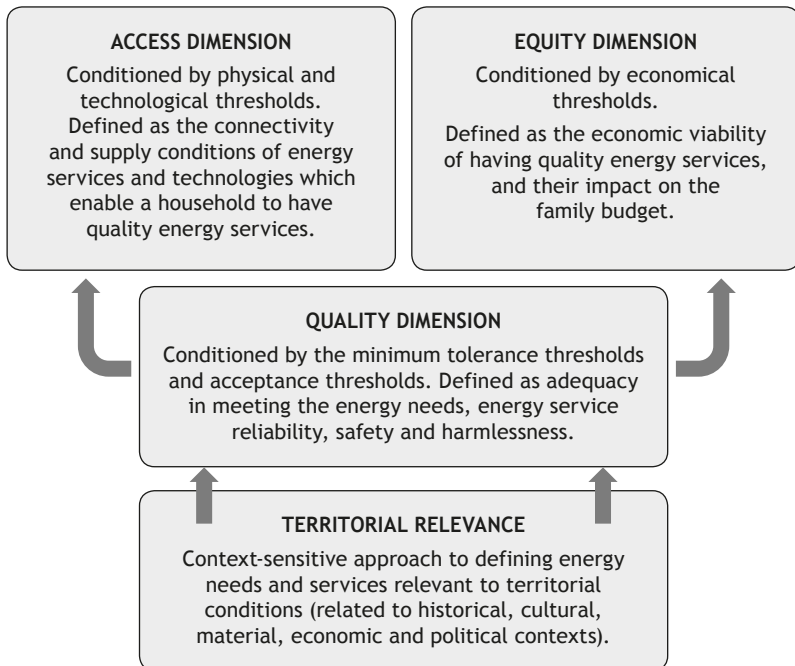
ACCESS DIMENSION
Conditioned by physical and technological thresholds. Defined as the connectivity and supply conditions of energy services and technologies which enable a household to have quality energy services.

EQUITY DIMENSION
Conditioned by economical thresholds.
Defined as the economic viability of having quality energy services, and their impact on the family budget.

QUALITY DIMENSION
Conditioned by the minimum tolerance thresholds and acceptance thresholds. Defined as adequacy in meeting the energy needs, energy service reliability, safety and harmlessness.

TERRITORIAL RELEVANCE
Context-sensitive approach to defining energy needs and services relevant to territorial conditions (related to historical, cultural, material, economic and political contexts).

Fig. 1 Articulation of the dimensions of energy poverty. Translated and adapted from RedPE 2022

Observing heating deprivation from the three dimensions of energy poverty (quality, equity and access) makes it possible to distinguish how its manifestations are driven by spatial relevance, insofar as energy needs are relevant in different socio-cultural, socio-technical and socio-ecological spaces. In terms of the quality dimension in the scheme shown in Fig. 1, the problem is evident in terms of the tolerance thresholds of the members of a household. In this sense, the temperature is an indicator of the thermal quality within a home, articulated on the one hand by the thermal comfort thresholds of its members and on the other hand by the individual and joint practices used to cope with the cold. Energy needs are set according to the indoor temperature
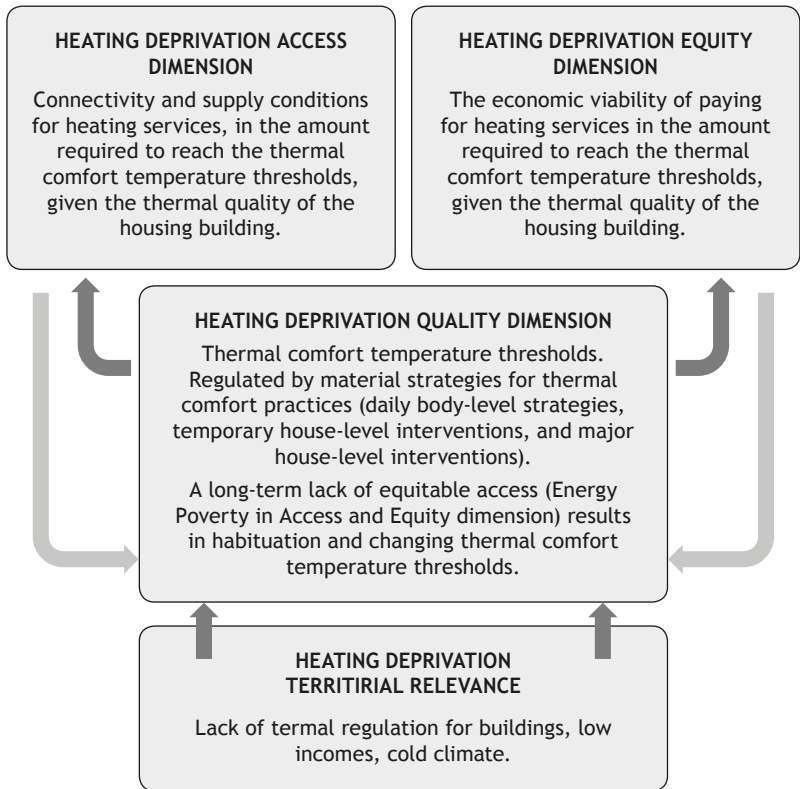

HEATING DEPRIVATION ACCESS DIMENSION
Connectivity and supply conditions for heating services, in the amount required to reach the thermal comfort temperature thresholds, given the thermal quality of the housing building.

HEATING DEPRIVATION EQUITY DIMENSION
The economic viability of paying for heating services in the amount required to reach the thermal comfort temperature thresholds, given the thermal quality of the housing building.

HEATING DEPRIVATION QUALITY DIMENSION
Thermal comfort temperature thresholds. Regulated by material strategies for thermal comfort practices (daily body-level strategies, temporary house-level interventions, and major house-level interventions).

A long-term lack of equitable access (Energy Poverty in Access and Equity dimension) results in habituation and changing thermal comfort temperature thresholds.

HEATING DEPRIVATION TERRITIRIAL RELEVANCE
Lack of termal regulation for buildings, low incomes, cold climate.

Fig. 2 Applying the energy poverty framework to the problem of heating deprivation

regulation determined by the thermal comfort thresholds and internal household practices. Heating services are covered according to the ability to access technologies and heat sources that are materially and economically equitable. If such access is not achieved, household members need to adopt new coping strategies or a redefinition (usually forced or artificial) of their thermal comfort thresholds. In other words, the quality dimension determines the equity and access dimensions, which iterates by redefining the quality dimension until an adaptation to the living conditions is achieved. Specifically, the tolerance thresholds that establish thermal comfort conditions define the need for material and economic access to heating. And in turn, the inability to obtain heating will redefine the thermal comfort tolerance thresholds through various practices adopted by household members.

The tolerance threshold that defines the quality dimension is then associated with thermal comfort, which is the temperature range in which a person feels comfortable or does not feel stressed, a subjective definition that depends on different physical and psychological conditions. Thermal comfort, therefore, varies according to the person's body conditions, such as clothing and level of physical activity. Each person has a range of environmental temperatures that allow them to carry out their daily activities. Ethnographic work has allowed me to distinguish two main classes of practices that regulate the thermal comfort temperature thresholds. On the one hand, there are the material strategies, which include three types. First, those implemented in personal dynamics like wearing more layers of clothing, drinking hot beverages, going to bed earlier, using a hot water bottle or electric blanket, or concentrating activities in a single space within the dwelling. Material strategies include those implemented at the household level, ranging from temporary strategies such as closing doors and windows to concentrating heat in one area of the home to low-cost or low-tech interventions such as adding materials to doors and windows. Finally, material strategies include significant interventions such as improving the insulation conditions of the home through the renovation of

materials or structures, namely retrofitting. On the other hand, there are psychosocial responses in which we find the tendency to normalise the lack of thermal comfort to lower the threshold of temperatures below which the dwelling is inhabited without feeling apparent stress from these liveability conditions.

