

Clouds May Be Past Farms and Future Rivers.

Reworlding Ecosocial Transitions Through Clouding More-than-human Participatory Design.

Weronika Zuzanna Kozak
Faculty of Architecture and Arts
Universiteit Hasselt
Hasselt, Belgium
weronika.kozak@uhasselt.be

Xinquan Wen*
School of Arts and Communication
Malmö University
Malmö, Sweden
xinquan.wen@mau.se

Liesbeth Anna Huybrechts
Faculty of Architecture and Arts and
Digital Futures Lab
Universiteit Hasselt
Hasselt, Belgium
liesbeth.huybrechts@uhasselt.be

Abstract

This paper starts from a premise that the current polycrisis calls for non-linear and poetic ways of conducting Participatory Design (PD). Hence, it aims to rethink the use of PD within ecosocial transitions through introducing a novel research methodology—clouding. Inspired by the feminist concept of diffraction [1, 11], the two co-authors have developed a clouding methodology through intersecting their research to address the need for PD to simultaneously remain a situated systemic support, while becoming more attuned to the increasingly shifting reality and non-linear temporalities of more-than-humans. Clouding PD would consist of acknowledging entanglements between disparate worlds through multi-directional inquiries that embrace uncertainty and cultivate difference—thus, potentially, it could bring forth obscure actors, hidden knowledge, and activate unapparent human and more-than-human synergies. The paper first outlines potentials lying in adopting clouding, and then attempts to prototype those thoughts, grounding them within a concrete context—Flemish countryside in transition. How could clouds not only represent uncertainties, interweave entanglements, but also illuminate ways for coexisting in peace? The text then morphs into a series of dialogical anecdotes composed of empirical fieldwork material, and, taking inspiration from clouds, explore different meanings they hold, potentialities they reveal, and relationalities they can help build, thus providing insights both for ecosocial transitions and clouding PD.

CCS Concepts

• **Participatory Design;**

Keywords

clouds, diffraction, farming, ecosocial transition

ACM Reference Format:

Weronika Zuzanna Kozak, Xinquan Wen, and Liesbeth Anna Huybrechts. 2026. Clouds May Be Past Farms and Future Rivers.: Reworlding Ecosocial Transitions Through Clouding More-than-human Participatory Design.. In *Participatory Design Conference 2026, Vol. 2: Exploratory Papers and Doctoral*

*There are two first authors, listed in alphabetical order. The third author is a second author.



This work is licensed under a Creative Commons Attribution 4.0 International License. *PDC 2026 Vol. 2, Milan, Italy*

© 2026 Copyright held by the owner/author(s).
ACM ISBN 979-8-4007-2469-5/2026/06
<https://doi.org/10.1145/3789492.3796431>

Colloquium (PDC 2026 Vol. 2), June 15–19, 2026, Milan, Italy. ACM, New York, NY, USA, 7 pages. <https://doi.org/10.1145/3789492.3796431>

1 Prologue

This paper, quite fittingly to its main premise and the character of our fieldworks, emerged through intra-actions. Intra-action, a concept coined by Karen Barad [1], presupposes that entities do not precede their relations, but, rather, emerge together through mutually constitutive entanglements. Instead of predefining a rigid structure or a detailed list of contents, we have decided to trace relationships between thoughts and phenomena we have become part of in our respective PhD trajectories. I (first co-author) have been invited to the world of clouds, nebulous wonderings and poetic observations of my fellow co-author. On the other hand, I (second co-author) have been invited to attune to farming stories oscillating between hope and grief emerging through my co-author's explorations of the Flemish countryside. This paper, therefore, is a form of a correspondence, a transcript of suggestions, dialogues, and sparks that the two authors of this paper have brought out of each other. As such, it became a diffractive reflection on undertaking more-than-human PD within contexts in transition.

2 Reworlding ecosocial transitions

We are two PhD students of the Reworlding network, focusing on developing PD approaches that can help to create a world where many worlds fit [5, 6]—activating synergies between humans and more-than-human worlds they are entangled with. Reworlding project explores the diverse and sometimes conflicting interpretations of ecological issues across actors, communities, and organisations, recognising that these divergences often result in social fragmentation and hinder collective action during ecosocial transitions.

The second co-author's doctoral project asks how design can help people feel belonging with their urban environment by paying attention to the sky and the changing climate. They focus on the idea of "atmospheric belonging"—how people relate to the sky, clouds, and weather as part of their everyday life. The second co-author's research questions ask how design can deepen this sense of belonging, and how including entities like clouds and weather systems can enrich participatory processes.

The first co-author's PhD investigates the effects of ecosocial transitions and growing climate uncertainty. Their main case study is the planned water transition (Water+Land+Schap project) and its possible consequences for farming communities in Flanders, Belgium. They explore the everyday and domestic contexts of

farmers and gather intangible strategies for living within transitions to inform policymaking.

2.1 Situating within more-than-human PD

PD has continually reinvented itself to remain responsive to the worlds it is embedded within. Emerging in 1960s Scandinavia, PD was initially rooted in local contexts, labour empowerment, and the democratisation of technological decision-making with employees [25]. Over time, however, its scope has expanded far beyond its early worker-centric framing to address global societal challenges, diverse scales of participation, and more-than-human entanglements [26]. This contemporary landscape of PD unfolds through four guiding agendas that collectively mark its theoretical and methodological transformation: politicising, diversifying, relationality, and transforming [26].

However, connecting and fulfilling these four agendas may be challenging, not only because the encountered entanglements can prove overwhelming, but also due to the often misplaced notions of what PD should serve. Despite a variety of more non-linear [14] or open-ended frameworks [4] and practices emerging, PD processes are often highly institutionalised—regulated, above all else, by strict timeframes—and end up being quite linear—driven with clear challenges to resolve. The wish to fulfil those goals before the end of the project can sometimes exclude open-ended experiments, unexpected outcomes or unconventional methods to emerge. Diffraction, rethinking knowledge production and meaning making, which we use here both as a metaphor and a theoretical methodology, could be a useful framework in such a reimagination of PD and transformation processes, as it points towards generative entanglement, embraces uncertainty, multi-directional inquiry, and the creative value of difference [1].

It seems that PD has to, simultaneously, be a situated and reliable support within systemic transformations, while also become afloat, to be able to accommodate the more fluid needs of more-than-human temporalities and realities. There is, therefore, the need for both grounding and aerating PD. Rather than making a case for diffracting PD, which might not be accessible to a wider audience, we think that learning from an entity that is both tangible and adrift, accessible even if remote, could be more enlightening. Clouds are diffractive entities—firmly rooted in the everyday routines, while inspiring a poetic reading of our domestic environments. Thus, in this paper, we would like to propose an approach to better attune PD to the fluid and shapeshifting nature of current eco-social challenges and that might be useful within transitions—clouding.

2.2 Transforming with and through clouds

Clouding, despite being heavily influenced by diffraction, emerges directly from the intersections of the methods both co-authors use in their disparate PhD works as well. However dissimilar at first glance, both studies and methods foreground receptivity, discern often intangible entanglements, as well as radically rethink current relationships to ecosystems and microclimates. The first co-author undertakes fluid ethnography, inspired by domestic ethnography, which discusses broader geopolitical issues such as migration through investigating home environments [3]. The farms the co-author visits are in potential or ongoing transition. Rather

than looking at merely the apparent domestic elements or physical traces of water, fluid ethnography looks for possible futures, hidden resilience strategies, and points of fluidity and leakiness. Gathering obscure details and neglected insights, observing through metaphors, and embracing unpredictability, can be seen as aligned with clouding—a methodological approach investigating sites, matters, and temporalities by staying with uncertainty and constant metamorphosis. The second co-author set out to foster deeper human-world relationships and create moments of togetherness by observing, sharing, and imagining their relationships with the atmosphere through cloudwalks. Cloudwalk can be seen as another situated way of practising clouding. In cloudwalks, participants walk together and attune to atmospheric conditions in situ. As such, it is an approach that blends scientific knowledge, personal stories, and embodied experiences to support inclusion and multi-species participation by engaging people with the sky, clouds, and weather as part of climate conversations. While anyone can adapt the basic structure of a cloudwalk—choosing a route in a park, nature reserve, or playground, inviting participants to notice clouds, wind, light and to speak in their own words—facilitating longer-term cloudwalk series draws on embodied learning accumulated through practise in reading subtle atmospheric shifts and group dynamics. Clouding draws inspiration from both these approaches and develops them beyond fieldwork into a research methodology and writing method, as will be explained below.

Thus, the two authors gather insights through rather experimental methodologies and allow data to emerge through intra-actions during moments of relationality. We use soft approaches, which emphasise sensitivity and unexpected experiences, standing in contrast to knowledge-driven mainstream ecological participation. We allow ourselves to be temporarily lost, decode meanings, or take multiple directions. As such, we both follow clouds.

Clouds are essential yet also hardly perceptible part of hydrological cycles and microclimates. Due to evaporation and transpiration, clouds could be previous forests, lakes, and ocean. Due to precipitation, clouds might be future grass, seas, and floods. The continuous material metamorphosis resulting from the deep entanglement with the shifting atmospheric environment makes them hard to trace [9]. However, taking the disorientation they foster as an inspiration [20], rather than a trigger for further complexification of PD process, makes them valuable insights in dealing with volatility and transition. Helpful in this is also tracing the etymology of the word *cloud*, which derives from Latin *nebulus* [21], the origin for, among others, words like nuance, phantom, and multitude. Clouds, acting as metaphors, reveal affinities and nuance, draw attention to temporary relationships, as well as the often forgotten elements of cycles and systems. They inspire thinking in relation, rather than against, pointing to the possibility of coexistence.