Thermal comfort articulators	
Material strategies	Body-level daily strategies: e.g., clothing and layers, beverages and food, bedtime, dwelling dynamics.
	Temporary housing interventions: e.g., room separations, additional curtains, plastic or cardboard over windows, rubbers and fabrics over doors.
	Major housing interventions: retrofitting, e.g., insulation of roofs, the installation of a thermopane.
Psychosocial responses	Habituation to lower temperatures

Fitting into the normality of cold housing

Heating deprivation is not commonly perceived as a problem, as people can adopt strategies to cope with a situation of cold in the housing infrastructure on the scale of their bodies. Normalisation doesn't bring narratives of discomfort, as "coping strategies become part of an accepted everyday routine but something that could be easily disrupted by a change in circumstances" (Chard & Walker, 2016). However, this normalisation of the problem cannot lead us to make it invisible since these strategies for coping with low temperatures are vulnerable and fragile to the incorporation of new pressures, so they should raise questions about wellbeing and solutions for householders who do not problematise their living conditions. Even when it can be seen as part of the accepted reality, housing practices and strategies for coping with heating deprivation are also statements of resistance (Pink, 2004). Hidden coping mechanisms for energy poverty could also be described as limitations following a crisis (Butler, 2020), so it should be considered in the design of initiatives to tackle energy poverty in order to understand the tipping point from habituation to overcoming the problem.

As noted above, poor housing insulation is a result of a lack of regulation of the thermal quality of construction in Chile, which in turn is the result of 50 years of neoliberal policies introduced in the dictatorship through the constitution, which allowed housing decisions to be left under purely market criteria. In the period from the 1980s to 2000, public policies focused on the quantity of houses to be built in order to reinforce the quantitative deficits, which in turn were in the hands of private decisions that minimised the costs, setting aside quality criteria and resulting in the use of poor-quality materials (Toro et al., 2021). At the same time, inequality and poor working conditions in the country result in households whose income is insufficient to cover basic needs such as healthy food, quality education and health coverage (UNDP, 2017), relegating thermal comfort and, more generally, living conditions to a lower priority when allocating the household budget. In this sense, habituation and adopting strategies to change a household's thermal needs are responses to a more significant condition of inequality. While these responses may reduce the perceived severity of the problem, facilitating adaptation to the given living conditions, they do not solve the problem and constitute a situation that can be considered fragile, as any new change in household conditions is perceived as a stressor that affects the sense of normality.

Retrofitting, approaches for energy efficiency interventions.

Nowadays, housing retrofitting is one of the central public policies under consideration for overcoming the problems of heating deprivation and reducing air pollution in the cities of southern Chile, as well as being part of the public policies for overcoming energy poverty in various parts of the world. One of the main challenges of this public policy is the significant investment required for the intervention and replacement of materials that constitute a housing unit. In Chile, 3.5 million dwellings need to be modified for better thermal insulation, yet subsidies cover, on

average, less than 10,000 homes per year, targeting lower-income segments of the population (De la Paz, 2021). Consequently, the improvement of the remaining dwellings is subject to the individual will of their owners, who can rely on credits or the direct financing of the investments required for the refurbishment. However, it is worth mentioning that given the high levels of inequality in the country, the economic conditions of households in the middle quintiles of the country are not substantially better than the socio-economic conditions of lower-income families; in fact, 70% of homes are in debt (Durán & Kremerman, 2022), so they do not have a substantially greater capacity to invest or get into debt than lower-income households. For this reason, for a large proportion of families, there is no alternative but to accept the living conditions of their home, given that they do not have the economic capacity to change them.

In this way, all the strategies to regulate thermal comfort allow people to adapt to living in cold homes but also affect people's willingness, ability and agency to improve their homes. Solving the problem of poor housing insulation involves understanding the tipping point at which a family moves from adapting, through material strategies or the simple normalisation of living conditions, to a readiness for major household intervention. This relationship between agency and the willingness to modify a home is situated in the framework of the ontological multiplicity of housing, as this type of habitat involves at least physical-spatial, socio-cultural and political-economic dimensions, "which interact on different scales from the housing object to the city" (Toro et al., 2021). Housing is outwardly a constituent of the urban territory, which simultaneously conditions social dynamics and is the subject of political and economic planning; housing is inwardly a refuge that protects its inhabitants from the environment and, at the same time, establishes the practice of dwelling.

In terms of the outward relationship, the dwelling and its thermal needs are in dialogue with the material infrastructure of other urban constructions inhabited by its members, such as work or study spaces and spaces for community use, where people

spend more or less time in their daily lives. The temperature thresholds that define thermal comfort and the willingness to modify the environment are also partly moulded by the distribution of each person's time between these different environments. Moreover, this external relationship is articulated from a dialogue with the political-economic dimension through an institutional infrastructure, which defines housing regulation and policies, determines the dynamics of tenure or renting, as well as the possibilities of access to heating. For its part, the inward dynamic of the dwelling with its inhabitants is presented in part as a technology that allows its members to be protected from climatic conditions, and at the same time as a place that generates belonging, identity and social integration (Toro et al., 2021).

Tackling heating deprivation and energy poverty

In its SDGs, the UN sets the goal of "modern" energy for all, but how much does energy modernity depend on housing modernity? The standards of modernity of a dwelling are constructed according to the imaginary concept of a global north as if these realities could be transposed intact to other territories. Public policies such as the long-term energy agenda, Energy 2050, set their sights on the electrification of heating in Chile as a modern solution to meet international carbon reduction agreements within the energy transition discourse. And yet, the "modern" house never existed for most of Chile's population; the ideal of housing was fragmented from the construction of modernity based on colonial processes in a way that would later reach exclusively the part of the population that had financial access to the conditions imposed by the market. So, is it possible to talk about modern energy meeting the needs of a "non-modern" house?

Today, Chile faces the challenge of resolving the implications of 50 years of radical neoliberal policies and a web of social inequalities that have affected housing but also education, health, the environment and other fundamental aspects of people's wel-

l-being and ecosystems. This challenge calls for official public institutionality through state initiatives and also for the reform of institutionality through the elaboration of a new constitution. It also calls for citizen organisation through community and collaborative actions. Improving the thermal conditions affecting the habitability of the dwelling is not limited to the realisation of large interventions on the dwelling, such as retrofitting measures. Recognising the role of other daily strategies that facilitate living in cold houses is necessary. But at the same time, there is no need to rest on the recognition that these strategies may be partly a solution-oriented approach to the problem of heating deprivation. Still, this is also often a forced form of resilience. This resilience reflects the lack of agency over one's housing in the face of the inequality provoked by dozens of years of neoliberalism and the failure to fulfil a promise of modernity.

References

Butler, D. (2020). *Communicating Energy Vulnerability: An exploration of energy advice within and beyond formal settings* [PhD]. University of Salford.

Chard, R., & Walker, G. (2016). Living with fuel poverty in older age: Coping strategies and their problematic implications. *Energy Research & Social Science, 18,* 62-70. https://doi.org/10.1016/j.erss.2016.03.004

Cortés, A., & Amigo, C. (2022). Energy culture and the dynamics of energy poverty in south Chile: A blind spot for decontamination energy efficiency policies. *People, Place and Policy,* 1-25. https://doi.org/DOI: 10.3351/ppp.2022.3584928226

Day, R., & Walker, G. (2013). Household energy vulnerability as 'assemblage'. In *Energy Justice in a Changing Climate. Social equity and low-carbon energy* (pp. 14-29). Zed Books.

De la Paz, V. (2021). *Asesoria Técnica Parlamentaria. Subsidio de Aislamiento Térmico. Programa de Protección del Patrimoino Familiar.* Biblioteca del congreso Nacional de Chile. https://www.bcn.cl/obtienearchivo?id=repositorio/10221/32682/1/BCN_subsidio_termico_def.pdf

Durán, G., & Kremerman, M. (2022). *Los Verdaderos Sueldos de Chile. Panorama actual del Valor de la Fuerza de Trabajo usando la Encuesta Suplementaria de Ingresos ESI* (2021) (Documentos de Trabajo del Área de Salarios y Desigualdad, p. 28). Fundación Sol.

Huneuus, N., Urquiza, A., Gayó, E., Osses, M., Arriagada, R., Valdés, M., Alamo, N., Amigo, C., Arrieta, D., Basoa, K., Billi, M., Blanco, G., Boisier, J. P., Calvo, R., Casielles, I., Castro, M., & Chahuan, J. (2020). *El aire que respiramos: Pasado, presente y futuro – Contaminación atmosférica por MP2,5 en el centro y sur de Chile* (p. 102). Centro de Ciencia del Clima y la Resiliencia (CR)2. www.cr2.cl/contaminacion/

Ministerio de Medio Ambiente. (2022). *Sexto reporte del estado del medio ambiente en Chile 2021.* (p. 325). MMA. https://sinia.mma.gob.cl/estado-del-medio-ambiente/

Pérez-Fargallo, A., Leyton-Vergara, M., Wegertseder, P., & Castaño-Rosa, R. (2022). Energy Poverty Evaluation Using a Three-Dimensional and Territorial Indicator: A Case Study in Chile. *Buildings,* 12(8), 1125. https://doi.org/10.3390/buildings12081125

Pink, S. (2004). *Home truths: Gender, domestic objects and everyday life* (English ed). Berg.

RedPE. (2019). *Acceso equitativo a energía de calidad en Chile. Hacia un indicador territorializado y tridimensional de pobreza energética* (N.o 5; p. 59).

RedPE. (2022). *Una mirada multidimensional a la pobreza energética en Chile* (p. 53). RedPE.

Reyes, R., Schueftan, A., Ruiz, C., & González, A. D. (2019). Controlling air pollution in a context of high energy poverty levels in southern Chile: Clean air but colder houses? *Energy Policy,* 124, 301-311. https://doi.org/10.1016/j.enpol.2018.10.022

Schueftan, A., Aravena, C., & Reyes, R. (2021). Financing energy efficiency retrofits in Chilean households: The role of financial instruments, savings and uncertainty in energy transition. Resource and Energy Economics, 66, 101265. https://doi.org/10.1016/j.reseneeco.2021.101265 Simcock, N., Thomson, H., & Petrova, S. (Eds.). (2018). Energy poverty and vulnerability: A global perspective. Routledge, Taylor & Francis Group.

Toro, F., Lange, C., & Saavedra, V. (Eds.). (2021). Habitar Digno y Nueva Constitución. LOM.

UNDP (Ed.). (2017). Desiguales: Orígenes, cambios y desafíos de la brecha social en Chile. Programa de las Naciones Unidas para el Desarrollo.

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Action research in policy analysis: the case of political ecological research on the transition from energy to sustainable renovation and construction of buildings in Slovenia

Abstract: The aim of this paper is to show the potential of action research in the field of policy analysis and policy design through the example of a political ecological study entitled "Analysis of the barriers of different target groups in decision-making processes related to the sustainable renovation of buildings". The action research method has so far been used in Slovenia mainly in the pedagogical field, but it has not yet been recognised in policy analysis, except in a few cases, as a way of designing policies that go beyond problem-solving in the direction of designing development-oriented policies. In line with its purpose, the argumentative arc of the paper is broad, ranging from the nesting of the design of the new policy in different environmental discourses, a brief presentation of the starting points of action research, a demonstration of a method of data analysis grounded in critical discursive studies, and an outline of the concept of the communicative space, which constitutes a key element of the design of the consultation process. The latter

extends the involvement of potential stakeholders from the spheres of politics, industry, business and the public in the shaping of the building renovation policy, and provides a continuum for reflexivity and the re-politicisation of the policy, polity and politics. The paper concludes with the outline of the structural problem of environmental policy and a brief description of the modification of the third step of action research with a focus on the design of the consultative process.

Introduction

While it would be hard to argue against the argument that we as a society have reached a consensus on climate change, more disagreement remains on the question of how we should tackle it; whether we should focus on solving individual problems or design a concept of development to prevent these problems from arising in the first place; is climate change an issue for the natural sciences or the social sciences; should different disciplines divide the problem between them or should they work together inter- or trans-disciplinarily; what solutions are possible within the existing socio-ecological order; and how do we understand the existing social order at all? Several different environmental discourses are actively in use at the same time, and it can be shown that some are the logical consequence of the previous ones, while others enter the established paths of problem solving from more or less radical reflections and understandings of the socio-ecological crisis.

One of the environmental discourses that has framed environmental policy in the Global North since the 1990s is that of sustainable development. The Bruntland Report's general but often quoted definition of sustainable development states that "humanity has the capacity to create sustainable development, that is, to ensure that the needs of the present are met without

compromising the ability of future generations to meet their own needs" (Dryzek, 2018, p. 176; Elliot, 2013, p. 20; Klarin, 2018, p. 71). It does not only emphasise the economic dimension of development, but also focuses on intra- and inter-generational equity (Dryzek, p. 177). The mention of the economic dimension in the first place is not accidental; the discourse of sustainable development recognises ecological constraints, but at the same time it is based on the assumption that the right policies can allow economic growth to continue unrestricted (Dryzek, 2018).

Sustainable development is not the only discourse currently practised by actors in environmental policies. It is also worth mentioning administrative rationalism, democratic pragmatism and economic rationalism, which, although they are not developmental concepts in the way they understand environmental problems and define solutions on this basis, function as operationalisations of sustainable development and ecological modernisation discourse, which builds on the former in its more reflexive variants. For when particular discourses, understood as semantic representations and systems related to political practices and power, are enacted through the everyday practices of actors, they enter into institutional organisation (polity), into existing understandings of how latent social conflict should be resolved through public action (policy), and into the very way in which we, as a society, coordinate the spaces of encounter between different relations of power (politics).

Environmental problems are interconnected and occur at multiple levels; we can say that they are complex, referring to the many and varied elements and interactions in the decision-making system environment (Dryzek, 2018, p. 19). At the same time, ecosystems are also complex, and despite centuries of scientific study, our knowledge of them is limited. Environmental problems are therefore characterised by a double complexity, ecosystemic on the one hand and social on the other. From this perspective, the field of building construction and renovation does not deviate from the established mainstream of government action when faced with environmental policy-making.

Alongside energy, transport and agriculture, the construction and renovation of buildings is a key area where European and national environmental policies are working to reduce greenhouse gas emissions. Since 2004, when the Republic of Slovenia joined the European Union, the concepts of building construction and renovation at national level have changed in line with the programming periods at EU level. In the current programming period, Slovenia is undergoing a transition from the concept of energy renovation of buildings, where primary energy savings are of primary importance, to the concept of sustainable renovation of buildings, where, in addition to primary energy savings, the energy inputs generated during the construction of the building are included, plus the energy used for the maintenance and use of the building, and the energy that will be consumed in the decommissioning of the building when it reaches the end of its lifecycle. In addition to the energy and performance aspects, the concept of sustainable building renovation an construction also takes into account the acoustic, thermal and light aspects of the quality of life; the economic aspect is therefore complemented by the broader environmental and social aspects, thus placing the concept of building renovation and construction in the context of sustainable development.