Attuning to clouds can be of great relevance in muddy and conflicted contexts, where the urgency for balance is paired with the need for deciphering complexity and heterogeneity of perspectives. However, as mentioned above, while there is a pressing need to nuance PD, it has to, simultaneously, remain a grounded and situated process. Thus, in order to explore the potentials of applying a cloud-like approach to PD towards peace-making to, simultaneously, formulate concrete reflections and dive into the possibilities

for dissolving the linearity of transition processes, we have decided to follow Flemish clouds hovering above farmlands.

3 Clouding PD within ecosocial transitions

Farming emerges as the most suitable environment to explore the possibilities of a cloud-like PD within transition processes. Conventional and industrial farming is faced with the increasing pressure to shift towards sustainable practices such as agroecology throughout the whole European Union [8], yet, specifically within the Flemish context [7], this is still facing dire challenges, as it is often conceived with little support from governing bodies. The dominant narrative, focused mostly on the need for action, not only portrays farmers as unwilling to change, but also neglects or fails to notice their quite intrinsic ability of finding balance between being rooted and afloat [30]. All farmers are naturally attuned to the unexpected, unknown, unpredictable, and emotional, and deal with it in their own ways. Their knowledge of navigating volatility could provide illuminating insights to tackling ecosocial transitions, yet it remains largely hidden, and inaccessible, as it is often not even recognised as special by farmers themselves [16]. Thus, in order to uncover it, one has to look closely for moments of porosity and leakiness—decode metaphors, float aimlessly or in multiple directions, and follow various pathways and tracks of thoughts. As such, a cloud-like methodology—a more fluid approach, shapeshifting, attuned to analogies, affinities and correspondences—is needed.

Transforming with clouds in connection to ecosocial transitions and PD can have a twofold relevance—on the one hand, it can aid in retracing, reconnecting, and reimagining ways of relating to environments; on the other hand, it can provide a stimulus to rethink PD within transition processes. Attuning to clouds can reveal points of porosity and leakiness, hidden knowledge and phantoms, multiple perspectives and forgotten alliances [31]. Following them could allow researchers to acknowledge the often unnoticed entanglements and rethink binaries—between water and land, air and soil, or nature and culture. Learning from clouds can be a way to stay with the trouble and approach PD in poetic and non-normative ways—get productively lost in multi-directional inquiries, confused with multiple horizons, and adrift in the unknown [20]. As clouds remind us, (re)worlding occurs more often through misunderstandings rather than fixing meanings [31]. At times, imperfect translations or differences in opinions cultivate understanding more deeply—an important lesson for PD, drawing attention to the value of staying with uncertainty. Within ecosocial transitions, researchers need to find comfort in the unknown, rather than trying to diminish it by providing stability at all costs—to not always create, but find or restore balance, time and again [18]. This points to PD as an evolving process, leading to a series of fragile equilibria rather than a fixed peace. While this reflection might prove discouraging, it not only calls for more empathy and receptivity, but also seems a far more attuned an approach to the temporality of the Anthropocene—a constantly shapeshifting and messy reality in need of (re)negotiation.

3.1 Four weather phenomena

Since adopting a cloud-like thinking within PD and transition processes consists of decoding metaphors—looking for fluidity and

embracing poetic ways of being—we have decided to cloud our writing, as well, and code our thoughts into weather phenomena. Thus, the text is structured into four main parts taking cues from specific weather phenomena emerging through cloud formations—cumulus clouds, rain clouds, an overcast sky, and contrails. The decision to provide a framework for the text based on weather phenomena was twofold. Firstly, clouds are apt metaphors to think about transitions; secondly, to emphasise that what happens in our fieldworks—whether it is a cloudwalk or a farm visit—is always an intra-action of humans, more-than-humans, and climate. Thus, farm visits are interspersed with cloudwalk observations; clouds form kinships, collide, fall as rain, become one with the soil, apples, cherries, and grapes, and evaporate again to blossom in the sky.