Over the different programming periods, actors have developed a specific polity, an institutional network, to enable the implementation of environmental policies in line with the objectives set. The concept of energy renovation and building construction therefore required, as a starting point, that the state apparatus be organised in a way that would allow the most efficient implementation of the policy. In doing so, the actors drew on past experience and the historical development of the state apparatus that had been set up to design and implement policy in other areas of state jurisdiction. However, in the transition to the new concept of renovation and construction of buildings, it has become clear that the institutional network and the way policies have been designed so far no longer fit the complexity of the concept of sustainable renovation and construction of buildings. The implementation deficit, as the tip of the iceberg, has stimulated the

previously perceived need for reflection on the communication, decision-making and implementation processes related to the implementation of building renovation.

The development and establishment of a new concept of sustainable building renovation and construction can be placed within the broader process of sustainability transitions that policy makers are embedding in visions and development strategies, based on national and supranational commitments. Sustainability transitions are long-term oriented, aiming to build more sustainable societies in a way that respects the essential interconnectedness between people and other living and non-living entities, and that recognises the associated uncertainties in knowledge, value pluralism and unequal power relations (Bartels and Wittmayer, 2020, p. 1).

In line with the purpose of the study, which is situated in the transition to a sustainable concept of building renovation and construction, the research team was placed in a position where it was necessary to design the research plan in a way that would not only contribute static data to the process as a starting point for further action, but would be dynamically embedded in the process; the research team is thus no longer an external observer, but a nested actor in the process of co-creating a new concept. The research team used an action research methodology to analyse the process of designing and implementing the new concept of building renovation and construction. By combining qualitative and quantitative research methods, the latter on the one hand allows the researchers to avoid quantifying the data in the subsequent steps of the analysis at the expense of gaining insight into the mindsets of the interviewed actors, and on the other hand, this methodology allows for a traceable and transparent coding of the data.

The research team's method of analysis draws on the tradition of critical discourse studies. The latter, by looking at the fragmentary, incoherent and non-linear nature of statements, bring us to the structural level of the discourses within which actors and institutions operate in a given situation. Discourses, as stunning collections of assertions, concerns and practices, provide insight

into the coherent mental structures in which the individual views, perceptions and, ultimately, rationality of each actor and institution are nested. In order to unpack the relationship between structure and agency, the research team drew on Margaret Archer's concept of the morphogenetic cycle, which pioneered the methodological distinction between structure, agency and culture, the material and the ideational (Archer, 1995, pp. 165-170; Lukšič, 2009, p. 21; Marsh and Stoker, 2010, p. 216). The methodological model has enabled an understanding of the relationships between mental representations, social structures and action, which are mutually conditional. The methodological approach is grounded in critical theory, which interrogates modern social and political life through the method of immanent critique (Eckersley, 2019, p. 21; Harvey, 1990). This interrogates social reality from its own starting point, while simultaneously critiquing this starting point from the perspective of historical context. It enters its object (of inquiry) and "fork from the inside out" (Harvey, 1990, p. 5).

In the first part of the paper, space is dedicated to a brief exposition of environmental discourses as practices in which the process of policy-making is nested, which concludes by situating the study in the transition to sustainability in the field of building construction and renovation, and describing the purpose of the study. In the second part, we give an introduction to the application of action research methodology in policy analysis, followed by an outline of three concepts – the policy arena, the communicative space and the discursive coalition – which introduce us to a rethinking of the aim of the study, namely the establishment of a new communicative form in support of the transition from energy to sustainability in the renovation and construction of buildings. Before discussing the method and outlining the process of data analysis, we mention the concept of storylines, which opens up a space for understanding the framing of the problem as always inter-discursive. The section on the method of data analysis describes the different phases of the analysis, extending the description of the third phase to shed light on the priority areas of the study. This is followed by a conclusion, which shows

that the design of environmental measures in the specific case has a characteristic of a problem on the level of structure that can be addressed by creating a new communication space.

The nestedness of the action approach in policy analysis – environmental discourses

As the effects of climate change are becoming increasingly visible in the everyday life of the so-called Developed North, there is a growing awareness that we as a society have so far taken a weak and short-sighted approach to tackling environmental and ecological problems. States, as guardians of the international order (Eckersley, 2019), are not using their apparatus to define and address environmental problems in ways that intervene at the structural level, thereby failing to address the very causes of these problems. Environmental policies and the measures and actions that result from them can be said to be framed by a discourse of problem-solving, but they lack a reflexive moment. The It is only the latter that makes it possible to conceive socio-ecological developments for regulation of environmental and ecological problems in a way that will, in the long term, improve the quality of being of human and non-human nature.

The development of environmental policies has a long history: when environmental issues came to the fore in the 1960s with the emergence of environmental problems and thus acquired the status of a political issue, the formulation of environmental policies established itself as the dominant form of regulation of social conflicts in modern societies (Hajer, 2020, p. 34). The way in which these problems were solved could be linked to the tradition of public policy, which emphasises the role of experts and expertise in administrative structures in the regulation of latent social conflicts (Dryzek, 2018, p. 92). While this privileges hierarchical relations over equality or competition (ibid.), it has at the same time allowed actors and institutions operating within this mental form to establish a relatively effective system of regulation of environmental problems.

Within the group of problem-solving environmental discourses, there are different conceptions of how to regulate environmental problems that require the coordination of multiple actors (Dryzek, 2018, p. 90). Administrative rationalism as an environmental discourse that frames the dominant responses of government actors to the emergence of environmental crises (Dryzek, 2018, p. 92) emphasises the role of experts in solving societal problems. These represent scientific and technical expertise organised in bureaucratic hierarchies and driven by the public interest (Dryzek, 2018, p. 110). The concept is grounded in the work of the German sociologist Max Weber, who developed the thesis that bureaucracy is the highest rational form of social organisation, based on the assumption that increasingly complex social and economic problems can be dealt with by breaking them down into smaller sets and sub-sets. Individuals or groups then work on each strand to develop a solution. This is done by the top of the organisational hierarchy, both in the case od setting the public interest and in administrating the fragmentation of the problem and bringing separate elements together to form a solution for a specofic complex problem (ibid.). But, as Dryzek (2018, p. 113) argues, complex problems resist the centralisation assumed by adminstrative rationalism; relevant knowledge is scattered and fragmented, and at the same time no one can know enough to make confident decisions about matters.

The other two concepts of reconciling orientations are captured in the discourse of democratic pragmatism and economic rationalism. We mention them here mainly because the mechanisms they offer open up space for the entry of the concepts of sustainable development and ecological modernisation. Democratic pragmatism, as a mental form, broadens the notion of who all can participate in the process of policy-making. The democratisation of environmental administration attempts to respond to the diminished effectiveness of administrative efforts by engaging the public, which is organised differently in liberal-democratic societies, through various tools such as public consultation, alternative dispute resolution, public policy dialogue, grassroots citizen consultation, public opinion surveys and

right-to-know legislation (Dryzek, 2018). The main reason for this democratisation through the involvement of the wider public is to ensure legitimacy (Dryzek, 2018, p. 122), with the main limitation of this approach being the existence of political power (Dryzek, 2018, p. 143). Actors whose actions are framed by economic rationalism, as an alternative modality of responding to the shortcomings of administrative rationalism, offer solutions to environmental problems in the context of the development of market-based mechanisms that will help society to achieve its public goals. It is about the development of market-type policy tools, which in their broadest form are about the conversion of environmental resources into private property, and – in a more moderate variant – about market-based incentives, which include tradable pollution allowances, emissions trading and green taxes (Dryzek, 2018, pp. 147-160).

If we add to the efforts to improve the management of environmental problems considerations on how to link ecological protection and economic growth with intergenerational justice at local and global levels, we arrive at a nodal discourse, what some call sustainable development (Fairclough, 2006, p. 39, in Dryzek, 2018, p. 27). It is essentially framed by considerations of how to resolve the conflict between environmental and economic values, which seek to redefine the concepts of growth and development (ibid.). The most commonly cited definition of sustainable development is Bruntland's, which states that "humanity is capable of creating sustainable development, that is, of ensuring that the needs of the present are met without compromising the ability of future generations to meet their own needs" (World Commission on the Environment and Spatial Planning, 1987, p. 8, in Dryzek 2018, p. 176). It consists of three pillars: economic, environmental and social. There is no broad consensus on the definition of the discourse of sustainable development; definitions abound both because of analysts demanding conceptual precision and because of different interests trying to occupy a piece of the territory (Dryzek, 2018, p. 178).

In the context of the transition from energy to the sustainable renovation of buildings, what is important for the new

concept of renovation and construction of buildings is the fact that sustainable development exists as a dominant, or rather hegemonic discourse that national governments are embedding in their environmental policies. The key to the formulation of a policy is operationalisation, i.e. the journey we have to make to move from concept to action. Here we move to the discourse of ecological modernisation, in which actors orient their actions around the idea of sustainability. In its weak version, ecological modernisation is characterised by the intention to restructure the capitalist political economy in such a way that it can also be defended ecologically (Dryzek, 2018, p. 174). In weak ecological modernisation, the emphasis in the regulation of environmental problems is on technological solutions, on a technocratic style of policy-making, and on solutions in the developed countries, which are able to maintain their economic advantages through this approach (Dryzek, 2018, p. 208). In its stronger version, actors are already engaged in broad changes to the social institutional structure and the economic system, in particular to make it more responsive to ecological concerns; to open, democratic decision-making; and to the international dimensions of environment and development (Dryzek, 2018, pp. 208-9).

Reflexive ecological modernisation as a third option is one that offers a stepping stone in the transitions to sustainability, a step forward in the regulation of environmental problems. It expands the weak and strong variants of ecological modernisation on several levels. At the polity level, it envisages the development of a new set of interconnected democratic institutions, in which experts lose their privileges, and science is expected to be renewed in such a way that research fundamentally takes into account and addresses public concerns, empowering citizens to make their own judgements on technical solutions. At the same time, the notion of reflexivity also refers to the level of policy, which presupposes the necessary consensual and interventionist style of policy-making that is tied to corporatism (Lukšič et al, 2022, p. 58). At the level of concepts, reflexivity means that, in new communicative forms, actors collectively reflect and critically question established com-

mon-sense understandings of regional and national development, rethink the priorities that have found their place in strategic documents and thus approaches to defining the environmental problem. From this perspective, policies are not only designed to solve problems, but problems must also be designed in such a way that they are capable of creating policies (Hajer, 2020, p. 26).

The transition from problem-solving to reflexive development considerations can also be observed in the formulation of environmental policies in the field of building construction and renovation. The dominant concept so far is the energy renovation of buildings, which basically takes into account the energy consumption of buildings after construction or, in the case of renovation, the energy savings resulting from the renovation of the building. The concept of sustainable renovation and construction brings indicators to the environmental policy in the field of construction and renovation that extend energy consumption to greenhouse gas emissions over the life cycle of the building (1), resource efficiency and circular life cycle of materials (2), efficient use of water resources (3), healthy and comfortable living and working spaces (4), resilience and adaptability to climate change (5), and optimisation of life cycle costs and value (6). (Sustainable Building Indicators, n.d.) Sustainable Building Indicators are the operational component of the concept of sustainability in building construction. Through this concept, buildings are understood as spaces of quality living (where quality is not only measured in terms of energy consumption), which are placed in sustainable neighbourhoods, which are in turn nested in the overall sustainable development of regions. In this way, the concept of sustainable construction and renovation implies designing and guiding development that, in addition to the ecological and environmental segments, also includes spatial, cultural, social, energy and political aspects, and the related development of economic models that facilitate such a way of living (Lukšič et al., 2020).

The subject of the action research, which dealt with the process of designing an environmental policy that will frame the sustainable renovation and construction of buildings, included,

in addition to the individual phases of the policy design process, a reflection on the level of the different mentalities of the actors involved in the process of designing the concept of sustainable renovation and construction. The individual, interrelated phases of policy development include agenda setting, policy formulation, policy adoption, policy implementation and policy evaluation (Dunn, 2018, 8-9). Classical policy analysis is thus concerned with the policy process itself, leaving out of the analysis the policy architecture that creates the space of the political, and politics as a process of coordinating orientations. In order to unpack the mental forms that frame decision-making and condition decision-making and expert rationality, it was necessary to reconstruct the different perceptions of actors on how they understand sustainable renovation and construction and how they see the different phases of the environmental policy-making process.

Action research in policy analysis

In order to address the increasing complexity of societies, the structural inability of public organisations to deal effectively with this complexity and the deterioration of the worldviews that underpin both increasing complexity and the way public organisations deal with it (Bartels and Wittmayer, 2020, p. 2), the study relied on an action research methodology. The latter allowed us to involve and connect researchers and other actors in the process of policy-making, with the aim of producing scientifically and socially relevant knowledge (ibid.) and transformative action in a collaborative way. Action research is both critical and relational in that it allows for a productive addressing of contemporary social problems. A key argument put forward by Bartels and Wittmayer (2020, p. 2) is that in order to productively address these problems, we need to negotiate the starting point of the research process, engage in multiple roles and relations, address hegemonic structures, cultures and practices, and evaluate reflexivity, impact and change as a result of an action research approach to the process of policy-making. Policy analysis thus seeks to critically interpret the process of sen-

se-making, argumentation and negotiation through which polisi actors address public problems (ibid.).

The existing networks of institutions and their interconnectedness, which constitute the policy arena as the space in which the policy-making process takes place, are highly complex; they involve a large number of relatively independent individuals, organisations and communities. These different and diverse groups and communities have different interests, values and practices (Keller and Heatwole, 1976, in Bartels and Wittmayer, 2022, p. 2). Policy systems are thus characterised by the sharing of power, responsibility and respect among the different actors involved, implying a relational conception of knowledge, i.e. knowledge understood as the product of interaction between competing perspectives, in which the policy analyst does not have a privileged position from which to define problems (Fischer, 2007, p. 103).

Action research does not comprise a single approach or methodology, but is a diverse family of interconnected processes that build on a variety of methods and tools (Dick, 2015, p. 15). They share three key elements – action, research and participation (Reason and Bradbury, 2001), which are grounded in the principles of criticality and relationality. Action refers to the joint action of researchers and participants who, by engaging in understandings and practices, develop a 'theory of action' about what should be done and what will (not) work. Research implies an emergent and circular process of collaborative inquiry, action and reflection that generates understanding of the specific problem and possible changes. This involves both reflecting on and transforming taken-for-granted assumptions, practices and relations, as well as collaboratively adapting research design and methods to the needs of a specific situation (Bartels and Wittmayer, 2020, p. 5). The third element, participation, is the ontologically given and ethical norm of the action research process and its effects. Everyone who participates in particular situations or more broadly in the system should be involved in and committed to authentic and empowering participation (ibid.).

On policy arenas, communication space and discursive coalitions

Three distinct but interrelated concepts of the policy arena, the communicative space and the discursive coalition are important in engaging and participating in the policy-making process. The concept of the policy arena refers to a space of political action in which social issues are politically thematised and thus become the subject of politics. This space of political action is characterised by the process of formulating policy problems, the process of policy decision-making and the process of realising the policy decision (Lukšič et al., 2020, pp. 46-47). The concept thus basically combines two notions: the first, which encapsulates certain functional problem sets of social reproduction (policy), and the second, which systematically varies according to the institutional form of politics and political processes (politics) (Lukšič et al., 2020, p. 46). The concept of policy arena was developed by Kitschelt (1980), who built it on the basis of Theodore Lowen's (2007) concept of arenas of power. The latter first defines policy fields – distributive, regulative and redistributive – as the basis for policy arenas. Based on these, he then develops the concept of arenas of power, which are formed around a particular policy (Lowen and Nicholson, 2007, pp. 53-54). The starting point of the policy arena typology is represented by seven functional problem sets that address different levels of relations and relationships, ideological and integrating practices, the establishment of the basic conditions for market exchange – structural policies, social investment policies and infrastructure policies, and the relationship between politics and economics (Lukšič et al. 2020, pp. 47-48).