The anecdotes are written in experimental and collaborative ways, corresponding to the meanings different clouds activate. Besides fieldwork data consisting of notes about farm work and cloud-walking, conversations with farmers and environmental or rural organisation representatives, the anecdotes borrow citations (similarly to how clouds borrow water) from poems, archival materials related to farming, newspaper articles, and scientific pieces, as well as include discussions both co-authors had with each other and their colleagues. The insights were either gathered thematically or paired more abstractly, according to personal interpretations. Thus, they morph into dialogues, nebulous ideas, and ecopoetry.¹ Cumulus anecdotes are, similarly to the clouds they take inspiration from, self-sufficient fragments, scattered on a page. When rain clouds gather, a simultaneous sense of excitement and agitation arises. Rain splashes and changes direction, while clouds collide. Thus, the rainy anecdote is formed from overlapping trails of thoughts. An overcast sky forms a heavy, disorienting, and almost solid block devoid of any punctuation marks. It became a good medium to study the simultaneously shifting and opaque landscape of agricultural policies, the increasingly harder to navigate uncertainty farmers face, as well as the first co-author's own struggles to navigate between unknown linguistic contexts. In contrast to the rest of the anecdotes, it merges multiple fragments of texts into one form. Trailing planes can have a twofold meaning—following human-made additional sky layers or observing contrails left by aeroplanes. Both meanings draw attention to the urgent need of recognising the often inextricable entanglements of humans, more-than-humans, and technologies.

Thus, we invite you, dear reader, to dive with us into a dialogue on clouds and farms.

A word of notice: the following anecdotes, when submitted, were formatted in a way to resemble, graphically, the appearance of differently clouded skies. However, due to the many issues encountered with the TAPS formatting system that was not accommodating more unique layout settings, we have decided to leave the text without any special formatting. Instead, we have included figures showing the original intention for the layout of the first and last anecdote. The only anecdote that maintains our original design in this version of the text is the third one—a heavily overcast sky of cloudy policies. The second anecdote was re-formatted to align with the TAPS better.

¹In more-than-human PD, ecopoetry denotes creative, relational methodologies that heighten awareness of human and non-human entanglements, cultivating ecological empathy and ethical imagination as central to participation [2, 17]

The affinity of clouds to islands is connected with one of the most commonplace images of clouds—delicate, fluffy entities, floating in the blue seas of the sky.

When looking at such a sky
or tracing the etymology
of the word island—
Latin *insula*—islands
can appear at first as
enclosed and clearly
demarcated entities,
intensifying the alienation
of its inhabitants.
“The farmer and his family live on an island.”

Remoteness of some farms creates
a sense of privacy and freedom,
which some farmers refer to as a privilege...

“Around midsummer,
my world shrinks to
my island of the farm.”

... but also a sense of loneliness
and detachment, amplified by
the working scheme and
unpredictable character
of the profession.
“It can be quite lonely.”

Unfortunately, the amount of cumulus clouds will be declining due to climate change, and its diminishing will exacerbate global warming, because with cumulus clouds gone, they will not block sunlight or keep ground temperature cooler.

Archipelagos are losing their islands.

Blue is the colour of:
“compassion that derives from loss”
“networks of care”
“recognition of fragility”
“precarious, ecological
enmeshedness in the world”

Is it a coincidence that it is also
the colour of the sky when clouds
evaporate to become one with (farm)land?

Islands never exist only against, they always emerge through relations with the sea. Perhaps this is why the Italian word *isola*, beyond its primary meaning, is also frequently used to describe richly irrigated territories, particularly agricultural ones.

The source for the word—Proto-Germanic
**awjō*—means both island, wetland and meadow—entities in a permanent state of wetness, where the binary between water and land disappears.

Clouds, islands, and fields emerge through intra-actions of water and land. Agricultural fields are weaved from fallen clouds.

“Imagine the clouds dripping.
Dig a hole in your garden to
put them in.”

Even if they disappear, clouds may be future farms.

3.1.1 Archipelagos of cumulus. The affinity of clouds to islands is connected with one of the most commonplace images of clouds—delicate, fluffy entities, floating in the blue seas of the sky.

When looking at such a sky or tracing the etymology of the word island—Latin *insula*—islands can appear at first as enclosed and clearly demarcated entities, intensifying the alienation of its inhabitants.

“The farmer and his family live on an island” [12].

Remoteness of some farms creates a sense of privacy and freedom, which some farmers refer to as a privilege²—

“Around midsummer, my world shrinks to my island of the farm”—but also a sense of loneliness and detachment, amplified by the working scheme and unpredictable character of the profession [28].

“It can be quite lonely.”³

Unfortunately, the amount of cumulus clouds will be declining due to climate change, and its diminishing will exacerbate global warming, because with cumulus clouds gone, they will not block sunlight or keep ground temperature cooler [29]. Archipelagos are losing their islands.

Blue is the colour of “compassion that derives from loss,” “networks of care,” “recognition of fragility,” “precarious, ecological enmeshedness in the world” [23]. Is it a coincidence that it is also the colour of the sky when clouds evaporate to become one with (farm)land?

Islands never exist only against, they always emerge through relations with the sea. Perhaps this is why the Italian word *isola*, beyond its primary meaning, is also frequently used to describe richly irrigated territories, particularly agricultural ones. [22]

The source for the word—Proto-Germanic *awjō*—means both island, wetland and meadow entities in a permanent state of wetness, where the binary between water and land disappears.

Clouds, islands, and fields emerge through intra-actions of water and land. Agricultural fields are weaved from fallen clouds.

“Imagine the clouds dripping.

Dig a hole in your garden to

put them in.” [20]

Even if they disappear, clouds may be future farms.

3.1.2 When rain clouds gather⁴.

///\\//\\//\\//\\//\\//\\//\\

/ Rain brings uncertainty.

We could hardly find traces in Kiewit from previous eras, except for street names, such as Rietstraat and Waterleliestraat.

/ One of the fruit pickers explains that the start of the work will be delayed, because the weather predictions changed.

At our next stop in De Wijers, we will see reeds. Therefore, today’s walk is not only walking in space, but also in time.

/ Initially, no rain was foreseen for Friday, but now it seems like it is going to rain after all.

The history of Kiewit and De Wijers is emblematic of broader hydrological changes across Flanders.

²Fragment of a conversation with a farmer.

³Fragment of a conversation with a farmer’s family.

⁴The title of this section is inspired by Bessie Head’s novel [13] under the same title, evoking a sense of hope despite grave challenges looming.

Figure 1: Archipelago of cumulus anecdote.

/ This would mean that we have to pick grapes much quicker than anticipated.

The region is increasingly recognised as a risk area for water scarcity, experiencing severe shortages in recent dry summers.

/ The decision is made—we have to act quickly. The fruit picker, an old friend of the family, calls his friends to help.

This is a paradox, as Flanders receives ample rainfall annually, but, historically, the water management system was geared towards rapid drainage of excess water to reclaim wetlands for agriculture, housing, and industry.

/ The next day, the picking group mushrooms exponentially. Grapes will be picked in time.

This “drainage culture” intensified over the last two centuries, with extensive networks of ditches and pipes efficiently removing water from the land, leading to significant loss of historical wetlands.

/ Rain brings mutuality.

Perhaps streets will become riverbeds again.

3.1.3 An overcast sky. The following anecdote is devoid of punctuation to mirror the cognitive overload and disorientation triggered by bureaucratic entanglements that farmers navigate.⁵ *het is zeer moeilijk om te voorspellen wat er zal veranderen voor landbouwers de vlaamse overheid voert een ongelooflijk jobbeleid⁶ they prefer to see more visible action on the ground policies and subsidies are hard to follow change all the time they don't give any time to react and then one thing is done not how it was supposed to be and the subsidy is gone there is a lack of alignment with the situation on the field voluntary environmental action is not rewarded doradztwo rolnicze jest tłumaczem rolnik nie ma czasu czytać wszystkich zmian rozporządzeń⁷ even advisors are struggling with the new regulations if farmers don't have faith and trust in taking green action they won't do it farmers are actors in the field they do not do administration you make a decision and then make it more complex and pay advisors to make it easier then they make exceptions and regulations become layered they are not complementary policies there simply is no opportunity for negotiation communication natuurlijk dat mensen boos en teleurgesteld worden⁸ our future appears distinctly overcast I also find navigating these policies hard because I understand where they are coming from but I know it is not how they should be done nature is slow layering complexity in policy is not good intention is good but it is difficult I am against effect not reason it takes time every single day is different you have to be quick I need to start early I see this weather and I am anxious there is no normal anymore there is a lot of uncertainty you have to control time we can make days longer en tegelijkertijd ook zoveel dat we gewoon niet in de hand hebben in ons*

⁵Writing without punctuation was once a foundational tradition across cultures. In ancient China, classical texts were generally written without punctuation, unfolding as continuous lines of characters until the 20th century [10]. Initially driven by material constraints and oral reading traditions, these practices also fostered interpretive participation, granting readers agency in shaping meaning. In clouding, non-punctuated writing echoes this fluid historical mode of reading: it not only mirrors the confusion of Flanders' farmers navigating shifting policies and bureaucratic language but also reopens space for ambiguity, multiplicity, and deeper forms of reader engagement.

⁶Translation from Dutch: *it's very difficult to predict what will change for farmers the flemish government is pursuing an incredible yo-yo policy* [27]

⁷Translation from Polish: *agricultural advisory is the translator a farmer has no time to follow all changes in policies*

⁸Translation from Dutch: *of course people will get angry and disappointed* [27]

werk in en met de natuur loslaten willen we niet en toch wanneer het niet anders kan brengt dat een zekere rust en weten dat volgend jaar weer anders zal zijn⁹ maybe what we need is to learn to foresee he lives with the weather he is like a river she likes structure and to know what will happen but it doesn't always work like that in farming you need both experience and experimenting and daring you need to dare to try¹⁰ sometimes you need to walk with your head in the clouds to see more clearly

3.1.4 Trailing planes. Artificial clouds can sometimes replace natural clouds. Chalk replaces water used to spray the roofs to lower the temperature and improve humidity inside the greenhouses and helps provide shade. Strawberries cannot be allowed to grow freely under the open sky.