If the policy architecture is set up properly, communication, decision-making and implementation processes can flow through without larger rifts. However, when the constitution of a new policy problem leads to a change of interests within the policy arena, and thus to the need for a new rebalancing of power relations, systemic conflicts arise within the existing policy arena. The interests that

the new concepts bring with them can no longer be interpreted within the old system, but have to be placed within a new systemic framework, a new policy network. If the processes of problem formulation and political decision-making are still somehow working, they break down in the realisation or implementation of the political decision. The new policy network leads us to consider a new institutional arrangement; this is needed to ensure that the state, as the most powerful mechanism for guiding social development, is sufficiently equipped with more effective mechanisms for both designing and implementing more environmentally sensitive policies (Lukšič et al., 2020, p. 59). New communication spaces need to be created in order to develop and foster communication capacity between public officials, citizens and policy makers (Henderson and Bynner, 2020, pp. 93-94). Communication capacity represents the need to have a deeper understanding of the situation and context, to work with the substantive issues involved, and to maintain and sustain productive working relationships (ibid.). Escobar (2017) highlights the complex participatory and political roles of public servants as they network across organisational cultures and boundaries (Escobar, 2017 in Henderson and Bynner, 2020, p. 94). The new communication space is thus not only about achieving policy goals, but also about democratic and social change for a better society in the future (Henderson and Bynner, 2020, p. 96).

An important part of action research is therefore the creation of a space/dialogue that includes representatives from different organisations and institutions. A communication space (Kemmis, 2001, in Hockley, Froggatt and Heimerl, 2013, p. 17) helps to disperse the often-powerful managerial voice, allowing the individual voices of actors to be heard; it fosters mutual understanding and consensus-building on how to take policy-making processes forward (ibid.). The formation of the communication space is therefore embodied in networks of real people. Communicative space is constituted when actors open up issues or problems for discussion, and when participants experience interaction with others as one that fosters the democratic expression of diverse views (Kemmis, 2001, p. 100, in Wicks and Reason, 2009, p. 244).

Just as liminal spaces in natural ecologies offer specialised niches, so too do communicative spaces offer new possibilities for new forms of relationships, different from those rooted in the system or the existing lifeworld (ibid., p. 258).

In order to make the communication space as inclusive as possible, we need to broaden our epistemological horizons and include different forms of knowledge. While insights into different forms of knowledge in this context are rooted in participatory research theory, which is fundamentally concerned with the inclusion of communities or those directly affected, they nevertheless significantly broaden our understanding of the potentially diverse knowledges that enter the communication space. Forms of knowledges thus include representational, relational and reflexive knowledge in addition to the 'objective', understood here as the result of research efforts based on the classic natural sciences (Park, 2001, p. 82). The functional subtype of representational knowledge explains relationships between variables in functional and correlational terms. These relations are represented in general propositions that allow the establishment of a logical structure and thus a deductive, nomological explanation is possible. The interpretative subtype of representational knowledge manifests itself as understanding meaning. This means that we have to take into account the background, intentions and emotions involved in understanding human relations and the texts, events and other artefacts of human creation. The object of knowledge, which is supposed to be already known, is re-described in the process of interpretation, thereby producing a new understanding (Park, 2001, p. 83). Relational knowledge both emerges from and leads to further integration. It is not fundamentally based on the formation of descriptions or facts, but on the construction of the relationship itself. It grows out of a commitment on the part of all parties involved to maintain their relationship, whatever the material conditions. Reflexive knowledge is rooted in a critical theoretical tradition that argues that human behaviour must not only understand the world, but also change it. It must be simultaneously normative and action-oriented, descriptive and

explanatory. Reflexive knowledge involves the actors themselves in critically analysing and evaluating issues, and is also the product of group deliberation, in which the parties involved present arguments for or against something, an understanding of a specific problem, or a course of action to be taken (Park, 2001, p. 86).

With the concept of the policy arena we have shown the interconnection between institutional arrangements or specific policy architecture, with the concept of the communicative space we have shown the possibility that a new network of actors can be formed when interests change within the existing institutional arrangements, and with the concept of discursive coalitions we have entered into the heart of the question, namely, how to create a storyline that will be used for the creation of solutions, now that we have created a new communicative space for the purpose of the construction of the policy problem. Discursive coalitions can be defined as a collection of a set of storylines (1), the actors who enunciate these storylines (2), and the practices that underlie discursive activity (3) (Hajer, 2020, p. 83). Storylines are narratives about social reality that are produced by combining elements from different domains and that provide actors with a set of symbolic referents that suggest a shared understanding to the actors (Hajer, 2020, p. 80). It is worth pointing out that discursive coalitions are different from traditional political coalitions or alliances. The former focus on storylines rather than interests, and storylines can change the actors' previous understanding. Second, Hajer (2020, p. 84) continues, discursive coalitions expand the space in which actors are located – new activities of actors who produce storylines (scholars, activists, journalists) and new practices within which this happens can be found (Hajer, 2020, p. 84).

When actors contour new storylines, they are, at least at the conceptual level, already enclosing the problem. The level of discursive problem closure, as the third task of social conflict regulation, is supposed to eliminate a situation that has been perceived as problematic (Hajer, 2020, p. 34). Discursive problem closure gives researchers insight into which aspects of the problem have been included and which excluded. The problem closure analysis

thus shows whether the regulatory strategy helped to achieve a particular environmental goal (ibid.).

On the methodology of data analysis

In the political ecological study "Analysis of the barriers of different target groups in decision-making processes related to the sustainable renovation of buildings", the research team developed methodology of data analysis based on critical discursive studies in order to uncover the storylines that enable the reproduction and/or transformation of specific discursive practices. The latter, by looking at the fragmentary, incoherent and non-linear nature of statements, brings us to the structural level of discourses within which actors and institutions operate in a given situation. Discourses, as a specific set of ideas, concepts and categorisations that are produced and reproduced in a specific set of practices and through which physical and social realities are given meaning, provide insight into the coherent mental structures in which the individual views, perceptions and ultimately the rationality of each actor and institution are nested (Hajer. 2020, p. 78; Dryzek, 2018; Lukšič et al. 2020; Ruth and Wodak, 2016). The method can thus shed light on the social and cognitive underpinnings of the way in which problems are constituted (Hajer, 2020, p. 25).

The main material for the analysis consisted of 40 interviews conducted by the research team with actors that were involved in implementation of energy renovation as well as in conceptualisation of sustainable building renovation sustainable building renovation. After the interviews were transcribed, they were anonymised, codified and systematised according to the themes in the preparation and implementation of the analysis. At the same time, the interviews were classified according to the typology of actors – the sphere of expertise, the sphere of political actors, the sphere of financial institutions, the economic sphere and the public sphere.

The first stage of the analysis involved a review of the interview transcripts and a substantive codification of the text. As part of the annotation process, the content of each interview was detected and identified through traceable and consistent content

categories. These include, for example, the different practices used by actors in their work, barriers in different areas and at different levels, ideas and suggestions for changes to existing practices, and reflection on collaboration between actors and between institutions (Lukšič et al., 2020, p. 74).

18. VEČ KOT ZGOLJ ENERGETSKA PRENOVA

1: Ja, vzporedno smo priča funkcionalni prenovi. Domovi za starejše se prenavljajo, recimo, ne smemo energetsko, ampak tako, da tudi zmanjšamo število postelj v sobi, ker so dolžni to delati, potem to izkoristijo, da to delajo hkrati. Ali pa delajo zraven balkone na sobo skratka, še druge posodobitve. Vem za tole, Vrhovci so tak primer. Tudi OŠ hkrati naredijo še kaj drugega, ampak z drugimi sredstvi.