The sky sometimes erases the plane's trace. Other times, it holds the line, shimmering and slow. A jet breathes warm vapor into cold heights. If the air is dry, the contrail vanishes. With enough moisture, it lingers, widens, becoming clouds spun from human passage and the breath of atmosphere [24].

Within the troposphere, every place carries its own shifting atmospheric temperament—formed through the intra-actions of geography, season, and human presence. What was once imagined as nature's untouched expanse—the open sky, the bucolic countryside—now stands at the frontlines of ecosocial change: regulated, fragmented, and carefully managed. Clouding becomes a way of sensing these entanglements—attuning to the evolving textures of natureculture across perspectives and timescales, without fixing them into a single story or universal view [15].

Apple trees often grow under two skies. But only one has clouds, this is why it was created in the first place. Textile roofs protect orchards from clear blue skies—and its intense sunlight—but also from hail, and other extreme weather conditions. Artificial clouds can sometimes replace natural clouds in an act of care.

4 Epilogue

What kind of insights clouding provides for PD within ecosocial transitions? Clouding, as it emerged in our PhD projects, serves not only as a metaphor but also a prototype for a situated methodology—operating, at once, as a writing technique, a mode of listening during fieldwork, and a way of retracing data that lingers with uncertainty instead of resolving it too quickly. In practice, this often meant giving up and abandoning a predefined path and goals and allowing data to arrive to us instead; during farm visits and cloudwalks, we followed metaphors, detours, and atmospheric shifts not knowing where they will lead us. This un-straightforward, cloud-like movement helped us adapt to each situation rather than adapting situations to us thus revealing unforeseen, yet crucial insights.

Clouds tend to be reserved for the background, however, when investigated, can attune to multitudes of phenomena. Thinking through relationality that clouds reveal—for instance, by attending to overlooked processes of the hydrological cycles—can provide relevant insights into how communities cope with the uncertainty

⁹Translation from Dutch: *and yet so much we simply can't control in our work in and with nature we don't want to let go and yet when there is no other option it brings a certain peace and knowing that next year will be different again* [19]

¹⁰The text, besides quotes from above-cited sources, is a collage of fragments of conversations held by the first co-author with farmers, environmental organisations representatives, colleagues, and fruit pickers.

Artificial clouds can sometimes replace natural clouds.
Chalk replaces water used to spray the roofs to lower the
temperature and improve humidity inside the greenhouses
and helps provide shade.
Strawberries cannot be allowed to grow freely under the
open sky.

The sky
 sometimes
 erases
 the plane's trace.

Other times,
 it
 holds
 the line,
 shimmering and slow.

A jet
 breathes
 warm vapor
 into
 cold heights.

If the air
 is
 dry,
 the contrail
 vanishes.

With enough moisture,
 it lingers,
 widens,
 becoming clouds spun
 from human passage
 and the breath of atmosphere.

Within the troposphere, every place carries its own
 shifting atmospheric temperament—formed through the
 intra-actions of geography, season, and human presence.

What was once imagined as nature's untouched
 expanse—the open sky, the bucolic countryside—now
 stands at the frontlines of ecosocial change: regulated,
 fragmented, and carefully managed.

Clouding becomes a way of sensing these
 entanglements—attuning to the evolving textures of
 natureculture across perspectives and timescales, without
 fixing them into a single story or universal view.

Apple trees often grow under two skies.
But only one has clouds, this is why it was created in the
first place.
Textile roofs protect orchards from clear blue skies—and
its intense sunlight—but also from hail, and other extreme
weather conditions.
Artificial clouds can sometimes replace natural clouds in an
act of care.

Figure 2: Trailing planes anecdote.

climate change brings. As clouds reveal “myriad potentialities” [20] they contest clear-cut relationships and narratives. Rain and farming usually brings to mind hopes for better crops; however, it can also be a phenomenon revealing hidden networks of support. Patterns of differences and affinities grow across not only anecdotes, but timescales. Clouding can unearth multiple temporalities existing all at once rather than occurring in chronological sequences, thus offering more concrete hope for other futures—for instance, by attending to evaporated water below the sky—are not traces of water in street names clouds, too?