2: *Na nek način, ko gre za prenovo konkretne stavbe, je energetski vir vezan na vaša finančna sredstva, druge pa na druge vire...*

1: Ja, tako; je pa mogoče, da ta sredstva sofinanciranja, ki so na razpolago, dodajo tisti, puš, da se prenova zgodi, ker vsaj en del se sofinancira...

2: *Koliko pa je pri energetski obnovi državnih stavb. A je 100 % financirano, ker pri Eko skladu, ko gre za prenovo..*

1: Ne, vse je omejeno na max. 40 upravičenih stroškov.

2: *Gre torej za to, da se subvencionira 40 %, 60 % mora pa država sama?*

19. NIŽANJE STOPNJE SOFINANCIRANJA

1: ... pa še recimo DDV razen vseh neupravičenih stroškov, kora pač nositi tisti, ki je lastnik, investitor. Če je to državna stavba, gre iz integralnih sredstev proračuna, če gre za občinsko, pa iz njihovega proračuna. S to dolgoročno strategijo, ki je bila pripravljena, je bila podana usmeritev, da se gre v ta zvišanja leverage v primerjavi s prejšnjim obdobjem, ko je bilo to sofinanciranje blazno razkošno, 90 % in da je to ocenjeno bilo kot, mogoče celo negospodarno.

20. VELIKOST PRIHRANKOV

Glede na to, da tukaj se ustvarjajo prihranki na račun zmanjšane porabe energije in praviloma tudi stroškov vzrdževanja, ki jih smatramo kot prihodke na projektu. Ti prihranki so res kar veliki.

Figure 1: Content codification of transcripts – No 1. and 2. represent the codes.

The focus of the second phase of the analysis was on the identification of broad thematic clusters or metacategories under which the labels from the first phase of the analysis were categorised or grouped. Metacategories represent fragments of a specific discourse and act as figures; they function in a way where they are not necessarily tied to the cognitive dimension of rationali-

1. področje dela - projekti energetske učinkovitosti	1, 2, 38	Področje dela
2. področje dela - energetsko pogodbeništvo	2, 3, 4, 11	Energetsko pogodbeništvo
3. energetsko pogodbeništvo - prednosti	5	Energetsko pogodbeništvo - problemi jamstev prihrankov
4. razlika med pričakovanimi in realnimi prihranki	6, 8, 44	Energetsko pogodbeništvo - problemi povratne dobe
5. ni jamčenja izračunanih prihrankov - prilagajanje, ni odstopanj	7, 10	Energetska sanacija
6. povratna doba - problem	21	Energetska sanacija - razpotreditev tveganj
7. tehnološka in celovita obnova	9	Javno-zasebno partnerstvo - upravičeni stroški
8. povratna doba - problem	12	Stiki med institucijami - podjetja
9. Javno-zasebno partnerstvo - vpr. Upravičenih stroškov	13	Odnosi s politiki
10. obnova objektov - tudi v tercialni dejavnosti	14	Povezovanje - forumi
11. prioriteta - prednosti pri 15. letni pogodbi	15	Nasveti za politiko - izkušnje iz obnove javnega ožjega sektorja
12. stiki z drugimi podjetji	16	Kršenje pogodb
13. stiki s politikami - sedaj urejeno, imajo podporo, to povezovanje je dobrodošlo	17	Vprašanje normativov udobja
14. forumi za povezovanje	18	Energetska sanacija - problemi 100% nepovratnih sredstev
15. učenje iz izkušenj ožjega javnega sektorja	19	Energetska sanacija - problemi normativnega okvira
16. kršenje pogodb - primer normativov glede temperature	20	Energetska sanacija - problemi
17. kdo postavlja pravila udobja	22	Usposabljanje upravnikov stavb
18. problem 100% nepovratnih sredstev - usmerjanje in monitoring	23	Monitoring
19. nepredvidena dodatna dela ob sanaciji - stvar zakonodaje	24, 25, 26, 36, 37	Sodelovanje z zunanjimi strokovnjaki in izvajalci

Figure 2: Example of metacategories for each interview (A – labels from Phase I; C – metacategories; B – clusters of labels under metacategories – label numbers).

ty, but carry a clear image of a specific situation or relationship. Accordingly, the thematic categories can also be referred to as topics, which are always half coded and half projective (Barthes 2019, p. 9). The method allowed for a synthetic overview of the often scattered and fragmented claims and ideas about particular topics in the interviews (Lukšič et al., 2020, p. 74).

In the third phase of the analysis, four priority areas were selected in agreement with the client: concepts, institutions, finance and cooperation between institutions. The first category refers to the concepts that the interviewed actors use to conceptualise the reasoning, planning and action in the fields of building renovation and construction, and the obstacles and difficulties that arise in these conceptualisations. In the next step, the level of concepts was internally segmented into barriers and proposals occurring within a discipline, between disciplines, and between disciplines and policy makers; or, within an institution, between institutions, and between institutions and policy makers, at the level of forming an overarching concept for the sustainable renovation and construction of buildings.

The area of institutions refers to the question of the institutions' mission from the interviewees' point of view, which is not necessarily in line with the formal mission of the institutions themselves. The question of institutions can be observed at the level of the individual institution and its internal organisation, its position within the network of institutions, and in relation to the dominant concept that establishes these relationships as meaningful and necessary. In other words, in relation to the storyline that allows actors to maintain their structural positioning through reproduction and/or transformation.

In the area of finance, the content relates to the issue of financing more broadly and the obstacles and difficulties involved. The area of financing comprises the various financial schemes, mechanisms and instruments that finance and promote the implementation of a particular measure, e.g. enabling different models of sustainable or wider building renovation. On the issue of funding, the levels relate to the funding of concrete measures, the

models of this funding (subsidies, grants, public-private partnerships), the distribution of resources within and between institutions, and then in relation to the various operational concepts, normative acts and subject-matter operators (ibid.).

The content of the fourth area, cooperation between actors, refers to the issue of formal and informal forms of cooperation with different actors and institutions in different contexts (e.g. professional cooperation in the elaboration of normative frameworks, informal communication between municipalities in the elaboration of projects). The area of cooperation between actors has given the research team an insight into the communication dynamics revealing the discursive coalitions within the institutional arrangement.

The fourth stage of the analysis was the preparation of a synthesis review of the identified barriers and actors' proposals. The barriers and proposals were segmented by priority area and by type of institution or actor. The material produced provides a basis for a discursive analysis of both the individual barriers and proposals and the actors' actions themselves. Environmental discourse is fundamentally fragmented and contradictory; it is the result of interaction embedded in practices (Hajer, 2020, p. 25). The latter is also manifested in a way where certain actors advocate certain perceptions of the problem and the corresponding implementation of actions, which are not necessarily feasible within a specific institution or network of institutions and require a change in the way they are organised.

In order to construct the communication space, in the final stage of the analysis, the research team constructed storylines according to barriers (1) and proposals (2) on the basis of a discursive analysis. The research team then developed a set of five storylines according to the typology of actors, i.e. politics, expertise, financial institutions, the economy, and the public. The storylines thus constructed serve to show how the seemingly divergent arguments of the different institutions are in many ways consistent or rooted in a related understanding of the problem; the seeming divergence arises either because of poor communication between the instituti-

ons or because of differences between scientific disciplines, and in the translation of expert inputs into programme documents. This is not to say that there are no differences in the understanding of the problem between institutions; they are always present by the very fact that each institution is dealing with a specific aspect of the same problem. The aim is therefore not to eliminate differences, but to develop a synthetic view of an environmental problem, in this case the transition from energy to sustainable renovation and construction of buildings.