As demonstrated in the third anecdote, applying clouding to writing significantly enlightens PD in ecosocial transitions—even if through disorientation. Farmers and environmental policymakers are usually placed in conflict—however, when engaging with both communities, more nuance is revealed, as similar sentiments are uttered by two, apparently opposed, sides. By seamlessly interweaving opinions from both farmers and policymakers, it bridges those two worlds together and brings hope for a consensus. Thus, clouding calls for relational (though not devoid of difference), rather than antagonistic perspectives—it is, in a sense, an approach going beyond non-binary. The intricacies of natureculture, most emphasised in the last anecdote, are unravelled and layered not only through vibrancies of weather and technologies, but also in sentiments of farmers and policymakers, and quotations from interviews and poets. A clouding exercise also provides insight as to how the temporalities of transition processes could become more non-linear, shifting, and receptive. Multi-directional inquiry, remaining receptive to unexpected outcomes, tracing patterns which (yet) do not exist, paradoxically, often provides more knowledge than following a straightforward path. As one grape picker told me (the first co-author), why research if you already know the answer?

The process of conducting PD in transitional contexts, marked not only by fragmentation and conflict, but also overwhelming stratification of issues, is a flight through clouds. Every time, new relationships may appear to dissolve seconds later, making one doubtful of ever seeing one. Then, one is left with a clear sky, washed away, providing little clarity. Through clouding, this paper reveals not only the relational nature of the current polycrisis but also the potentialities of diffracting more-than-human PD. We experimented with a way of conducting and writing PD so that it could better demonstrate multi-dimensionality we experienced in our research. We believe clouding PD (writings) can transform our empirical experiences in an embodied manner. Being with clouds is a humble, curious, and affective approach, recognising and attending to networks we are embedded within. Through reconfiguring entanglements, we believe that clouding can pave way for solidarity, accountability, and justice.

Acknowledgments

We would like to give special thanks to Maria Gil Ulldemolins for sharing ideas on how to write more like a cloud and for suggesting that clouds could be citational bodies.

The first co-author would like to thank their three supervisors—Liesbeth Huybrechts, Bram Vandemoortel and Seppe De Blust—for continuous support and insights which contributed significantly to

this paper, such as thoughts on sponge landscapes and symbolic interactionism.

The second co-author is thankful to their supervisors, Anna Servavalli and Ann Light, for their careful and comprehensive guidance, as well as to their mentors Roeland Dudal and Liesbeth Huybrechts during the constructive Belgian secondment.

This project has received funding by the European Union's Horizon 2022 Marie Skłodowska-Curie Actions Doctoral Network (MSCA-DN-01) REWORLDDING under grant agreement No 101119451.