Conclusion

The new concept of the environmental polis is embedded in a political architecture framed by a mental form of administrative rationalism. At the same time, the overarching discourse is sustainable development, which, with its multiplicity of definitions and approaches, offers ample room for manoeuvre to develop approaches to tackling the environmental problem in ways that best suit a wide variety of actors. At the same time, the concept of sustainable construction and renovation in itself presupposes a different kind of organisation and cooperation already at the level of scientific and technical expertise, the fragmentation of which, as a consequence of nested administrative rationalism, clashes with the rigidity of the polity architecture. Operationalisation through the concept of weak ecological modernisation (technological solutions as a priority) with a mixture of democratic pragmatism (involvement of civil society through the possibility of giving an opinion when a specific proposal is on the public agenda) with the tools of economic rationalism (promotion of private capital, lack of state action) produces a Gordian knot between the actors involved. Given that the different discourses as mechanisms for coordinating efforts (Dryzek, 2018, p. 90) are situated in different, sometimes even the same institutions, the combination of the three active environmental discourses leads to an internal structural conflict. Policy decisions thus become contradictory, the situation leads to blockages that result in an implementation deficit. The operationalisation of the concept of sustainable

construction and renovation of buildings requires the development of a new mental form, which will be mapped by the actors involved into a new organisational diagram, a new way of cooperation between institutions and, finally, a new form of communication.

In line with the action research methodology, which is based on a circular, emergent and iterative process of collaborative inquiry, action and reflection to generate understanding and change, the framing of the problem is also gradual. The success of action research is measured by the contribution it makes to improving work in concrete situations, which, in addition to the above-mentioned features, includes the participatory form of the study and the public accessibility to the research results. In the case of this specific study, an intermediate level was added, which is usually carried out by researchers in an individualised way, i.e. the level of reflection. While this level is usually carried out in a way that allows the research participants to reflect on the results given in the report, which then become an integral part of the final report, in the case of the study on the transition from energy to the sustainable renovation of buildings, we have opted for a consultation process.

The design of the consultation process is based on the actors reflecting and discussing together, through 15 workshop-style consultations, the problems, obstacles and proposals identified in the study (1) and, through the process, co-creating a new communication space (2) that will potentially prevent the emergence of certain obstacles and problems in the future and facilitate the implementation of actions. It is worth noting that the category of problems represents the set of problems envisioned in the planning phase, while the category of obstacles represents the set of problems that emerged during the actual implementation of a given action (Cangulheim, 2017). It can be said that the design of the consultative process is aimed at removing the already identified obstacles before they are reached through practice, so that the actors' attention can be focused on solving problems and possible new obstacles, and the development of new proposals as a result of the actors' joint work.

Both the actors involved in the study and those active in the specific policy arena have the opportunity to reflect in the new

communication space on current concepts, the roles of the institutions involved, the relations between them and the financial mechanisms that make implementation possible in this respect. Reflexivity as a concept here has a double meaning, that is, the reflexivity of the actors involved and the reflexivity of the researchers. In fact, a distinction must be made between mental, physical and social space; the space of philosophical-epistemological origin quickly becomes fetishised and mentally envelops the social with the physical (Lefebvre, 2013). Although this kind of space is still generative and the actors within it can produce new ways of understanding and guiding policy mechanisms, researchers and the actors involved may overlook the new set-ups of power relations.

Although actors with different mental forms enter the new communication space on equeal footing, at least in principle, it is important at this point to recognise which actors are coordinating actions with which mental form. In this way, the communication space can turn into an internal space for seeking legitimacy for decisions under the veil of participation and collaboration. There is also the risk that the communication space collapses under the weight of the pursuit of individual political interests and no longer serves its fundamental purpose, i.e. the collective reframing of perceptions of the problem at hand and the ways of acting to solve it.

References

Archer, M. (1995). *Realist social theory: the morphogenetic approach.* Cambridge: Cambridge University Press.

Henderson, J. in Bynner, C. (2020). Cultivating 'sanction and sanctuary' in Scottish collaborative governance: doing relational work to support communicative spaces. V Bartels, K. P. R., in M. Wittmayer, J. (ed.), *Action research in policy analysis: Critical and Relational Approaches to Sustainability Transitions* (pp. 91-111). Routledge.

Bartels, K. P. R. in M. Wittmayer, J. (2020). Action research in policy analysis and transition research. V Bartels, K. P. R., in M. Wittmayer, J. (ed.), *Action research in policy analysis: Critical and Relational Approaches to Sustainability Transitions* (pp. 1-17). Routledge.

Barthes, Roland. (2019). *Fragmenti ljubezenskega diskurza.* Ljubljana: Studia Humanitatis

Cangulheim, Georges. (2017). *Epistemologija in zgodovina znanosti.* Ljubljana: Studia Humanitatis.

Dick, Bob. (2015). Reflections on the Sage encyclopedia of action research and what it says about action research and its methodologies. Action research 13(4): 431-444. DOI: 10.1177/1476750315573593

Dryzek, J. S. (2018). *Politika Zemlje. Okoljski diksurzi.* Ljubljana: IČKZ.

Dunn, William N. (2018). *Public policy analysis.* An integrated approach. New York: Routledge

Eckersley, R. (2019). *Zelena država. Premišljanje demokracije in suverenosti.* Ljubljana: IČKZ.

Elliot, Jennifer A. (2013). An introduction to sustainable development. Fourth edition. Routledge, London in New York

Fischer, Frank. (2007). Policy analysis in critical perspective: the epistemics of discursive practices. *Critical policy studies* 1(1):97-109.

Harvey, D. L. (1990). Introduction. *Sociological perspectives*, 33(1), 1-10.

Hockley, Jo, Froggatt, Katherine in Heimerl, Katharina (ed.). (2013). *Participatory research in palliative care. Actions and reflections.* Oxford: Oxford University Press

Kazalniki trajnostne gradnje. (b.d.) https://kazalnikitrajnostnegradnje.si

Klarin, Tomislav. (2018). The concept of sustainable development: from its beginning to the contemporary issues. *Zagreb international review of economics & business, Vol. 2, No. 1, str 67 – 94.* DOI: 10.2478/zireb-2018-0005

Kitschelt, Herbert. (1980). *Kernenergiepolitik. Arena eines gesellschaftlichen Konflikts.* Campus Verlag: Frankfurt/New York

Lefebvre, Henri. (2013). *Produkcija prostora.* Ljubljana: Studia Humanitatis

Lukšič, A. A. (2009). Konec demokracije? *Teorija in praksa,* 46(5), 537-558. Accessed at: https://www.dlib.si/details/URN:NBN:SI:DOC-Z9WOAEOY/?query=%27contribut or%3dLuk%c5%a1i%c4%8d%2c+Andrej%27&pageSize=25&frelation=Teorija+in +praksa

Lukšič, A., Kranjc, R., Maraž, D., in Vidmar, N. (2020) *Analiza ovir različnih ciljnih skupin pri odločevalskih procesih, povezanih s trajnostno prenov stav – 1. Faza.*

Marsh, D., in Stoker, G. (ed.). (2010). *Theory and methods in political science.* Basingstoke: Palgrave MacMillan.

Park, P. (2001). Knowledge and participatory research. Reason, P., in Bradbury-Huang, H. (ed.), *The SAGE Handbook of Action Research: Participative Inquiry and Practice* (2nd ed.) (pp. 81–90). SAGE Publications Ltd.

Wicks, Patricia Gaya in Reason, Peter. (2009). Initiating action research. Challenges and paradoxes of opening communicative space. *Action research*, 7(3): 243 – 262.

Wodak, R. in Meyer, M. (ed.). (2016). *Methods of Critical Discourse Studies.* Washington DC: Sage Publications.

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