References

- [1] Karen Barad. 2007. *Meeting the Universe Halfway: Quantum Physics and the Entanglement of Matter and Meaning*. Duke University Press, Durham, NC.
- [2] Franca Bellarsi and Judith Rauscher. 2019. Toward an ecopoetics of randomness and design: an introduction. *Ecozon@* 10, 1 (April 2019), 1–23. <https://doi.org/10.37536/ECOZONA.2019.10.1.3066>
- [3] Paolo Boccagni and Sara Bonfanti (Eds.). 2023. *Migration and Domestic Space: Ethnographies of Home in the Making*. Springer International Publishing, Cham. <https://doi.org/10.1007/978-3-031-23125-4>
- [4] Rachel Clarke, Sara Heitlinger, Ann Light, Laura Forlano, Marcus Foth, and Carl DiSalvo. 2019. More-than-human participation: design for sustainable smart city futures. *interactions* 26, 3 (April 2019), 60–63. <https://doi.org/10.1145/3319075>
- [5] Marisol De La Cadena and Mario Blaser (Eds.). 2018. *A World of Many Worlds*. Duke University Press. <https://doi.org/10.1215/9781478004318>
- [6] Arturo Escobar. 2018. *Designs for the pluriverse: radical interdependence, autonomy, and the making of worlds*. Duke University Press, Durham.
- [7] European Landowners' Organisation (ELO). 2025. *Press Release on Farm Budget (Unconfirmed)*. European Landowners' Organisation (ELO). Retrieved from https://mcusercontent.com/7e5f446a883c6b513832bd781/files/86fb1e3a-db15-8537-5934-21ef56441cff/250716_ELO_Press_Release_on_farm_budget_unconfirmed_docx.pdf
- [8] Eurovia (European Landowners' Organisation). 2025. Our policy positions. Retrieved from <https://www.eurovia.org/our-policy-positions/>
- [9] Jaivime Evaristo, Scott Jasechko, and Jeffrey J. McDonnell. 2015. Global separation of plant transpiration from groundwater and streamflow. *Nature* 525, 7567 (September 2015), 91–94. <https://doi.org/10.1038/nature14983>
- [10] Imre Galambos. 2014. Punctuation Marks in Medieval Chinese Manuscripts. In *Manuscript Cultures: Mapping the Field*, Jörg Quenzer, Dmitry Bondarev and Jan-Ulrich Sobisch (eds.). DE GRUYTER, 341–358. <https://doi.org/10.1515/9783110225631.341>
- [11] Donna Haraway (Ed.). 2013. The promises of monsters: A regenerative politics for inappropriate/d others. *Cultural studies* (2013), 295–337. <https://doi.org/10.5749/j.ctvtv937f>
- [12] Hardeman, J. 1969. Wij boeren en onze gemeenten. In *Televisielessen voor boer en tuinder*. 16–22.
- [13] Bessie Head. 1968. *When rain clouds gather*. Victor Gollancz Ltd.
- [14] Liesbeth Huybrechts, Niels Hendriks, and Sarah Martens. 2017. Counterfactual scripting: challenging the temporality of participation. *CoDesign* 13, 2 (April 2017), 96–109. <https://doi.org/10.1080/15710882.2017.1309438>
- [15] Rem Koolhaas. 2020. *Countryside: a report*. Taschen, Köln.
- [16] Weronika Kozak. 2025. Homesick while (still) at home: What are the possibilities in conducting domestic ethnography in a potentially lost home? In *10th Ethnography and Qualitative Research International Conference (EQuIRC)*. Trento, Italy. Retrieved October 16, 2025 from <https://indico.global/event/7911/contributions/122971/>
- [17] Ann Light. 2024. More-than-Human Participatory Approaches for Design: Method and Function in Making Relations. In *Participatory Design Conference 2024*, August 11, 2024. ACM, Sibul Malaysia, 1–6. <https://doi.org/10.1145/3661455.3669862>
- [18] Kristina Lindström, Li Jönsson, and Per-Anders Hillgren. 2024. Reorientations: Practicing Grief and Hope in Post-Carbon Futures. In *Participatory Design Conference 2024*, August 11, 2024. ACM, Sibul Malaysia, 187–196. <https://doi.org/10.1145/3666094.3666104>
- [19] Jen Nold. 2025. Bio Boeren Blog – augustus 2025. *Bio Boeren Blog*. Retrieved October 16, 2025 from <https://www.ccbt.be/nl/BioBoerenBlog-augustus2025>
- [20] Yoko Ono. 2000. *Grapefruit: a book of instructions + drawings*. Simon & Schuster, New York.
- [21] Michael Powers. 2015. *Wolkenwandelbarkeit*: Benjamin, Stieglitz, and the Medium of Photography. *The German Quarterly* 88, 3 (July 2015), 271–290. <https://doi.org/10.1111/gequ.10237>
- [22] Robida Collective (Elen Bajor, Vida Rucli, and contributors including Tymon Hogenelst, Valerija Intihar, etc.). 2022. Robida 8: Isola / Otok / Island. *Robida Collective*, 63.
- [23] Catriona Sandilands. 2018. Into This Blue: Betsy Warland's Queer Ecopoetics 1. *ISLE: Interdisciplinary Studies in Literature and Environment* 25, 1 (May 2018), 186–205. <https://doi.org/10.1093/isle/isy013>
- [24] Ulrich Schumann. 2005. Formation, properties and climatic effects of contrails. *Comptes Rendus. Physique* 6, 4–5 (May 2005), 549–565. <https://doi.org/10.1016/j.crhy.2005.05.002>
- [25] Jesper Simonsen and Toni Robertson (Eds.). 2012. *Routledge International Handbook of Participatory Design* (0 ed.). Routledge. <https://doi.org/10.4324/9780203108543>
- [26] Rachel Charlotte Smith, Daria Loi, Heike Winschiers-Theophilus, Liesbeth Huybrechts, and Jesper Simonsen. 2025. *Routledge International Handbook of Contemporary Participatory Design* (1st ed.). Routledge, London. <https://doi.org/10.4324/9781003334330>
- [27] VILT redactie. 2024. In de glazen bol van klimaatexpert Boussemaere: landbouwers zullen nog veel extreme watertjes moeten doorzwemmen. *VILT – Vlaamse infocentrum land- en tuinbouw*. Retrieved October 16, 2025 from <https://vilt.be/nl/nieuws/in-de-glazen-bol-van-klimaatexpert-boussemaere-landbouwers-zullen-nog-veel-extreme-watertjes-moeten-doorzwemmen>
- [28] Els Vloebergh. 2025. Bio Boeren Blog – juli 2025. *Bio Boeren Blog*. Retrieved October 16, 2025 from <https://www.ccbt.be/nl/BioBoerenBlog-juli2025>
- [29] Raphaela Vogel, Anna Lea Albright, Jessica Vial, Geet George, Bjorn Stevens, and Sandrine Bony. 2022. Strong cloud–circulation coupling explains weak trade cumulus feedback. *Nature* 612, 7941 (December 2022), 696–700. <https://doi.org/10.1038/s41586-022-05364-y>
- [30] Virginia Woolf. 1931. *The Waves* (First Edition ed.). The Hogarth Press, London.
- [31] Esther Leslie. 2009. Thought Cloud. *The Essay: Head in the Clouds*. Retrieved from <https://www.bbc.co.uk/programmes/b00hr5ll>